

Understanding the Impact of Housing on the Economy:

Housing Economy Toolkit*

CAHF's Housing in the Economy programme seeks to answer a specific and simple question: *What impact does housing have on a nation's economy?* Since 2015, CAHF's Housing Economic Value Chain studies have been undertaken in over 15 African countries to various depths of analysis. In South Africa, the study was applied to both the entire housing sector, and then separately to the sub-sector of government-subsidised housing. In Kenya, Rwanda and Senegal, the study has been coupled with the World Bank's Private Sector Development Strategy processes, and fed into their manufacturing support and building material supply chain analyses. In Kenya, the government has asked for additional attention on the impact of housing on job creation. Most recently, the government of Zambia has appointed CAHF to undertake the study as part of their efforts towards a national housing strategy.

Investment in housing through the construction of new units and rental of existing units has very many impacts on a nation's economy. As illustrated, the spending of household savings and resources (1) creates a long-term investment for the household (2), while supporting an industry that then delivers more housing for more households (3). As houses appreciate in value, this can generate regular and growing household income (4) which in some cases can be leveraged with finance. The economic value added to the economy during construction (5) is felt through job creation, as well as the increased purchase of building materials and services that go into the housing construction process (6). In this way, the fixed capital engine of the economy grows (7), stimulating demand for other linked goods and services (8) which through taxation (VAT, company tax or personal income tax) provide revenue for the government (9) which creates a basis for further household and national economic growth (10).



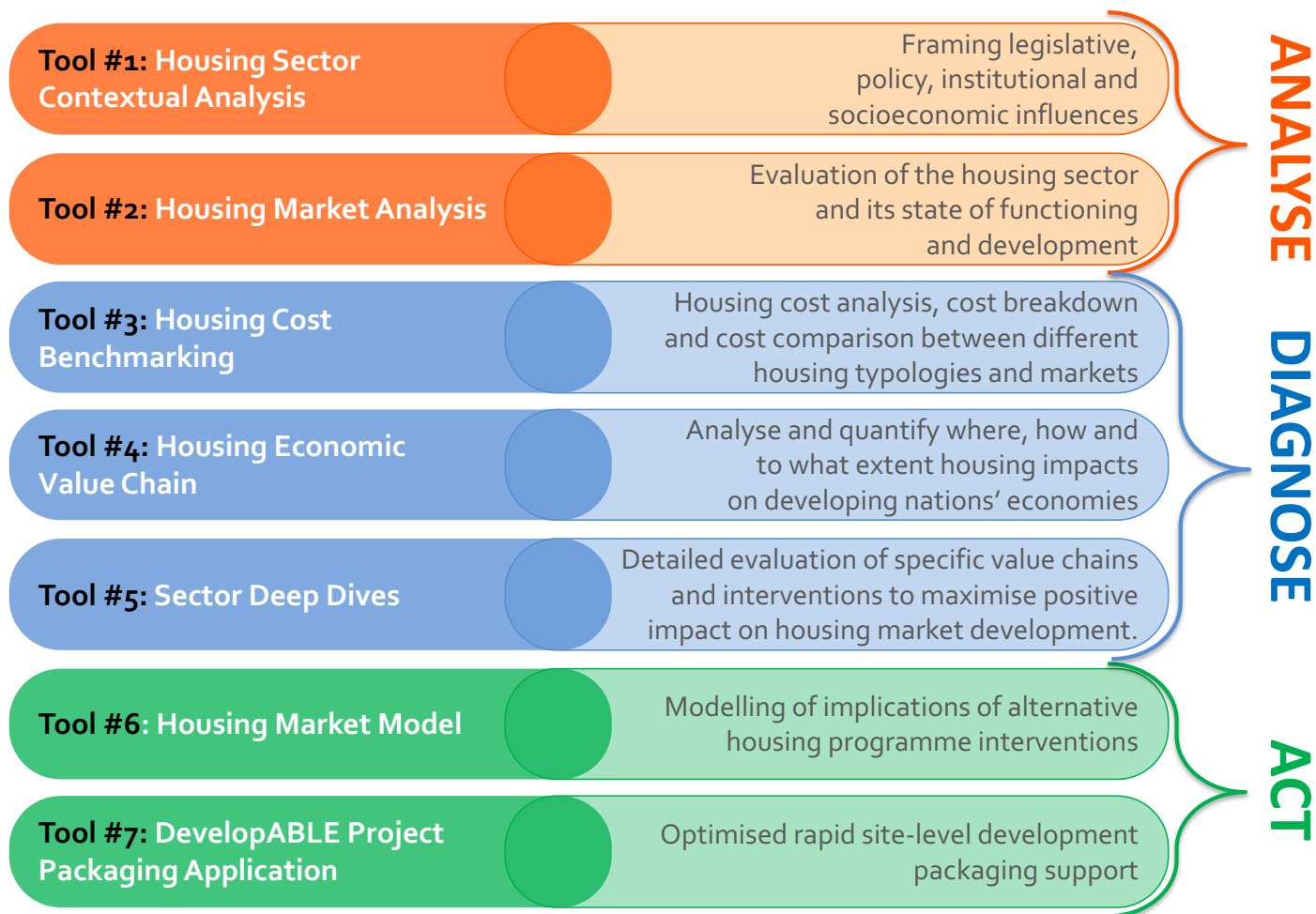
But how are these impacts calculated? National statistical figures report on the impact of construction on GDP, but this includes both residential and non-residential construction, and does not include rental activity. Percent of GDP generated from real estate is also tracked, but again, this is not disaggregated into the various real estate sub-sectors. Further, Africa's housing sector involves so much informal activity – from labourers paid in cash through to recycled building materials. How can all of these be quantified to realise a 'true' perspective on the role that housing plays in all of its diversity? And for housing policy makers, how can we isolate the particular impact of affordable housing?

The Housing Economy Toolkit offers an integrated set of diagnostic, modelling and decision support tools that are used to quantify, analyse, diagnose and improve the performance of a housing sector. The underlying approach draws on economic value chain theory which has been applied to housing and adapted to the data-scarce environments in which housing is delivered in African countries.

The Housing Economy Toolkit can be used by different stakeholders at different scales ranging from the national sectoral level analysis to an analysis of an individual programme, project or site. The integrated nature of the methodology means that implications for public, private and non-profit organisations of specific programmes and projects can be developed. The toolkit can also be applied at sectoral, sub-sectoral, national, regional or local level, as well as at programme or project scale. This flexible approach enables stakeholders in the housing sector to consider the potential future *housing outcomes and economic impacts* of strategic choices in a housing sector, programme or project. Individual tools can be applied in combination or separately depending on specific requirements.

* See <https://housingfinanceafrica.org/projects/housing-and-the-economy/> for all the CAHF outputs in the Housing in the Economy Programme

The Housing Economy Toolkit comprises seven tools:



Tool # 1 Housing Sector Contextual Analysis

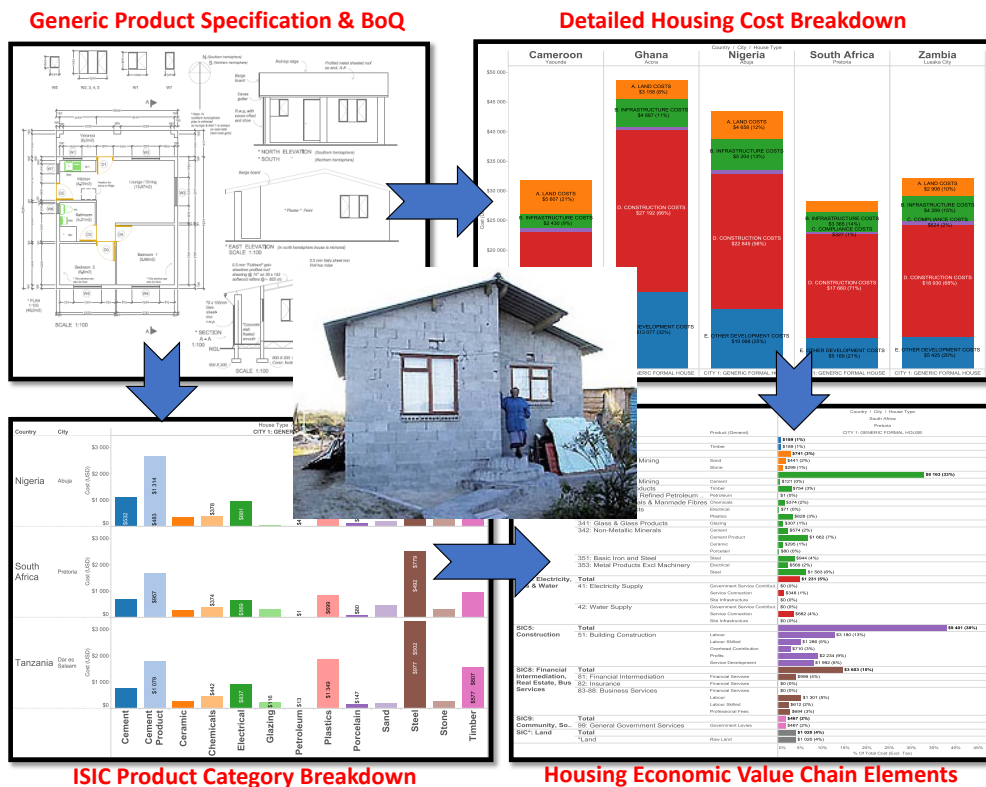
The first tool in the Housing Economy Toolkit is the **Housing Sector Contextual Analysis (HSCA)**. The HSCA provides an approach for systematically analysing the factors that frame and influence a country's housing sector, ensuring that a basic understanding of a housing sector is available to guide future activities. The components of the HSCA include (1) *International Covenants*: the goals, declarations and covenants binding or influencing country housing sector performance; (2) *Governing Framework*: the legislative, strategy, policy and programme approach of housing in the country; (3) *Institutional Framework*: the State, State-Corporate and private institutions, as well as other actors engaged in the housing sector; (4) *Strategic Planning Cascade*: the interplay between growth, development and housing sector strategies and plans; and (5) *Macro-economic Conditions*: International, sub-continental and national economic fundamentals that drive housing market growth.

Tool # 2 Housing Market Analysis

The second tool is the **Housing Market Analysis (HMA)**. This provides a method and framework for systematically analysing and evaluating a housing market. The HMA includes: (1) *Housing Demand Side conditions*; (2). *Housing Supply-Side conditions*; and (3) *Housing Programme-Specific conditions*. Based on these analyses, (4) *Housing Market Optimisation potentials* are identified that can improve sector growth, supply and demand outcomes.

Tool #3 Housing Cost Benchmarking

The third tool is **Housing Cost Benchmarking (HCB)**. The HCB methodology creates a highly detailed breakdown and analysis of housing development costs into specific materials, labour and development overhead categories. This breakdown facilitates total cost comparison, as well as construction, labour and materials cost breakdowns within, between and across selected housing typologies. Both formally and informally constructed typologies can be included in the HCB framework. The HCB methodology also provides Housing Economic Value Chain compositions per housing typology.

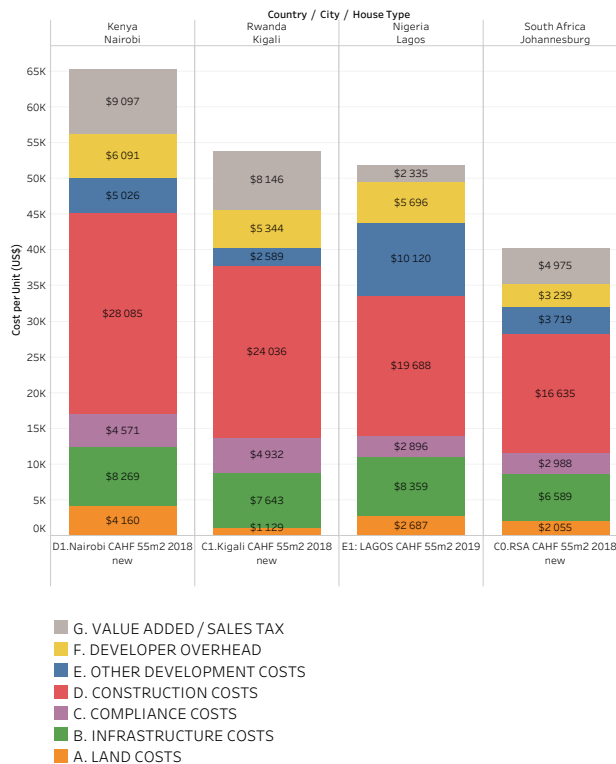


CAHF's Open Access Initiative draws on the HCB Methodology, collecting data from live projects. This can improve the precision of the HCB analysis.

See <https://housingfinanceafrica.org/projects/open-access-initiative/>



Total costs of housing typologies selected for analysis are aggregated from the basic cost elements of housing construction. These are land, infrastructure, compliance costs, construction, materials and labour, and other indirect costs and overheads. Further, each unique cost element is categorized according to International Standard Industrial Classification (ISIC) sector and sub-sector, and assigned a labour or material category, so that the cost contributions from different types of materials and sectors of the economy can be analysed.

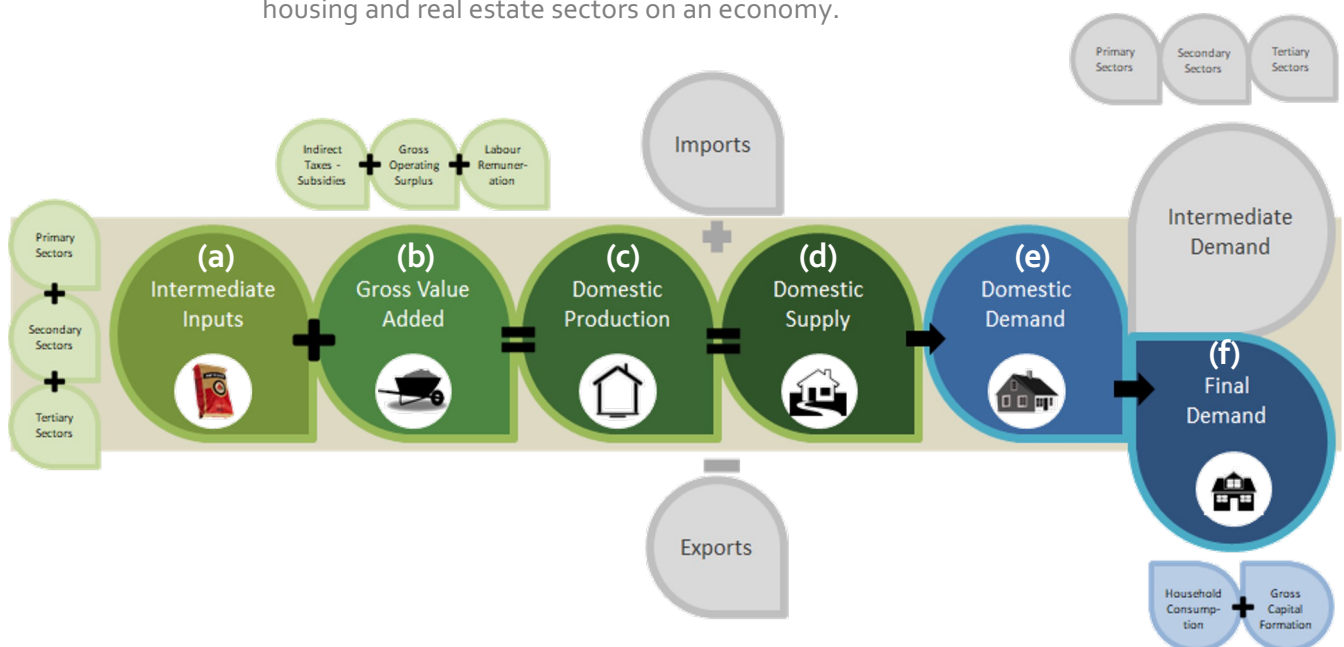


Tool # 4 Housing Economic ValueChain

The fourth tool in the Housing Economy Toolkit is the Housing Economic Value Chain (HEVC). The methodology facilitates the calculation of the economic contribution of the housing sector in economies with limited available data, nascent formal housing sectors, high proportions of informal housing and thin formal housing finance systems. Specifically, the approach can use data proxies where data is not available or unreliable.

As illustrated, **(a) intermediate inputs**, which include materials and services from upstream in the economy, **plus (b) Gross Value Added** by the developers, contractors and households who produce housing through value added inputs of labour, gross operating surplus and net indirect taxes) **equals (c) Domestic Production**, that is the creation of new value in rentable or sellable housing stock. This is added to (d) Domestic Housing Supply, which is matched to (e) Domestic Demand for housing, including Intermediate demand (inputs to other value chains) or (f) Final Demand for housing (from government, households or through additions to gross fixed capital formation in the economy).

Once the housing economy is presented in this way, we can calculate the contribution of housing to GDP, as well as various housing multipliers that indicate the ripple effects of the housing and real estate sectors on an economy.



Tool # 5 Sectoral Deep Dives

The fifth tool is the Sectoral Deep Dive (SDD). Based on the assessments of the four previous tools, we can identify the specific sectors that may pose specific risks or opportunities to the performance of the housing sector. These sectors can be analysed in greater depth by tracing and assessing their specific economic value chains and/or supply chains. This in turn can be used to understand blockages and opportunities, and craft specific approaches to stimulating domestic efficiencies and growth.

Understanding the employment implications of housing sector development is a critical element of housing sector growth. Employment implications of housing programmes and projects are used for planning, as well as reporting on ESG outcomes. Understanding latent capacity and utilisation rates also assists in understanding expansion capacity within the sector. Skills profiles of the labour force required to develop housing assist to identify potential constraints and training needs, as well as to understand the requirements for building a talented and experienced workforce to limit substitution by expatriate skills.

Tool # 6

Housing Market Model

The sixth tool in the Toolkit is the **Housing Market Model**. The Housing Market Model (HMM) provides a comprehensive framework for understanding the interactions between and implications of current and future strategies to enhance affordable housing delivery. The HMM assesses the effective housing demand of different household income groups in the affordable housing market by modelling the interplay between housing supply-side and housing demand-side parameters. Based on this framework, the potential impacts and implications of different housing market intervention options available to programme or project implementers are modelled.

The HMM is supported by an Excel-based tool that helps decision makers to understand key outcomes of specific defined housing provision scenarios. As a spreadsheet model, it relies on numerous inputs and assumptions to generate outputs. It is important to note that these inputs emulate reality but cannot provide accurate assumptions of housing market and human behaviour. The HMM's modelling parameters are defined based on prevailing conditions in housing and related sectors. These include the scale of the housing sector, programme or project, the typology and size of units, household income and expenditure on housing and financing terms available to participating households. The model has changeable input assumptions that enable adaption to assess implications of multiple input-output scenarios and potential intervention strategies on effective housing demand across different household affordability groups. The impacts that alternative approaches, inputs or interventions could have on pushing the boundaries of current housing development and financing constraints in housing, financial and construction markets can then be tested. This also enables modelling of the desired development outcomes for specific programmes or sites as one way of contemplating feasibility.

The HMM builds scenarios based on a series of inputs defined into the housing demand-side, housing supply-side and housing market interventions. A. *Housing Demand-side Inputs* aim to increase households' affordability for housing. B. *Housing Supply-Side Inputs* aim to increase efficiency of housing development. *Housing Interventions* test the implications of specific supports and interventions focused on improving access to housing for target groups. Based on these underlying elements, the model enables the development of C. *Project Matching and Feasibility* outcomes based on parameters defined for specific cities and identified project sites. Finally, this enables the definition of proposed project concepts and financial feasibility, at the level of individual projects. This identifies the types and quantum of support envisaged for the housing programme or project to ensure its implementation feasibility.

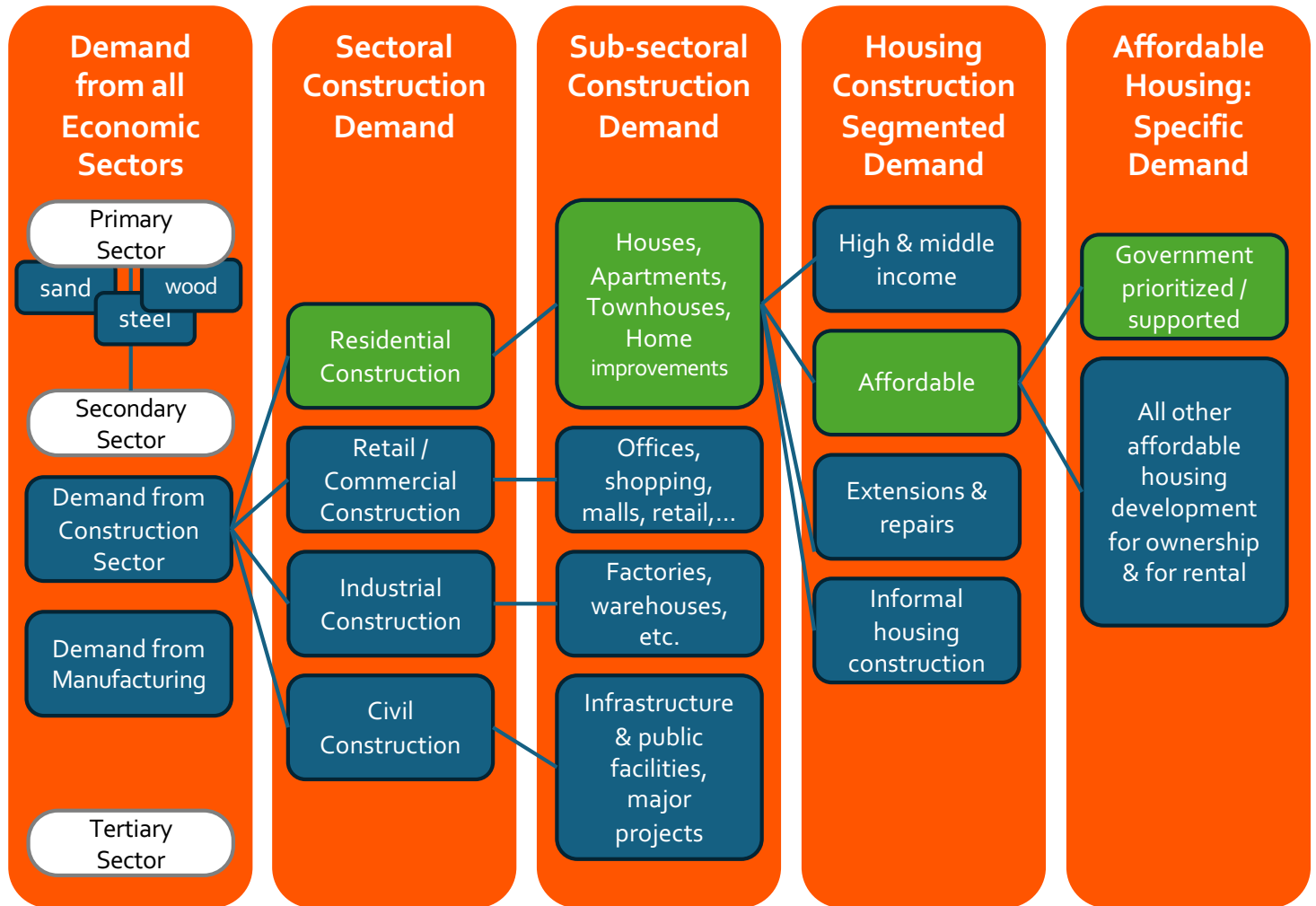
Tool # 7

DevelopABLE

DevelopABLE is the final tool in the Housing Economy Toolkit, taking all of the data, information and insight generated in tools # 1-6 and applying this in a project context. Developed by David Gardner with support from NOVO Impact Fund, DevelopABLE substantially reduces the time and cost burden of development packaging for Micro- and Small Developers. DevelopABLE is a technology-driven, human-facilitated development packaging and approval support application that assists small scale builders to quickly conceptualise, design, measure and cost their developments. This ensure better chances of project viability, financial close and municipal approval. Designed to provide transparency in the project packaging process, DevelopABLE will ensure that less experienced developers and professionals can quickly, professionally and successfully navigate the development process in the shortest possible time and most cost-effective manner.

CAHF Briefing Note

The housing economy is vast – dependent on and also influencing sectors and sub-sectors far beyond a simple definition. The performance of the housing economic value chain will only be as strong as its weakest link. By tracking the economic context and impact of link, it is possible to isolate specific components to look at them specially, identifying both blockages and efficiencies that can be minimised or leveraged to improve overall housing sector performance, the strength of its impact on the economy, and the capacity of its approach to meet the needs of low income earners.



Centre for Affordable Housing Finance in Africa

To access the full library of studies in the **Housing in the Economy Programme**, visit <https://housingfinanceafrica.org/projects/housing-and-the-economy/>

Visit the **Open Access Initiative** for further work using this methodology: <https://housingfinanceafrica.org/projects/open-access-initiative/>

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Acknowledgements

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