

Financing Green Buildings

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Agenda

- Green Buildings
- Green Buildings (Perception Vs. Reality)
- The Viscous Circle
- Stakeholders
- The Value Chain with Financing Options
- Examples of EE Homes In India
- Journey has begun!
- About Tata Capital Housing Finance (TCHFL)

Points to Ponder

Household sector consumes 40-50% of energy in India

Residential sector consumes ~ 21% of electricity produced

- 10,000 kWh/ year (warm & humid zone)
- 3000-5000 kWh/ year can be saved with EE Homes

India has doubled its floor area of buildings between
2001-2005

By 2050, the country will add 35 billion Sq. m. of new
building floor area

Green Buildings

- Energy Savings ~ 20-30%
- Water Savings ~ 30-50%

Green Buildings and Green Mortgage

“Green Buildings are buildings that uses less water, optimize energy efficiency, conserve natural resources, generate less waste and provide healthier spaces for occupants, as compared to conventional building”

--- Indian Green Building Council

A green mortgage can be any one (or multiple) supplemental incentives that can added to a traditional mortgage program so the person buying the home can use funds to improve the home’s energy efficiency rating by making various “green” improvements.

Green mortgages, let **customers** borrow extra money (LTV) to pay for energy efficient upgrades and at a discounted rate of interest (RoI)

Default rates are lower in EE Buildings than standard HL/ HE customers

Net Zero Energy Building (NZEB)

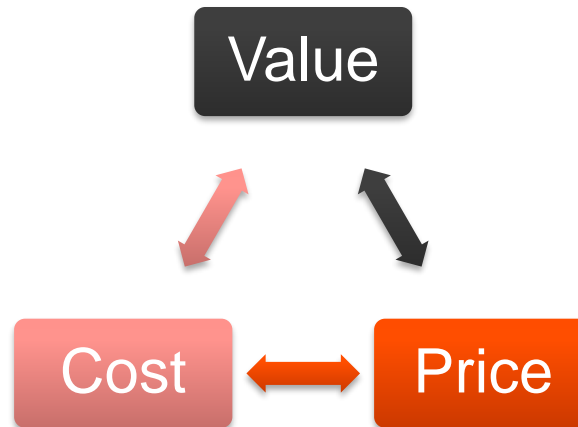
- A residential or commercial building with greatly reduced energy needs. In such a building, efficiency gains enable the **balance** of energy needs

NZEB is a building that produces as much energy as it uses when measured at the site

- Requirements: Integrated systems, High efficiency equipment/ systems, Design, Automation, Training, Incentives & Communication to all Stakeholders

The Value Proposition of Sustainable (Green) Building

- Serve the Society at large keeping in mind the Environmental Sustainability
- Create long term value to all by delivering & engaging all the Stakeholders



Green building costs and savings



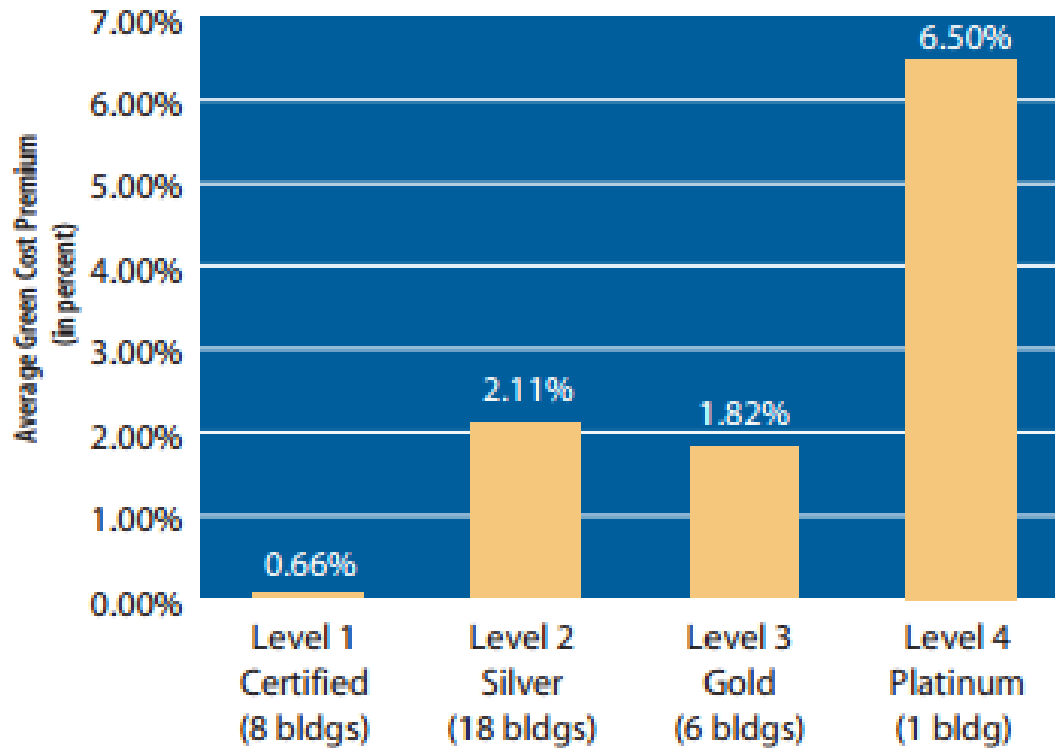
The public dramatically overestimates the marginal cost of green building. A 2007 public opinion survey conducted by the World Business Council for Sustainable Development found that respondents believed, on average, that **green features added 17% to the cost of a building**, whereas a study of 146 green buildings found an **actual average marginal cost of less than 2%**

(Source: WBC SD)

The average cost premium of building green over and above the cost of conventional construction – or green cost premium – **is a mere 5.0% and can be as low as 1.1%.**

(Source: Green Building in South Africa)

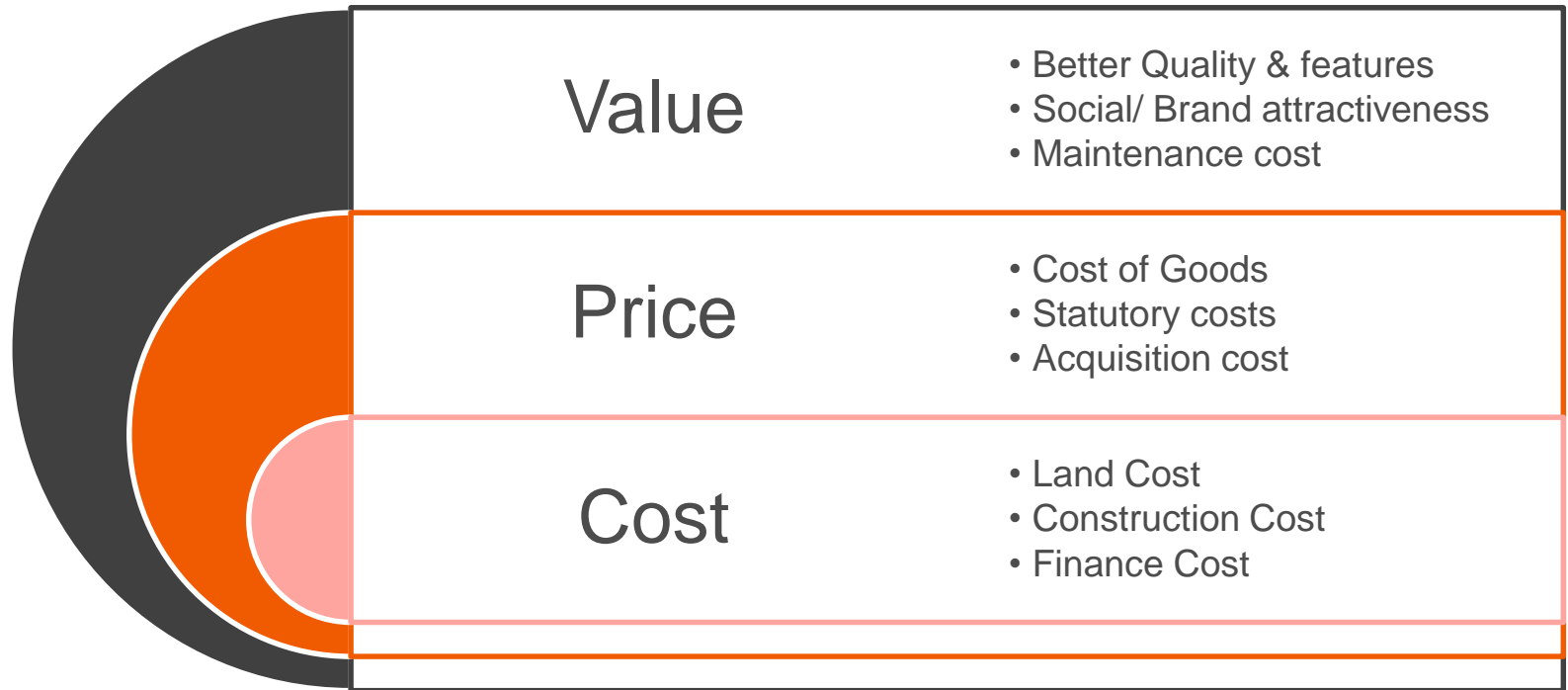
Average Green Cost Premium vs. Level of Green Certification for Offices and Schools



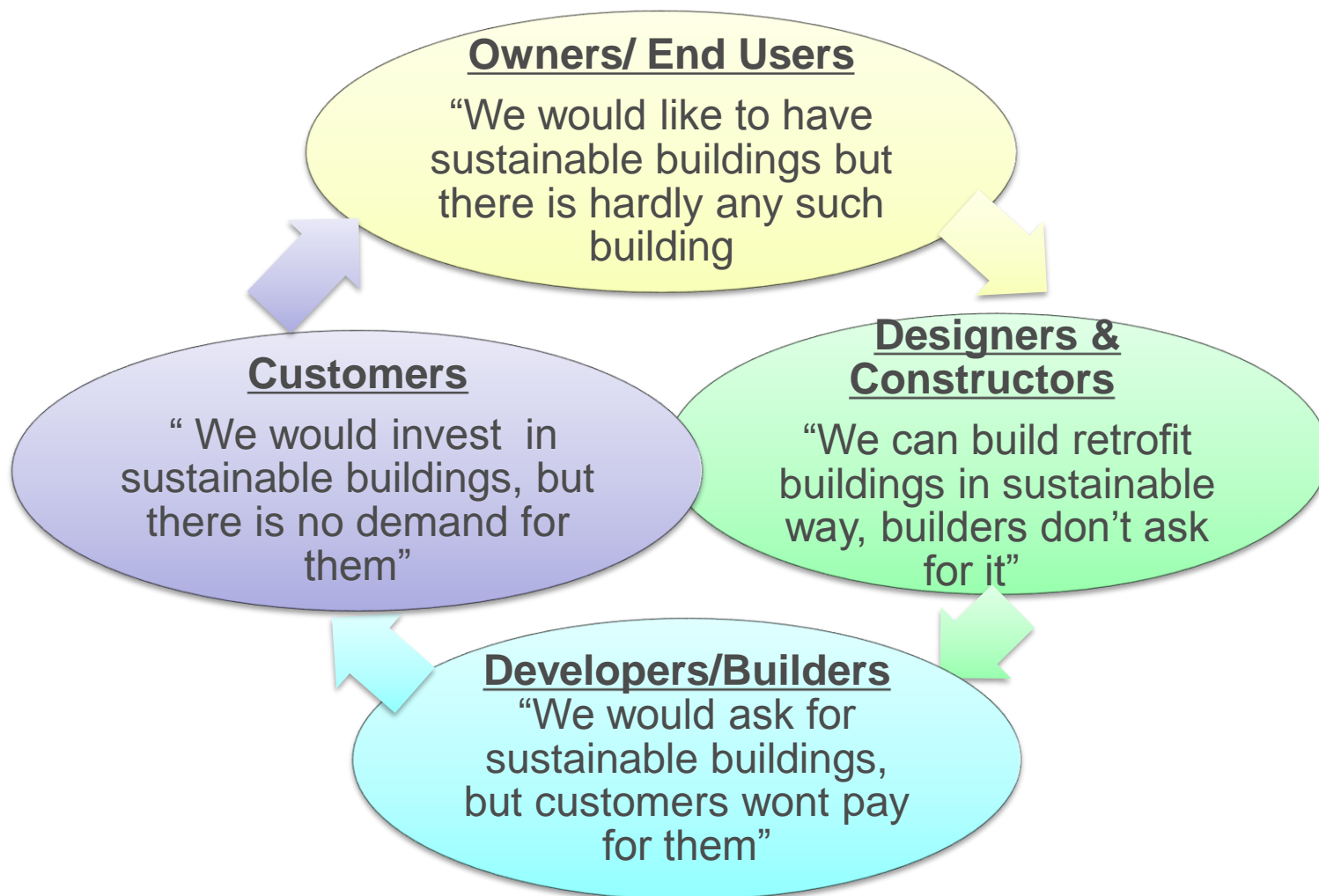
Source: USGBC, Capital E Analysis

A Green Building can get attract more premium

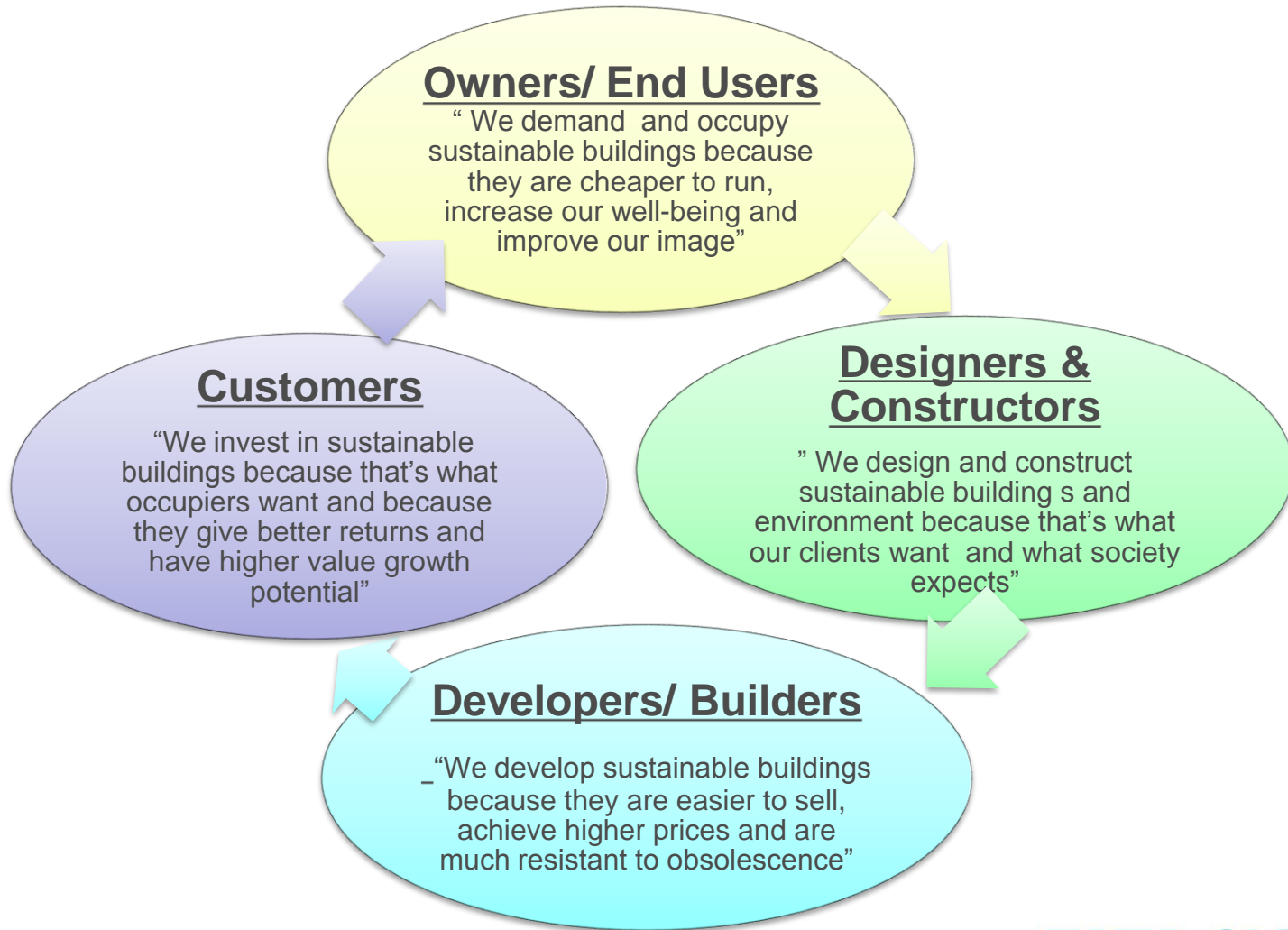
Source: GH Kats, Green Building Costs & Financial Benefits



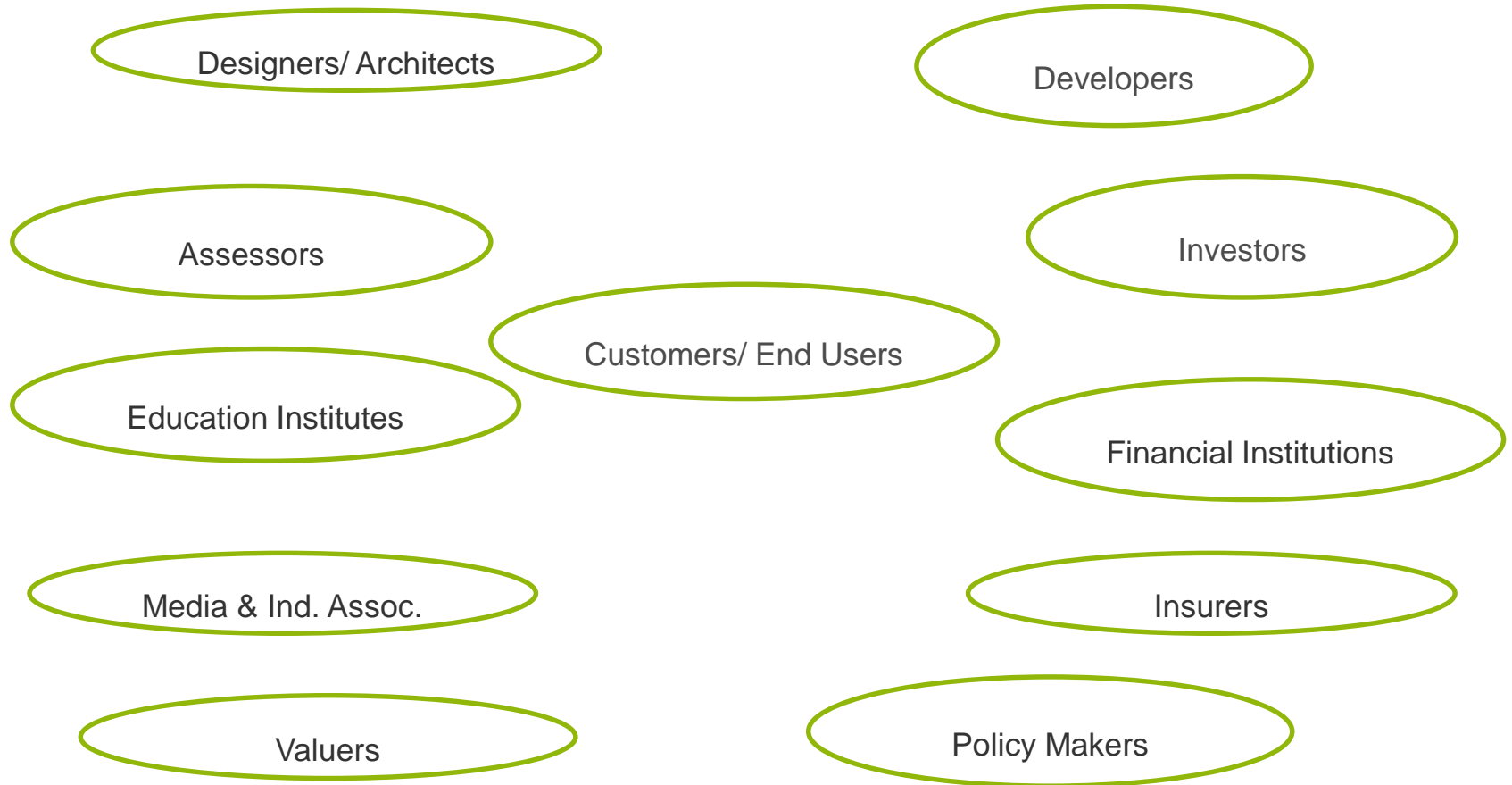
The Viscous Circle of Blame



Breaking the Viscous Circle of Blame



Stakeholders



Engage All Stakeholders

Stakeholder	Role
Policy Makers	To create a Supportive Legal Policy framework for the benefit of all
Owners/ End Users	To Demand & Occupy Sustainable buildings as they are relatively cheaper and increase overall prosperity
Investors	To Invest in Sustainable buildings as they provide better returns
Designers & Architects	To Design Sustainable buildings and environment because that's the client's are asking/ society wants
Developers/ Contractors	To Build Sustainable buildings as they are easier to sell, fetch relatively higher prices and maintenance free
Education Institute/ Trainers	To spread the knowledge of sustainable buildings because that is critical for implementation of sustainable development principles

Engage All Stakeholders

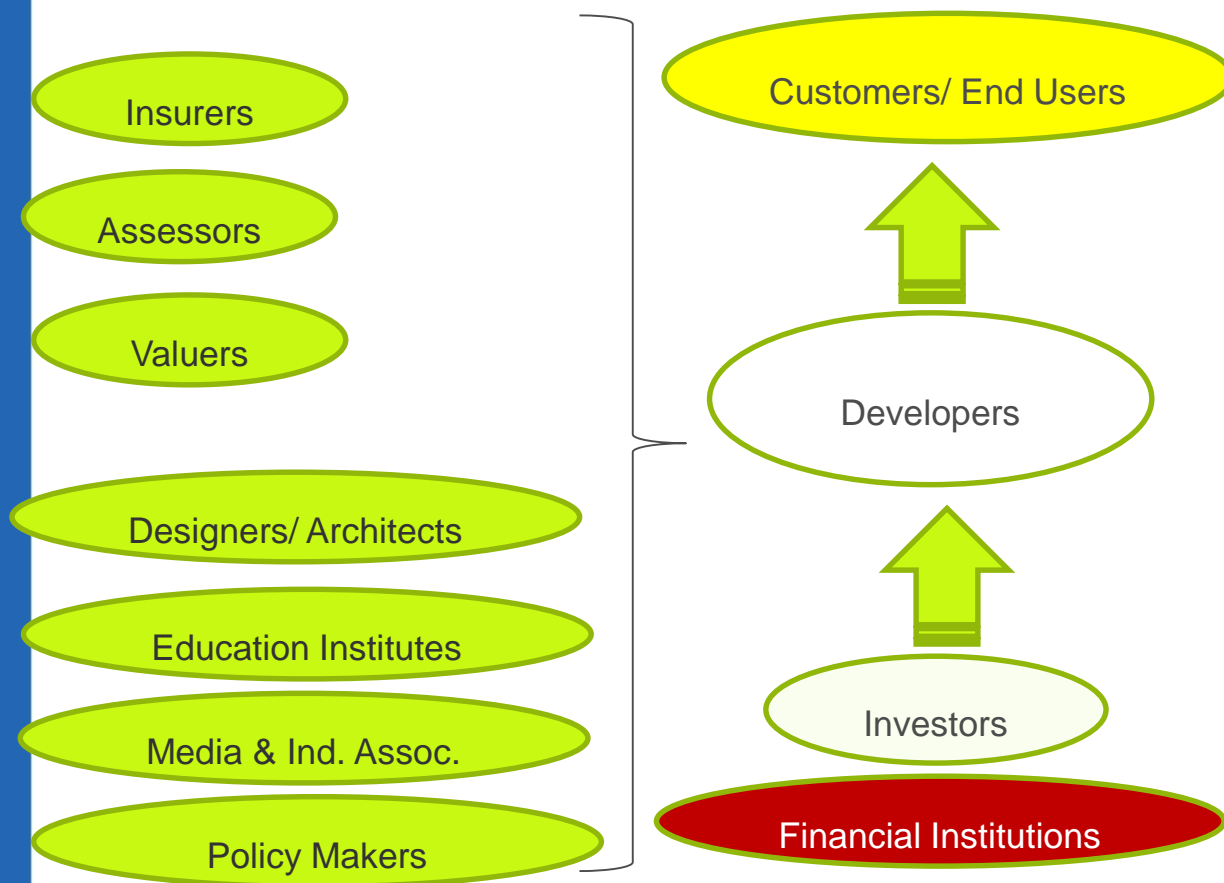
Stakeholder	Role
Assessors/ Certifiers	To assess and communicate the various criteria for assessment of Sustainable building
Valuers	To Recognise the benefits and use this in estimates of Market Value and other estimates
Insurers	To Grant better conditions for sustainable buildings as they offer better loss prevention benefits
Financiers	To Grant better financing conditions/ options, as sustainable bindings are less risky
Media & Industry Associations	To Spread awareness about the Benefits of sustainable habitat/ Building

How to attract & engage all stakeholders?

1. Policy / Guidelines for sustained impetus
2. Ratings of Products/ Buildings
3. Benefits to the developers (in terms of financial – Rate of Interest/ Non- financial – Approvals, TDR, extra space, ...)
4. Increase Value of the Product/ Capital & Rental Value
5. Funding incentives/ Grants to Financers
6. Higher LTV, Eligibility, Lower RoI to the Customers
7. Communication to all Stakeholders
8. Skill Development/ Institution for Trainings
9. Construction Equipment that support sustainable buildings
10. Get Best Practice/ Showcase/ Awards & Incentives

“By the yard it is hard, but inch by inch, anything’ s a clinch”

The entire Value Chain



- **Mechanisms**

- Private Equity (PE)
- Land Financing
- Debt (HL/LAP/CF)
- Leasing
- Capacity Building
- Incubating new tech
- Funding ESCOs/ Retros
- Building Material Suppliers' Financing

- **Institutions**

- Banks/ Financial Institutions
- Leasing Companies
- Property Funds

Green Mortgages can help in following ways

- Get money to invest in energy efficient upgrades for a new house
- Help you to qualify for a larger mortgage to pay for a house that is already energy efficient
- Qualify you for money for green renovations when refinancing a mortgage
- Make older homes more comfortable and more affordable with lower utility payments.
- Help you to use less energy to maintain the temperatures in your home and therefore lessen you family's footprint.

Exemplary Performance

Efforts can be seen on
Policy front and Capacity building areas...

Exemplary performance 2016

Passive Architecture Design	Titan New Corporate Campus, Bengaluru	
Passive Architecture Design	High Court Complex, Goa	
Construction Workers' Health & Safety	Integrated Commercial Cum Residential Complex, Bhubaneswar	
Construction workers' health and safety:	TATA Housing Residential Development, Kolkata	
Energy Management	Incubation Centre, Software Technology Parks of India, Mohali	
Use of Sustainable Building Materials	Redevelopment of Kidwai Nagar (East), New Delhi	
Site Management	Vallabh Bhawan Extension Complex, Madhya Pradesh	
Site Management	Corporate Office Building of Numaligarh Refinery Limited, Guwahati	
Integrated Water Management	Indian Institute of Technology, Hyderabad	

Exemplary performance 2015

Exemplary performance 2014

Exemplary performance 2013

GRIHA Incentives

Efforts can be seen on Policy front and Capacity building areas...

Uttar Pradesh Housing and Urban Planning Department:

Haryana government: GRIHA Incentives

Revised Haryana building bye laws 2016 recognize green building measures by project and awards benefits of additional FAR upto 25% by getting his building/site/project certified from GRIHA Council and achieve GRIHA rating as per sub 4 or adopting either green norms specified in sub 3.

GRIHA rating 1 star 2 star 3 star 4 star 5 star Additional Far for all building uses(except plotted residential) 5% 10% 15% 20% 25% Note - Extra FAR shall be given over and above the maximum permissible FAR as stated in code 28.

[Haryana building bye laws - 2016](#)



Government of West Bengal, Department of Municipal Affairs: GRIHA incentives

Pune Municipal Corporation (PMC) - GRIHA incentives

Pune Municipal Corporation (PMC) - SVA GRIHA incentives

Incentives for Green campus by MNRE

Sikkim adopts GRIHA

The Journey had already begun...

- Tata Housing
- Godrej
- Mahindra
- Prestige
- Rustomjee
- Kumar
- Kalpataru
- Prateek
- Gulshan
- Oberoi
- Aparna
- Sobha
- Sare
- Phoenix
- Embassy
- Brigade
- Olympia
- Navin...

Examples of EE Homes In India

‘A Journey of a thousand Leagues begins with a Single Step’ - Lao Tzu

Tata Capital Housing Finance Ltd.

- Home Loan
- Home Equity Loans/ Loan Against Property
- Construction Finance as part of Builder/ Developer Funding
- Rural Housing
- Affordable Housing
- Energy Efficient Homes



Key Drivers of TCHFL

- Trusted Brand
- Oversight of Management by eminent Board of Directors, supported by experienced management team
- Retail focus
- Relationship with Pan India Developers through CF
- Operational efficient process and Customer centric approach
- Technology-driven (supported by TCS)
- Secured Loan Book and strong asset quality
- Robust Risk, Credit and Technical Valuation process, supported by audit (external agency)

Green Building Financing is Way Forward!



Thank You!

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