

AFRICA 2063: HOW CITIES WILL SHAPE THE FUTURE OF A CONTINENT

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ISPI



The last two decades have been marked by a profound turn-around in the perceptions of Africa, both within the continent and internationally. This change has been driven primarily by the exceptional economic growth in many parts of Africa, despite a slow-down and financial crisis about ten years ago. Renewed confidence among many African states is reflected in the Africa 2063 Agenda spearheaded by the African Union. This manifesto puts an important focus on the impressive urbanization of Africa, one of the region's major trends. In 2030 more than one billion Africans will be city-dwellers, while at least six cities will be inhabited by more than ten million citizens. What are the main challenges for African cities in terms of infrastructure, energy, housing, technology, and mobility? What role do governments play? Is it possible to manage this urbanization wave in a sustainable manner, reducing the number of people living in informal settlements and slums?

The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of the Italian Institute for International Political Studies (ISPI)

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PROMOTING SUSTAINABLE INFRASTRUCTURE TO UNDERPIN AFRICAN URBANISATION

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At the intersection of Africa's urbanisation, employment, economic growth, cultural and environmental imperatives sit the question of infrastructure. Traditionally, development policy would simply advocate for the roll-out of modern network infrastructure, through, first, a focus on governance reform so that the country in question could be sufficiently credit-worthy to access the requisite development finance to implement infrastructure projects. This approach has demonstrably not worked in most of Africa for two main reasons. One, irrespective of the quality of governance, most sub-Saharan African countries are too poor to be considered credit worthy, and the prevalence of infrastructure poverty undermines political institutions. Two, modern infrastructure systems are often inappropriate not just because of costs, but also due to the associated negative environmental impacts: too resource-intensive and often a contributor to carbon emissions especially when coal and other fossil fuels underpin the energy infrastructure systems.¹ Today, these problems are well understood by African leaders, and institutions and a different approach is afoot that should be reinforced by European partners.

In light of this context, one can draw on the following operational definition of sustainable infrastructure:

"Sustainable infrastructure is infrastructure that is socially, economically and environmentally sustainable [...] Sustainable infrastructure is inclusive and respects human rights. Such infrastructure meets the needs of the poor by increasing infrastructure access, supporting general poverty reduction, and reducing vulnerability to climate change risks [...] It positively impacts GDP per capita and job outcomes. Sustainable infrastructure does not burden governments with debt they can never repay, or end users with tariffs they cannot afford including and especially the poor [...] Environmentally sustainable infrastructure mitigates carbon emissions during construction and operation (e.g., high energy efficiency standards). Sustainable infrastructure is also resilient to climate change (e.g., by building public transport systems in less fragile places or to different specifications due to climate change risks)."²

This agenda is not unique to Africa but rather an imperative for the whole world. However, due to the extreme deficits in Africa and the extent of poverty and limited infrastructure finance resources, the challenges are unique. Since Europe is equally confronted with dramatically re-configuring the material and carbon intensities of its aging infrastructure networks, there is indeed an integrated debate to be had about new priorities to achieve the Sustainable Development Goals (SDG) and low-carbon ambitions. Africa is confronted by four major infrastructural priorities.

ENERGY TRANSITIONS

Energy security is a precondition for economic prosperity and peace. Africa is hobbled by extreme deficits with regard to reliable and sustainable energy generation capacity. Addressing this issue ranks as a very high priority for all the key national, regional and pan-African institutions such as the African Development Bank (AfDB) and various infrastructure actors. Fortunately, the SDG agreement and processes have created considerable momentum to not only address energy deficits but to simultaneously consider the importance of building a low-carbon, future-proof system. Influential think tanks such as the Africa Progress Panel argue that: "Governments should aim at a 10-fold increase in power generation by 2040, while laying the foundations for a low-carbon transition. Public spending on energy should be raised to 3-4 per cent of gross domestic product (GDP), supported by measures aimed at raising the tax-to-GDP ratio and avoiding excessive reliance on bond markets."³ The emphasis on increased investment and building low-carbon systems are particularly important to ensure a more equal, inclusive and sustainable future.

This approach is being reinforced by the global platform Sustainable Energy for All (SE4-all) which operates under the auspices of the United Nations. Their mandate⁴ is to work: "With leaders in government, the private sector and civil society to drive further, faster action toward achievement of Sustainable Development Goal 7, which calls for universal access to sustainable energy by 2030, and the Paris Climate Agreement." SE4-all operates through three regional hubs around the world, including Africa. The

Africa hub is embedded in the AfDB which means that they are able to reinforce and influence the electrification priority of the bank. Practically, SE4-all is working with numerous African countries to develop an explicit sustainable energy strategy for their country, linked to the 2030 targets and translated into an investment plan. This is an excellent institutional platform to reinforce.

MOBILITY TRANSITION

The second binding constraint on African economies is undoubtedly limited and poor transport infrastructure. A number of African firms are rendered uncompetitive simply because of the time lost to get goods from point A to point B. This refers to the existence and quality of road and rail infrastructure, the limited capacities of ports, and the pathetic state of passenger transport, especially in terms of the public transport system.⁵ These problems seem to be recognised by African development institutions and governments. However, it is striking that at present a lot of the emphasis from a pan-African perspective is being placed on regional transport infrastructures that need to be enhanced to enable the vision of strong trade corridors that propel the regional integration agenda of the African Union, which aims at establishing a Continental Free Trade Area (CTFA). This agenda translates into the Action Plan for Boosting Intra-Africa Trade (BIAT) which is supported and promoted by the AfDB. It is in this context that there has been a marked increase in foreign direct investments towards regional mobility projects such as rail corridors, road corridors and ports.⁶

This is indeed important, but it must be complemented with a much more ambitious package of investments to establish and grow integrated public transit systems in African cities and towns. Unless African cities are decongested, made safer for pedestrians and informal solutions are upgraded, it will be impossible to reap the urban dividend. Most African cities can be characterised in the following manner: Most urban trips are done by walking due to the unaffordability of private and public motorised transport. However, despite this fact, there is hardly any provision made for pedestrians in how roads are designed and built,

nor is public or mass transit prioritised in land-use. Due to the lack of public investment in public transport, partially informal minibus taxis and motorcycles often provide the bulk of mobility for urban dwellers. Furthermore, due to a lack of investment, inappropriate regulation and control systems marked by arbitrary extortion, these para-transit systems are often dangerous and inconvenient. Yet, quasi-informal mass transit systems have responded to market demands and the sprawled urban form evident in most African cities. For this reason, they have to be central to a more sustainable, affordable and convenient future system.

There has been a significant growth in policy awareness and development to systematically solve public transport.⁷ For example, there have been a number of attempts to introduce bus-rapid transit systems in various cities, as well as investments in light rail and tram-based systems in North Africa. There has also been a steady increase in policy awareness of combining public transport planning with land-use planning so that the underlying problems of urban sprawl and car-dependency can be addressed over time.

HOUSING AND LAND

Africa has the highest proportion of slum dwellers in the world. This stems from rapid and largely unplanned and poorly managed urbanization. It is also a function of low and variable household income, compounded by a skewed market. Formal mortgage finance reaches less than 10% of the population and most publicly financed housing programs that target the lower middle class and civil servants are very small and achieve limited impact.⁸ Residents in informal settlements struggle to formalize their dwellings because of a lack of access to affordable finance, insecure tenure arrangements, overpriced construction materials and limited depth in the construction sector. Yet, despite these dramatic problems, housing and land regularization remains a policy blind spot for most African government and especially the pan-African policy agenda. This is reflected in the fact that housing and land access does not feature once on the Agenda 2063 portal of the African Union.

The de facto reality is that the majority of shelter provision and production is achieved through the efforts of urban residents against the odds. However, even though one can admire the ingenuity and thrift of these residents, it does come at an enormous cost. Living space in informal areas are small and marked by overcrowding, poor insulation, damp and leakage, bad air circulation, limited infrastructure and often no sanitation provision. Furthermore, the collective living spaces in these neighborhoods are also poorly lit, often dangerous for women and children, devoid of green and play spaces, prone to environmental disasters such as flooding and landslides, and overrun with solid waste that clog drainage systems and worsen environmental health problems. Most informal settlements exacerbate urban sprawl even though the occupational densities can be extremely high.

Given the youthful character of the urban population, the demand for accommodation and housing is not going to reduce anytime soon. It is remarkable that there is so little political and policy attention in the Agenda 2063 processes to address the housing and land crisis across the African continent. That said, there are three domains of policy advocacy and experimentation that can be aggregated and framed as a nascent African response. At the bottom-end of the income spectrum there are powerful social movements and support organisations that work with slum dwellers to address their housing needs through their own initiative and resources, but with an eye on catalyzing public funding to support their efforts.⁹ The federations affiliated to Slum Dwellers International (SDI)¹⁰ is one example and the work they have done with Cities Alliance¹¹ to mainstream slum upgrading programmes are an important reference point.

Since most working people in African cities cannot participate in the mortgage market, there is a massive need for subsidized housing for the middle-class in most African cities. Over the last decade or so we have seen a number of African governments such as Rwanda, Nigeria, Ethiopia, and Ghana establish such programmes. However, apart from Ethiopia and Angola, none of these programmes have achieved any kind of scale and they have definitely not been able to stimulate a secondary market that grows

from this stock. As a result, the need for this class of housing stock and associated financing instruments remains vast. Lastly, there have been attempts to strengthen mortgage market instruments so that the coverage can expand beyond 5-10% of the population. Again, in this domain of reform, progress has been slow. According to the Centre for Affordable Housing Finance in Africa the main reason for policy failure has been the lack of an integrated understanding of the full housing spectrum.¹²

DIGITAL REVOLUTION

The ubiquitous discourse on the so-called fourth industrial revolution reflects the extent to which digital platforms and technologies are seen as central to all economic sectors, global trade and future competitiveness. The intersection of urbanisation and economic productivity demonstrates the importance of place in a more globalised economy and labour market, which points to the importance of city-level strategies of investment and co-ordination. Digital technologies are not only the lubricant of globalisation, they also hold the promise of transforming the functioning and efficiency of urban systems. This policy conclusion is strongly projected in the discourse on smart cities and the potential of smart infrastructure combined with e-governance to change the fortunes of cities and regions.

The substance of the smart city agenda is highly contested, but there have been some important efforts on the part of the UN and International Telecommunications Union (ITU) to promote a public interest definition. They propose¹³ that: "A smart sustainable city is an innovative city that uses information and communication technologies (ICTs) and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social, environmental, as well as cultural aspects." The reason ITU and the UN Economic Commission for Europe (UNECE) promote this normative definition is because there are undeniable risks associated with an uncritical adoption of smart city rhetoric.

Most of the hardware and software that underpin the smart city is developed and supplied by private sector actors. In order to optimise value, these actors offer holistic propriety products which can lead to technological lock-in and skew the long-term investment priorities of city governments. Also, smart city dogmas tend to favour real estate and infrastructure proposals that service the (emerging) middle-class and formal businesses because they represent a viable market. This market bias can reinforce pre-existing urban inequalities or make them worse. It is also evident that smart city technologies can be used repressively through surveillance technologies that target independent civil society organisations and political opponents of the ruling party. In summary, smart city investments do not automatically represent progress, unless their impacts are seen as contributing to enhanced urban sustainability and equity.¹⁴

A significant initiative on the African continent that seems to be gaining traction is Smart Africa. According to the website¹⁵, "SMART Africa is a bold and innovative commitment from African Heads of State and Government to accelerate sustainable socioeconomic development on the continent, ushering Africa into a knowledge economy through affordable access to Broadband and usage of Information and Communications Technologies." It is spearheaded by President Paul Kagame of Rwanda and now includes at least 23 African Heads of State, the Secretary General of the ITU and the AU Commissioner for Infrastructure and Energy on its board. Smart Africa sponsored an initiative¹⁶: the Africa Smart City Blueprint. This sets out an African perspective on how best to promote smart city projects that is in line with domestic developmental priorities.

This piece draws on a longer policy essay: Pieterse, E. (2019) [The potential of sustainable urbanisation in Africa](#). Berlin: Alfred Herrhausen Gesellschaft.

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11. <https://www.citiesalliance.org/open-calls/slum-upgrading>
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13. <https://www.itu.int/en/mediacentre/Pages/2017-PR45.aspx>
14. For a useful overview of the risks and opportunities, see: M. Hajer, "On being smart about cities. Seven considerations for a new urban planning and design", in M. Hajer and T. Dassen (eds), *Smart about cities. Visualising the challenge for the 21st Century Urbanism*. Rotterdam, nai010 publishers, 2014.
15. <https://smartafrica.org/>
16. https://smartafrica.org/IMG/pdf/smart_africa_sustainable-cities_a_blueprint_for_africa.pdf.pdf



THE NEW PATH OF AFRICAN URBANIZATION

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Pliny the Elder wrote it first and it is still confirmed today: something new always comes from Africa (ex Africa semper aliquid novi). Looking at the extensive urbanization process that crosses the continent, at least three elements seem indeed unprecedented: 1) urbanization is not a consequence of industrialization, but runs parallel to it; 2) urbanization occurs regardless of the creation of infrastructures, which on the contrary remain rather lacking; 3) technological innovation in the urban areas does not follow a gradual pattern, as occurred in the Western world, but proceeds by jumps: for example, bytes do not transit through the landline telephone network, which is lacking, but directly through mobile phones and broadband submarine communication cables.

The Global Cities Desk, launched by ISPI in September 2018, publishes its first dossier with a territorial focus and, significantly, decides to begin exactly with Africa. An area to which ISPI dedicates constant attention, as it is shown by the report "A Vision for Africa's Future", a wide overview of the main transformations occurring in the sub-Saharan region and of expected scenarios. A concern that can also be observed in the greater consideration of this topic by many opinion leaders within Italian society, from institutions to non-governmental organizations to companies and even media.

This dossier is the outcome of collaboration with the African Center for Cities (ACC) of the University of Cape Town, which is a reason for satisfaction: in any area, no progress in relations with Africa can be achieved without an effective partnership with the increasingly dynamic energies that are active on the other shore of the Mediterranean Sea.

Data is macroscopic and essentially well acknowledged: if the African continent will, as it seems, double its population from now to 2050, growing from the current 1.2 billion people to around 2.5 (approximately a quarter of the world's population), the urban component in 2030 will already exceed a billion people (currently it accounts for a little less than 500 million), overtaking the rural. However, as an example, Gabon is already around 87% "metropolitan". As is known, in 1900 the ten biggest cities around



the world were in Europe (eight) and in North America (New York and Philadelphia); instead, in 2030, the same ranking will be entirely located in Asia and Africa, with at least six African cities having more than ten million people (Cairo, Lagos, Kinshasa, Luanda, Dar es Salaam and Johannesburg). The problem is that currently the inhabitants of “informal” contexts, such as slums and shanty towns, account for more than half of the total (at a global level, they represent one in every seven people): this amount is expected to increase – in percentages or in absolute data – in the coming decades.

These slums, inhabited by very poor and young people, are at the same time the effect and the cause of urbanization: the effect, since people abandoning the countryside and lacking resources go to these urban areas searching for better living conditions; the cause, since the sprawl further worsens territorial conditions, increasing desertification and climate emergencies, and producing a vicious circle that multiplies migrants and climate migrants, threatened by dangerous environmental conditions (already today the World Bank estimates that 40 billion euros worth of real estate assets are at flood risk in Dakar, an amount approximately twice Senegal’s GDP). Certainly, the enormous differences between countries, regions and cities are not to be ignored: keeping them in mind can help us predict some of the migration flows inside the continent and prevent possible conflicts.

Therefore, going back to the initial argument, the urban development of Africa needs to be planned in a creative way, so that this phenomenon does not become traumatic and deleterious for the whole planet but instead contributes to the growth of a continent that has shown enviable development rates for several years. First of all, urbanization without industrialization poses an enormous employment challenge. While in Charles Dickens’ novels the omnivorous factory exploited non-urbanized farmers as if they were parts of a machine, in the African case, the cities risk “ignoring” millions of unemployed young people with large families, even without an exploitative master. To mitigate the consequences of this type of situation, enormous investments in human capital and training are needed, in demonstration that Goal 11 of the Sustainable Develop-

ment Goals (which directly deals with urban settlements) cannot be achieved without a holistic perspective, which should concern societies’ and people’s development. An explosion of social conflicts seems inevitable without such an effort: industrialization in Western cities caused exploitation, but also demands for rights and social liberation; in a non-industrialized but very urbanized context, we do not know the characteristics that possible collective conflicts might have – perhaps the so-called “Arab Spring” can partly anticipate them.

Regarding infrastructures, all of the research shows that they are essential to achieve growth both in an urban and at a general level. Africa is still very lacking in infrastructure, even though in recent years global players such as China have intervened in this sector, led more by the logic of investment and no longer by that of aid. The regional consortia, as well as the “corridor” projects, can virtuously influence infrastructure projects, provided that we do not lose sight of the other side of the coin. To be sustainable, future African cities will also have to deal with the social and environmental costs produced by urbanization and infrastructure: for example, the enormous difficulty in accessing proper accommodation or obtaining credit, the obstacles in mobility and the challenge of energy supply (in this dossier Marco Alberti discusses this, explaining the need for a new model based on renewable and decentralized sources).

Lastly, technological innovation. Two economists, Jonas Hjort and Jonas Poulsen, have recently demonstrated a direct correlation between the arrival of submarine cables, and therefore broadband, and an increase in employment (skilled and less skilled), in productivity and in the exports of the urban areas where cables arrive and in their interior regions. As has been said, Africa is skipping some steps compared to the West: if in 2000 broadband all over Africa was less than that of Luxembourg alone, in 2017 78% of Africans owned or had access to a mobile phone/smartphone, which is radically transforming some sectors such as financial services, personal services and transportation. Like in the West, many areas are directly served by airports, subordinating railway construction, so that in Africa technology has become immediately intangible, bypassing



the previous step. The consequences that this will have on urban economies are yet to be discovered.

In conclusion, this dossier is about asking questions rather than providing answers. What the development model of African cities will have to be from now to 2063 – the horizon on which, six years ago, the African Union proposed scenarios and outlined development goals for the continent – is a very interesting matter that requires intelligent and innovative devising and planning. What is certain is that Europe, and Italy in particular, can make valuable contributions: from an economic prospective, by enhancing the growth of small and medium enterprises, and districts, which can positively influence the business model in the expanding African economy; from an urban prospective, by proposing the reticular paradigm of European cities, rich in tradition, as a benchmark, not to be completely reproduced (which would be impossible anyway), but as a source of inspiration in order to have more sustainable urbanization.



THE INFRASTRUCTURAL DIMENSIONS OF AFRICAN URBANIZATION

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In policy circles the challenges associated with Africa's unfolding urban transition is typically reduced to the need for infrastructure to ensure effective urban management. However, what is meant by urban infrastructure, what is the scale of the deficits and how these can be financed, are often obscured. In this article I aim to instil a sense of the scale of the challenge of addressing Africa's urban infrastructure, the impossibility – and even undesirability – of meeting this deficit through conventional models of infrastructure development, with an eye on possible alternatives.

THE GAP: THE SCALE OF THE CHALLENGE

The 'Finance Gap' is a popular phrase used to describe the shortfall in funding needed to meet the current and ever-growing demand for infrastructure and services. The majority of studies on the African finance gap work with country level aggregations and data. Less attention has been given to the urban finance gap. The exception is the 2010 publication *Financing Africa's Cities: The Imperative of Local Investment*.¹ This study used three different types of estimation and concluded that sub-Saharan Africa needed anywhere from \$15 to \$30 billion per year to cover the backlog and mounting service needs.

This estimation is notably wide and now also dated, begging the question: why is it so hard to estimate Africa's urban infrastructure needs and their associated costs? This challenge boils down to the difficulty in defining the scope of both the urban and infrastructure. Calculating the urban/city financing gap requires gross assumptions, proxies and generalization. What exactly is urban infrastructure. Is it infrastructure delivered by city governments, infrastructure within cities, or infrastructure which serves cities? Does it include sub-grade and super-grade investments, hard and soft infrastructure, capital and operating costs, and new investments as well as rehabilitation and maintenance? What are the assumed standards used to estimate the network and per unit costs? These questions all muddy the challenge of apprehending Africa's urban infrastructure finance gap. Nevertheless, the financing gap has powerful appeal and mobilizing power. It highlights,

even if only roughly, the incredible scale of the challenge which lies ahead.

What it does not do, however, is to explain why this gap exists or how it could be addressed. The following two sections provide a stylized exploration of these more qualitative questions.

WHY: THE DRIVERS OF THE FINANCE GAP

The infrastructure and finance challenge has historical, structural, and institutional dimensions. Historically, investors in Africa's infrastructure have fixated on extractive economic sectors (i.e. mining) and regional scale transport infrastructures (mostly to facilitate trade). During the colonial period, the growth and servicing of African cities was a by-product of geo-political investments. By the time that international lenders, like the World Bank, turned their attention to Africa's booming cities in the 1980s, the Structural Adjustment era had hit and funds for large-scale networked investments were drying up. This left Africa with small-scale urban projects, mostly focussed on social development.

Structurally, infrastructure requires long-term financial commitments which can be recouped over time. However, in Africa, local financial markets are underdeveloped and access to global markets is highly constrained. Despite the large pools of global capital sitting in banks, pension funds and the like, Africa's public infrastructure assets are not regarded as a competitive asset class. This is due to perceived higher (or unknown) regulatory and political risks and lower returns. The sorts of projects which do attract investment, such as shopping malls, coal powered energy plants, and so on, often have seriously problematic outcomes in terms of urban form and sustainability.

This brings us to the institutional issues. Given the lack of finance which is available to fund African cities' development needs, Africa's urban infrastructure is primarily funded by national governments, rather than private funders or financiers. Most of this funding is channelled through national state owned enterprises and parastatals (rather

than local governments). These entities are often linked to national line departments, such as water, roads, or energy. At best, these investments are disjointed and fragmented; at worst, national entities intentionally undermine African cities through withholding investment or developing national vanity projects. The result is that African city governments remain weak, unable to shape their own development agendas.

HOW: PROPOSITIONS FOR AFRICA'S URBAN INFRASTRUCTURE

The common argument that more money – combined with generic 'good governance' interventions – will suffice to address these deeply historical, structural, and institutional/political issues is unlikely. The complex and intractable nature of the challenge requires new and creative thinking on urban infrastructure. It requires moving beyond a technical fixation on planning, financing, and engineering services; not that these are not relevant.

Reflecting on the perpetual consolidation and multiplicity of socio-technical systems in cities, Gautam Bhan argues that infrastructure scholarship and policies should "begin from existing practices of service delivery on their own terms, recognize the contexts that they come from, understand why they have emerged, and then reassess whether the network is the most feasible (and not just the most theoretically desirable) mode through which to reach the outcomes we want."² Inspired by this, it is possible to imagine African cities not as the passive and grateful recipients of 'global best practise', but as places of imaginative experiments, radical revision, and incremental material extensions. Without indulging in a romanization of informality and poverty, it is necessary to be inspired by what is and what could be. From this point of departure, I argue for the possibility of new infrastructure models which are decentralized, labour intensive, digitally enabled and innovative.

Centralized infrastructure is a mainstay of the classic infrastructure ideal. This norm has overlooked the potential of materially decentralized designs which are smaller

scale, more locally embedded, and have the potential for incremental extension and transformation. Inspiring examples come from waste collection, water distribution, and sanitation management.

Equally important is the decentralized governance of urban infrastructure. It is vital that urban infrastructure investments support local governments, rather than bypass or undermine them. Key to this is developing robust and flexible municipal finance systems and using service provision as a key site of local political negotiation and accountability. There are several important cases where African cities have been empowered to shape their own infrastructural priorities, with positive effects. Notwithstanding the enduring fragmentation of post-apartheid cities, South African metropolitan governments have increasingly aimed to integrate land use, planning, transport, and housing, aligning investment to create maximum value for the city. From protests to public participation processes, this delivery has also been a key site through which the social contract between the state and urban citizens has been developed.

Labour intensive, rather than capital intensive, infrastructure and service provision is necessary in African cities where both work opportunities and capital is limited. Importantly, in contrast to the sorts of ditch digging public works programmes we have seen in cities in South Africa, labour intensity should be integrated along the full supply chain of urban infrastructures, including in the operations and management of these services. There are large numbers of inspiring cases where labour intensive, rather than capital intensive service delivery has been successful in African cities. For example, the bicycle and motorbike taxis used in parts of East Africa and West Africa. These taxis provide a valuable service, overcome the challenges which conventional public transport faces when confronted with weak road infrastructure, sprawling urban form and heavy congestion, and creates a significant number of jobs for one of the most important demographic groups – young men. There are also many cases where capital intensive infrastructures have created long lasting viability challenges, particularly when they have been high-tech, requiring foreign expertise and currency to keep running.

While the smart city craze is thoroughly suspect, the importance of leveraging the rise of cell phone and internet access and usage on the continent is not. There is a clear need to consider digitally innovative models of service delivery. As mobile technology becomes cheaper, and young and tech savvy people who make up the current ‘youth bulge’ become the primary consumers of urban infrastructure, there are infinite possibilities – many of which will come from local enterprises which we looking to both build their business and address a need. Ride hailing apps, mapping programmes, mobile payment systems, and service accountability tools – already in use in African cities – utilize lower tech, but digitally creative systems, improving service provision, access, and accountability.

In conclusion, these propositions is that they require very different material investments and governance arrangements. They necessitate different financial and fiscal models for their development, operations, maintenance, and management. While Africa’s alarmist urban infrastructure finance gap remains a relevant rallying call to consider the scale and extent of the problem, the next step is to engage in creative experiments which challenge, rather than attempt to emulate, conventional infrastructure delivery and

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THE IMPLICATIONS OF EUROPE'S 'CONTAINMENT DEVELOPMENT' FOR AFRICAN CITIES

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Since 2015, European leaders have worked alone and in concert to retard and reverse migration to Europe. They have channeled billions of Euros to Turkey to fend off migrants from Syria, Afghanistan, and elsewhere. Billions more aim to address what they see as the 'root causes' of migration from sub-Saharan Africa: chronic underdevelopment, poverty and poor governance. Using a mix of 'development at home' and border control strategies, Europeans aim to 'fix'¹ Africans through 'substantial socio-economic transformation [...] so people no longer leave for a better life'. Bolstering this 'containment development' are coercive border surveillance and security interventions meant to prevent Africans from journeying to Europe. Underlying the EU migration management strategies is a deep-seated fear of African mobility, and the assumption that any movement within the continent is a step closer to Europe.

European efforts to craft the sedentary subject have profound impact on cities and urban policy agendas. Constraints on movement – whether through development programmes or coercion – stop people from moving to where they can trade, work, or study. In an era of precarity amidst planetary urbanism, normalizing fixity can legitimize forms of anti-poor urbanism that undermine the possibility for realizing SDGs and the New Urban Agenda vision of building inclusive sustainable cities.

How did we get here? In many ways, European leaders are still grappling with the impact of the refugee crisis that has shaken the region since 2015, when record numbers of people landed in Greece, Italy, or Spain after crossing the Mediterranean Sea in rickety, overcrowded boats. The number of arrivals have since declined, due in part to European efforts to halt migration and in part to conflict in Libya making the passage more perilous. Even so, 407 people died² crossing the Mediterranean between 1 January and 10 April 2019. By prohibiting boats from rescuing drowning migrants, Europe is complicit in these deaths. Moreover, European politicians are using each death to justify further 'humanitarian' efforts to keep people at home.

The EU's two-pronged – containment development and control – approach is unlikely to succeed. First, clamping

down on African migration through ramped up border security, data collection and technical aid to strongmen, sets the stage for human rights abuses and the weakening of democratic institutions that could result in human displacement. Second, there is little chance of Europe's proposed 'Marshall Plan with Africa',³ which includes investments in African education, vocational training, and infrastructure, will achieve the growth required to locally absorb the next generation of African labor. Moreover, rather than stemming African mobility, development investments will create incentives for people to move towards employment centres. Research suggests that economic growth in low-income countries tends to increase rather than reduce migration. This is because even modest increases in wealth and education provide more people with the resources and tools to move. Eventually, economic growth will slow emigration, but those days are decades off. Along with emigration, investments in rural areas will only accelerate the rapid urbanization taking place across much of the continent.

FOSTERING URBAN EXCLUSION

Despite global commitments in the New Urban Agenda and Sustainable Development Goals to build inclusive and sustainable cities, the new 'containment development' will likely further Africa authorities' unease with widespread urbanization. Most directly, selected cities are becoming imbricated within a continental, EU-supported security apparatus. Take, for example, the tens of millions⁴ of euros being sent to Agadez in central Niger, long a hub for smugglers and migrants en route to Europe. Although ostensibly intended to help the region's poor by creating jobs in migrant transit areas, the plan for Niger⁵ is far more elaborate. By supporting law enforcement to close routes across the Sahara,⁶ cities become outposts in a security line across the continent. Europe is trying similar strategies in Mali and elsewhere by investing in both local development and coercive structures to stem mobility. Given the global tendency to do immigration far from border areas, EU support for enhanced surveillance and border control will likely foster unaccountable police harassment of immigrants, domestic migrants, and the poor communities in which they live.

Beyond enhanced securitization, development for containment includes attempts to create populations disconnected from local and global circulations and imaginations. Current efforts at categorisation, stigmatization and emplacement reinforce colonial planning modalities that seek to root Africans in their 'traditional' lands. Such framing empowers urban elites and authorities who remain deeply uneasy with the unregulated movement of poor people into their city. In modern politics – all the more so in deterritorialising late-modern capitalism – one's ability to move has become a hallmark of citizenship. Fixing people beyond city boundaries produces a kind of defracted geography that fosters the marginalisation of the cities' most vulnerable populations.

The closer one is born to the European border, the more extreme such efforts to sedentarize and exclude are likely to become. Those within European nominated 'risk zones' will encounter the most martially coercive and ideationally concerted interventions aimed at restricting mobility. Those further south will be affected less overtly by external interventions, freer to move and imagine in ways only slightly altered by the containment apparatus largely paralleling the equator. But here too the normalisation of bordering, urban exclusion, and the denigrations of universalism, Pan-Africanism and rights talk will have important effects.

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3. J.P. Pham, "[Germany's 'Marshall Plan' for Africa](#)", *Atlantic Council*, 23 January 2017.

4. I. Manzo Diallo, "[EU strategy stems migrant flow from Niger, but at what cost?](#)", *The New Humanitarian*, 2 February 2017.

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AFRICAN CITIES: BETWEEN URBANIZATION AND MODERNIZATION

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There is one piece of data that everyone knows. In the world, the urban population has exceeded the rural population and the United Nations World Urbanization Prospects 2018 revision¹ estimates that by 2050 this percentage will have risen to 68%, with the proliferation of megalopolises, especially in countries with emerging economies. Since 2050 is still a long way away, hearing this information is not something that gets us particularly excited. However, seen from a different perspective, it means that approximately 10,000 people are moving to live in a city every single hour. From yesterday to today, more than 200,000 people have been urbanized. And the same will happen from today to tomorrow, and so on, for over 30 years.

The trend of world urbanization is having serious repercussions on the African continent. The International Organization for Migration (IOM) claims that, in a short space of time, the so-called “medium-sized cities” of Asia and Africa (and above all their outlying areas, we can assume) will host almost all of the world’s urban growth. In a handful of years, the number of African people living in cities will rise from 500 million to 1 billion. A 100% increase.

In some regions of the world, the urbanization process – although immense – has been more gradual, following the rhythm of industrial growth. As a result, cities have been able to “prepare themselves” better to welcome the incoming flows of people, rendering the entire process smoother. In Africa, vice versa, extreme climatic phenomena and the emptying of rural areas have made the urbanization process much quicker and often turbulent. In some cases, the lack of planning has generated large informal settlements, with serious impacts on health and the environment, displacement, illiteracy and unemployment, especially among young people. According to a study conducted by the Economist Intelligence Unit (The Global Liveability Index 2018), 7 of the world’s 10 least livable cities are located in sub-Saharan Africa, with several of these in countries characterized by high GDP growth rates. On the other hand, the United Nations communicates that by 2100, 5 of the 7 largest cities in the world will be African. Lagos will be the biggest, with 88 million inhabitants. In 1960 it had only 200,000.

Therefore, the phenomenon of urbanization is tightly interwoven, more than others, with that of migration. According to the IOM, there are more than 250 million international migrants in the world, which means about 3.5% of the global population. Four times the Italians, or Brazilians and Spaniards all together. One thing is sure. Most of these people will continue to be absorbed by the cities, and not only in Africa. It is said that in Sydney, London and New York, non-natives already account for over a third of the resident population today, but with one significant difference: those arriving in such cities usually intend to remain there. On the contrary, for thousands of Africans, the megalopolises are often a “stepping stone” between rural poverty and the search for better conditions elsewhere. On the other hand, according to the estimates by Un-Habitat, more than 200 million people in sub-Saharan Africa, that is, 56% of the entire urban population, live in slums. If only 10% of these were to decide to seek their fortune elsewhere, we would suddenly have over 20 million new migrants in the world. Without a doubt, this is a global problem. But also a serious issue to be properly faced at the local level, before it becomes an unsolvable problem at the international.

On this subject, perhaps the first step should be to explore ways to address the two problems in a more coordinated manner, by optimizing the impact of available resources and making solutions more effective. Indeed, despite the close link that exists between urbanization and migration, the two trends are not always tackled together. “At the global level,” – reports a study by IOM² – “migration policies and urbanization policies tend to be discussed in separate fora, which results in a lack of policy coherence”.

A second link brings the relationship between urbanization and the territory into play, in a perspective of sustainable development. According to C40 Cities, although the cities occupy a limited area of the planet, they consume around two-thirds of generated energy and are responsible for 70% of global CO2 emissions.

Cities are the focus of SDG 11 in the UN 2030 Agenda, which is very ambitious since it aims to make cities inclusive, safe, resilient and sustainable, in a limited time. For

the African cities, this is a particularly challenging goal. If indeed, on the one hand, urbanization has modernized large sectors of the economy and accelerated growth, on the other it has sometimes been a cause of instability, draining the workforce away from rural areas, with no opportunity of reasonable relocation in the urban contexts.

The unique nature of the African case study requires us to look at SDG 11 from at least 3 different viewpoints. First of all, from that which upholds an integrated rather than a sector-specific approach to urban development; to make the cities of the region more environmentally sustainable, for example, it is not enough to focus only on reducing emissions, but also to act on the other political, social and economic levers.

Secondly, we must make the most of the new technologies to make African cities “smarter”, as well as more resilient and livable. Hope City in Ghana, or the techno-city of Konza in Kenya, are experiments (even if not always successful ones) that attempt to combine environmental protection, energy efficiency and economic sustainability, also relying on digital platforms to activate the typical services and functions of a modern “smart city”.

Last, but not least, it is important to reduce the contrast between cities and rural areas, which is particularly stark in the sub-Saharan area. If, indeed, the cities are the driving forces behind growth and innovation, we cannot promote their development to the detriment of the agricultural sector. From this viewpoint, urbanization should also be observed from the different angle presented by SDG 7, that is, with a view to ensuring access to affordable, reliable, sustainable and modern energy for all. Generating renewable energy not only means helping some African countries to alleviate dependence on commodities, but also promoting the natural resources they have and giving their national industries a competitive edge. Furthermore, better distributed energy production favors a more localized and sustainable economic development of the rural areas, helping to promote access to energy for the almost 600 million Africans who are still without it today. For some years now³, the International Energy Agency (IEA) has stressed that although the sub-Saharan area has

experienced an increase in investments in a new range of energy, since 2000, two thirds of the total have been used to develop energy resources destined for export purposes. A dangerous imbalance for everyone.

On the other hand, favoring access to (fully sustainable) energy in Africa means offering immediate opportunities for growth and development. In that regard, the International Renewable Energy Agency (IRENA) claims that integrating renewable sources into the agro-food chain could slow down price volatility, strengthen energy security, reduce emissions of greenhouse gases and help improve food sustainability in the long-term. An important contribution to reducing the impoverishment of rural areas, but also – similarly – to slowing down the migratory flow towards cities. Urbanization is undoubtedly an unstoppable phenomenon. However, we can paraphrase the famous saying, “if the energy won't come to the people, then the people will come to the energy”.

Finally, this observation on the urbanization process in Africa reminds us that cities belong to the geo-economy of modernity. The morphology of the international arena is experiencing a phase of rapid change, in which sub-state entities are definitively acquiring a role of increasing importance. The foreign policy of the future must therefore also deal with the need for a state-to-city diplomacy, considering cities as co-protagonists of an all-new, dynamic scenario. In this geo-economic logic, cooperating with Africa means not only managing governmental urgencies and tracing the problems back to a hive of international legality. A new partnership also requires creating new political and economic restrictions, transferring and adapting models of sustainable urbanization, promoting local development to modernize the continent. While moving in this direction is an unpostponable priority, cities are vital to embracing a radical change of perspective and turning risks into opportunities.

Many say that Africa is “the continent of the future”: to make that true, cities should really become the driving force that helps pave the path towards it.

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2. IOM, *Migrants and Cities: New Partnerships to Manage Mobility*, 2015, Geneva.

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THE POTENTIAL OF NATIONAL URBAN POLICIES IN AFRICA

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The growing recognition of the importance of cities for development does not alter the fact that cities and countries are co-dependant, or that cities are better off when supported by their national governments. An appropriate balance of power and responsibilities between tiers of government is at the heart of sustainable cities and in sub-Saharan Africa striking this balance requires policy innovation, if not experimentation.

Sub-Saharan Africa's urbanisation is often caricatured as "fast, late and poor", attributes that create particular challenges when it comes to financing and providing the infrastructure and services that urban citizens require to live long and productive lives. Less widely acknowledged are the urban governance arrangements that compound finance and service delivery challenges. The limits of generalisations notwithstanding, many cities in the region are governed by an awkward combination of traditional and municipal authority, and this authority is highly prescribed by national governments. Local governments find themselves charged with the administration of petty responsibilities and revenues, while control of the significant urban investment and revenue streams remains with national government and SOEs¹. This mode of urban governance foregoes the benefits of proximity in urban development, and increases the chance that the rapid growth of urban populations in Africa will overwhelm the capacity to assimilate this population in ways that avoid social and ecological disaster. Dar es Salaam is one of the few primary cities in the world where infant mortality and maternal mortality at birth is higher than the national average, pointing to harsh realities of rapid and inadequately planned and coordinated urban expansion.²

It was the limitations of the prevailing multi-level governance arrangements in many sub-Saharan African countries that saw National Urban Policies (NUPs) emerge in 2016 as a key policy instrument for the region in the wake of Habitat III. NUP proponents in Africa envisaged these policies fulfilling different needs: caretaking cities while local government capacity was created; simplifying and cohering the many interests, bylaws, tenure regimes and programmes that had accreted over decades of piece-meal urban development; providing a conduit through which

African cities could contribute to Agenda 2030. With the benefit of a few years' hindsight, what many proponents under-estimated was the extent of competition between tiers of government and the danger, innate to NUPs, that they legitimise the desire of national governments to retain control over local authorities.

It is this contested nature of multi-level governance that necessitated caution by the Coalition for Urban Transitions (CUT) when developing a NUP in Tanzania and supporting the process of NUP review in Ghana. The CUT is a donor funded outfit, external to the respective country's governments, but with a desire to support national governments in overseeing sustainable cities. The need to balance caution, reflexivity and ambition resulted in the Tanzanian Urbanisation Laboratory (TULab) and the Ghana Urbanisation Think Tank (GUTT), two interdisciplinary institutions convened and funded by the CUT but directed by the respective governments.

The two country contexts are very different. Tanzania is in the midst of a centralisation phase in an attempt to crack down on corruption, marshal a consolidated fiscus and finance the type of mega-project stimuli that will see the country achieve middle-income status. Ghana, in contrast, is committed to cities and has had a celebrated NUP for 5 years, but has struggled to implement this policy in a way that encourages local economic development and addresses income and spatial inequality.³

In spite of differences both the TULab and the GUTT had a research focus – data and knowledge are crucial to the urban transition regardless of context. The commissioned research was undertaken by local researchers, covered a variety of topics and yielded valuable insights, including:

- How much households are prepared to pay, and how much money local governments actually have (not how much they need) to build infrastructure and provide services in Tanzanian cities – between \$23 and \$150 per capita per year;
- The manner in which people access safe drinking water in the absence of state services – through a

sophisticated network of local experts that a few local authorities have harnessed to overcome bottlenecks in the formal water sector;

- How power is wielded between different tiers of government in Tanzania – through staff procurement, the timing of budget transfers and prescriptions on how cities may enter the debt market;
- The growth and employment implications of a Special Economic Zone (SEZ) based industrial pathway relative to a pathway designed to meet growing urban demand for food, construction material, energy and mobility in Ghana and Tanzania – the economic growth prospects are similar, but there is a significant difference in who benefits from the new work opportunities that are created.

The emphasis in both countries was on diagnosing the root causes of existing urbanisation outcomes, rather than jumping to conclusions or expedient policy prescriptions. Deliberations identified the importance of enabling conditions, including an urban rights framework, a political commitment to cities and new data (especially qualitative data on urban informality) as prerequisites for the success of the more technical NUP components such as finance and infrastructure planning.

In accommodating a wide variety of voices and perspectives, the respective TULab and GUTT experiments had to navigate between continuity and disruption, local knowledge and donor expectations, deliberation and deadlines, experimentation and planning, government protocol and youthful irreverence. These are tensions intrinsic to urban development and while there was, as with most experiments, the constant threat of 'combustion', accommodating these tensions contributed to a refreshing candour and creativity that in turn yielded new policy insights. It was, for example, through the bringing together of in-country policy conversations around industrialisation, urbanisation and climate change, that a new narrative emerged on how the global imperative of low-carbon cities could be harnessed to support industrial competitiveness, create urban jobs and attract investment in ways that have proven elusive to Tanzania and Ghana in the past.⁴ Similarly, through

the respective processes it became clear that a thriving, low-carbon urban future was not something that African countries needed to ‘find’ or ‘adopt’, but rather something that could often be readily crafted through the coordination of mundane and routine decisions at different scales, but with cities in mind.

Neither the TULab nor the GUTT tried to write policy or legislation, understanding that this is the domain of democratically elected governments. Implicit in both processes, however, was the recognition that the influence of research is determined by the sense of ownership that decision-makers feel towards the resulting knowledge and data. Ownership was enhanced by drawing on local researchers to conduct fieldwork, relying on the cadre of government officials and urbanists convened quarterly by the TULab and GUTT, to peer review reports, deliberate and share ideas. In the process research findings were embedded in the discourse and imaginaries of the same people that influence urban development and will live with the consequences of their decisions and interventions.

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THE HOUSING CHALLENGE IN AFRICAN CITIES?

Kecia Rust

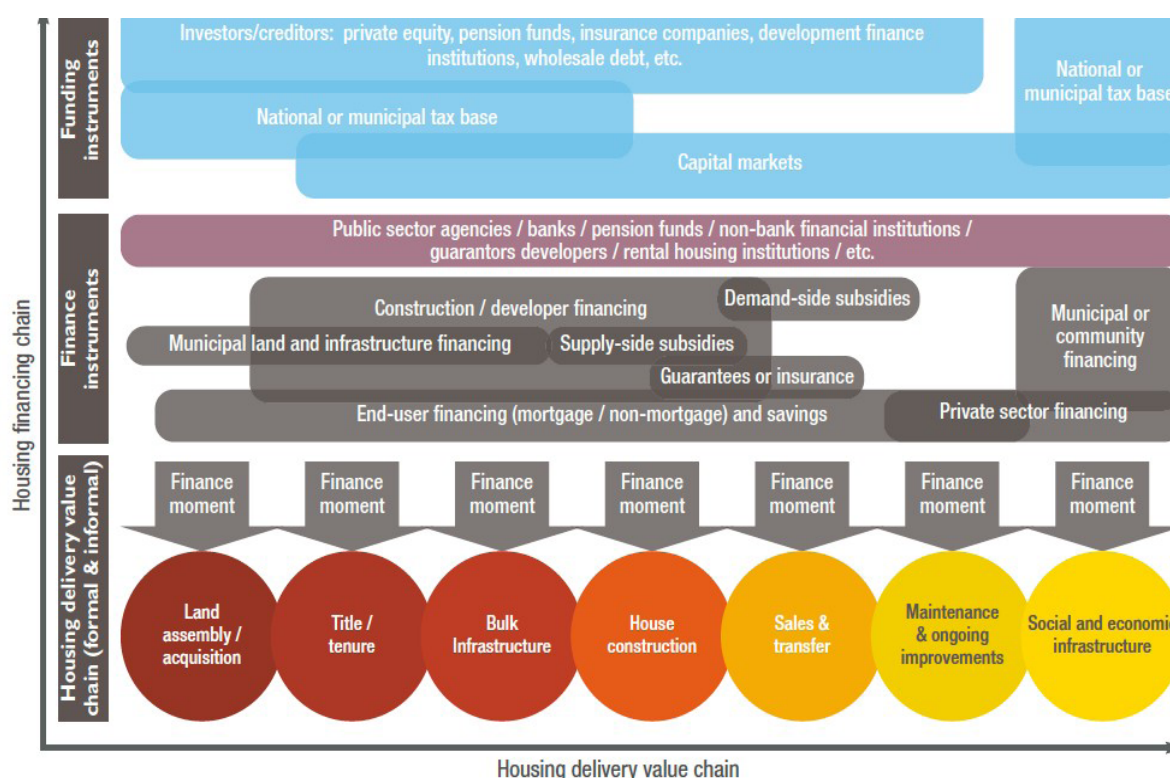
Center for Affordable Housing Finance in Africa

The inadequacy of Africa's urban housing markets is evident across the continent, expressed in the cost and scale of housing being delivered, and visible in the very poor housing circumstances of the majority. That over 60% of urban dwellers live in slum conditions is in part a consequence of income, but more significantly one of an inefficient housing ecosystem in which neither price nor scale is achieved. In 2018, the cheapest newly built house delivered by a private developer was unaffordable to the majority of the urban population in 46 of Africa's 55 countries, even with finance. The cheapest privately developed unit on the continent was in Kenya: a 15m² bedsitter unit on the outskirts of Nairobi, priced at US\$11,200. Given prevailing mortgage rates, this unit was ostensibly affordable to 51% of the urban Kenyan population. Only 85 of these units were built, however.

The challenges in Africa's urban housing markets are found along the value chain. (See Figure 1). From the high cost of land, to backlogs in land registry systems, to the inability of local government to deliver bulk infrastructure, to very limited number of contractors and developers who can build consistently at scale, to underdeveloped mortgage markets and limited market information to support buyers and sellers of property, to the lack of appropriate finance to support new players in the industry and informally employed households, and so on, the housing value chain is riddled with very weak links. In the meantime, households get on with their lives, developing sometimes innovative strategies to navigate the market as best they can. In the context of rapid urbanisation, the inevitable densification of African cities, and the myriad of associated pressures, however, the informal housing responses that have sustained the urban poor are increasingly inadequate.

Housing sector practitioners, whether in the public or private sectors, are well versed in the issues and are clear on both the urgent need to address the poor housing conditions that persist, and the growing opportunity for a market-based response. We are at a fascinating moment in which the confluence of efforts to promote financial inclusion, urban resilience, infrastructure investment, and macro-economic policy attention create a uniquely enabling environment for the growth of housing in particular.

Figure 1: Housing delivery value chain¹



Innovation is being found along each link in the housing value chain.

Lenders, investors, builders and suppliers are getting much better at identifying and targeting niche markets. If not yet a move away from the attraction of large-scale, massive developments, we can see increasing attention in the opportunity to be found in the connected results of many small projects and initiatives at the local level that together add up to something big. Practitioners are also getting better at aggregating demand, while they disaggregate their services, making them fit for purpose for a lower income or informally employed target market.

For example, in South Africa, a number of players are developing hybrid finance and business support prod-

ucts that seek to recognise the investment potential of backyard rental and inner city refurbishment as viable housing supply streams. In Zambia, a mortgage lender has developed a product to support incremental housing construction for the very many households who would otherwise have to finance their own housing construction with savings, taking years for what a financed process would achieve in months. In Mozambique, a developer has negotiated with the city of Maputo for development rights to work with residents in an informal settlement, whereby each informal dwelling is replaced by two formal dwellings. This approach reduces the per plot land prices and allows the developer to sell the new dwelling for a highly reduced price to the incumbent resident, while realising a market-based return in the sale of the second unit on the open market. In Ghana, an entrepreneur is exploring the



use of blockchain technology to improve titling efficiencies.

Mortgage lenders in Nigeria, Morocco and Algeria have adopted uniform underwriting standards for borrowers in the informal economy, enabling them to engage with a much wider population that would otherwise not be eligible for secured credit. In Kenya, the potential capacity of the savings and credit cooperative sector was recently highlighted as an explicit opportunity to aggregate small scale savings into a lump sum against which private capital could be leveraged and on-lent to SACCO members seeking housing loans. Various models and approaches to housing micro finance are being piloted and expanded upon in Uganda, Kenya, Zimbabwe, Zambia, Angola, Ghana, South Africa and Côte d'Ivoire, and the experiences from these are contributing towards a track record that is building both investor and municipal confidence in incremental housing processes.

Meanwhile, governments are increasingly engaged. The impact of housing on the economy – on macroeconomic growth and job creation, as well as on the potential for financial intermediation and the ongoing sustainability of cities – is as significant as the very clear need to address

the poor housing and slum conditions that persist for the majority of urban residents. In Kenya, housing has become part of the current President's "Big Four" plan for his term of office. President Uhuru Kenyatta has committed to increasing housing supply, with a promise of 500,000 affordable housing units by 2022. Similar attention is being given to housing by governments in South Africa, Tanzania, Ethiopia, Nigeria, Côte d'Ivoire – indeed, in very many governments, housing is becoming a subject of attention not just by the housing department, but by the Central Bank.

A key challenge facing all practitioners is the paucity of data. Very basic indicators regarding the performance of each link in the housing value chain are missing. This is something that the Centre for Affordable Housing Finance in Africa (CAHF) has been focusing on, and seeks to address in the publication of its yearbook on Housing Finance in Africa, and in its other work as part of its broader Data Agenda. Innovation along the housing value chain is clearly evident, expressed in local niche markets and across the continent. We can leverage this experience and replicate it in other contexts if we track it, creating baseline information that highlights new opportunities for the investor interest that is clearly there. This is a job for the entire housing sector.

1. Centre for Affordable Housing Finance in Africa, *Housing Finance in Africa. A review of Africa's housing finance markets*, Johannesburg, Centre for Affordable Housing Finance in Africa, 2018 p. 18.