

Capacity Building for Improving the Implementation of Affordable Housing in Indian Cities

### Public Private Partnerships In Affordable Housing



## Introduction





### **Module Overview**

#### Objective

This module aims to build a comprehensive understanding in the learner about

- Public Private Partnership (PPP) in the Indian context
- Affordable housing in India
- Applying PPP as a mode of procuring Affordable Housing projects in India.

#### Outcomes

Government officials, in general, are expected to conceptualize affordable housing projects, budget the project costs and implement the projects. The intended learning outcomes of this capacity building exercise are aligned to the above mentioned roles of government officials. As a result of the training imparted to them under this capacity building exercise, learners are expected to:

- become familiar, in general, with affordable housing as well as public private partnership as a mode of procuring infrastructure projects,
- become familiar with the various PPP models recommended by the Ministry of Housing and Urban Affairs of the Government of India,
- · become aware of the recent developments in PPP in terms of new models,
- be exposed to the various issues and challenges in implementing PPP projects in affordable housing,
- understand the best practices and approaches taken nationally and internationally, in implementing affordable housing projects under PPP mode of procurement,
- And thereby become equipped to conceptualize and undertake affordable housing projects in PPP mode.







Image Source: Associated Press

### Definitions

#### Affordable Housing

The Ministry of Housing & Urban Affairs of the Government of India in its scheme guidelines for Housing for All (Urban) defines an affordable housing project as a housing project where 35% of the houses are constructed for EWS category.

#### EWS

- Scheme guidelines define the economically weaker section (EWS) households as households having an annual income up to Rs.3,00,000 (Rupees Three Lakhs) and provides States/UTs with the flexibility to redefine the annual income criteria as per local conditions in consultation with the Centre.
- It also defines an EWS House as an all-weather single unit or a unit in a multi-storeyed super structure having carpet area of upto 30 sq.m. with adequate basic civic services and infrastructure services like toilet, water, electricity etc. States are provided with the flexibility to determine the area of EWS as per their local needs. For the avoidance of doubt, carpet area as used in the definition above means the net usable floor area of an apartment, excluding the area covered by the external walls, areas under services shafts, exclusive balcony or verandah area and exclusive open terrace area, but includes the area covered by the internal partition walls of the apartment.

#### **Public Private Partnership**

- PPPs are a contractual means to deliver public assets and public services. PPP contracts include those intended to develop and manage new infrastructure, contracts to undertake significant upgrades to existing infrastructure (these are called infrastructure PPPs), and those under which a private partner manages existing infrastructure or only provides or operates public services (known as service PPPs).
- The Department of Economic Affairs (DEA) of the Government of India defines PPPs as:
- PPP means an arrangement between a government or statutory entity or government owned entity on one side and a private sector entity on the other, for the provision of public assets and/ or related services for public benefit, through investments being made by and/or management undertaken by the private sector entity for a specified time period, where there is a substantial risk sharing with the private sector and the private sector receives performance linked payments that conform (or are benchmarked) to specified, predetermined and measurable performance standards.





### Definitions

#### **Privatisation**<sup>1</sup>

Privatisation has generally been defined as a process of shifting the ownership or management of a service or activity, in whole or part, from the government to the private sector. The privatisation may be of many forms, which include outsourcing, management contracts, franchise, service shedding, corporatisation, disinvestment, asset sales, long-term lease, etc.

- The responsibility for delivery and funding a particular service rests with the private sector.
- The ownership rights are sold to the private sector along with associated benefits and costs.
- The nature and scope of the services under privatisation is determined by the private provider.
- All the risks inherent in the business rest with the private sector.

#### Under Public-Private Partnership<sup>1</sup>

- The government (public sector) retains the responsibility of providing the services.
- The government may continue to retain the legal ownership of assets.
- The nature and scope of the services is contractually determined between the parties.
- Risks and rewards are shared between the government and the private sector.





### Significance

#### Economy

There is a significant investment deficit in the country, which the government alone will not be able to address. PPPs can offer a wider range of financing options toward affordable housing provision.

#### Environment

Private partnerships can enable transfer of sustainable technological practices to the affordable housing sector and make for more for environmentally sound habitats.

#### Equity

PPPs can boost supply and offset financial risks of affordable housing, and enable the government to utilize their resources on other social development issues.





### Significance

#### Case for PPP in Affordable Housing

The huge investment required for developing housing for all in the country may be difficult to meet for the Governments (Centre and States) given their fiscal constraints. Any effort in that direction is likely to increase the liabilities of the Governments. The private sector, given its resourcefulness (both in terms of financing as well as execution of the projects) would therefore be a necessary partner in developing and delivering housing infrastructure to the weaker sections of the society at affordable prices. As such, participation of the private sector in coordination with the public sector to develop the affordable housing is the need of the hour.

#### **Benefits of PPP**

Advantages of public-private partnerships are numerous and well documented. The major benefits of procuring infrastructure projects under PPP mode may be summarized as:

- PPPs allow access to the substantial financial resources of the private sector
- PPPs enable the public sector to benefit from private sector technical expertise, experience and efficiency
- PPPs enable the public sector to transfer project-related risks to the private sector.





### Significance

PMAY(U) Performance



Source: PMAY (U), as on 7 December 2020

Given that 65.66 Lakh (~6.57 Million) dwelling units are grounded out of the demand of 1.12 Crores (11.2 Million) dwelling units and of the and to be grounded going forward and that **Rs.93,842 crore (INR 938.42 Billion)** is yet to be released from the Centre alone, which represents the financial burden on it from the PMAY (U) Scheme, it is obvious that both the efficiencies of the private sector in delivering the projects and the financial resources of the private sector are both crucial for the success of Housing for All in India.





# **PPPs in India**





### History

PPP in India can be traced back to private investments in railroads in the latter part of the 19<sup>th</sup> Century and has come a long way. Today, it can be argued that there are no sectors where PPP is not being explored. Some marquee projects in PPP in India are:

- The Kempegowda International Airport, Bengaluru
- Mundra Port India's Largest Commercial Port

Hyderabad

Metro

#### **Rise & Fall**

PPP in India has its hey days and dark periods. The private participation in infrastructure which was on the rise from 2005, peaked in 2010 buckled and fell steeply in 2013.

In 2013 PPP fell in volume by 68% of its five-year average (2008-2012) and brought down with it the global private participation in infrastructure during the year..

In recent times, PPP is being revitalized by innovative models such as Hybrid Annuity Model, Toll-Operate-Transfer Model and Asset Recycling.

#### 1991 - 2006

etc.

86 PPP projects worth INR 340 billion were awarded till 2004 (Source: World Bank Study in 13 states, 2005). Most of these projects were in the

projects were in t Roads & Bridges sector.

#### 2006 - 2011

Growth in PPP from 450 projects costing INR 2,243 billion in Nov. 2009 to 958 projects costing INR 3,833 billion in Jul. 2011.

Favourable policy reforms and innovative PPP structures resulted in increased acceptance of PPP Models.

#### 2011 onwards

Maturing landscape for PPPs created. India occupies the 1st position in APAC region in terms of operational maturity for PPPs (Source: Evaluating the environment for PPPs in Asia-Pacific – The Economic Intelligence Unit, 2014).

Strengthening of the PPP Policy framework, issuance of guidance notes, PPP toolkit and improved procurement procedures for selection of private entities.

Source: Report of the committee on revisiting and revitalising public private partnership model of infrastructure , November 2015





### **PPP Models**

PPP models (also known as modes or types) are structured based on the roles of the public and private partners, ownership arrangements and allocations of risk between the partners. The major families of PPP modes are:

- Management contracts
- Lease contracts
- Concessions and
- Build-own-operate (BOO) contracts and Build-operate-transfer (BOT) and its variants





### **Management Contracts**

Modes/Features	Asset ownership during contract	PPP duration	Capital investment	Revenue Risk	Private partner roles	
Management Contracts	Contractual arrangement for the management of a part or whole of a public facility or service by the private sector. Capital investment is typically not the primary focus in such arrangements. Note: service contracts and management contracts of less than 3 years duration are not included in the definition of PPP in India.					
Management Contract	Public	Short to medium (typically 3 – 5 years)	Public	Low (Pre-determined fee, possibly with performance incentives)	Management of all aspects of O&M	
Management Contract (with rehabilitation/ expansion )	Public	Medium to long	Private Brownfield projects (Rehabilitation / expansion)	Medium (Tariff / Revenue share)	Minimum Capex, Management, Maintenance (Similar to management contracts but include limited investments for rehabilitation or expansion of the facility)	





### **Lease Contracts**

Modes/Features	Asset ownership during contract	PPP duration	Capital investment	Revenue Risk	Private partner roles
Lease Contracts	Asset is leased, eithe	er by the public entity t	o the private partner or v	vice-versa.	
Lease	Public	Medium (typically 10-15 years)	Public	High (Revenue from Operations)	Management and maintenance
Build Lease Transfer (BLT) / Build-Own- Lease-Transfer (BOLT)	Private (Leased to the government)	Medium (typically 10-15 years)	Private (Greenfield project)	Low to medium (Pre-set lease from the government)	Capex (building a facility, leasing it to the Govt. and transferring it after recovery of capital)
Build-Transfer-Lease (BTL)	Public	Medium (typically 10-15 years)	Private (Greenfield project)	High (Revenue from User Charges)	Capex and Operations (building an asset, transferring it to the Govt, and leasing it back. Delivers the service and collects user charges)





### Concessions

Modes/Features	Asset ownership during contract	PPP duration	Capital investment	Revenue Risk	Private partner roles		
Concessions	Responsibility for cor	Responsibility for construction (typically brownfield / expansions) and operations with the private partner while ownership is retained by the public sector.					
Area Concessions	Public	Long (typically 20-30 years)	Private (Brownfield/ Expansions projects)	High (Tariff revenue)	Design, finance, construct, manage, maintain (responsible for the full delivery of services in a specified area, including operation, maintenance, collection, management, and construction and rehabilitation of the system as well as the capital investment)		





### **BOT Contracts**

Modes/Features	Asset ownership during contract	PPP duration	Capital investment	Revenue Risk	Private partner roles
Build-Operate-Transfer Contracts	Responsibility for con	Responsibility for construction (typically greenfield) and operations with the private partner while ownership is retained by the puse sector.			
Design-build-operate (DBO)	Public	Short-medium (typically 3-5 years)	Private (Greenfield project)	High (Tariff revenue)	Design, finance, construct, manage, maintain.(responsible for the full delivery of services including operation, maintenance, collection, management, and construction and rehabilitation of the system along with .capital investment)
Build-operate-transfer (BOT)/ Design- Build- Finance-Operate-Transfer (DBFOT)	Public	Long (typically 20-30 years)	Private (Greenfield project)	High (Tariff revenue)	DBFOT - Design, finance, construct, manage, maintain (Most common form of BOT concession in India)
Build-operate-transfer (BOT) Annuity	Public	Long (typically 20-30 years)	Private (Greenfield project)	Low (Annuity revenue/unitary charge)	Design, finance, construct, manage, maintain





### **BOOT Contracts**

Modes/Features	Asset ownership during contract	PPP duration	Capital investment	Revenue Risk	Private partner roles
Build-own-operate Transfer (BOOT) Contracts	Private partner has th	ne responsibility fo	or construction and	l operations. Ownershi concession.	o is with the private partner for the duration of the
Build-own-operate-transfer (BOOT) or DBOOT	Private	Long (typically . 20-30 years)	Private (Greenfield project)	High (Tariff revenue)	DBOOT - Design, construct, own, manage, maintain, transfer (Most common form of BOOT concession in India)
Build-own-operate (BOO)	Private	Perpetual	Private (Greenfield project)	High (Tariff revenue)	Design, finance, construct, own, manage, maintain (Not common in India.)





# **Risks in PPPs**





### **Understanding Risk**

#### What is Risk?

"Risk is the chance of an event occurring which would cause actual project circumstances to differ from those assumed when forecasting project benefits and costs"

Risk Management & Contractual Issues, Partnerships Victoria

#### **Key Projects Risks**

Each stage of a project is associated with certain risks. Identifying the risks and allocating them between the partners for mitigation, is key to the success of a public private partnership project. The golden rule of risk allocation is that a risk be allocated to a partner (i.e. public or private) who is best suited/equipped to handle the risk.

Therefore, proponents of a PPP project should be equipped with an understanding of various risks associated with a project and also, how the various PPP models in general and in affordable housing in particular address the risks and mitigate them.





Risk	Description
Pre-operative task ris	sks
Delays in land acquisition	Risk that the project site will be unavailable or unable to be used within the required time, or in the manner or the cost anticipated or the site will generate unanticipated liabilities due to existing encumbrances and native claims being made on the site. Delays in land acquisition may result in cost-over runs (increase in material and/or labour costs) or finances held – up (in SPV's equity, performance security, salaries, office-setup etc. for the developer)
External linkages	Risk that adequate and timely connectivity to the project site is not available, which may impact the commencement of construction and overall pace of development of the project. For instance, non-availability of trunk infrastructure or approach road may hinder the pace of the project.
Financing risks	Risk that sufficient finance will not be available for the project at reasonable cost (eg, because of changes in market conditions or credit availability) resulting in delays in the financial closure for a project. For example, rising NPAs or slow-down in investments in HFCs may result in credit – crunch for developers.
Planning risks	Risk that the pre-development studies (technical, legal, financial & others) conducted are inadequate/not robust enough resulting in possible deviations from the planned/expected outcomes in the project development. For example, the non-suitability of soil for multi-level buildings affects the project.
Approvals risk	Refers to the risk that necessary permits, authorisations and approvals required prior to the start of construction are not obtained in a timely fashion, resulting in delays to construction and the project as a whole. Eg. non – availability of NOC from aviation authority if the project falls under airport funnel zone before undertaking the project.





Risk	Description
Construction Phase	Risks
Design risk	Risk that the proposed design will be unable to meet the performance and service requirements in the output specification, resulting in additional costs for modification and redesign. Eg. Unaddressed demand for two, three and four wheeler parking. The project may not have adequate parking spaces while many of the beneficiaries may be cab drivers, auto-rickshaw drivers, food-delivery boys and courier messangers etc.
Construction risk	Risk that the construction of the assets will not be completed on time, budget or to specification, leading to additional raw materials and labour costs, increase in the cost of maintaining existing infrastructure or providing a temporary alternative solution due to a delay in the provision of the service.
Approvals risk	Risk that delays in approvals during the construction phase will result in a delay in the construction of the assets as per the construction schedule., leading to cost overruns. Eg. delay in obtaining NOC from fire department.
Operation phase risk	(S
Technology risk	Risk that the technology used will be superseded and will not be able to satisfy the requirements in the output specifications, resulting in increased costs of a replacement technology. Eg. Newer cost reducing and/or time reducing construction technologies coming to the market, while the project was envisaged on conventional construction methods.
Operations and maintenance risk	Risk associated with the need for increased maintenance of the assets to meet performance requirements. Eg. Need for continued maintenance and budget for the same, especially when the project is close to a tourist attraction.





Risk	Description	
Volume risk	Risk that demand for a service will vary from that initially projected, such that the total revenue derived from the project over the project term will vary from initial expectations. Eg. Reduced demand for an affordable housing project due to economic downturn.	
Payment risk	Risk that tolls are not collected in full or are not set at a level that allows recovery of costs. Eg. Delay in payments or inability of the beneficiary to pay remaining instalments due to economic downturn.	
Financial risk	Risk that the private sector over stresses a project by inappropriate financial structuring, resulting in additional funding costs for increased margins or unexpected refinancing costs. Eg. Rupee devaluation when the project is funded by external commercial borrowing resulting in refinancing or Hike in LIBOR rate when the interest rate for the project is financed by floating rate interest linked to LIBOR.	
Handover risks		
Handover risk	Risk that the concessionaire will default in the handover of the asset at the end of the project term or will deviate from the minimum quality/ value of the asset that needs to be handed back to the public entity.	
Terminal value risk	Risk relating to differences from the expected realisable value of the underlying assets at the end of the project.	
Other risks		
Change in law	Risk that the legal/regulatory regime will change, having a material adverse impact on the project. Eg. Amendments to RERA act resulting in compliance costs to ongoing project	





Risk	Description
Force Majeure	Risk that events beyond the control of either entity may occur, resulting in a material adverse impact on either party's ability to perform its obligations under the contract. Eg. Impact of lockdowns (labour, material supply, payments with-held) enforced by government due to pandemic on an unfinished project.
Concessionaire risk	Risk that the concessionaire will prove to be inappropriate/unsuitable for delivery of the project. Eg. A developer with no experience in construction undertaking an affordable housing project has a higher probability of facing cost- over runs, delays and off-take risks etc.
Sponsor risk	Risk that the sponsor will prove to be an unsuitable partner for the project, for example due to poor project management or a failure to fully recognise the agreed terms of the Concession Agreement.
Concessionaire event of default	Risk that the private partner will not fulfil its contractual obligations and that the Government will be unable to either enforce those obligations against the sponsors, or recover some form of compensation or remedy from the sponsors for any loss sustained by it. Eg. Concessionaire going bankrupt during construction
Government event of default	Risk that the Government will not fulfil its contractual obligations and that the private partner will be unable to either enforce those obligations against the Government, or recover some form of compensation or remedy from the Government for any loss sustained by it as a result of the breach.





# Trends





- Trends prevailing in PPP across regions/countries include legislating/reforming public private partnerships, project governance, developing toolkits for PPP, focus
  on and measuring outcomes, developing frameworks for renegotiating PPP contracts, innovative models and financing mechanisms, promoting sustainable public
  private partnerships, capacity building and creating awareness among government officials and lenders, using PPPs for innovation etc.
- However, for the purposes of this module, the trends in financing of infrastructure, especially PPPs as well as the recent developments in conceptualizing and implementing innovative contracting structures in public-private partnerships, are of prime significance as they can be readily applicable for executing PPP projects in Affordable Housing in India.
- The other rationale behind this narrower focus is that framework or PPPs in affordable housing is already in place and with the PMAY (U) soon to complete 5 years, the focus should be on implementation rather than on policy making, especially with just over 58.6% (as on 11<sup>th</sup> July 2020) of the demand for housing being grounded.
- Focus on Sustainable Development Goals (SDGs)

SDGs are now becoming an important criteria for multilateral development banks (MDBs) and development agencies in financing PPP projects, translating into renewed focus on service PPPs for social housing, community healthcare and public education.<sup>2</sup>

This focus of development finance institutions (DFIs) on SDG (social housing is covered under SDG) may be explored by government agencies in exploring financing suitable projects/basket of projects, including those undertaken in PPP mode.





#### - Exploring Islamic Finance for Public-Private Partnerships

Islamic Finance, a \$2 trillion market for Sharia compliant investment has been hitherto an unexplored avenue for financing PPP projects. The World Bank and Islamic Development Bank Group (IsDB) have explored, through a series of publications, how Islamic Finance has been applied in PPP projects and have provided guidelines as well as agreements for various structures. As a result, there is an interest globally in exploring Islamic Finance for financing PPP projects.<sup>2</sup>

Some of the success stories of Islamic finance-backed PPPs are the Queen Alia International Airport in Jordan, the East Klang Valley expressway project in Malaysia, the Karachi-Thatta dual carriageway project in Pakistan, a container terminal project in Djibouti, an integrated health campus in Konya, Turkey, the Prince Mohammad Bin Abdulaziz International Airport in Saudi Arabia etc.

Islamic Finance may be explored by implementing agencies in financing suitable PPP projects/basket of PPP projects.

#### - Emergence of Asset Recycling as an option for financing infrastructure

Asset Recycling, also called Capital Recycling has gained a lot of traction amongst PPP practitioners, investors and government agencies across the globe. Clive Harris and Stephanie Creed describe Asset Recycling as a process which recycles previous taxpayers' funds that have been locked up in older assets to pay for new or renewed assets. Australia is the first country to adopt this model in 2013 and its success has prompted US, Indonesia and India etc. exploring the model for financing infrastructure.<sup>2</sup>

Asset recycling is a suitable method for addressing off-take of unsold inventory of constructed units.





Prevalence of Unsolicited Proposals and moves towards regulating them

Unsolicited proposals (USPs) are generally a maligned and often misused form of procuring infrastructure projects.

- An unsolicited proposal (USP) is a proposal made by a private party to undertake a PPP project, submitted at the initiative of the private firm, rather than in response to a request from the government. A significant number of PPPs (23%) originate through unsolicited proposals (USPs)<sup>3</sup>
- Among the 135 economies that are covered by the Procuring Infrastructure PPPs 2018 project, in 57% of economies including Australia, Chile, Ghana and
  Japan regulate the use of unsolicited proposals and in 10% of the economies such as Chad, Myanmar, and Trinidad and Tobago, projects are originated through
  unsolicited proposals but are not regulated.<sup>4</sup> In short, unsolicited proposals are a prevalent practice in 2/3<sup>rd</sup> of the 135 economies surveyed.
- The general trend has been towards regulating unsolicited proposals. The World Bank with funding from PPIAF, has published the Policy Guidelines for Managing Unsolicited Proposals.
- Unsolicited proposals are not entertained in India. However, the same may be handled under Swiss Challenge Method which is discussed in a later section.





#### Blended Financing of PPP Projects

Multilateral & bi-lateral development financial institutions have began using blended finance for PPP projects.

- "Blended finance involves the use of official development finance– including subsidised loans and guarantees, grants for technical assistance, and equity investments in private ventures to 'crowd in' commercial finance, including to support PPPs.<sup>6</sup>
- Blended finance in LDCs (Least Developed Countries) is overwhelmingly manifested in the form of PPPs.<sup>6</sup>
- "Evolution of new financing models and PPP models and blended financing that combines funds from both governments and the private sector is also becoming more prevalent, especially in countries where the public sector has less access to private funding".<sup>7</sup>
- Suitable projects/basket of projects may be explored under blended finance, wherein the means of finance could be a combination of Grant/equity from DFI, soft loans and private partner's contribution.

#### Establishment of Asian Infrastructure Investment Bank (AIIB)

The AIIB was created in January 2016 as a 21st-century multilateral development bank (MDB), with the aim of fostering greater regional and global integration through connectivity and with a specific mandate: to provide development finance in infrastructure and other productive sectors.<sup>8</sup>

AllB may therefore be approached for financing suitable projects/basket of projects under PPP.





- Increasing Appetite of funds for investments in PPP projects
  - PPP and infrastructure investment markets are becoming global, with key international players operating in many countries around the globe9

The reason for the increased attraction of pension funds is the asset – liability match that PPP projects bring on board (PPP concessions typically are of 25 – 30 years period). Australian and Canadian pension funds are leading the way when it comes to global investments in infrastructure.

(Investors in infrastructure include sovereign wealth funds, public & private pension funds, insurers, banks, university endowments & foundations, private equity funds and infrastructure funds).

- Insurance companies worldwide currently allocate approximately 2% of their assets under management to infrastructure investments.<sup>10</sup>
- Investor exposure to infrastructure has been fairly low with only 20% of pension schemes investing in the asset class and an average allocation of under 2% of total scheme assets.<sup>11</sup>
- Projects/basket of projects, especially under rental housing may be so structured as to attract international pension funds.





Trends with respect to legislation of PPP, financing of Affordable Housing, new PPP structures, taxation with respect to affordable housing, new construction technologies, pipeline of infrastructure projects etc. are prevailing in India. However, those related to financing of PPP projects and new PPP structures are covered under this module as they are relevant and contextual for PPP in affordable housing in India.

#### **Trends Related to Financing**

- The Department of Economic Affairs of the Ministry of Finance of the Government of India accorded infrastructure status to affordable housing by including
  affordable housing under Social and Commercial Infrastructure and updated the Harmonized Master List of Infrastructure sub-sectors on the 30<sup>th</sup> of March, 2017.
- Subsequently, the Reserve Bank of India included affordable housing under Infrastructure and extended its regulations with respect to flexible structuring for long term loans to infrastructure sector to affordable housing. RBI also allowed banks to issue long-term bonds with a minimum maturity of seven years to raise resources for lending to long term projects in infrastructure sub-sectors and affordable housing.

The above measures were taken to ease the difficulties faced by banks in lending to affordable housing.

- Debt financing for infrastructure transactions in India is largely denominated in Indian rupees. There is a reliance on government funding through EPC and annuity-based infrastructure financing models.<sup>12</sup>
  - In recent years banks in India have been greatly troubled by mounting NPAs (non-performing assets) crippling their ability to finance fresh projects. The NBFC (Non-Banking Financial Company) crisis of September 2018 aggravated the situation. Many lenders who were active in project finance such as ICICI Bank, IDFC and Axis Bank have altogether stopped funding new projects.
  - "Banks, which have been a major financier, are slowly retreating from PPP lending due to asset-liability mismatch, restrictions posed by Basel-3 norms and high levels of non-performing assets (NPAs)".<sup>13</sup>

(Asset-liability mismatch arises if banks fund projects that take 3 to 5 years to be constructed by one year term deposits)

The receding interest of domestic banks in project finance calls for new affordable housing projects to be structured such that overseas investors including pension funds and lenders such as Multi-lateral Development Banks are attracted to fund the project/s.





- Foreign direct investment (FDI) in most sectors is on the automatic route, implying 100% FDI in almost all infrastructure sectors<sup>14</sup>
  - "Despite the relaxation of limits by the government, FDI in infrastructure has not grown as expected, partly due to sluggish domestic investments. Measures are required to revive domestic investments since foreign investors generally follow domestic trends".<sup>13</sup>
  - The Finance Minister of India in her 2020 budget for the year 2020-21 eliminated Dividend Distribution Tax (DDT), which the Finance Ministry expects to attract Global pension funds and Indian pension funds to infrastructure.<sup>15</sup>
  - The union budget of 2020 proposed to monetize at least 12 bundles of highways of over 6,000km before 2024, indicating government's ambitions of raising capital by privatizing operating infrastructure assets. Crisil estimates this capital-raising opportunity at Rs.60,000 crores.<sup>16</sup>

The asset monetization ambition signals towards willingness to embrace asset recycling model.

New projects in affordable housing, may therefore be so structured/packaged into a basket of projects as to attract FDI.

#### Creation of NIIF

- The National Investment and Infrastructure Fund (NIIF) is a fund manager set up in December 2016 and anchored by the Government of India, with a mandate to invest equity capital in domestic infrastructure. The Indian government has 49% stake in NIIF with the rest held by marquee investors such as Abu Dhabi Investment Authority, Temasek and HDFC Group.
- The Union Budget of 2020 earmarked Rs.22,000 crore as equity support to National Investment and Infrastructure Fund (NIIF) and India Infrastructure Finance Company (IIFCL). Finance Ministry officials believe that this investment could be leveraged eight to nine times.<sup>15</sup>

NIIF, therefore, provides another option for financing affordable housing projects to be undertaken in PPP mode. Projects need to be structured to elicit NIIF's interests and accommodate it as an equity partner.





- Trends related to investing
  - Funding challenges for both private and public segments
  - Lower-than-expected pick-up in new PPP models.
  - Lack of high returns can be argued as one of the primary reason for disinterest of private developers in affordable housing projects. Therefore, projects need to be structured with sufficient returns for the private sector so as to improve private sector's participation in the sector.

Source: Uphill Trek –CRISIL's India Outlook, August 2019



Private share of infrastructure spending to drop further

Source: CRISIL Research





- **GST Relaxation:** The Goods and Service Tax (GST) Council reduced the GST for affordable and low-cost housing to 8% on the total value of under-construction properties, instead of the earlier effective rate of 12%.<sup>21</sup>
- Stamp duty relaxations: Several states such as Karnataka, Rajasthan and Maharashtra have significantly lowered their stamp duty charges for affordable housing.
- Income Tax related relaxations: The Government of India has provided several rebates under the Income Tax Act to both housing developers and buyers over the years to provide a boost for the sector.
- Fast tracking of bankrupt companies under Insolvency and Bankruptcy Code (IBC) would help to make unused land available faster for low cost housing.<sup>22</sup>
- Government identifies 3,000 acres of land available with six Central Public Sector Enterprises (CPSEs) for construction of affordable houses. More such initiatives are expected from the government to ease land availability for low cost housing.<sup>22</sup>.
- Land Pooling was trending in the affordable housing sector in 2018 for the following reasons:<sup>22</sup>
  - Approval of eagerly anticipated "Delhi's land pooling policy" which is expected to contribute significantly to the sector in terms of affordable housing inventory.
  - Hyderabad Metropolitan Development Authority will conduct a study for designing the land pooling scheme in Mumbai and Pune.





### **New and Innovative Models**

• The Hybrid Annuity Model (HAM) – adopted by NHAI/MoRTH and later used by Namami Gange

HAM was introduced in 2016 and has since become a popular and widely adopted model for procuring PPP projects. The salient features of this model are:

- The bid parameter is the life cycle cost i.e. the net present value (NPV) of the quoted project cost and the O&M cost for the operations period.
- Construction support of 40% of the Bid Project Cost will be paid to concessionaire annually in 5 equal instalments linked to completion of project milestones. The
  concessionaire has to bear the remaining 60%. Semi-annual annuity payments shall be made to the concessionaire upon completion of construction towards this
  balance 60% of the Project Cost.
- User fee collection is authority's responsibility. O&M during the concession period is concessionaire's responsibility and O&M payments shall be made to the Concessionaire based on the amounts quoted by the concessionaire.

#### • The TOT Model<sup>19</sup> – Adopted by NHAI

The Union Cabinet gave the National Highway Authority of India (NHAI the nod to monetize 75 public-funded national highways with a road length of around 4,500 km which are operational and are generating toll revenues for at least two years after the commercial operations date. The proceeds were to be used for future development and O&M of highways.

The Ministry of Road Transport and Highways (MoRTH) and NHAI formulated the Toll-Operate-Transfer (TOT) model for the purpose of securitizing and recycling of government owned operational road assets that were constructed under EPC mode or BOT (Annuity) model. The TOT Model is in essence an Asset Recycling model.

Under the model, NHAI passes on the toll collection rights and operation and maintenance obligations for 30 years to the private developer against payment of upfront, one-time, lump sum concession fees quoted by the private developer as part of the comprehensive bidding process





### **New and Innovative Models**

#### - The Modified Swiss Challenge Method

A Swiss Challenge is a method of bidding, often used in public projects, in which an interested party initiates a proposal for a contract or the bid for a project. The government then puts the details of the project out in the public and invites proposals from others interested in executing it. On the receipt of these bids, the original contractor gets an opportunity to match the best bid.<sup>18</sup>

The Indian Railways proposed a modified Swiss Challenge method for redevelopment of Railway Stations across the country, in Feb. 2017. The Zonal Railways were to adopt this route for 23 stations. The modified Swiss Challenge Method comprised of a two-stage process.







### **New and Innovative Models**

The HAM and TOT Models have been successful.

In the first tranche, NHAI auctioned a bundle of nine projects - totalling 648 km. The tranche covers 9 stretches in total - 5 highways running across Andhra Pradesh and 4 highways in Gujarat Singapore's Macquarie Asia Investment Fund has bagged the maiden bundle with a bid that is 1.5 times higher than NHAI estimates. Against NHAI's expectations of Rs.6,258 crore, the winning bid is Rs.9681.5 crore.<sup>20</sup>

New models have been adopted by various authorities in India in order to address the shortcomings of existing PPP models and to attract private investment in infrastructure. They serve as precedents and the models can be adapted to affordable housing by housing authorities.



Source: CRISIL - Rekindling private investment in roads and highways March 2019





# Present Status of PPPs in Affordable Housing




# History

- The private sector participation in delivering affordable housing can be traced back to "Udayan -The Condoville" developed in late 1990s by Bengal Ambuja Housing Development Limited (BAHDL) - a joint venture between Gujarat Ambuja Cements Limited (GACL)and West Bengal Housing Board (WBHB). CAGL and WBHB each held 49.5% equity in BAHDL and the remaining 1% was offered to public.
- The model was based on the principle of cross-subsidization. The land assembly and acquisition for the project was the responsibility of the WBHB. The BAHDL was responsible for the overall formulation, implementation and monitoring of the project. GACL was responsible for the overall management of the affairs of the company including monitoring and supervision of entire construction activities in conformity with the statutory requirements.
- HUDCO provided project finance. "Mass Education" an NGO was involved in the project maintenance activities. Home Trust Finance Company Limited, a subsidiary of GACL and later acquired by HDFC provided housing finance to the beneficiaries.
- Rajasthan came up with several PPP models in its Affordable Housing Policy of 2009. States such as Karnataka and Maharashtra etc. followed suit and adopted PPP as a mode of procuring affordable housing projects.

Typical Affordable Housing Project						
Location	Beyond 25 – 30 km from the city centre					
Target Clients	ts Industrial zones in the vicinity and commercial hubs at the sub-urban nodes					
Project Size	1,500 – 3,000 units					
Dwelling Density	80 – 100 units per acre					
Land Area	15 – 35 acres					
Composition	Mostly 1 RK* and 1 BHK**, with few 2 BHK					
Saleable Area of Units	250 – 350 sq.ft. for 1 RK and 400 – 500 sq.ft. for 1 BHK					
Launch Price	INR 0.5 to 0.7 million for 1 RK and INR 0.7 to 1.0 Million for 1 BHK					
Launch Rate	INR 1,800 – 3,000 per sq.ft.					
Structure	Ground/Stilt + 3/4 floors (walk-up apartments without lifts)					

Source: Jones Lang Laselle





### Trends

#### In Home Purchase and Sale Market

In line with the aspirations of home buyers, some developers have begun offering the same facilities as those in normal housing projects in their affordable housing projects. As a result well designed lifestyle facilities in affordable housing is fast becoming the new normal.

#### In Home Finance and Project Finance Market

Access to home finance is now available to lower income/informal segment buyers. More than 100 NBFCs/Micro-Finance companies grouped under 'Affordable Housing Finance' companies (AHFCs), are now tapping the fortune at the bottom of the pyramid with their home loan offerings.

Financial institutions and HFCs have began offering project finance at competitive rates and terms. PE funds and HNIs have began investing in affordable housing developers/projects.

#### In Home Occupation and Leasing Market

Co-living, shared space and rental housing that cater to the needs of niche customer segments who are no longer keen on owning a house but view housing as a service, are the new buzz words in the housing market. Many developers and operators have forayed into this segment.





## **PMAY(U)** Verticals

### IN-SITU SLUM REDEVELOPMENT

- Using land as a resource
- With private participation
- Extra FSI/TDR/ FAR if required to make projects financially viable
- Gol grant of Rs. 1 lakh per house

### CREDIT LINKED SUBSIDY SCHEME

- Interest subvention subsidy for EWS & LIG for new house or incremental housing.
- EWS: annual household Income upto 3 lakhs & house size upto 30 sq m
- LIG: annual household Income between
- 3-6 lakhs & house sizes upto 60 sq m
  Benefit of up to Rs. 2.67 Lakh through interest subsidy of 3-6.5%

### AFFORDABLE HOUSING IN PARTNERSHIP

- With private sector or public sector including parastatal agencies
- Central Assistance per EWS in affordable housing projects where 35% of constructed houses are for EWS category
- Gol grant of Rs. 1.5 lakhs per house

### BENEFICIARY LED CONSTRUCTION

- For individuals of EWS category requiring individual house
- State to prepare a separate project for such beneficiaries
- No isolated/ splintered beneficiary to be covered
- Goi grant of Rs. 1.5 lakhs per house

Source: PMAY (urban) document by HUDCO





# Demand, Supply, and Opportunities

#### Demand

- Validated demand of 11.2 lakhs houses as per PMAY(U).
- 12<sup>th</sup> Five Year Plan estimated total housing shortfall at 18.78 lakhs houses, of which 96% is in EWS / LIG segments.

### Supply

- PMAY(U) is targeting construction of 11.2 lakhs houses by 2022.
- Private sector supply is limited but fast growing.
- Informal sector is a big player.

#### Opportunities

- At Rs.6 Lakhs per dwelling unit<sup>\*</sup> the size of the current opportunity for procuring affordable housing projects in India (i.e. ungrounded) is estimated as Rs.2.78
   Lakh Crore (INR 2.78 Trillion).
- In terms of construction, given that only 3.47 million houses have been constructed, ~7.73 million houses are yet to be constructed. At Rs.6 Lakhs per dwelling unit\* the size of the opportunity is Rs.4.64 Lakh Crore (INR 4.64 Trillion).
- The opportunity extends to creation of trunk infrastructure as well.
- The overall opportunity is not restricted to construction alone, but also extends to allied fields such as financing/lending, construction technologies/housing technologies, consulting etc.

#### Estimated Investment in PPP in Affordable Housing

Assuming that 23% of the investment to come from the private sector, in line with Crisil's estimates, the estimated investment in the current opportunity of Rs.2.78
 Trillion in affordable housing would be Rs.63,949 Crore (INR 639.49 Billion).





- Lack of marketable land parcels within city limits that are suitable for developing affordable housing.
  - Many potential beneficiaries of EWS and LIG housing such as street vendors, people working in retail and hospitality sectors, domestic helps, labourers, autorickshaw drivers etc. earn their livelihood which is typically based on their location within the city and would therefore would like to live in the vicinity of their means of livelihood.
  - However, the cost of land in such core locations would be high and also, large land parcels may not be available in such locations. As a result, many of the
    available land parcels are unsuitable/unviable for undertaking affordable housing, unless relaxation in development norms are provided, which in turn result in
    an additional burden on the choked infrastructure of cities.
  - In cases where suitable land parcels are available, they may not have the commercial potential to provide a livelihood to beneficiaries, resulting in low off-take of such housing. Less than expected off-take results in unsold inventory for the public authority and increases the revenue risk for the private developer.
  - Further, complicating the matters more for the developer and reducing the financial viability of the project to the private partner, bureaucrats tend to erroneously assume PPP as a transaction wherein the private partner not only incurs the costs of development including sometimes investment on trunk infrastructure, but also pays a consideration to the government towards the value of land given/leased under a concession.
- Cumbersome statutory clearance and approval processes
  - Typically, nearly 30-40 clearances are needed for a project and the process takes nearly 2 3 years, thus affecting the gestation period, the project cost and ultimately the financial viability of the project. India is ranked an abysmal 177 out of 183 countries in terms of ease of obtaining construction permits.\*
  - The affordable housing developer is particularly vulnerable to delays in approvals and permissions as the margins are low in affordable housing. The approval risks are not only the major contributor towards pre-operative risks but to the overall financial unviability of the project itself.
- \* Doing Business 2011, World Bank and International Finance Corporation.





- Stringent Development Norms
  - The development norms and building bylaws are usually drafted and enforced by the city municipal administration/Urban Local Body (ULB) level, which have not caught up with the Central/State Government policies related to affordable housing. This incongruence many a time result in hurdles for the developer both in terms of delay in obtaining permits/approvals and/or in availing subsidies/incentives/benefits of GoI schemes
  - Stringent by-laws such as restrictive FAR norms, density norms, set-backs etc. in the core areas of the city make the project unattractive to the developers. Strict zoning and controls result in pushing development to peripheral areas that might not have the requisite trunk infrastructure.
- Lack of trunk infrastructure, social infrastructure and connectivity.
  - Housing (including affordable housing) is a state subject and is typically implemented by a city's municipal corporation or a Urban Local Body (ULB). Many of
    these entities across the country are in precarious financial condition affecting their ability to take up affordable housing projects, associated trunk infrastructure
    and transportation facilities.
  - In all the PPP models for Affordable Housing promulgated by MoHUA the responsibility of providing trunk infrastructure lies with the public partner (government entity). Non-provision or delay in providing trunk infrastructure increases the offtake risk and affects the viability of the project.
  - Lack of social infrastructure including healthcare facilities and educational institutions in the vicinity of the project also affects the offtake of housing units.
  - The non-availability of convenient and frequent public transport connecting the project to commercial hubs/core areas of the city also affects the offtake.





#### Limited participation by large organised real estate players

- Typically, developers launch housing projects in phases as the later phases command a higher price. The same strategy cannot be applied to affordable housing. The best suited model for affordable housing is a working capital model wherein cash receipts fund the construction in profit margins. With the limited capacity of lenders to fund large working capital, the sector needs large players with the financial muscle to implement projects.
- The very nature of affordable housing that requires established large players to enter into the segment, keeps them away. The lack of interest of the private sector in affordable housing is attributable to low-profit margins/low absolute value of returns, project delays, non-availability of suitable land parcels, high sensitivities to changes in input costs, lack of financing, lack of large scale mass housing opportunities and lack of availability of skilled manpower.

#### Construction Financing Issues

Most of the developers in affordable housing are regional players and have small to medium balance sheets size. Earlier, the cost of financing was high which
restricted their bandwidth. But with infrastructure status accorded to affordable housing, the issue was resolved to a large extent. However with the current
credit crunch, developers are still facing difficulties in arranging finance.

#### Escalating Construction Costs

- Affordable housing is vulnerable to increase in costs. Cost of materials such as cement and steel have been gradually increasing. This coupled with non-availability of sand and skilled labour have resulted in a steep increase in the cost of construction.
- Developers have to manage costs while not compromising on the facilities provided or the safety and serviceability of the built-structure over its lifetime. Further, there is very little or no scope for increasing the price of the affordable housing unit.
- Technology is many times portrayed as the solution for keeping the construction cost at manageable levels. However this is not always the case. For example, the aluminium foam technology which is said to reduce the construction time by approximately 25% and thus lower the labour cost, equipment leasing cost etc., is expensive and the benefits can only be derived while building high rise buildings.





- Unaddressed Maintenance
  - In many affordable housing projects on government land, a robust framework for maintenance of the project (post handing over) is missing. This neglect
    ultimately leads to poor maintenance of projects and creation of 'New Urban Slums'. It is therefore necessary that the maintenance aspect is handled at the
    planning stage itself and an institutional mechanism & fund allocation be done towards maintenance of the project.
- Lack of Access to Housing Finance for Beneficiaries
  - Beneficiaries of EWS and LIG housing are low income groups with irregular income and/or informal sources of income and in many cases, with seasonal
    fluctuations in income. They often work in the unorganized sectors, lack documentation such as proofs of identification, address and income etc. needed to
    avail loans and are usually unaware of bank's lending norms, financing options and government schemes such as Credit Linked Subsidy Scheme (CLSS).
  - The housing loans to such beneficiaries are perceived as high risk with uneven repayment patterns and high potential to turn into non-performing assets (NPAs) by the lenders. As a result high interest rates would be charged on housing loans to such beneficiaries. In short, banks' and Housing Finance Companies' (HFCs) risk management practices and cost structures are not aligned to the needs of low income beneficiaries, thus depriving them of a stable roof on their heads.
- The Challenge of Beneficiary Identification
  - Processes used in identification of beneficiaries are not robust. Neither government agencies nor developers or financial institutions are capable of identifying beneficiaries on their own, who can afford a home, make timely payments to lenders and occupy the housing units allotted to them. Many a time beneficiaries fail to relocate to their housing units as the location is not suited for their occupation or is not convenient to the locations that can generate a livelihood for them. The databases of beneficiaries, if available, do not capture all the characteristics of a beneficiary.





#### Capacity Constraints of Implementing Agencies

- Implementing agencies may have insufficient funds to promote affordable housing projects, may not possess adequate knowledge of PPP procurement, may not be exposed to latest and low cost technologies in construction.
- Further MoHUA or the NITI Aayog or the Urban Development departments of states have not drafted/published the Model RFQ, Model RFP and the Model Concession Agreements for PPP in Affordable Housing which could have boosted the confidence of both the public and private sector in taking up affordable housing projects under PPP mode.

#### The Challenge of Beneficiary Identification

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#### Rising Expectations of Beneficiaries

The definition of basic requirements and amenities is ever evolving. Yesteryears' luxuries are today's necessities. Concepts such as smart homes, building
automation etc. have crept into affordable housing. Amenities such as jogging/walking tracks, green spaces, Sewerage Treatment Plants (STPs) etc. are
needed to induce the beneficiaries to relocate. All these trends have further pushed up the cost of developing an affordable housing.





# **PPP Models in Affordable Housing**





### **Overview**

#### PPP Models on Government Land<sup>31</sup>

- Model 1: Government-land Based Subsidized Housing (GLSH)
- Model 2: Mixed Development Cross-subsidized Housing (MDCH)
- Model 3: Annuity Based Subsidized Housing (ABSH)
- Model 4: DBFMT-Annuity cum Capital Grant based Subsidized Housing (AGSH)
- Model 5: Direct Relationship Ownership Housing (DROH)
- Model 6: Direct Relationship Rental Housing (DRRH)

#### PPP Models on Private Land<sup>31</sup>

- Private-land based Subsidized Housing (CLSS Scheme for EWS/LIG/MIG)
- Private-land Based Subsidized Housing (AHP Scheme for EWS)





### **Overview**

#### **Risks and their Persistence**

In a typical BOT/BOOT/BTO project, key risks and their associated periods are illustrated below



#### Applicability of PPP to Affordable Housing

- Affordable Housing Projects are intrinsically different from other PPP Projects. Private developers do not linger on long after the completion of construction
  and handing over/sale of the dwelling units. As such, many of the various PPP models may not be suitable for developing affordable housing projects. Those
  suitable, have to be tweaked to become relevant to the sector.
- In order to encourage PPP in Affordable Housing, many states such as Rajasthan, Gujarat, Odisha, Andhra Pradesh, Madhya Pradesh etc. came up with their own PPP policies especially for slum redevelopment, but could not achieve the desired results. The Ministry of Housing & Urban Affairs (MoHUA), of the Government of India, in order to address the constraints inherent in the PPP policies of the states and to broaden the framework for PPPs in Affordable Housing, came up with the Public Private Partnership Models for Affordable Housing.





# Model 1: GLSH

### **Government-land Based Subsidized Housing**

Government Entity	Private Sector	Beneficiaries	Risk	Govt. Entity	Private	Beneficiary
<ul> <li>Provides land (the subsidy from the state)</li> </ul>	<ul> <li>Designs, builds and finances the project</li> </ul>	<ul> <li>Pay to Govt. Entity EMIs or a</li> </ul>	Land	y		
<ul> <li>Establishes project parameters (technical specifications, land</li> </ul>	(constructs the housing units of predetermined	predetermined lump- sum amount upon handover of housing	Design	✓	✓	
area, no. of housing	standards, at a pre- determined cost and	unit Maintain the	Construction		✓	
construction time)	within a predetermined time)	common areas,	Financing		×	
<ul> <li>Identifies beneficiaries</li> <li>Pays to private</li> </ul>	<ul> <li>Transfers completed housing units to the</li> </ul>	ted utilities and he infrastructure within	Trunk-Infra	~		
developer based on milestones achieved	Govt. entity	the premises	Off-take	✓	✓	
<ul> <li>Allots (transfers) housing units to hopeficieries</li> </ul>			Cost recovery	~		
<ul> <li>Collects payments from boneficiarize towards</li> </ul>			Maintenance			✓
Denencianes lowards						

Design, Build and Finance (DBF) Structure with Bid Parameter = Unit Cost

Credit Risk



cost recovery



 $\checkmark$ 

**Financial** 

Institution

# Model 1: GLSH

### **Government-land Based Subsidized Housing (GLSH)**

- The model is comparable to turnkey (EPC) basis of procuring a project.
- As the private developer is responsible and held accountable for designing, building and financing of the project and delivering the project at a pre-determined cost and within a pre-determined time. The responsibility of obtaining approvals by virtue of being responsible for designing the project may also rest with the developer which if delayed, severely affects the financial viability of the project for the developer.
- The milestone based payment to the private developer mitigates the construction risk associated with the project to a large extent from the public authority's perspective. However, the public authority should be completely familiar with the designs & technologies used/proposed as well as the project documentation in order to step-in in event of the private developer failing to deliver the project.
- There is no involvement of private developer or the public authority in the maintenance of the units after the transfer of units to allottees, which is a significant drawback of the model as the risk of project may result in a new urban slum persists.
- The model requires the allottees to make payment of a pre-determined amount for the cost of the housing unit at the time of handover or pay a predetermined equated monthly instalments for a predetermined period of time. Given that the beneficiaries have limited access to housing finance in India, the public authority may adopt the model if it has significant access to finances for making payments to the private developer.
- On one hand the model may not be attractive to the private developers given the payment risk that they are required to assume under the model, and on the other if the public authority has access to finances the model would be the most attractive to private developers. Developers would prefer to complete the project on time and be compensated on time for their efforts. From the private developer's perspective, the model is independent of cyclical (boom & bust) nature of real estate.





# Model 2: MDCH

Gover

### Mixed Development Cross-subsidized Housing

Government Entity	Private Sector	Beneficiaries	F
<ul> <li>Provides land on lease (lease co-terminus with agreement period &amp; nominal lease rental)</li> <li>Establishes project parameters (technical specifications, land area, no. of housing units and their sizes, construction time)</li> <li>Identifies beneficiaries</li> <li>Allots (transfers) housing units to beneficiaries</li> <li>Collects payments from beneficiaries towards cost recovery</li> </ul>	<ul> <li>Designs, builds and finances the project (constructs the housing units of predetermined standards, at a predetermined cost and within a predetermined time)</li> <li>Transfers completed housing units to the Govt. entity</li> <li>Receives concession for construction of highend housing/ commercial development on a potion of the land or</li> </ul>	<ul> <li>Pay to Govt. Entity EMIs or a predetermined lump- sum amount upon handover of housing unit</li> <li>Maintain the common areas, public spaces, utilities and infrastructure within the premises</li> </ul>	

higher FAR/TDR

Risk	Govt. Entity	Private Developer	Beneficiary	Financial Institution
Land	✓			
Design		~		
Construction		✓		
Financing		✓		
Trunk-Infra	~			
Off-take	~	✓		
Cost recovery		✓		
Maintenance			✓	
Credit Risk				✓

Bid Parameter = No. of Affordable Housing Units to be delivered at Fixed Cost per Unit





# Model 2: MDCH

### **Mixed Development Cross-subsidized Housing**

- The private developer could even be allowed to utilize the entire land made available by government for high-end housing/commercial development in exchange for providing affordable housing at another location, on land to be arranged by the private developer, provided that the characteristics of the other land are similar as that provided by the State
- Cross subsidizing affordable housing by high-end housing. In addition, subsidy is also provide in the form of land by the government.
- Govt. may also provide fast track clearances for undertaking the development of high-end housing.
- Cross subsidizing social housing (EWS/LIG units) is a popular method adopted across geographies and many successful PPPs in Affordable Housing have adopted this strategy.
- The key consideration of the public authority under this model should be the number of affordable housing units to be built and not monetization of government land. Cross-monetization projects, may undergo strict public scrutiny and therefore the public authority may commission/undertake a value for money analysis before undertaking the project in PPP mode.
- The model can be adopted in land parcels with commercial potential or in metro-cities where TDRs are an attractive proposition. The model usually requires changes to permissible FAR, height restrictions and other development regulations for a project to become attractive/financially viable to the private development.
- Developers, in case of land parcels with commercial potential, have an upside built-in in the cross-subsidization model that compensates them for the risks they
  assume under the model. The model is best suited to be adopted during the boom period of a real estate cycle.





# Model 3: ABSH

### **Annuity-based Subsidized Housing**

Government Entity	Private Sector	Beneficiaries
<ul> <li>Provides land on long term lease (subsidy from the state)</li> <li>Establishes project parameters (technical specifications, land area, no. of housing units and their sizes, construction time)</li> <li>Identifies beneficiaries</li> <li>Pays annuity (up to 10 years) to private developer</li> <li>Allots (transfers) housing units to beneficiaries</li> <li>Collects payments from beneficiaries towards cost recovery</li> </ul>	<ul> <li>Designs, builds and finances the project (constructs the housing units of predetermined standards, at a predetermined cost and within a predetermined time)</li> <li>Maintains the housing units (medium to long-term maintenance of the housing units during the annuity period – upto 10 years)</li> <li>Transfers completed housing units to the Govt. entity</li> </ul>	<ul> <li>Pay to Govt. Entity EMIs or a predetermined lump- sum amount upon handover of housing unit</li> </ul>

Risk	Govt. Entity	Private Developer	Beneficiary	Financial Institution
Land	✓			
Design		~		
Construction		~		
Financing		~		
Trunk-Infra	~			
Off-take	~	~		
Cost recovery	~	~		
Maintenance		~		
Credit Risk				~

Bid Parameter = Annuity sought





## Model 3: ABSH

### **Annuity-based Subsidized Housing**

#### This Model is also called as DBFMT Annuity Model.

- Annuity comprises of
  - Construction cost
  - · Interest on loan availed by Developer
  - Maintenance cost over the annuity period and payment towards the reimbursement of any other overhead expenses
- The Public authority shall fix the NPV period with interest on annuity to be calculated at the State Bank of India's (SBI) highest Marginal Cost of Lending Rate (MCLR).
- The model guarantees returns for the private developer.
- Maintenance arrangement is incorporated in the model as private developer is responsible for maintenance during the annuity period and receives compensation for it as well.
- The model helps the authority in better balancing of cash in flows in the form of payments by beneficiaries with cash outflows i.e. annuity payments.
- However, the limited upside in returns from the project and the maintenance responsibility (which is not their core activity) may result in developers not warming up to the arrangement.
- Given the limited upside and guaranteed returns, the model is suitable during recession in real estate.





## Model 4: AGSH

### DBFMT-Annuity cum Capital Grant based Subsidized Housing

Government Entity	Private Sector	Beneficiaries	Risk	Govt. Entity	Private Developer	Beneficiary	Financial Institution
<ul> <li>Provides land on long term lease</li> </ul>	<ul> <li>Designs, builds and finances the project (constructs housing</li> </ul>	s, builds and Pay to Govt. Entity s the project EMIs or a pre- ucts housing determined lump-sum	Land	✓			
<ul> <li>Establishes project</li> </ul>			Design		✓		
parameters (technical	units of pre- determined	amount upon handover of housing	Construction		√		
area, no. of housing	standards, at a pre-	unit	Financing	✓	✓		
units & their sizes,	determined cost and within a pre-		Trunk-Infra	✓			
<ul> <li>Identifies beneficiaries</li> </ul>	determined time)	ıg	Off-take	✓	✓		
<ul> <li>Pays capital grant (40%)</li> </ul>	<ul> <li>Maintains the housing units (modium to</li> </ul>		Cost recovery	✓	✓		
<ul> <li>– 50% of project cost)</li> </ul>	long-term		Maintenance		✓		
period as milestone	maintenance of the housing units during		ousing units during			✓	
<ul> <li>Pays annuity (upto 10 years) to private developer</li> <li>Allots (transfers) housing units to beneficiaries</li> </ul>	<ul> <li>the annuity period – upto 10 years)</li> <li>Transfers completed housing units to the Govt. entity</li> </ul>		<ul> <li>Bid Parameter:</li> <li>Lowest Annuity a number of hous construction period</li> </ul>	amount, provi ing units to d.	ded that capital gr be provided, are OR	ant is fixed a-priori, ea, technical specs	with and

 Collects payments from beneficiaries towards cost recovery



• Lowest Capital Grant required, provided that Annuity amount is fixed a-priori.



## Model 4: AGSH

### **DBFMT-Annuity cum Capital Grant based Subsidized Housing**

- The Public authority shall fix the NPV period with interest on annuity to be calculated at the State Bank of India's (SBI) highest Marginal Cost of Lending Rate (MCLR).
- The model is a variant of the Hybrid Annuity Model (HAM).
- The model incorporates a maintenance mechanism in it. Private developer is responsible for maintenance during the period and is compensated for the activity.
- The capital grant allows the developer to recover a portion of their investment after the completion of construction. This along with the guaranteed returns is expected to attract the private developers towards the project.
- The public authority, to some extant, can match its receivables and payables during the maintenance period. However, the authority should have access to sufficient finances to pay the capital grant to the developer for it to take up a project under this model.





## Model 5: DROH

### **Direct Relationship Ownership Housing**

Government Entity	Private Sector	Beneficiaries	
<ul> <li>Provides land on long term lease</li> <li>Establishes project parameters (technical specifications, land area, no. of housing units and their sizes, construction time)</li> <li>Sets eligibility of beneficiaries</li> </ul>	<ul> <li>Designs, builds and finances the project (constructs the housing units of predetermined standards, at a predetermined cost and within a pre-determined time)</li> <li>Maintains the housing units (medium to longterm)</li> </ul>	<ul> <li>Pay to the Developer (Private Entity) EMIs or a pre- determined lump- sum amount upon handover of housing unit</li> </ul>	
	<ul> <li>Identifies beneficiaries &amp; Transfers completed housing units to the beneficiaries through the Govt. Entity</li> <li>Collects payments from beneficiaries towards cost recovery</li> </ul>		

Risk	Govt. Entity	Private Developer	Beneficiary	Financial Institution
Land	✓			
Design		✓		
Construction		✓		
Financing		✓		
Trunk-Infra	~			
Off-take	~	✓		
Cost recovery		✓	✓	
Maintenance		✓		
Credit Risk				✓

**Bid Parameter:** per-unit-cost in the form of the monthly EMI that the Developer will be allowed to recover from the beneficiaries





# Model 5: DROH

### **Direct Relationship Ownership Housing**

- The model enforces a direct financial relationship between the developer and beneficiary. The beneficiary may make a lump-sum payment at the time of transfer of housing unit or in the form of equated monthly instalment (EMI) for a fixed period of time, directly. In other words, the risk of cost recovery is borne by the developer.
- The developer is also responsible for the maintenance of the dwelling units for a pre-determined period which is typically the same as the cost recovery period.
- The model aligns developer's interests with the success of the project.
- However, this model entails the highest level of risk transfer to the private sector. Given that only EWS and LIG housing can be undertaken under the model, the upside for the developer is very limited. Hence, from a developer's perspective the model does not adequately compensate for the risks associated with the project.
- Developers who specialize in social housing (EWS and LIG housing) and have tie-ups with banks for project finance as well as housing finance can undertake projects under this model.





### Model 6: DRRH

### **Direct Relationship Rental Housing**

Government Entity	Private Sector	Beneficiaries
<ul> <li>Provides land on long term lease</li> <li>Establishes project parameters (technical specifications, land area, no. of housing units and their sizes, construction time)</li> <li>Sets eligibility of beneficiaries</li> </ul>	<ul> <li>Designs, builds and finances the project (constructs the housing units of predetermined standards, at a predetermined cost and within a pre-determined time)</li> <li>Maintains the housing units (medium to long-term)</li> </ul>	<ul> <li>Pay to the Developer (I Entity) EMIs pre-determin lump-sum an upon hando housing unit</li> </ul>

- Identifies beneficiaries & Transfers completed housing units to the beneficiaries through the Govt. Entity
- Collects payments from beneficiaries towards cost recovery

Private or a ined amount over of

Risk	Govt. Entity	Private Developer	Beneficiary	Financial Institution
Land	✓			
Design		✓		
Construction		✓		
Financing		✓		
Trunk-Infra	✓			
Off-take	✓	✓		
Cost recovery		✓	✓	
Maintenance		✓		
Credit Risk				✓

Bid Parameter: per-unit-cost in the form of the monthly EMI that the Developer will be allowed to recover from the beneficiaries





## Model 6: DRRH

### **Direct Relationship Rental Housing**

- This model suffers from all the shortcomings of the previous model 5 (DROH).
- While in the case of model 5 (DROH) the ownership was transferred to beneficiaries at the end of cost recovery period, in the case of this model the ownership of the asset/dwelling unit rests with the developer completely aligning its interests with the project.
- Developers have the right to evict tenants for non-payment of rent.
- Locations with significant migrant populations are suitable for taking up projects under the model.





# **Comparative Analysis**

Parameter	Model 1 (GLSH)	Model 2 (MDCH)	Model 3 (ABSH)	Model 4 (AGSH)	Model 5 (DROH)	Model 6 (DRRH)
Design & Construction	Developer	Developer	Developer	Developer	Developer	Developer
Maintenance	Beneficiaries	Beneficiaries	Developer	Developer	Developer	Developer
Distribution	Developer to Govt. Entity	Developer to Govt. Entity	Developer to Govt. Entity	Developer to Govt. Entity	Developer to Beneficiaries	Developer to Beneficiaries
Development Mix	Affordable Housing	Affordable Housing + High-end housing/ commercial development	Affordable Housing	Affordable Housing	Affordable Housing	Affordable Housing
Trunk Infra by	Govt. Entity	Govt. Entity	Govt. Entity	Govt. Entity	Govt. Entity	Govt. Entity
Land provision	Govt. Entity	Govt. Entity	Govt. Entity	Govt. Entity	Govt. Entity	Govt. Entity
Lease period	30 to 99 yrs.	30 to 99 yrs.	30 to 99 yrs.	30 to 99 yrs.	30 to 99 yrs.	30 to 99 yrs.
Contract period	2 to 4 yrs.	2 to 4 yrs.	15 to 20 yrs.	15 to 20 yrs.	15 to 20 yrs.	15 to 20 yrs.
Bid Parameter	Per unit cost (lowest lump-sum amount)	No. of affordable units to be provided	Per unit cost (lowest annuity payment)	Lowest Annuity amount or lowest upfront grant	Per unit cost (lowest EMI or lowest lump-sum amount)	Per unit cost (lowest rent)





# **Comparative Analysis**

Parameter	Model 1 (GLSH)	Model 2 (MDCH)	Model 3 (ABSH)	Model 4 (AGSH)	Model 5 (DROH)	Model 6 (DRRH)
Off-take responsibility	Govt. Entity	Govt. Entity	Govt. Entity	Govt. Entity	Private Developer	Private Developer
Off-take related performance bonus	10%-15% linked to no. of units sold	10%-15% linked to no. of units sold	10%-15% linked to no. of units sold	10%-15% linked to no. of units sold	Not Applicable	Not Applicable
Financing	Private Developer	Private Developer	Private Developer	Private Developer & Govt. Entity	Private Developer	Private Developer
Subsidy	Land	Land	Land	Land	Land	Land
Cross subsidy	Not Applicable	Land for High end housing	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Cost recovery by Developer	Govt. entity pays lump-sum amount on completion	Revenue generated from high-end housing	Govt. entity pays long term annuity payments on completion	Govt. entity pays upfront grant & long term annuity payments on completion	Beneficiaries pay lump-sum amount or EMIs	Beneficiaries pay monthly rent
Beneficiary Eligibility	Govt. Entity	Govt. Entity	Govt. Entity	Govt. Entity	Govt. Entity	Govt. Entity





F**ORD** FOUNDATION

### Model 1 – Taking advantage of Credit Linked Subsidy Scheme (CLSS)

Risk	Govt. Entity	Private Developer	Beneficiary	Financial Institution
Land		✓		
Design		✓		
Construction		✓		
Financing		✓		
Trunk-Infra	✓	✓		
Off-take	<ul> <li>✓</li> </ul>	✓		
Cost recovery		✓		
Maintenance			~	
Credit Risk				✓





### Model 1 – Taking advantage of Credit Linked Subsidy Scheme (CLSS)

- Any private land –owner possessing land parcels suitable for affordable housing can take up a project under this model.
- EWS/LIG/MIG units are eligible for CLSS benefits under the model
- Beneficiaries of Economically Weaker section (EWS) and Low Income Group (LIG) seeking housing loans from Banks, Housing Finance Companies etc. would be eligible for an interest subsidy at the rate of 6.5% for a tenure of 20 years or during tenure of loan whichever is lower.
- Interest subsidy will be credited upfront to the loan account of beneficiaries through Primary Lending Institutions (PLI) resulting in reduced effective housing loan and EMI. The Net Present Value (NPV) of the interest subsidy will be calculated at a discount rate of 9%.
- For extending CLSS to MIG, an interest subsidy of 4.00% & 3.00% have been extended to MIG I category (defined as having an annual household income of INR 12,00,000) and MIG II category (defined as having an annual household income of INR 18,00,000) respectively for tenure of 20 years or during tenure of loan whichever is lower.
- The credit-linked subsidy will be available only for loan amounts up to Rs.6 lakhs for EWS/LIG, Rs.9 lakhs for MIG I and Rs.12 lakhs for MIG II.
- The minimum carpet area of houses being constructed under this component should be up to 30 sq.m. for EWS, 60 sq.m. for LIG, 90 sq.m. for MIG I and 120 sq.m. for MIG II in order to avail of this credit linked subsidy
- The credit-linked subsidy will be available only for loan amounts up to Rs.6 lakhs for EWS/LIG, Rs.9 lakhs for MIG I and Rs.12 lakhs for MIG II. As a result the private developer may not obtain the required return on the land used for affordable housing, restricting the usage of Model A to periphery of the cities where land cost is less compared to commercial hubs and central locations of the city.
- Further, neither the authority nor the developer is responsible for the maintenance of affordable housing units and blocks constructed under the Model. As a result there is a risk of neglect and the project resulting in poor maintenance and ultimately resulting in a new urban slum.
- Trunk infrastructure is to be provided by the authority. Non-provision or delay in providing the same will result in either low off-take or the developer bearing the cost of trunk infrastructure, thus resulting in the project becoming unviable for the developer.





Model 2 – Private Land Based Models under AHP scheme

Government Entity	Private Sector	Beneficiaries
<ul> <li>Fixes cost of dwelling unit for EWS housing.</li> <li>Establishes project parameters (technical specifications, land area, no. of housing units and their sizes, construction time)</li> <li>Establishes eligibility of Beneficiaries &amp; Identifies them.</li> <li>Provides Trunk Infra</li> <li>Grants subsidies, exemptions &amp; concessions (such as State subsidy, Central grant of Rs.1.5 Lakhs per EWS unit, stamp duty exemption, EDC/IDC exemption, higher FAR, TDR, single window clearance, Taxation benefits under Section 80 IBA of the Income Tax Act 1961</li> </ul>	<ul> <li>Provides land</li> <li>Designs, builds &amp; finances the project (constructs the housing units of predetermined standards, at a pre- determined cost &amp; within a pre- determined time)</li> <li>Fixes cost of dwelling unit for LIG &amp; MIG housing.</li> <li>Transfers housing stock upon completion to beneficiaries.</li> </ul>	<ul> <li>Pay to the Developer (Private Entity) EMIs or a pre- determined lump-sum amount upon handover of housing unit.</li> <li>Maintains the housing units</li> </ul>

Risk	Govt. Entity	Private Developer	Beneficiary	Financial Institution
Land		✓		
Design		✓		
Construction		✓		
Financing		✓		
Trunk-Infra	✓	✓		
Off-take	×	✓		
Cost recovery		$\checkmark$		
Maintenance			✓	
Credit Risk				✓





### Model 2 – Private Land Based Models under AHP scheme

- Private developer may cross-subsidize EWS units with LIG or MIG units. Developers are eligible to fix prices of LIG and MIG units under this model (EWS units' price is fixed by the State agency).
- Central assistance of Rs.1.5 Lakh per EWS house is available to the private developer.
- States/UTs can explore alternate institutional arrangements such as JVs/SPVs/BoT and its variants etc. under the model.
- The public authority shall fix the cost of the dwelling unit. However, the responsibility and risk for cost recovery rests on the private developer. The private sector may not be equipped or unwilling to bear this revenue risk.
- Even though cross-subsidization of EWS housing by LIG or MIG units is allowed, the possibility of the same is limited as LIG and MIG also come under Affordable Housing.
- Neither the public authority nor the private developer is involved in the maintenance of the project. Therefore there is a possibility of neglect or poor maintenance.





Model 2 – Private Land Based Models under AHP scheme



\*\* for Model B – Private land Based Subsidized Housing (AHP Scheme for AWS), the infrastructure status benefit under Section 80 IBA of IT Act 1961 will be applicable only if the project has 50% of FAR/FSI dedicated to dwelling units of min. 60 sq.m. carpet area. Therefore, apart from 35% of houses for EWS, the project would be required to construct remaining % of FAR in either EWS/LIG category to qualify for the above benefits. For such projects, a combination of Model A and B can also be worked out.

\* In the online process of building plan sanctioning, an option may be created for the developer to get single window clearance and other incentives, through automatic route as prescribed in the PMAY guidelines..





# **Alternative Approaches**





# Swiss Challenge / Modified Swiss Challenge

The Swiss Challenge Method is a private sector-initiated procurement method, where a private developer makes an unsolicited public infrastructure project proposal to the government.<sup>32</sup> Once approved, the government then seeks counter proposals against the original proposal and chooses the best amongst all options (including the original project proposal).<sup>33</sup>

Depending on the adoption of Swiss Challenge Method in the state, a public authority can explore the Swiss Challenge method or a variation of it, for procuring Affordable Housing projects on Govt. land.

For example, consider a hypothetical situation wherein a public authority is considering adopting a Swiss Challenge Method for procuring a project on government land in a smart city. Typically Swiss Challenge policies across states emphasize on innovativeness of a proposal. As such, the conventional models may be difficult to apply directly. The authority may consider different criteria under innovation, say for example smart homes/building automation, design aesthetics or construction technology etc. In this case, the authority may choose to adopt the modified Swiss Challenge Method (described in an earlier section) and may choose to finally tender out in a model similar to DROH (Direct Relationship Ownership Housing).

#### Indian states that have implemented the Swiss Challenge Model



Source: IKIGAI Law





# **Asset Recycling**

The public authority if it faces off-take related challenges in the projects constructed by it on Government land under EPC/Item Rate contract etc. can consider Asset Recycling, by clubbing the concept with Rental Housing. This way, while the project does not swerve away from the objective of Housing For All, it generates finances for undertaking Affordable Housing projects elsewhere.

For example, consider a hypothetical situation wherein a public authority has constructed an affordable housing project using its own funds but the project has very low off-take.

The authority may consider monetizing the project and may use a model similar to DRRH (Direct Relationship Rental Housing) with the difference being that the private partner is free from design and construction risks.

Risk	Govt. Entity	Private Developer	Beneficiary	Financial Institution
Land	✓			
Design	✓			
Construction	✓			
Financing		✓		
Trunk-Infra	✓			
Off-take	✓	✓		
Cost recovery		✓	✓	
Maintenance		✓		





# International Case Studies





Country	THE NETHERLANDS <sup>34</sup>	ALC: NO.
City	Amersfoort	
	Vathorst was an urban extension of the city of Amersfoort (near Utrecht) that had a population of around 140,000 in 1998. Vathorst was part of the VINEX programme. Construction began in 2002 with an aim of developing 11,000 homes for 30,000 residents along with shopping, business and community facilities by 2023.	
Implementation Strategy	Public-Private Partnership using JV	
Policy	Dutch VINEX policy and its Impact	
	Between 1995 to 2005, 450,000 homes were constructed in towns with over 100,000 population. <b>The selected locations were accessible by public transport – a key feature of the policy</b> . The extension of the towns had an average of 2,000 new houses with some locations of the size 10,000 new homes.	
	The Central government provided subsidies to cover land acquisition, decontamination and public transport and infrastructure costs.	
	VINEX was replaced in 2006 by the Nota Ruimte - a more decentralised policy.	
Financing & Structure	A 50:50 JV, called The Vathorst Development Company (OBV), between the local authority and the private sector participants comprising of private land owners and developers, was set up.	8
	OBV borrowed 250 million euros from the Dutch municipal bank BNG to finance the project at an interest rate of 5% with a repayment period of 15 years. The debt was planned to be serviced by the proceeds from land sales.	
Development Strategy	The company funded the railway company to open a station several years before the population justified it, and it underwrote an entrepreneur to open a restaurant.	A Stoken
	Houses were developed in several price categories for different income-groups, thus not only promoting social integration but also <b>cross-subsidising</b> the cost of the social housing.	1
	A shopping centre and a business park that are also part of the project. On an average, 600-700 new homes were added every year.	
Social Housing	30% of the housing in Vathorst was allocated as affordable either through subsidised renting or housing for sale.	





WRI INDIA — ROSS CENTER


Country	FRANCE <sup>34</sup>
City	Montpellier, one of the largest cities in France.
Implementation Strategy	Public-Private Partnership SPVs
Policy	<b>1/3</b> <sup>rd</sup> of any new residential development is <b>sold off</b> , <b>1/3</b> <sup>rd</sup> <b>is subsidized affordable housing</b> with the condition that subsidy is repaid during resale and <b>1/3</b> <sup>rd</sup> <b>is developed as social housing</b> . This arrangement creates on an average 2,500 houses per year in the city.
Financing & Structure	The SPV – a private development company is owned largely by the municipality. The state investment bank Caisse des Depots holds a 15% share in the company. Each project is subject to vetting by Caisse des Depots which leads to commercial banks funding the projects.
Development Strategy	SERM, a SPV, for example, employs a strategy involving primarily working within development areas called ZAC's (Zones d'Amenagement Concerte) set by the municipality where extra powers are available to acquire land parcels. <b>The city follows</b> " <b>patient</b> " acquisition of land over 30 years as a result of which, many of the ZACs are in central locations. The development policy has promoted harmony as well as led to market sale houses
	cross-subsidising the cost of the social housing.
Social Housing	1/3 <sup>rd</sup> of all new developments









Country	BAHRAIN	
Authority	Ministry of Housing (MoH) of the Kingdom of Bahrain	
Implementation Strategy	Public-Private Partnership (Design-Build-Finance-Operate)	
Private Developer	A consortium led by Naseej B.S.C (c), a Bahrain based real estate and infrastructure development company. Naseej incorpoated a SPV named Sharaka for Housing Projects BSC) for Designing, Constructing, Financing and Operating the project. Construction began in June 2014 and was completed at the end of September 2015.	
	Source: Mott Macdonald's website	
Location	Al Madina Al Shamalia (reclaimed islands also known as North Bahrain New Town) and Al Lawzi.	
Concession	5 year concession period. Agreement signed on January 2, 2012	
The Project	Project cost is Bahraini Dinar 163 million (USD 450 Million). The project comprises of 2,817 homes (2,450 social housing units and 367 affordable homes).	
	Source: Looking ahead – Annual Report 2015, Ministry of Housing, Kingdom of Bahrain.	
Policy	Mazaya – a social housing policy developed by the Government of Bahrain in 2002, in collaboration with the United Nations Human Settlements Program (UN-Habitat). This policy enable Bahrain's citizens to choose a housing area and from a selection of types of housing units, with housing finance provided up to Bahraini Dinar 81,000 (\$215,000) by banks and guaranteed by the government. EMIs do not exceed 25% of monthly income of the home buyers. The government pays the shortfall between the actual EMI and the EMI paid by the beneficiary.	
Financing & Structure	Naseej achieved financial close for the project with Ithmaar Bank. 165 affordable <b>villas and townhouses</b> were planned to be offered for sale on the open market, priced between to Bahraini Dinar 96,000 (\$254,400) and to Bahraini Dinar 109,000 (\$288,850). 202 affordable <b>apartment units</b> priced between to Bahraini Dinar 44,000 (\$116,600) and to Bahraini Dinar 84,000 (\$222,600), The above affordable housing units would then <b>cross-subsidise</b> the remaining 2,450 <b>social housing units</b> that were to be distributed by the Ministry of Housing. Source: Bahrain plans construction of social and affordable housing, Oxford Business Group.	
Development Strategy	<ul> <li>The new affordable housing stock was released in 2014 in four tiers at 90-day intervals.</li> <li>The first tier was available to Bahrainis on the Eskan Bank housing list,</li> <li>The second was limited to Bahrainis earning less than to Bahraini Dinar 2000 (\$5300) a month</li> <li>The third to Bahrainis earning more than to Bahraini Dinar 2000 (\$5300) a month</li> <li>Expatriates were then allowed to buy property in the final tier, but had to pay an extra to Bahraini Dinar 100 (\$260) per sq metre of built-up area.</li> <li>Source: Public-private partnerships help address Bahrain's nationwide social housing shortage – Oxford Business Group.</li> </ul>	
Social Housing	2,450 housing units	





## Indian Case Studies





Bhubaneswar Affordable Housing <sup>35</sup> One of the first Public Private Partnership (PPP) for Affordable Housing to be structured under "Real Estate Regulatory Authority Act" (RERA) <sup>35</sup>		
City	Bhubaneshwar, the capital of Odisha state in India.	
Implementation Strategy	Public-Private Partnership.	
	Cross Subsidizing Affordable Housing Units by Developer Units.	
Authority	Bhubaneshwar Development Authority (BDA)	
Transaction Advisor	IFC (International Finance Corporation)	
Private developer	Paramitra Smart Infra Private Limited (a SPV incorporated by Consortium of Shyam Indus Power Solutions Private Limited and GSBA Builders Private	
(Concessionaire)	The project was ewarded based on the lowest subsidy sought	
Location & Site	20.21 acres government owned land in Bhubaneshwar, the capital of Odisha state in India.	
The Project	The Developer will design, finance, construct and handback 2,600 affordable housing units on 13.71 acres free of cost to Bhubaneshwar Development Authority (BDA) over a period of 36 months, with an interim requirement to handback at least 800 units within 24 months. In lieu, the Concessionaire will be given free hold rights on the balance of 6.5 acres, with the transfer of this land also being done in two phases in proportion to completion of affordable housing units.	
Policy	Bhubaneshwar Development Authority (BDA) formulated the revised "Policy on Housing for All in Urban Areas" in 2015 by plugging the gaps in its policy on the basis of IFC's advice.	
	The project was the country's first ever Public Private Partnership (PPP) for Affordable Housing as well as the first real estate PPPs to be structured under the "Real Estate Regulatory Authority Act" (RERA), which was enacted in 2016 to regulate the real estate market in India.	
Financing & Structure	The Concessionaire was provided the right to construct a <b>residential/commercial project on developer component of the land</b> , i.e. 6.50 acres, as well as free hold rights on the same land to recover its investments.	
Development Strategy	The Developer is required to complete & handback at least 800 units within 24 months and in total, construct & handback 2,600 affordable housing units within a period of 36 months.	
	The transfer of the developer component i.e. 6.5 acres, is linked to the above milestones and will be done in proportion to completion of affordable housing units.	
Maintenance Arrangement	The developer is required to address any structural deficiencies in the affordable housing units identified within 5 years from the date of handback.	
	<ul> <li>The developer shall create a maintenance account with \$500,000, interest income from which would be used later to undertake ongoing maintenance of the affordable housing units.</li> </ul>	
Social Housing	2,600 units to be constructed and handed back to the public authority, free of cost, within a 36 months period.	





Shukhobrishti (http://www.shukhobrishti.com) <sup>36</sup> India's Largest Mass Housing Project		
City	New Town, Kolkata;	
Implementation Strategy	Public Private-Partnership, with SPV formation by successful bidder.	
Authority	West Bengal Housing Infrastructure Development Company Limited (WBHIDCO)	
Private developer	Bengal Shapoorji Housing Development Private Limited, a SPV floated by Shapoorji Pallonji and Company Private Limited	
Location & Site	The project is located in Rajarhat - the 'New Town' on the north-eastern fringes of Kolkata, which is being developed to international standards with its own central business district comprising of numerous IT parks, hospitals, schools, hotels, shopping malls and international convention center etc.	
	The Shukhobrishti project is being developed on 150 acres of land in the Action Area-III in the New Town of Kolkata.	
	The Shukhobrishti project comprises of 20,000 apartments built exclusively for low and middle income groups. Once completed, the project will be home to nearly 1,00,000 people. The project comprises of LIG and MIG housing, as below:	
The Project	<ul> <li>Spandan (LIG) - 1 BHK (Carpet/Lockable Area of approx.320sq.ft.)</li> </ul>	
	<ul> <li>Sparsh (MIG-L) - 2 BHK (Carpet/Lockable Area of approx.480 sq.ft.)</li> </ul>	
	<ul> <li>Spriha (UMIG) - 3 BHK (Carpet/Lockable Area of approx.690 sq.ft.)</li> </ul>	
Financing & Structure	<ul> <li>Home financing by HFCs.</li> </ul>	
	<ul> <li>Micro-Housing Finance Company (MHFC), Kolkata provided financial assistance to the eligible allotees in LIG segment.</li> </ul>	
	The pricing of the units was kept initially at Rs.3 Lakh for LIG units and Rs.6 Lakhs for MIG-L units. Subsequently, with the rising costs of construction, the prices were increased to Rs.4.5 and Rs.9 Lakhs respectively. In recent years LIG units were offered at Rs.6 Lakhs and UMIG units at Rs.15 Lakhs.	
	<ul> <li>The pricing is linked to the household income ceiling/limit of household income set at Rs.15,000 per month initially. The cost of LIG housing unit of Rs.3 Lakh which can be financed at a monthly instalment of Rs.2,500 which is less than 30% of household income. Similar approach was adopted for MIG housing as well.</li> </ul>	
Policy	Essentially, the project is a township and is an integral part of <b>development of New Town</b> in Kolkata comprising of business, educational and healthcare facilities.	
Development Strategy	<ul> <li>The project includes an array of facilities including two primary schools, health centre, shopping arcade, provision stores, community centres, children's play area, amphitheatre, entertainment and two clubs.</li> </ul>	
	<ul> <li>The project is being developed in two phases. Currently over 9,000 apartments have been constructed and around 8500 apartments are handed over to the allottees. The second phase is currently under execution.</li> </ul>	
Social Housing	<ul> <li>10,444 LIG apartments with carpet area of 320sq.ft.,</li> </ul>	
	<ul> <li>3,840 MIG apartments of 480sq.ft.</li> </ul>	
	<ul> <li>Balance 5,716 apartments having an area of 690sq.ft.</li> </ul>	





## **Best Practices**





## **Site Selection and Acquisition**

- A key contributor to the success of the Dutch VINEX policy, discussed earlier in a separate section, was that the selected locations were accessible by public transport.<sup>34</sup>
- In Columbia, the first macroproyectos (small city) named Ciudad Verde in Soacha, near Bogotá essentially a social housing project has integrated housing with transportation link connecting residents to Bogotá via the TransMilenio bus rapid transit system.<sup>37</sup>
- In Bilbao, Spain, brownfield land of shipyards and ports that were relocated as a part of new development model or industrial strategy, were reused to build housing of which 50% were earmarked for social housing.<sup>34</sup>

#### Dos

- Ensure good connectivity to the site or select sites that have good connectivity, thereby reducing off-take risks.
- Undertake integrated development of transportation and affordable housing
- Consider using centrally located government owned land parcels for developing affordable housing.

#### Don'ts

- Proposing affordable housing projects without acquiring ownership of the land parcel and thereby avoiding cost over-runs to the developer due to delays in land acquisition or preliminary costs ending up as sunk costs for the developer due to land being not acquired.
- Selecting site without review of land records, encumbrances etc. & the resolution of related issues and without conducting necessary surveys (topographical, soil testing and other geo-technical investigations).





## **Permits & Clearances**

As discussed in an earlier section, obtaining permits and clearances is a major challenge faced by the private sector in any real estate project including affordable housing projects. Further, the financial viability of an affordable housing project is very sensitive to delays. Many states and authorities in India have adopted practices such as Single-Window system or digitization of the approval system to combat the delays in approving projects. Some such examples are:

- The Greater Hyderabad Municipal Corporation introduced building permission under the `Green Channel' in 2010 to grant building plan approvals, which is implemented for buildings up to Ground+3 floors (12 meters height) or plots within 1,000 square meters in the approved layouts of Hyderabad Metropolitan Development Authority (HMDA).<sup>23</sup>
- The Pune Municipal Corporation has successfully re-engineered their building permit processes integrating computerized procedures for submission and verification of documents and drawings through "single window system". After adopting the new system, time required for sanctioning of building proposal has been reduced to 21 days from 45-50 days.<sup>23</sup>
- Indore Municipality has set a process of submission of approval request in electronic format to confirm the building plan to the bye-laws. The software program lists all changes that are required to make the submission comply with the bye-law. The turnaround time for comments is within 72 hours and approvals can be provided within a week of submission. The Indore Model has resulted in the municipality earning higher fees, reduction in litigation and very quick approval cycle time.<sup>38</sup>
- Rajasthan UIT has a single window clearance for all approvals that are required from the state Government and the approval cycle time in Rajasthan is shorter than other States. There is a legal provision for maximum approval time of 90 days.<sup>38</sup>

#### Dos

- Explore adopting an electronic Single-Window approval and clearance system.
- Consider setting up a dedicated cell, at State level, comprising of personnel from various departments for providing approvals and clearances for affordable housing projects.
- Establish Project Co-ordination Committees at State Level, for affordable housing, comprising of officers from various departments and authorities, that meet frequently to discuss issues faced by various projects.

#### Don'ts

Kick-start projects without applying for approvals and clearances and obtaining in-principle nod from various departments/authorities.





## **Project Development**

The use of services of professionals/firms as well as adoption of good project development processes goes a long way in successful implementation of the project. The case in the point being

- Eight different builders and some 50 different architects were involved with no one architect designing more than 80 units to ensure choice and variety, with the social housing units were designed to the same high standards as housing for sale to ensure cohesion, in the case of Vathorst in the city of Amersfoort in the Netherlands.<sup>34</sup>
- Naseej, the concessionaire in case of the first PPP project in Bahrain (discussed earlier) put together a top-tier consortium of international and local consultants with world-class expertise in master planning and architecture, infrastructure design, housing and building design, landscape design, facilities management, financial and legal advisory, cost consultancy and project management, for designing the project. (Source: Naseej achieves financial close – housing PPP project, Bahrain, Oct. 27, 2013, https://www.ameinfo.com/industry/real-estate/naseej-achieves-financial-close-housing-ppp-project-bahrain)

#### Dos

- Avail the services of consulting firms to assess the techno-economic feasibility of the project and to prepare a detailed project report (DPR) as well as to design the units, before undertaking the project in PPP mode. PPP, at the end of the day, is just a contractual means to deliver public assets and public services, and requires the necessary pre-procurement due-diligence exercise to be conducted.
- Engage the services of a transaction advisor to structure the PPP transaction and prepare the bid documents. RFPs for appointing Transaction Advisors is issued by the Ministry of Finance, Gol.

#### Donts

Undertaking implementation of the project i.e. construction of the project, without planning the required trunk-infrastructure.





## **O&M Arrangement**

The risk of the newly developed affordable homes turning into new urban slums is very real if maintenance arrangements are not made while planning the affordable housing projects.

- The Ansaar Management Company in Pakistan adopts an approach of building communities in batches of housing units, by being engaged post construction for a period of five years and supporting community development. The underlying rationale is that the occupation of a critical mass of homes will have a positive impact on the price of the remaining houses in a development.<sup>39</sup>
- In the case of Affordable Housing in Bhubaneswar, presented earlier, the Developer was required to address any structural deficiencies in the affordable housing units identified within 5 years from the date of handback, and simultaneously creating a maintenance account with \$500,000, interest income from which would be used later to undertake ongoing maintenance of the affordable housing units. This arrangement ensured that the project would not be a mere construction contract and that the Concessionaire would be obligated even after project handover to ensure the quality of its construction.<sup>35</sup>

#### Dos

- Involve the developer in the post construction maintenance of the facilities through a contract arrangement. This strategy would be much easier to adopt in the cases of cross subsidized projects wherein the affordable housing is cross-subsidized by residential or commercial development on a portion of the land. The benefit for the developer is that over a period of time the value of his investment increased manifold.
- Alternatively, the public authority may assume the O&M risk and associated expenses in the same manner as it assumes responsibility for provision of trunk
  infrastructure. The public authority may budget the O&M expenses of the project for a specified period of time and contract out the operation and maintenance to
  a facility management firm.

#### Don'ts

Plan and execute an affordable housing project without a robust maintenance arrangement.





## **Beneficiary Identification**

- In the case of the Spanish VPO ('officially protected housing'), the development is financed by a mixture of deposits from prospective purchasers (20%) and banks. Purchasers are normally selected by the developer using lists of eligible households provided by the municipality.<sup>39</sup>
- The Elang Group in Indonesia sells standardized units directly to the homeless. The customers represent a diverse range of poor households including factory workers, workers' in informal sectors, as well office workers. Elang Group manages to identify buyers through its strong cooperation with local banks.<sup>39</sup>

#### Dos

- Prepare and maintain a database of potential database of beneficiaries along with their credit worthiness at municipal level. The above should not be a cumbersome exercise as most of the population in the country has been brought under banking through Gol's Jan-Dhan Yojana.
- Depending on the envisaged financing pattern of the project, identify eligible beneficiaries based on their credit worthiness.

#### Donts

Transfer the responsibility of identifying beneficiaries or ascertaining their credit worthiness to the private developer as they are not equipped for performing such tasks.





## **Project Execution**

- Under the Dutch VINEX policy, directing expansion of towns with populations over 100,000 into locations accessible by public transport was the key strategy adopted. The Vathorst Development Company, for example, funded the railway company to open a station several years before the population justified it, and underwrote an entrepreneur to open a restaurant.<sup>34</sup>
- In the 'in-situ' slum redevelopment project with private participation in Ahmedabad in Gujarat was executed in eight packages consisting of eight locations in the city and provided 1,592 dwelling units of about 27 sq. carpet area with basic civic infrastructure like water supply, sewerage system, internal road connectivity with street lights, etc. 83 eligible slum dwellers owning commercial spaces were each allotted shops of 15 sq.m. carpet area.<sup>40</sup>
- In the Affordable Housing Development in Vatva, Ahmedabad by Foliage Real Estate Developers Ltd., the development of infrastructures like sewerage, drainage, water supply, electricity and mass transport is the responsibility of the ULB.<sup>39</sup>
- In the Ciudad Verde project, located in the small town of Soacha south Bogotá, the development's infrastructure includes hospitals, schools and hydroelectric power sources funded through public-private partnerships.<sup>41</sup>

#### Dos

- Adopt a holistic approach that integrates transportation, trunk infrastructure, commercial facilities and social infrastructure such as schools and hospitals etc. with affordable housing. This approach results in better off-take by beneficiaries.
- Use project management, both tools and services of professionals, for executing the project.
- Ensure that trunk infrastructure is provided before or in tandem with construction of affordable housing units, so that delays in providing trunk infrastructure are avoided/reduced. Non-provision of trunk infrastructure on-time results in off-take risks and lower returns for the private developer.
- Allow sufficient time period for bidders to work out the techno-economic feasibility of the project. Adhere to the timelines prescribed in the model RFQ and the model RFP issued by the Ministry of Finance, Gol.
- Put best efforts in complying with the conditions precedent set forth for the authority in the concession/development agreement, within the stipulated time for the same.

#### Donts

- Tender out the project without obtaining sanction of necessary budgets or arranging finances.
- Become overly fixated with recovering land value as the primary objective is to provide housing for all.











## Takeaways

#### Why PPPs

Depending on the maturity of adopting PPPs in their jurisdiction, different countries or regions have different motivation for adopting PPPs. In countries with large gap in infrastructure financing, PPPs are an alternative mode of financing infrastructure development and bridging the gap. In mature economies, the drivers for continuing to adopt PPPs have been the objective to achieve:<sup>43</sup>

- Value for money (VFM)
- Design and operational innovation
- Appropriate Risk Transfer
- Superior whole-of-life outcomes
- "PPP is not fundamentally about financing. This may sound like a contradiction to many, as governments normally think of PPPs when they are short of money.
   Financing is certainly a very important ingredient of a PPP and its success. The drivers of a PPP should be efficiency gains, improvements to performance, higher accountability, superior technology, superior management, superior outcomes, better quality, and lower prices. These are the outcomes that a PPP is trying to achieve by bringing in the private sector. In the process, financing will also come".

#### Shri. Pradeep Singh, former VC & MD, IDFC Projects

- The precipitous fall of PPP in 2013 has left a bad taste in the mouths of many project proponents. The resistance to PPP also stems from fear of the unknown among many bureaucrats, engineers and technical consultants alike. However, PPP is being revitalized by innovative models and continues to be an efficient method of procuring public assets and services. Today, PPP has permeated into almost all sub-sectors of infrastructure and beyond.
- The aim of building affordable homes should serve the intent of the government and as such be in proximity to schools, hospitals, markets as well as accessible through affordable mass transport systems. The complimenting infrastructure such as roads, water, power, and sewer management will enable sustainability of affordable housing and prevent creation of slums.<sup>44</sup>
- In an ideal PPP scenario, the Public sector could look into<sup>27</sup>

a. Aggregating land for projects,

- b. Providing single-window and time bound clearances,
- c. Redrafting the local development byelaws to suit the requirements of Affordable Housing projects: Review local byelaws like setbacks, parking norms, etc. and fine-tune the same to meet the requirements of Affordable Housing projects





## Takeaways

- d. Re-evaluating the taxes and levies from the perspective of reducing cost of home ownership for the target segment: Reduction/exemption of taxes and duties on construction materials can significantly reduce construction-related costs
- Stakeholders will benefit from the availability of suitable land parcels with the requisite trunk infrastructure, expedited clearances, and an adequate organisation of financing. Moreover, for the planning and design process to transition smoothly into project execution, it is important that the development authorities have requisite capacity to handle projects of this type and scale which seems to be lacking. Lack of availability of suitable financing options for beneficiaries who predominantly work in informal segments is another bottleneck for mainstreaming of affordable housing in India. Furthermore, it is equally important that awareness amongst the intended beneficiaries increases to bring them into the fold of formal banking sector.<sup>27</sup>
- Another key aspect that is widely neglected while planning an Affordable Housing Project is the maintenance post hand over of units to the customers/ beneficiaries. This eventually creates 'New Urban Slums' and defeats the purpose of creating these assets in the first place. It is of utmost importance to address this aspect to create sustainable benefits of creation of these assets.<sup>27</sup>.
- Given the interest of pension funds to invest in Infrastructure, the government may consider packaging all greenfield developments across the state to attract such investors. The projects may be taken up under affordable rental housing to cater to the long term cash-flow generation requirement and asset liability matching requirements of such investors.
- The state administration may also consider asset recycling of existing unoccupied inventory of affordable housing in the state. It may also consider alternative models for procuring affordable housing projects via Swiss Challenge method or a modification of the same, if the Swiss Challenge method is permitted in the state..





## **Exercises**





## Case Example – Sukhi Sewaniya

Sukhi Sewaniya is a village in the Bhopal district of Madhya Pradesh, India, and is located near the Bhopal Bypass road. The village has gradually developed into a suburb of the Bhopal city. As per 2011 census of India, Sukhi Sewaniya has 535 households. The village is famous for its agro-based factories and industries. It is one of the leading and second largest industrial area in Bhopal City. Sukhi Sewaniya lies at an approximate distance of 15 km from Bhopal City.

There is a direct bus from Sukhi Sewaniya to Halalpura bus stand in Bhopal. The railway station at Sukhisewaniyan is situated on Bhopal–Bina railway line, and trains connect the village to Bhopal, Bina, Katni, Bilaspur, Vidisha, Agra, Gwalior, Jhansi, Itarsi, Guna, Kota, Jaipur and Jodhpur.

#### Source: Wikipedia

Urban Development Urban Development and Housing Department of the Government of Madhya Pradesh intends to construct EWS and LIG Housing units numbering 800 in total, in a plot of land admeasuring 15 hectares that is under its possession in Sukhi Sewaniya. The site is abutting Vidisha Road.

#### Assumptions:

Floor Area Ratio (FAR) allowable: 1.5

Ground coverage: 50%

ORD

OUNDATION

No. of Houses to be constructed: EWS: 550 units and LIG: 250 units

Unit carpet areas: EWS: 30 sq.m. and LIG: 50 sq.m.



Bhopal Bypass Road

Sukhi Sewaniya



- Can the project be undertaken in PPP mode? State the rationale behind your stance.
- If your answer to the above is "Yes", under which PPP model would you propose that the project be undertaken?





Assume that the project is proposed to be undertaken in PPP mode. Discuss and assign the various risks to the Government Entity/Authority and Private Entity/Developer.

*Note*: The golden rule of risk management is that a risk should be assigned to the stakeholder who is best equipped/suited to handle the risk.

Risk	Assigned to	Reason
	(Govt. entity / Pvt. entity)	
Pre-operative task risks		
Delays in land acquisition		
External linkages		
Financing risks		
Planning risks		
Approvals risk		
Construction Phase Risks		
Design risk		
Construction risk		
Approvals risk		





Risk	Assigned to (Govt. entity / Pvt. entity)	Reason
<b>Operation Phase Risks</b>		
Technology risk		
Operations and maintenance risk		
Volume risk		
Payment risk		
Financial risk		
Handover Risk		
Handover risk		
Terminal value risk		





Risk	Assigned to (Govt. entity / Pvt. entity)	Reason
Other Risks		
Change in law		
Force Majeure		
Concessionaire risk		
Sponsor risk		
Concessionaire event of default		
Government event of default		





- If you were to execute the project, list down the issues and challenges that you anticipate.
- Which would be the most challenging issue that you are likely to face? State your reason/s.





- Revisit your opinion regarding taking up the project under PPP mode. Is there a change in your stance? State the reason/s for your change in stance.
- If you believe that the project may be undertaken in PPP mode,
  - Which is the best suited PPP model for undertaking the project in your opinion? and why?
- If you believe that the project is not suitable to be undertaken in PPP mode, what product mix would you recommend for improving the financial viability of the project? and why?





- What best practice/s would you like to adopt in developing the project? State your reasons.
- In your opinion, is a Transaction Advisor required for the project. List out the reasons that made you arrive at your opinion.
- If you were to appoint advisors for planning the project and tendering it out, what would be the source of the RFP that you will adopt.
- Draft your Dos and Donts for the project.
- Prepare and submit to the State Level Appraisal Committee (SLAC) a concept note for undertaking the project.





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# Thank you.



