

# The Dreams A-Lite Project: USD 1000 Homes: An Insight into a Proposed Bottom of the Pyramid (BOP) Township to Address the Problem of Affordable Housing for the Urban Poor in India

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## Abstract

The provision of low cost housing to greater sections of the needy populace has been an issue of immense magnitude that policy formulators the world over have continued to grapple with. Over time, the problem has only amplified, thereby enhancing the pressing need for immediate intervention through innovative and sustainable solutions. Globally, and especially in emerging markets this gargantuan problem has reached epic proportions with over 320 million people bereft of access to basic housing. Woven around the thread of social innovation and entrepreneurship, this project is an in depth research study aimed at ultimately creating affordable housing solutions for the urban poor populace at large. The endeavour of this research is to ascertain the response and purported feasibility of a proposed Bottom of the Pyramid (BOP) Township, named **Dreams A-Lite**, to be constructed on the outskirts of the metropolitan city of Mumbai, India. Based upon the favourable findings of the research, the essence was to develop a self-sustaining, scalable and globally implementable business model that would eventually create Rs. 60,000 (USD 1,000) homes for 10 million people over the next 10 years. The Township outside Mumbai would serve as the prototype and launching pad for future projects across the country first and then even abroad. The research takes into cognizance the monthly incomes, number of earning family members, size of present dwellings and consumption choices and trends of sections of the urban poor living in Mumbai through a questionnaire based survey. Furthermore, in depth interviews and surveys on retailers and other companies who would be interested in establishing a foothold in the proposed township through the purchase of commercial and media space was also undertaken. Based on the research results, the proposed model assumes a self-sustaining hue on the back of the captive consumptive potential of the potential residents.

**Key Words:** Affordable, Bottom of the Pyramid (BOP), Business Model, India, Low Cost Housing, Self-sustaining, Social Innovation, Township, Urban Poor

## 1. Introduction

With the advent and proliferation of urbanization across the globe, humankind embarked on the beneficial trajectory of socio-economic upliftment and development. On prima facie evidence; whilst urban regions offer myriad growth and employment opportunities coupled with the promise of a higher quality of life; this has not proven to be a universal reality. The inconvenient reality remains that with fast expanding populations, many urban regions are grossly ill-equipped and under-resourced to support an increasing number of denizens. This is a far more acute problem in emerging countries such as India where many an urban city continues to struggle under the burden of expectations, inadequate central planning and rampant rural migrations. Ever enhancing consumptive demand and the lack of concurrent supply coupled with gross disparities in the distribution of wealth and income has made poverty a historical and tangible reality.

As per the World Bank's estimates; as recent as May, 2014; there are over 872 million people currently below the poverty line. Of these, 180 million people reside in India. In essence, with over 17% of the world's total population; India accounts for 20.6% of those living below the poverty line. These are stark statistics that paint an even more desolate picture. According to the Reserve Bank of India (RBI), as of 2012, there are about 53,125,000 individuals living below the poverty line in urban areas in the country. Set in this backdrop, urban poverty brings with it its own basket of related problems. In the absence of adequate space, non-access to decent living conditions and an often perennially cash-strapped situation; the urban poor struggle to make ends meet. Thus, the provision of low cost, affordable housing solutions becomes not just a novel alternative but a necessity in today's times. With central governments either bereft of any ideas on how to tackle this societal issue or wallowing away in an ocean of mismanagement, bureaucracy and corruption; private entities would be well

served to view this as a potential opportunity to serve the Bottom of the Pyramid (BOP). This research project is a proactive step in that particular direction.

### ***Focal Issues in Housing***

Affordable housing replete with the most basic of amenities has continued to be a vexing issue the world over for a long time now. Based on this in-depth study, the following have emerged as the most critical issues with underlying commonalities across the globe; especially in developing economies and socio-economically deprived sections of society -

- Large pockets of sub-standard housing due to greater inequalities of wealth
- Mega-cities turning into mega-slums with the poor dwelling in shanties, ghettos and slums
- Lack of availability of water, electricity, sanitation and other basic amenities
- A majority of these people as well struggle to mobilise adequate or timely financial resources for the purchase or mortgage payments on their homes/shelters

### ***A Solutionist Approach***

Although the entire situation does present grave challenges, it also presents a fair window of opportunity that would enable effective idea conceptualization and eventual execution. The following are the reasons why the housing problem can be addressed with alacrity -

- Housing is made expensive due to large number of regulatory and bureaucratic methods
- The cost of land, labour and materials constitute a bulk of the costs
- Through Public Private Partnership (PPP), it can be expected that the cost of land be subsidized as a viability gap funding is available to a large number of Urban Renewal schemes
- By using Sweat Equity of those whose house is constructed as well as volunteer hours, there can be a substantial reduction in the construction costs
- By using Prefabricated fibre boards, construction time can be hastened with a firm view on its environmental implications

## **2. Research Objectives**

Moved by the pressing issue of urban poverty in the country, a project based upon a social entrepreneurship initiative to develop a viable solution to this growing problem was undertaken. After identifying the major problems in this sector, the very purpose of carrying out this research undertaking are outlined. The main objectives of this project were fourfold -

- To ascertain the feasibility of creating a self sustaining Bottom of the Pyramid (BOP) Township on the outskirts of Mumbai as a means to provide affordable and subsidized housing to such individuals (Rs. 60,000 or USD 1000 homes)
- To identify consumption trends within the low income-high aspiration urban poor population
- To gauge the response of private companies and retailers who would be willing to invest in both commercial and media space within the BOP Township
- To correlate consumption trends with retail offerings that in turn would subsidize the cost of housing

## **3. Research Design and Methodology**

The research conducted to facilitate the eventual creation of the prototype Bottom of the Pyramid (BOP) Township was exploratory in nature and involved the adoption of primary and secondary research sources. The study was carried out in a phased process over a period of time with the twin views of first, finding out the demand and response of certain sections of the urban poor within the city of Mumbai to the idea of moving to a self sustaining BOP Township on the outskirts of the city and then, evaluating the feasibility and response of corporate houses and retailers interested in setting shop within the township.

- (A) The primary research was based upon two carefully formulated questionnaires directed at separate target respondents –

- Sections of the urban poor living in despicable conditions on D’Mello Road, Parel; Agripada; Dharawi and Colaba. The objective was to gain a better understanding as to the psyche of these individuals, their interest in the idea of purchasing a Rs. 60,000 (USD 1000) home and consequently to gauge the feasibility for a planned BOP Township that would address their housing needs to begin with. Our results drawn from this part of the research are based on the responses of 50 respondents
- Major corporate houses from the FMCG and Telecom sectors amongst others and also small to mid-sized retailers. The objective was to identify the latent interest in the purchase of commercial and media space within the township. The results drawn from this portion of the study are based on the responses of 50 respondents

(B) Apart from this we also conducted extensive in depth interviews with the following:

- Construction experts
- Non Governmental Organization representatives from Habitat for Humanity International (HFHI) already working in this field at some level

The survey was designed to use a stratified proportionate random sample. The idea was to utilize this as the basis for our proposed model which outlines the establishment of a BOP Township with a captive audience of 50,000 persons. The eventual sample size drawn from the urban poor sections located in the previously mentioned areas across Mumbai is representative of the 25 lakh people below the poverty line in the city (*As stated in the Below Poverty Line (BPL) Survey conducted by the Bombay Municipal Corporation (BMC) as of March 5, 2012*). After taking into consideration a 95% confidence level and a 5% sampling error, the final calculated sampling size comes to 48. The actual number of surveys conducted was 50. This is a relatively small sample size as a result of the calculated data accruing from the break-even analysis.

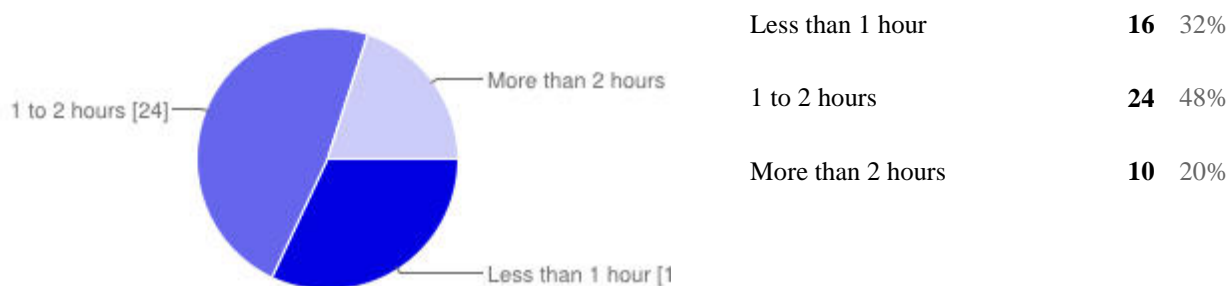
#### 4. Key Findings

Based on the surveys followed by systematic data collection and analysis, the following were the key results that accrued from the first survey –

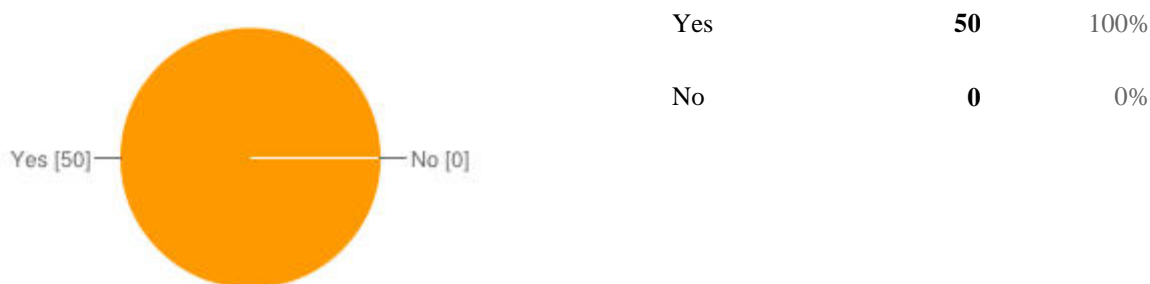
- To begin with, the average monthly income that needed to be taken into consideration initially before the formulation of the housing model came to Rs. 5,184 (USD 86.40)
- The average size of the dwellings of the respondents turned out to be 133.3 sq. ft. The proposed model would aim to offer these very individuals 300 sq. ft. homes for Rs. 60,000 (USD 1000)
- It was found that of the 50 respondents surveyed, all 50 individuals expressed a desire to purchase a 300 sq. ft. house for Rs. 60,000 (USD 1000); thus, implying a 100% interest level
- Out of those interested respondents, 62% agreed to move to the same township on the outskirts of Mumbai, India
- When asked if they would be willing to contribute time and effort in the construction of their own dwellings as the model is based on utilizing the element of sweat equity; an overwhelming majority of the interested respondents replied in the affirmative.

The following illustrations lend greater credence to the findings –

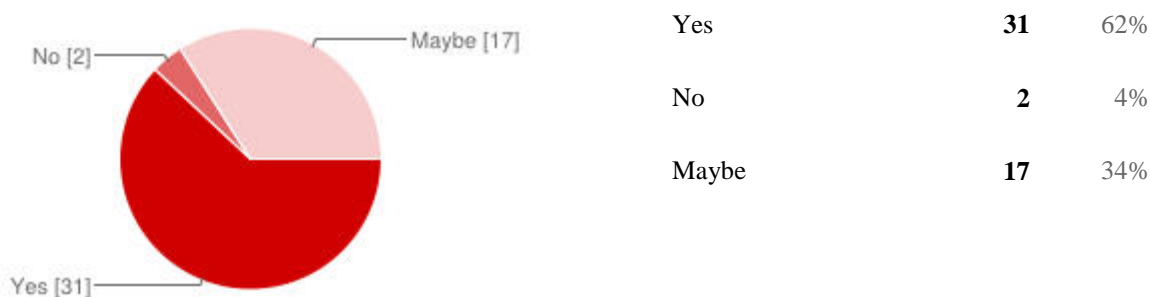
#### How long do you take to commute to work?



**Would you be interested in buying a 300 sq. ft. home for Rs.60,000 (USD 1000)?**

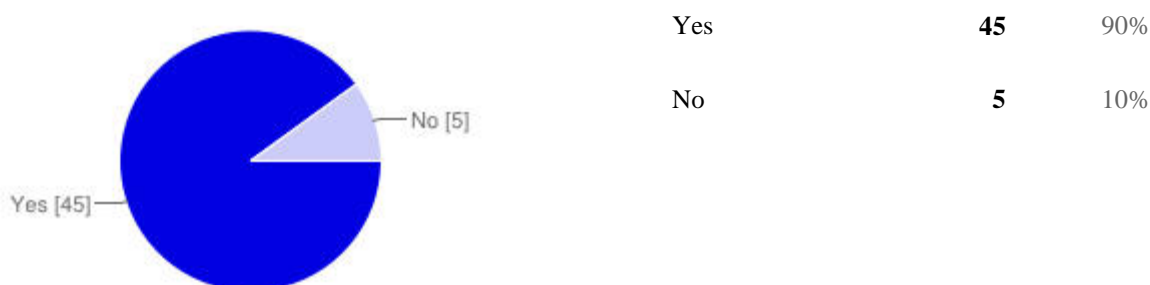


**If yes, would you shift to a city - outskirts that is well connected through public transport for a Rs.60,000 (USD 1000) home in a building?**

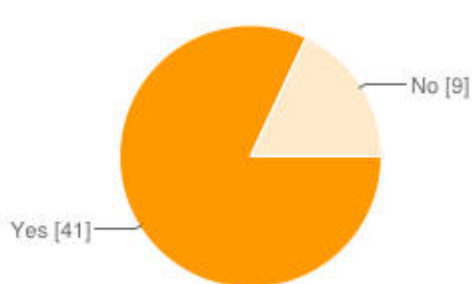


The second survey involving retailers and companies produced the following results. Once again the interest in being associated at some level or the other with a venture of this magnitude turned out to be overwhelming. The opportunity to effectively target an “*aspiration fueled*” captive audience of 50,000 people in one shot is a major incentive –

**Would your organization be interested in purchasing Commercial Space in a low cost Bottom of the Pyramid (BOP) Township?**



**Would your company be interested in purchasing Housing Media or Outdoor Advertisement Space in the aforementioned BOP Township?**



Yes	41	82%
No	9	18%

## 5. Recommendations – The Proposed Antidote

The affordable housing model would involve the construction of a wholly independent, self-sufficient and sustainable township on the outskirts of the city of Mumbai, India in an area such as Karjat or Dahanu, targeted at the proverbial Bottom of the Pyramid (BOP). The following are the model's salient features with a firm thrust on providing hugely subsidized housing -

- Creation of Rs. 60,000 (USD1,000) homes for the poor
- Target all those who reside in urban and semi-urban slum pockets
- Establishment of a self-sustained township model inclusive of schools, hospitals, markets and places of worship through Public Private Partnership (PPP) model with local nodal agencies to ease regulatory requirements
- Incorporating the element of **Social Innovation** would help utilize their consumption of food, entertainment and other daily expenses as a tool to subsidize their housing in return
- Sale of houses to residents below the cost of construction
- Sale of retail spaces to retailers in order to fulfill the home owner's consumption needs. These can be priced typically higher such that it finances the cost of not only ongoing projects but also creates a revolving fund for future projects in the long run
- Effective usage of various advertising media to generate a fund to take care of a majority of the maintenance and municipal taxes
- The basis of the idea is to increase the disposable incomes for the poor

The model works on the sound principles of an effective Public Private Partnership (PPP), incorporating inputs from the potential homeowners themselves; thereby co-producing value at both a macro and micro level; consequently benefiting all stakeholders involved. In essence, it works at a fundamental level as it provides constructive relief for both the Government, the concerned authorities who continue to find solutions to the housing problem and also the low income (Bottom of the Pyramid) segments. In addition, the intermediate party in the form of Banks and Financial Institutions would also stand to gain considerably as the element of risk is grossly downgraded -

### *The Government and its Welfare Objectives*

- Through the township, one could provide those concerned with basic amenities such as water and sanitation that the Government continues to struggle to provide
- A large amount of prime property, previously lost to slum-dwellers can be effectively freed through the establishment of the township on the outskirts of the city
- This in turn would have a positive impact on urban planning

### *The BOP Sections*

- The model would ensure that they have a permanent base or the privilege of having an asset backing for the family which acts as a security net in hard times
- Under this scheme, while they may have to travel to work, all the other hazards of staying in slums are thoroughly eliminated
- Additionally, the concept of holistic community development and building will sought to ensure that defaults are kept to a minimum, if not avoided outright

### *The Banks and Financial Institutions*

- Access to fulfill priority sector lending obligations
- Access to quality real estate
- High asset coverage

### **6. Project Feasibility**

As a direct consequence of the market research studies, the primordial demand for housing solutions on the platform of the initial model postulates was first established. Furthermore, the formulation of a prototype township model for the same which would involve the construction of a 1000 homes catering to 50,000 people to begin with was undertaken. The Project Feasibility study is what follows -

#### **Revenue Statement**

<b>Particulars</b>	<b>Amount for the Year (INR)</b>	<b>Amount for the year (USD)</b>	<b>Reference</b>	<b>Amount for the Quarter (INR)</b>	<b>Amount for the Quarter (USD)</b>
<b>Revenues</b>					
<b>Sales Revenues for Residential Properties</b>	<b>60,12,00,000</b>	<b>1,00,20,000</b>	10,020 units at Rs.60,000 per unit	<b>15,03,00,000</b>	<b>25,05,000</b>
<b>Sales revenue from commercial properties</b>	<b>2,37,50,00,000</b>	<b>3,95,83,333</b>	5,00,000 sq feet at Rs.4,750 per sq ft	<b>59,37,50,000</b>	<b>98,95,833</b>
<b>TOTAL REVENUE (A)</b>	<b>2,97,32,00,000</b>	<b>4,66,03,333</b>		<b>74,40,50,000</b>	<b>1,24,00,833</b>
<b>Costs</b>					
<b>Total Residential Cost of Construction</b>	1,20,24,00,000	2,00,40,000	Note 1	30,06,00,000	50,10,000
<b>Total commercial property cost of construction</b>	15,00,00,000	25,00,000	5,00,000 sq. ft at a cost of Rs.300 per sq.ft	3,75,00,000	6,25,000
<b>Marketing Cost</b>	1,00,20,000	1,67,000	2% of sales	25,05,000	41,750
<b>Admin. &amp; Other Cost</b>	1,50,30,000	2,50,500	3% of sales	37,57,500	62,625
<b>Interest Cost</b>	2,03,25,600	3,38,760	Note 2	50,81,400	84,690
<b>Facilities Cost</b>	20,50,60,000	34,17,667	Note 3	5,12,65,000	8,54,417
<b>Land Cost</b>	9,00,00,000	15,00,000	45 acres at Rs. 20 lacs/ sq ft.	2,25,00,000	3,75,000
<b>Labour Costs (Skilled)</b>	1,85,68,000	3,09,467		46,42,000	77,367
<b>TOTAL COST(B)</b>	<b>1,71,14,03,600</b>	<b>2,85,23,393</b>		<b>42,78,50,900</b>	<b>71,30,848</b>
<b>NET SURPLUS(A)-(B)</b>	<b>1,26,47,96,400</b>	<b>2,10,79,940</b>		<b>31,61,99,100</b>	<b>52,69,985</b>

#### **Notes**

*Note 1*

Particulars	Amount for the Year (INR)	Amount for the Year (USD)	Amount for the Quarter (INR)	Amount for the Quarter (USD)
<b>No.of Houses (A)</b>	10,020	<b>10,020</b>	2,505	2,505
<b>Area of House (in square feet) (B)</b>	300	<b>300</b>	300	300
<b>Total residential area(square feet) (C) = (A)*(B)</b>	30,06,000	<b>30,06,000</b>	7,51,500	7,51,500
<b>Cost of Construction ( Materials , Fittings, Machines) ^ (D)</b>	400	<b>6.66</b>	400	<b>6.66</b>
<b>Unit Cost (E) = (D) * (B)</b>	1,20,000	<b>1,998</b>	1,20,000	<b>1,998</b>
<b>Total cost of construction(F) = (E)* (A)</b>	1,20,24,00,000	<b>2,00,40,000</b>	30,06,00,000	<b>50,10,000</b>
<b>^Excavation, Foundation and Slab Pouring = Rs. 65/sq ft. Panel Installation and Decking = Rs. 100/sq. ft. Concreting &amp; Roofing = Rs. 45/sq. ft. joint Setting, Painting and Finishing = Rs. 80/ sq. ft. and internal fittings and materials = Rs. 110/ sq. ft.</b>				

*Note 2*

Particulars	Amount for the Year (INR)	Amount for the Year in (USD)	Amount for the Quarter (INR)	Amount for the Quarter (USD)
<b>Loan amount(Refer funding requirement)</b>	40,65,12,000	67,75,200	10,16,28,000	16,93,800
<b>Interest cost at 10% p.a for 6 months</b>	2,03,25,600	3,38,760	50,81,400	84,690

Note 3

Particulars	Amount for the year (INR)	Amount for the year (USD)	Amount for the quarter (INR)	Amount for the Quarter (USD)	Remarks
<b>School Building</b>	4,32,00,000	7,20,000	1,08,00,000	1,80,000	Forty buildings - 3,600 sqft each at a cost of Rs.300 per square feet as considered
<b>Hospital Building</b>	1,08,00,000	1,80,000	27,00,000	45,000	Ten buildings - 3,600 sqft each at a cost of Rs.300 per square feet as considered
<b>Community House</b>	21,60,000	36,000	5,40,000	9,000	Two buildings - 3,600 sqft each at a cost of Rs.300 per square feet as considered
<b>Roads, Lighting, Paving, Water Connection</b>	11,89,00,000	19,81,667	2,97,25,000	4,95,417	2 road chains of 3 kms each (rectangular length of each road chain around complex is 3 km. Cost per km is 10,00,000 for a tar project. An avg. of 2 light terminals around every building. 835 buildings. 1200 base area .Cost of Paving is Rs. 50/- sq ft. Each house costs Rs. 5000/- for a minor water connection from Municipal link within township
<b>Grounds</b>	3,00,00,000	5,00,000	75,00,000	1,25,000	30 buildings (1 acre)
<b>Total</b>	<b>20,50,60,000</b>	<b>34,17,667</b>	<b>5,12,65,000</b>	<b>8,24,417</b>	

## 7. Conclusion

Urban poverty is not an issue that policymakers and government leaders can afford to brush under the carpet anymore. The need to develop effective affordable housing solutions for these affected populations is of paramount significance. Set in this backdrop, productive PPP models on the lines of the Dreams A-Lite Model could be implemented across the board. The fact that there is a latent demand and inherent aspiration in the Bottom of the Pyramid (BOP) populace to gain access to better living opportunities signifies a potentially lucrative business opportunity for those concerned entities looking to get into this sector. The emphasis has to be on the development of self-sustaining models that take into consideration the interests of all stakeholders involved at multiple levels. This will then be a major step in the direction of better urban planning.

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