Investment can’t happen without information: efforts in building the data landscape for affordable housing
Cities are built the way they are financed – Bertrand Renaud, 1984
and are being built, every day, across Africa, by households and builders of all types and capacities, from individuals to corporations. How can we understand this activity in support of quality, sustainable, affordable housing delivery that attracts investment?
CAHF has been tracking the basics since 2010

CAHF’s Yearbook on Housing Finance in Africa documents the housing finance context of all 54 countries, collecting and presenting basic data and information, with precise referencing, to show the breadth and diversity of housing finance systems and habits across the continent.

First edition: 2010
This year: 14th edition, to be launched on 31 October 2023 at the AUHF Conference in Windhoek, Namibia.

https://housingfinanceafrica.org/resources/yearbook/
We’ve then dived deeper into key questions. As our methodologies evolve, we can better quantify what is really happening on the ground.

The Housing Economic Value Chain studies explore the impact of housing on the economy, considering materials value chains, labour markets, formal and informal delivery activity, of housing built for ownership and rental, and then calculate the percent contribution to GDP and the estimated number of jobs created.

https://housingfinanceafrica.org/projects/housing-and-the-economy/
We’ve explored property market performance using Deeds Registry Data in South Africa

Citymark South Africa: Overview of housing stock and transactions by metro (2012-2021)

This dashboard offers an overview of the stock and transactions for the South Africa’s eight metro municipalities from January 2012, up to the end of December 2021.

30th June 2020


Citymark South Africa: Mortgage lending at national, provincial, metro and sub-place level (2012-2021)

In this dashboard on mortgage lending, we look at the supply of mortgage loans by lending institutions in each of the eight metros.

30th June 2020


Citymark South Africa: Government-subsidised housing at national and provincial level (2012-2021)

This dashboard focuses exclusively on government-subsidised housing in South Africa at national and provincial level, for the period January 2012 to end of December 2021.

30th June 2020

And we’ve explored benchmarking with fictional BoQs in hypothetical developments to test sensitivities and highlight areas for attention

<table>
<thead>
<tr>
<th>COST ELEMENTS</th>
<th>DESCRIPTION</th>
<th>TOTAL DEVELOPMENT COSTS (KES)</th>
<th>IN UNITED STATES DOLLAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>55m² individual plot house</td>
<td>Per dwelling unit</td>
<td>3 954 067</td>
<td>$32 429</td>
</tr>
<tr>
<td></td>
<td>Per m2 of net sales area per unit (55m²)</td>
<td>71 892</td>
<td>$590</td>
</tr>
<tr>
<td>Low-rise apartments</td>
<td>Per dwelling unit</td>
<td>3 015 486</td>
<td>$24 731</td>
</tr>
<tr>
<td></td>
<td>Per m2 of net sales area per unit (44m²)</td>
<td>68 534</td>
<td>$562</td>
</tr>
<tr>
<td>High-rise apartments</td>
<td>Per dwelling unit</td>
<td>3 269 856</td>
<td>$26 818</td>
</tr>
<tr>
<td></td>
<td>Per m2 of net sales area per unit (44m²)</td>
<td>74 314</td>
<td>$609</td>
</tr>
</tbody>
</table>

Recently we’ve explored the landscape for housing data across eight countries and engaged with public sector agencies Kenya and Nigeria to address gaps

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Extract and analyse household data to close data gaps, esp. Integrated Household Budget Survey</td>
<td>Regularly collate and republish succinct housing and housing finance related statistics published by the CBK</td>
<td>Publish indicators &amp; reports on residential transfers (including raw land sales, registration and sale of new units and residential resale transactions).</td>
<td>Disseminate indicators and reports on turnaround times from application to decision for planning submissions, as well as cost of compliance related to applications and permitting</td>
<td>Extract and analyse data collected by industry bodies with emphasis on the affordable sector.</td>
<td>Analyse new DHS data when it becomes available</td>
</tr>
<tr>
<td>Produce a digital dashboard for inclusion on the KNBS website, drawing in data from across KNBS surveys, explicitly speaking to the Affordable Housing Programme</td>
<td>Ensure timely publishing of data. Extract mortgage data in a separate publication so it is easier to access.</td>
<td>Generate and publish key indicators off the pending National Land Management System. Especially make available underlying transactions data so that third parties can augment and add value to the data</td>
<td>Make available detailed data on units completed to enable analysis of activity in the affordable segment of the market</td>
<td>The KMRC has undertaken extensive analysis on mortgage lending. This analysis (aggregated for the sector as a whole) should be shared more widely</td>
<td></td>
</tr>
<tr>
<td>Make raw data available for household level analysis of income, housing circumstances, etc.</td>
<td>Transactions data generated by lenders &amp; credit bureaus could significantly improve public understanding of credit access and performance</td>
<td></td>
<td></td>
<td>Encourage donors to create more comprehensive and standardised data gathering protocols and templates for projects they fund</td>
<td></td>
</tr>
</tbody>
</table>

Where DFIs fund affordable housing developments, they should request that developers submit comprehensive and standardised data in line with clear protocols and templates (as with NGOs) – participation in the Open Access initiative.

Although data is fundamental to the investment decision, good quality, focused data is very difficult to come by. Investors, developers, all highlight the difficulty of accessing data that gives an accurate picture of the affordable housing investment opportunity and its risks. Key data questions relate to the nature of the product, its composition and associated costs; the process followed, including steps, time and cost, and the blockages that arise and the implications these have on overall affordability; details relating to people, the target market, their affordability, other financial pressures, housing needs; etc.; the performance of the investment, whether this is a worthwhile venture, how it might be improved, etc; and finally good practice.

CAHF, Reall, FSDKenya, HfHi, the World Bank Group and others all do important work providing high level data to the market. It is at the micro-level – at the level of the project or the Fund, or at the level of the household – that there is very little data in the public domain. As a result, there is very little information to frame a view on product, process, people or performance – and as such, investors and other market players are reticent to engage because they can neither quantify the opportunity nor the risks.

But at the end of the day, what does this tell us?

Classic research focus: CAHF, HfHi, UNHabitat, Reall
FSD Kenya/Reall/Hofinet etc focus available for curation from public sector agencies/ regulators
What funds & DFIs look at, but keep internal
What developers look at, but keep internal
What lenders look at, but keep internal

Opaque, limited availability; unstandardized collection, incidental

High level market information is increasingly available, but key gaps remain. These could be addressed by public sector players and DFIs, and are the focus of CAHF’s Data Agenda for Housing in Africa


This micro-level data is kept from the public domain because of its supposed commercial value, and the fear that sharing will undermine the competitiveness of the players. The challenge therefore is to harvest / liberate / and assemble this data in ways that support market development without undermining commercial competitiveness.
The Open Access initiative invites developers and financiers to share: live data collection, produced as ‘useful outputs’ and enabling advocacy process to overcome blockages. Benefit to developers = showcasing and benchmarking

Data collected through housing delivery & management process

1. Product
• Detailed breakdown of product cost and income inputs relating to project identification, development cost data (project inception, land, obtaining rights and permits, infrastructure costs, building construction and professional fees, housing and other building construction costs, indirect construction site costs, other development costs), property operating and maintenance costs, property operating income data and gross revenue data.
• Collected twice: at proposal stage and at the end of the investment
• Benchmarking, analysis of efficiencies, identification of subsidies, interrogation of environmental (green) components, contribution towards life cycle costing

2. Process
• Detailed project delivery tracking of costs and time by value chain/ work stages
• Statutory standards vs. actual experience
• Relevant legislation and institutions involved at each step
• Regulatory experience (procedures, approvals, fees)
• Collected live, throughout the project implementation process

3. People
• Household data, housing history, household income & assets, transport to work and school, basic monthly household budget, housing financing, satisfaction
• Enabling demand segmentation by employment, income, transport, etc.
• Collected during sales, at occupation and then annually where possible

4. Performance
• Financial structuring, feasibility, budget vs. actual
• ESG indicators
• Maintenance / sinking fund costs
• Ease of Defaults, performance analysis
• Gross / Net Yields
• Collected on completion and derived from product, process and people data

5. Practice
Shared background research & input to standardised templates

Project design
• Market survey checklist & format
• Typical demand survey questionnaire
• Land-pre-assessment checklist
• Typical professional services procurement documents, services agreements, professional indemnity etc.
• Feasibility study structure and format

Initiation
• Example term sheet
• Income and expenditure statement

Housing delivery value chain
• Typical offer to purchase / deed of sale forms
• Example layout plans and reports used in environmental and town planning applications
• Detailed building plans
• Typical services installation contract procurement and contract forms

Legal documentation
• Redacted legal agreements
• Maintenance contracts
• TPS agreement
• Homeownership Association agreements etc)

Software
• Property management software

Research
• Feasibility / market studies
• Demand side analyses
• Environmental Impact Assessments

Affordable Housing Investment Alliance
• Quarterly or biannual participation /active sharing
• Signatory to issue of common concern
• Project-related advocacy on key value chain blockages
• AHIA Portal for broad based sharing of material, lessons, networks, etc.
Working with developers who are happy to share, we have been moving from the hypothetical to the real

### Development Cost Breakdown

<table>
<thead>
<tr>
<th>Cost Description</th>
<th>1 KENYA</th>
<th>2 KENYA</th>
<th>3 KENYA</th>
<th>4 KENYA</th>
<th>5 KENYA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance Cost</td>
<td>15.58%</td>
<td>16.61%</td>
<td>8.92%</td>
<td>12.52%</td>
<td>12.47%</td>
</tr>
<tr>
<td>Marketing and Other Development Cost</td>
<td>3.13%</td>
<td>3.76%</td>
<td>2.60%</td>
<td>15.05%</td>
<td>15.05%</td>
</tr>
<tr>
<td>Construction</td>
<td>56.76%</td>
<td>57.08%</td>
<td>60.68%</td>
<td>67.69%</td>
<td>66.58%</td>
</tr>
<tr>
<td>Consultants, DM &amp; PM Fees</td>
<td>13.56%</td>
<td>13.14%</td>
<td>15.05%</td>
<td>8.79%</td>
<td>7.97%</td>
</tr>
<tr>
<td>Compliances and approvals</td>
<td>4.62%</td>
<td>4.30%</td>
<td>3.99%</td>
<td>4.62%</td>
<td>7.42%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>4.48%</td>
<td>4.73%</td>
<td>4.26%</td>
<td>4.30%</td>
<td>7.77%</td>
</tr>
<tr>
<td>Land</td>
<td>13.56%</td>
<td>13.14%</td>
<td>7.69%</td>
<td>8.17%</td>
<td>9.32%</td>
</tr>
</tbody>
</table>

### Benchmarks

- **Average Size per Unit**
  - Studio: 20sqm
  - One Bed: 40sqm
  - Two Bed: 55sqm

- **No. of Units**
  - 1 KENYA: 400
  - 2 KENYA: 137
  - 3 KENYA: 232
  - 4 KENYA: 232
  - 5 KENYA: 143

- **Size of Land**
  - 1 acre
  - 0.5 acres
  - 1.2 acres
  - 0.8 acres
  - 1 acre

- **Efficiency**
  - 82.90%
  - 76.11%
  - 75.85%
  - 87.50%
  - 85%

- **Parking Ratio**
  - Not given
  - Not given
  - 0.6
  - 0.4
  - 1.5

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Working with developers who are happy to share, we have been moving from the hypothetical to the real

Affordable Housing has become an ambiguous phrase with a different definitions between public and private sector. **But at this stage, we can only make price comparisons and not cost comparisons**

<table>
<thead>
<tr>
<th>Selling Price/Square Meter</th>
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<tbody>
<tr>
<td>Starehe Point 1</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>One Bed</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Two Bed</td>
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<td></td>
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<tr>
<td>Three Bed</td>
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</tbody>
</table>

**Source:** Boma Yangu Portal and Project Websites
Sneak peak at the Nairobi Metro Area Dashboard (currently live in Beta mode)

- 2022 data to be released in a new & improved dashboard, shortly
- Annual collections planned with ongoing submissions permitted
- This offers an important opportunity for developers to showcase their developments
- All data accessed from the public domain
- Fingers crossed: we do this in Nigeria with REDAN

Source: HCCB (2023 Report)

On this journey, CAHF has learned that we cannot collect data alone – partnerships are critical, in collection, analysis, dissemination and learning. The public good of information is the responsibility of and benefit for all players: public, private, NGO and DFI

Over time, the Open Access Initiative (OAI) intends to draw in all the players in the housing ecosystem: each contributing their experience in data, insights and practice.

This will address information asymmetries in the housing market, offering benchmarking data for the respective markets, regional and continent-wide comparisons and shining light on key areas for policy attention.

Basic principles

- Standard, accepted definitions – solid metadata
- Consistent framework for collection product | process | people | performance | practice
- Consistent delivery of outputs: timely, relevant, clear
- Confidentiality of inputs, Open Access to outputs
- Spirit of experimentation, testing, refining, experimenting again
We can’t do this alone – we must mobilise the entire industry – but how? Our panel:

Dr Muhammad Gambo
- The value of data as a public resource – a public good. What is the argument?
- Where is the line between Open Access, market transparency, and market competitiveness?
- How can we improve the data landscape for affordable housing? What should be our priorities: public sector administrative data? Private sector data? Macro data? Micro, project level data? Do we have to prioritise or do we do it all at once?

Michael Kanui

Dao Harrison
- How do we sustain these efforts? How do we address the need for funding?
- What impact does open data have on a developer’s ability to target affordable housing? (this one is for you)

Drs Marja Hoek-Smit
- Is there an opportunity for twinning arrangements where one country might assist another in its data efforts?
CAHF MOOC. Making Housing Markets Work in African Cities: the role and opportunity of finance

A free massive open online course (MOOC)

Housing finance in Africa matters. The lack of adequate and affordable housing requires action.

Because how housing is financed impacts on what housing we build, it impacts on how we build housing, and it affects how housing supports our lives and livelihoods. Many households across Africa do not have a home to comfortably stay in, let alone work in. There are innovative approaches that can make a positive difference to housing on the continent.

This MOOC tackles key questions around affordable housing through an in-depth exploration of housing finance in African cities:

1. How does housing impact the economy?
2. What is the demand for and affordability of housing?
3. What are housing supply networks?
4. How are the steps to constructing, maintaining and transacting housing financed across African settlements?
5. What are the innovative financial instruments?
6. How can these be expanded down-market?