CAPTURING PROCESS OF INFORMAL HOUSING DEVELOPMENT

A LONGITUDINAL SURVEY METHODOLOGY
A pattern recognition approach

“How did they do that?”
FIRST - We need to change our

ATTITUDE!!!

It is not ‘just a survey’ but

A CELEBRATION OF SUCCESS!

Consider it a **Festival** to celebrate the community’s success that also provides the basis for a survey of its development.

It is not ‘just a survey’, but a way toward **re-energizing the sense of community** along with a serious reflection in understanding the process. The survey teams are not just surveyors, but are **guides** who help the families to understand and reflect.

The survey forms provide the structure for reflection with the families and provides the background for policy considerations.
PROCESS CAPTURE IS KEY METRIC

Four Metrics:

- EXPANSION By Rooms
- INCOME Household
- NUMBER IN HOUSEHOLD
- SPECIAL EVENTS

=> Shows critical Trigger points in understanding process
Rationale: Why are we doing this?

• The frightening challenge of doubling of population and tripling of Third World urban areas by 2030 requires new thinking on strategy and policy.
  
  We need more houses quickly!

• The demonstrated success of the informal sector in building housing – estimated at 70% by the World Bank – is the key de facto partner in housing.
  
  How do they do it?

  ▪ The pay-as-you-go process clearly works. BUT:
    ▪ takes a long time – it is slow (how to speed up?)
    ▪ Unclear quality of construction (how to improve quality?)
    ▪ Often in undesirable locations (how to guide location?)
    ▪ Very expensive to service after-the-fact (how to preplan areas?)

The key to sustainable policies is to link with existing practice of the incremental self-builder.
What is incremental housing?

A step-by-step, staged development starting from an initial small starter core, controlled by owner.

Incremental housing is an integral urban development process in building housing, communities and citizens.
What does it look like?

**Lima, Peru**
Squatter shack to elegance. Extensive squatter invasions in Peru starting in the 60s, are now incorporated as citizens.

**Bangkok, Thailand**
- An early 'site and services/core house project with support from the World Bank. Several core house options were offered starting from a basic 25sq.m. core.

**Sri Lanka**
The first core house project in urban areas, 1985. Various core house options were offered, from bare lot, to shell house, to small core unit. Lots were grouped into 'gampodas'- a traditional clustering of families.

**Cairo**

It keeps getting better!
What are the benefits of an incremental strategy?

**At the urban scale:**
Guides location of growth
Maximizes effective use of funds: “build one – get many”
Addresses speed and scale challenges of rapid urban growth

**To communities:**
Provides instant identity
Supports development of social networks
Provides sufficient size to support services, commercial opportunities

**To families:**
Provides houses more quickly
Provides a ‘safe’ start
Provides affordable option
Offers flexibility and choice in house expansion and outcome
Parallels secure tenure, basic services and facilities
What are some examples of incremental ‘starter’ core houses?

Typology of core houses

More complete
More support

CORE HOUSE TYPES

Basic Core
Squatter Start
Latin America
Toilet Only
Typical Core Formal Projects

Shell
Grow House
Canada
Elemental
Chile
Egypt Shell
Apartments

Capacity of cities
Stage of development
Economic strength
Image concerns
More innovative
Understanding process is a (the?) key reference for sustainable proactive policies

Quantitative vs Qualitative Data

“Numbers are nice
But process is twice (as nice)”
The three components of a planned proactive incremental process:

1. **Establish a FRAME for development**
   - **Frame Options**
     - Complete Frame: Lots, roadways, public facilities areas
     - Ready to move in
   - **Main Organizing Elements**
     - Neighborhood clusters, roadways, public facilities area
     - Ready to move in by groups of families
   - **Main Street Grid as Frame**
     - Roadways, public facilities area
     - Ready with development protocol
   - **The Basic Building Block**
     - The Neighborhood Cluster
     - 50-75 families
     - Shared open space
   - **Advantages**
     - Supports social groupings
     - Stabilizes and provides security
     - Provides immediate identity
     - Large-scale quick intervention
   - **Opportunities**
     - Mutual housing expansion
     - Communal services
     - Subsistence agriculture in shared area
     - Parallels effective donor support
     - Provides base for representative structure

2. **Provide a STARTER CORE**
   - **A Community with Various Core House Options**
   - **Benefits**
     - To the City: Provides quicker opportunities for shelter
     - Mitigates impact on resource demands
     - Adds facilities planning and development of city
     - To the Family: More affordable, more flexible in expansion to meet individual needs
     - Can move in immediately
     - Provides immediate security
     - Can use local skills and materials to expand
     - To the Community: Provides immediate
     - Delivers street and neighborhood
   - **Options**
     - Shell House + Lot
     - Starter Core House + Lot
     - Floor Slab, Party Walls + Lot
     - Lot Only
     - Peripheral Lots
     - Water, sanitation services provided through a variety of communal and individual options

3. **Support the process**
   - **A Growing Diverse Community**
   - **Establish Supporting Policies**
     - Promote good quality, safe construction
     - Facilitate process to speed development
     - Strengthen community
     - Assure basic services
   - **Consider Government Capacity**
     - Consider stage of development
     - Consider the importance of long-term sustainable household formation
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The process survey focuses on the dwelling and support policies.
The Survey Base: House Consolidation/Expansion Typology

The survey considers the addition to a city’s housing stock as a key goal.

Starter (Move-in)

STAGNANT (Not developing)
- No added rooms to housing stock of city
- Marginal-to-poor quality
- Needs support?

CONSOLIDATED (Successful)
- Provides additional rooms to housing stock of city
- Improved quality

EXPANDED (Very successful)
- Provides additional units to housing stock of city
- Improved quality
The Basic Process Diagram: Understanding Process

**Key Policy issues**

- **Move-in**
  - How to start?
  - What is an appropriate starter unit?
  - What are key location factors?
  - What support is needed?

- **Growth:**
  - How to speed process?
  - What ‘bottlenecks’ to overcome?
  - How to promote safe construction?
  - When and where interventions needed?

- **Current stage**
  - How does it compare to other housing options?
  - What is the cost/benefit to city, to community and to families?
The Basic Process Diagram: Discovering Household Strategies

Key Survey Questions
(in addition to standard set of basic information)

WHAT
- Initial move-in?
- Tenure situation?
- Payments?
- Permits, etc.?
- Services?
- Location, attraction
- How found?
- Sense of security?

WHY/WHEN/HOW
- Trigger, catalyst?
- Govt support?
- Difficulties?
- Key interventions

WHAT
- Tenure situation?
- Payments?
- Services?
- Value?
- Sense of security?
- Expectations?

The vital missing link to understanding?
The Basic Process Diagram: External Factors

National, city context
EXTERNAL FACTORS

- City economic situation
- Country economic situation
- Policies: title, credit, infrastructure
- Disasters, war

The Household Survey

Move-in

Growth:
- Consolidation
- Expansion
- Stagnant

Current stage

Neighborhod context
EXTERNAL FACTORS

- Shifts in relative location
- Services in community
- Facilities in community

Which drive the ‘triggers’ of development?
Typical Survey Summary – 3 Activities

Data collected via paper, cell phone or DIY methodology

1 – Diagram Timeline Data
Household Interviews (Paper, cell, DIY)
Data aggregated as collected

2 – Household Survey
At incremental growth stages
Household Interviews (cell phone aggregates data during collection)

3 – Government and Neighborhood Context Survey
Staff interviews, publication research

Pattern analysis

Traditional analysis

- Sketch of each stage
- Photographs: outside inside
And how to do it: Three Ways of collecting data?

Traditional interview ‘paper’ surveys

‘mSurvey’ cell phone base

Do-it-yourself fill-in forms?
Graphing the Three Key Metrics

Change in Household size

Change in household income

Growth in terms of rooms

Graphing the Three Key Metrics
Diagram Survey Form

We want to learn how your house was built, to help us in helping others to do the same.

1 - FAMILY SIZE: Indicate household size on vertical axis over time. Plot date when person added (moved in or born). Plot cumulative number on diag.

2a - NUMBER OF ROOMS: Plot number of rooms on horizontal axis when added.

2b - FLOORS: Indicate expansion of floors on vertical axis over time.

4 - SPECIAL EVENTS: Indicate when ‘special’ things happened that helped expand the house. For example, funding from the government, official title (if you did not have it at the start).

5 - INCOME: Indicate household income on vertical axis over time.

Conventions
- Trajectory of house growth (rooms+floor)
- Household size
- Household income

House identification: (site and services, consolidated squatter, upgraded squatter)

Name: (neighborhood, city, country)
Example in Squatter Settlement in Lima, Peru
Examples from Squatter Settlement in Lima, Peru

Consolidated Houses

Unconsolidated Houses

New Houses

SUCCESSFUL #1

Rooms

Persons

SUCCESSFUL #2

LESS SUCCESSFUL #1

LESS SUCCESSFUL #2

NEW #1

NEW #2

Examples from Squatter Settlement in Lima, Peru
Now GO CELEBRATE
with the family and the community!

For more information:
url: web.mit.edu/incrementalhousing
Your Turn! SELF-ASSESSMENT

ROOMS/HOUSEHOLD SIZE

1 - Graph HOUSEHOLD SIZE (number)
2 - Graph number of ROOMS (Kitchen + Bathroom = 1)

(Plot the values at the life thresholds, then connect with line)