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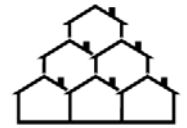
DELIVERY AND INFRASTRUCTURE: BUILDING INNOVATIONS

**ACHIEVING AFFORDABLE HOUSING DELIVERY BY
CREATING 500,000 HOUSING UNITS BY 2016**

Presented at 3rd ASO HOUSING CONFERENCE
ABUJA ♦ 12th APRIL 2013

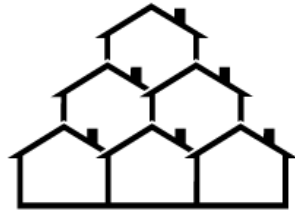
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Structure of this presentation



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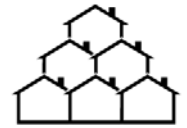
- Meeting housing needs and making housing affordable in Nigeria
- Bringing together different stakeholders through housing policy & urban projects
- Innovating for sustainable & affordable housing
- Developing rental housing in the ecosystem



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Meeting housing needs and making housing affordable in Nigeria

Presented at ASO Conference
Abuja ♦ 12 April 2013



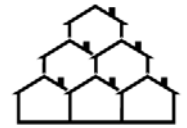
Answering the housing demand in Nigeria

- **Shortage of quality affordable housing in Nigeria**
 - Nigeria's population is at least 162 million (2011) and is predicted to reach 289 million by 2050 (8th most populous country in the world).
 - Current housing deficit is estimated to 17 million homes.
 - With 127 homes per 1,000 inhabitants (7.9 people per available home)

- **Forecast gap demand in 2020 is estimated at 44 million homes**
 - To meet the supply gap, Nigeria needs to add 2,600,000 homes a year

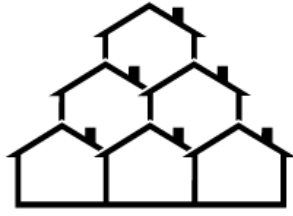
- **Given the shortages, homes prices and rents have grown ahead of general inflation**

- **Housing development has overbuilt the market's upper end**, leaving the poor to build their own homes, neighborhood and cities, with huge informal settlements in Lagos, Abuja and other fast growing cities.



Delivery Challenges

- **Current delivery**
 - 90 % by private developers
 - Federal production is projected at 4.2% of the annual requirement
- **Structuring delivery chain on supply side and demand side**
- **Delivery and infrastructure challenges:**
 - No production of quality home below 5 millions Nairas (
 - Scarcity of development land. Land is costly.
 - Need of capable real estate developers
 - Construction and building materials: 60% of raw material is imported and rising cement price
 - Urban infrastructure delivery
 - Greenfield developments located in areas that lack of basic infrastructure, which adds as much as 30%

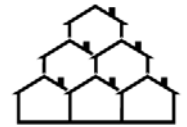


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Bringing together different Stakeholders through Housing Policy & Urban Projects

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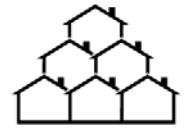
Urban projects make cities more attractive



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- Articulating Housing policy at National, State and local level
- Giving a comprehensive vision of urban space (for today and tomorrow)
- Developing Long term vision and prioritizing public resources
- Promoting partnership between different stakeholders by pursuing common interest and collective achievement
- Structuring short term implementation to facilitate investment from private developers
- As a general principle, trunk infrastructure – roads (including paving and drainage), electrical grids, water and sanitation networks – is the responsibility of government.
- Clarifying the contribution to the project of each stake holders (site infrastructure, public amenities, access roads, etc.)
- Making cities more attractive for investors (local and foreigners): better communication for all actors including the residents

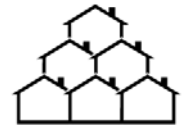
Urban projects make cities more attractive



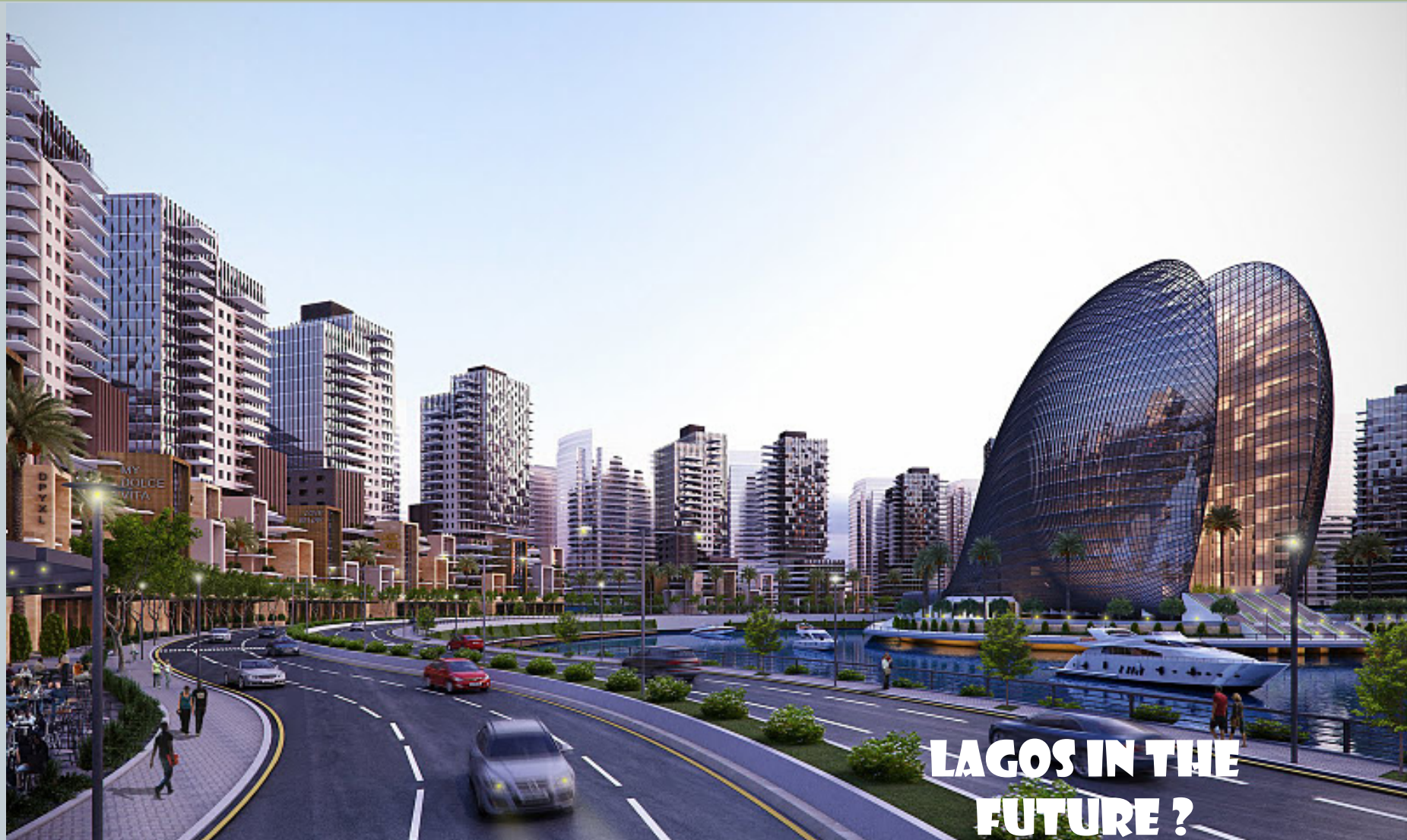
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Urban projects make cities more attractive

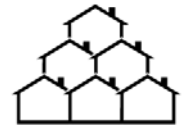


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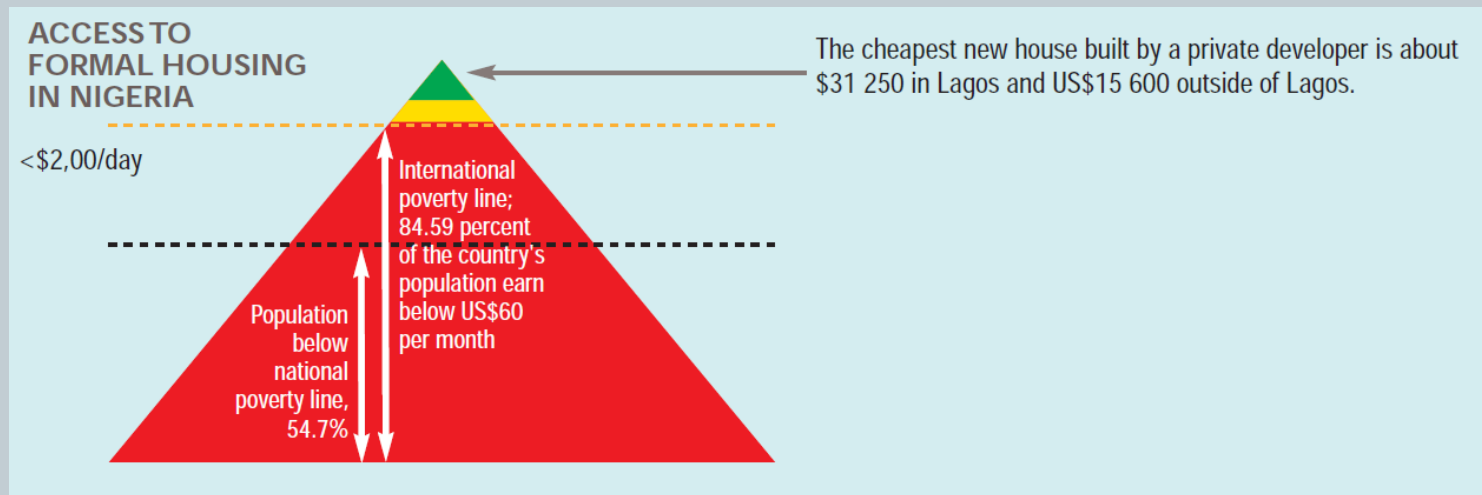
Sustainable affordable housing

Always requires government involvement



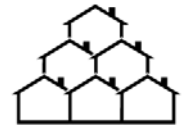
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- **Markets work great ... for most people**
 - Not ‘the bottom of the pyramid’



- **“Affordable housing” does not exist in “economic nature”**
 - Either it’s unaffordable or it’s substandard
 - What do you think of slums?

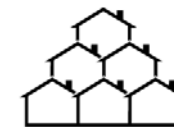
Sustainable affordable housing Always requires government involvement



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- **Slums are economically rational**
 - They are a wealth-extraction machine
 - Take money *out* of neighborhoods
- **Public-private partnership usually works best**
 - Pure private → unaffordable
 - Pure public → inefficient
- **Public-private partnership still to be defined in Nigeria**
 - Responsibilities of the different stakeholders
 - The participation of the different stakeholders
 - The legal and administrative process
- **Affordable housing means government must pay money**
 - Via a structured program
 - 4 forms of capital + 2 types of assistance
 - Many choices possible (supply side or demand side, direct or indirect)

Supply-side and demand-side: Goals of each intervention



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Supply side

Demand side

Formal

Build new market-quality homes, with clear title, that can be financed with mortgages

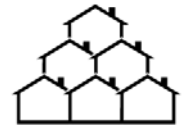
Offer affordable loans (rate, gearing) for people to buy formal homes

Informal

Provide trunk infrastructure and city services to people formalizing their homes

Lend to informal workers who improve their homes (Home Asset Loan Finance)

'Free' money comes in many forms



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Cash

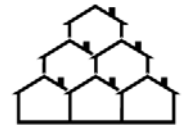
1. Grants
2. Hard debt with high gearing
3. Hard debt with interest subsidy
4. Soft debt
5. Hard equity
6. Soft equity
7. Operating subsidy
8. Redirective subsidy

Non-cash

1. Land (cheap or free)
2. Zoning and density
3. Trunk infrastructure
4. Site infrastructure
5. Cheap or free utilities (ongoing costs)
6. Credit enhancement
7. Tax relief (VAT) on building
8. Ongoing real estate tax (rates) relief

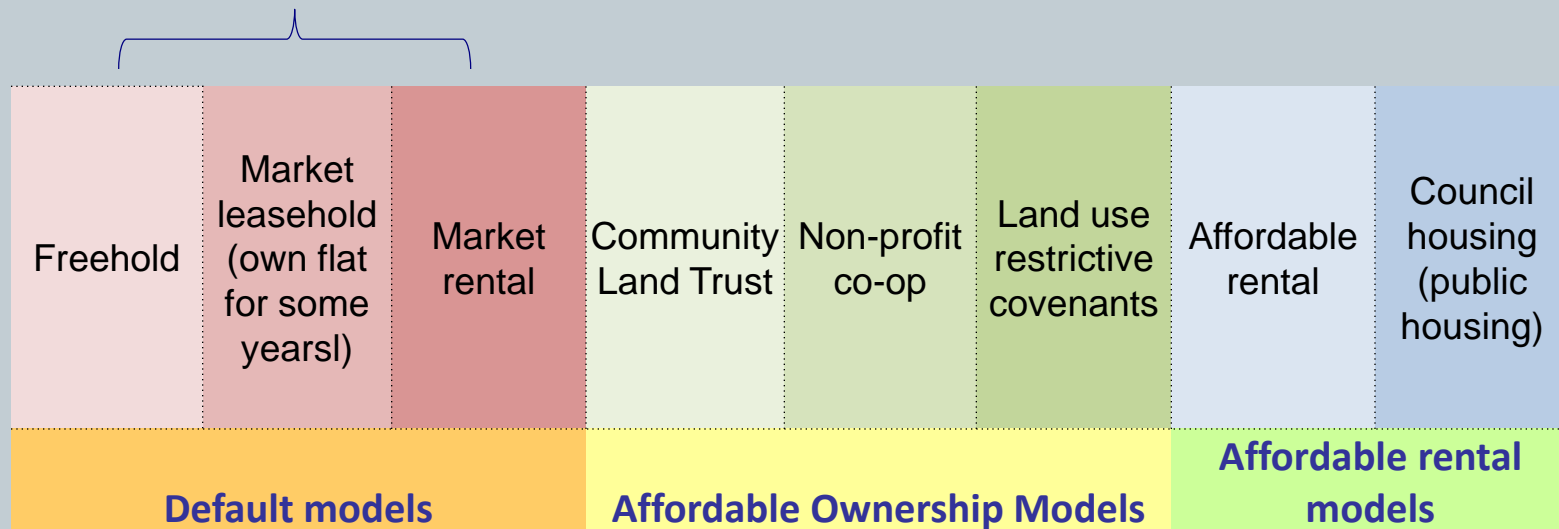
Tenure is a spectrum:

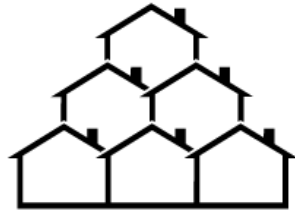
From no government involvement to substantial



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Initial forms:
created by pure
private markets



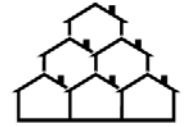


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Innovating for sustainable & affordable housing

Presented at ASO Conference
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Innovating in architecture for sustainable & affordable housing



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- **Management of Space:**

- Visualizing a positive urban future in Nigeria:

Need of a comprehensive research on Nigerian cities, mobility, formal and informal economy, formal and informal settlements, architecture, housing and land market in Nigeria, highlighting priorities.

- Which States ? Which Cities ? Which neighborhoods ?

To determine the location and perimeter of projects.

- Which type of project :

Urban renewal ?

Formalization of informal settlements ?

Satellite towns ?

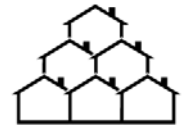
New Cities ?

- Which standards ?

To determine minimum size of plot and of house

Which density ?

Innovating in architecture for sustainable & affordable housing

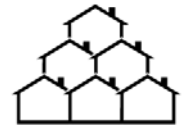


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- **Anticipating the adaptation of construction sector to housing sector and improving supply chain**

- **Challenges to build housing to respond to the equation:**
 - Quantity (target of 500 000 units by 2016) : capacity of production
 - Producing quality homes :
 - between 5 and 10 Million Nairas (31 500 \$ – 61 000 \$)
 - below 5 Million Nairas (< 31 500 \$)
 - Quality housing : problem of the quality of the finishing
 - In limited time : diminishing time of construction
 - Within a limited budget :
 - Less use of imported material
 - Adapted to the climate and the environment : “Green approach”
 - Integrating the question of culture, identity, ways of living and evolution
 - Easy to implement : low skill labor, quick and adapted formation

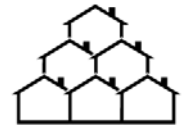
Example of Sustainable architecture in France



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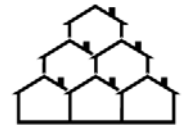
Example of Sustainable architecture in France



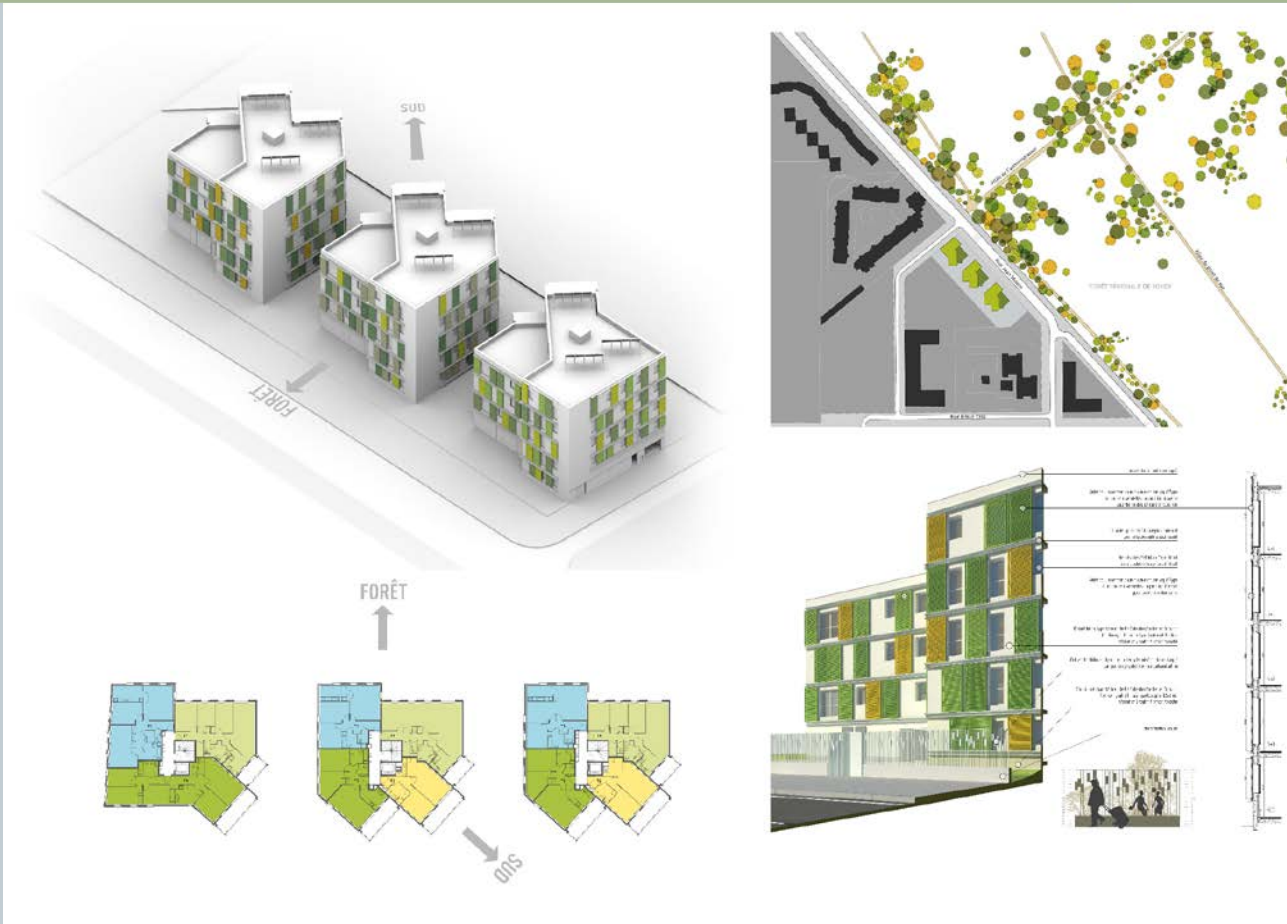
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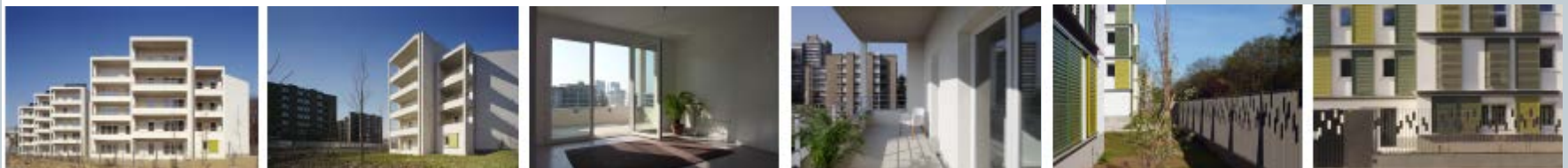
Example of Sustainable architecture



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- Promoting quality of life
- Taking into account the ways of living
- Integration to the urban environment
- Orientation
- Green building
- Use of solar panel



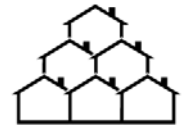
Innovating in architecture for sustainable & affordable housing



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- **Program “CQLT” Cost, Quality, Liability, Timing**
Experience of French Ministry of Ecology and Sustainable 2005-2010
- To allow the implementation of innovative processes of construction
- To estimate them, to facilitate and to accompany the technical or architectural innovation
- To give tools to the clients (master of work) to realize at best their objectives at the stage of project, conception (design) and realization of the operations.

Example of construction innovation in France from shipping container



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Industriel : B3

Architecte :
CGARCHITECTES

Promoteur :
INVESTTEAM

Capacity: 200 units
per year

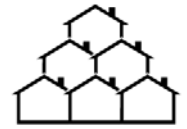
Studies: 1 to 3
months

Timing:
2 to 3 month
(1 house)

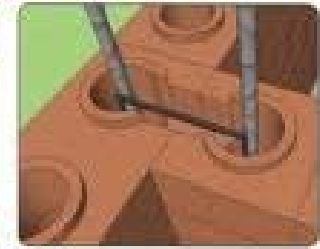
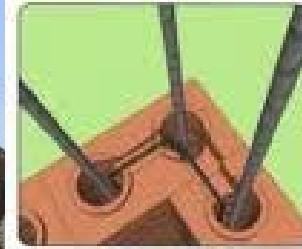
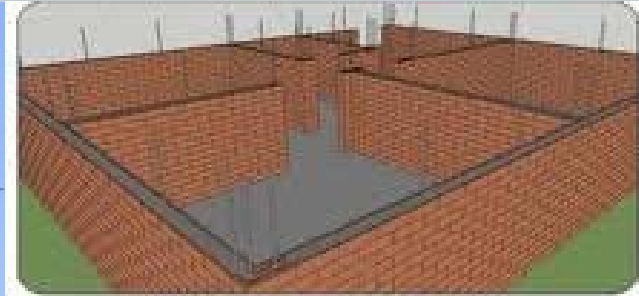
6 months
(20 houses)

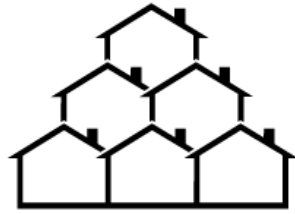
9 to 11 months
(30 apartments)

Example of Sustainable architecture in Brazil from clay bricks



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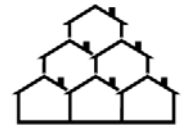


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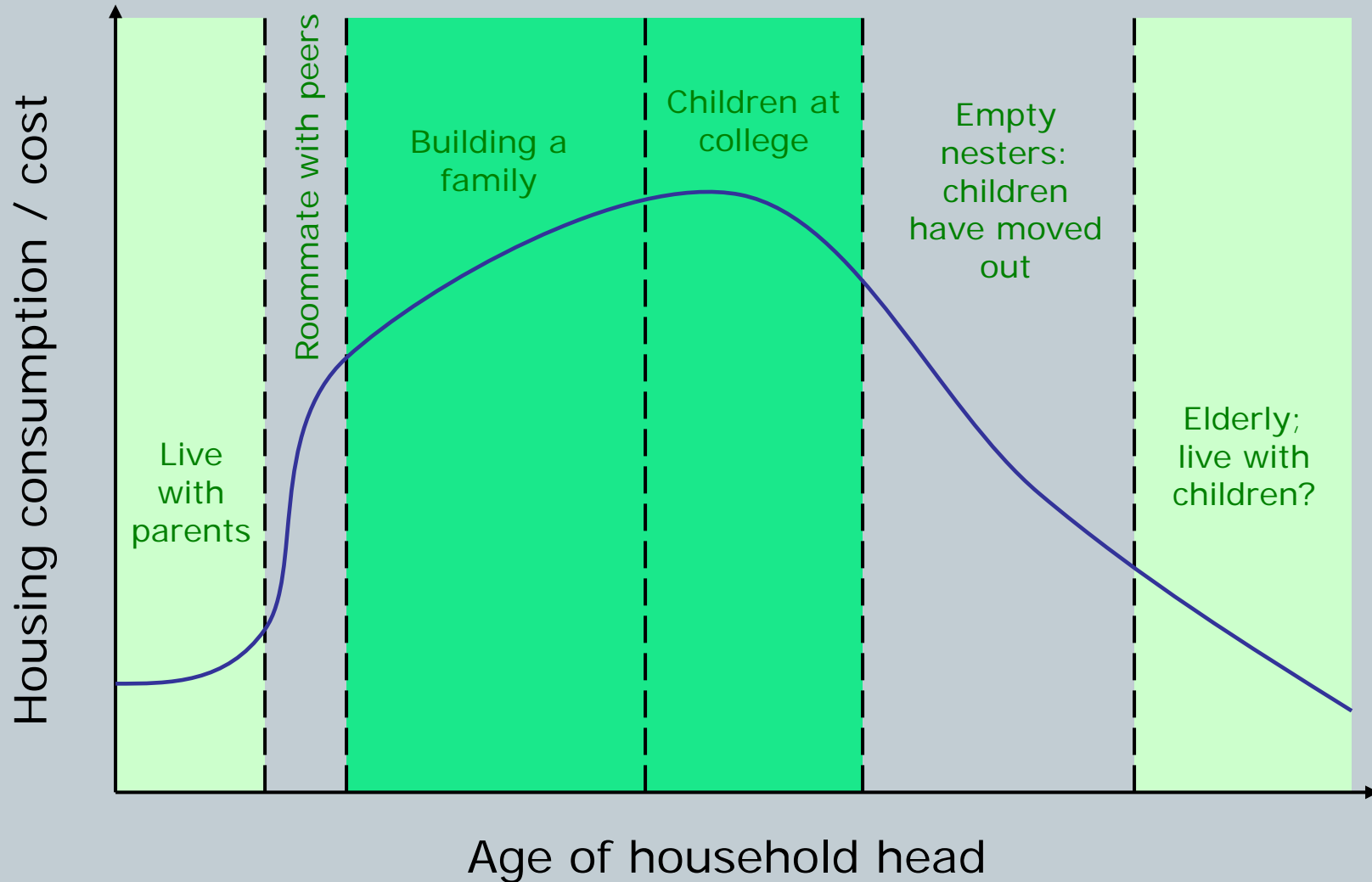
Developing rental housing in the ecosystem

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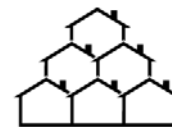
The housing people need and want changes over the course of their lives



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Benefits of quality housing: which of them can rental achieve?



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Buildup of equity value

Achievable when homes can be resold and increase in worth

Right to sell and capture property value

Predicated on effective and efficient title and settlement

Ability to finance against equity in the home/ collateral

Requires effective financing marketplace

Controllable occupancy cost

How can one bind the landlord not to gouge the tenant?

Improvability

Ability to add floors, rooms, walls, fixtures

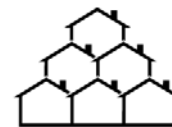
Security of tenure

Confidence you will live here as long as you make the payments

'Quiet enjoyment': security of possessions, personal space

Can protect people and things you value; no forcible intrusion

Rental's advantages compared with homeownership



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Lower cost of occupancy

For people who want simply the cheapest housing possible

Lower capital requirements

Security deposits, damage, vandalism, theft

Easier credit decision

Resident needs only first month's rent, security deposit

Resident can be informally employed

Rent can be paid in cash, month by month

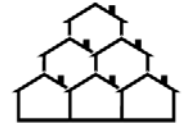
Can be an informal/undocumented citizen

Since there is no financing, owner does not investigate resident's background

More easily accommodates shifting household sizes, types

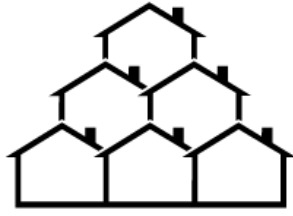
Roommates, co-workers, can pool money, cooking, labor ..

Affordable housing's dual mission: *social* and *economic*



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- Conventional (market rental) housing has one goal: Maximize profit
 - Serving residents is only a means to an end
- Affordable housing has *two* goals
 - *Social*: Provide affordability to residents
 - *Economic*: Make efficient use of scarce resources
- These two goals are diametrically opposed
 - Cheaper for residents ↔ more costly
 - Financially safer property ↔ residents pay more
- Every decision requires *resolving this tension*
 - How do we reconcile the two missions?
- Better program design eases the stress
 - But does not eliminate it
 - Designers and administrators must have a consistent decision rule
 - So that all parts of organization work in harmony



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