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SUSTAINABLE CITIES

HOW PRIVATE SECTOR PLAYERS ARE GEARING UP

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PS&D

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SUMMARY

Emmanuelle Riedel Drouin

Head of Proparco's Financing department

By 2050, almost 70% of the population of developing countries will be living in cities. Deploying sustainable urban infrastructure and services is a massive challenge: as well as being major commercial hubs, these cities are also places in which people have to live and work and get access to education and healthcare.

The consequences of this rapid urbanisation are primarily social: slums and shanty towns are growing exponentially and there is an increasing risk of social fragmentation and impoverishment. But there are also economic consequences: joblessness is an increasing problem while the lack of access to economic opportunities is becoming critical. There are environmental impacts as well - particularly due to urban sprawl and overcrowding - and vulnerability to climate change is becoming more and more acute. The big challenge is to enable urban areas to absorb this growth at a time when most developing cities are expanding by means of informal settlements.

Supporting the sustainable city[1] means taking action across many sectors. A wide range of "municipal infrastructure" needs to be built and operated, including waste, water and sanitation systems, energy and communication networks, street lighting and social infrastructure (education, health, social housing, etc.). Mobility in and around the city also needs to be addressed, i.e., access by road, airport or port.

The need for investment in sustainable urban infrastructure is therefore massive. It is estimated at up to US$ 5,000 billion a year on a global scale. The private sector plays a key role in this development by supporting and partnering local public policies. It strives to be an implementing partner alongside the public sector, which can then focus on seed funding (through project preparation facilities).

The private sector is also closely involved in implementing climate action plans and reducing the hidden carbon footprint of urban consumption.

Indeed, cooperation between cities and business can provide a boost for green jobs, develop expertise and accelerate the transition to a low-carbon economy, while generating revenue at local government level.

This new issue of Private Sector & Development presents several examples of how sustainable urban projects are designed and rolled out. While there is no "one-size-fits-all" solution, the importance of a partnership-based approach is highlighted by all stakeholders. No one single player can shoulder the burden of urban development. Only genuine concertation between local authorities and business can ensure the effective deployment of sustainable and resilient urban projects.

1 ▸ A sustainable city may be defined as an urban space that is socially inclusive, economically productive, environmentally resilient and emits low levels of emissions.

Frédéric Audras
Head of the Urban Development, Planning and Housing division, AFD

Frédéric Audras has been Head of the Urban Development, Planning and Housing division at AFD since 2019. Frédéric Audras has spent his career working in financial management and local authority financing and has held advisory, budgetary and management roles both as consultant for a major French city and at the head of teams of experts providing technical and financial assistance to local authorities.

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Salim Bensmail is senior investment director at Meridiam and has been in charge of The Urban Resilience Fund since October 2021. He previously held a number of different positions in the French public sector, notably as head of the infrastructure funding support programme (FININFRA) at the French Treasury between 2014 and 2018, and as Deputy Director of Finance in charge of public-private partnerships for the City of Paris.

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Christel Bourbon-Séclet joined the group Agence française de développement in 2008 and contributed to the financing of a large number of environmental and municipal projects (including embobility, water & sanitation, waste and public lighting) in her capacity as Head of Proparco's Mobility, Municipal and Environmental infrastructure division. She is currently seconded to C40 Cities for Climate Leadership Group as Director City Finance Programme overseeing all C40 finance works and supporting cities to access finance for implementation of ambitious, inclusive and resilient climate actions.

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Carel Kleynhans is the CEO of Divercity Urban Property Group – a leading developer of, and investor in well-located affordable rental housing in South Africa. Divercity owns and manages roughly 7,000 apartments and has over 2,000 new affordable apartments currently in development in Sandton and Cape Town. Carel holds a Masters in Finance from the University of Cambridge where he was a Chevening scholar and has a professional background in corporate finance.

Simina Lazar
Participation and Civil society Project officer, AFD

For nearly 15 years, Simina Lazar has been working with local governments and organisations in Africa and in Europe to design sustainable urban policies, as well as developing digital services in a user-centred way. With a background in Social Anthropology and International Relations, she is looking at how both the human level and global systems can contribute to build thriving communities and cities, respectful of the planet. Early 2023, Simina Lazar joined the Citizens and Institutions team of AFD, as Participation and Civil society Project officer.

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Samuel Lefèvre is head of project teams at Agence française de développement's (AFD) Cities division. His areas of expertise include financial engineering and financing urban infrastructure and local development projects. Samuel currently manages project preparation funds for the Cities & Climate in Africa (CICLIA) and Covenant of Mayors in Sub-Saharan Africa (CoM SSA) initiatives, co-financed by the European Union, the Swiss State Secretariat for Economic Affairs (SECO) and AFD, for the benefit of African cities. He also heads up AFD's Cities and Climate practice community.

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Ram Lokan is an experienced global real estate investor with over 18 years of experience. He joined Kasada in 2019, where he leads transactions across the firm's target economies. He has closed and managed real estate transactions across North America, India and Africa. Prior to joining Kasada, he was based in Dar es-Salam, where he was CEO of Village Supermarket, a regional supermarket chain. He also spent eight years in real estate and infrastructure investments. Ram Lokan started his career as an M&A Analyst at Credit Suisse in New York.

Francisco Lozano
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Francisco Lozano is one of the most experienced and knowledgeable professionals in Colombia´s infrastructure sector, especially in the financing of projects, as well as in concessions and the structuring of transactions aimed at the privatization of energy companies and concessions. He has more than 25 years of experience in the public and private sectors. Since 2019, he is the President of the Infrastructure Development Bank of Colombia (FDN), where he has led the financing and structuring of several projects of national and regional importance.

Eduardo Paes
Mayor, Rio City Hall

Eduardo Paes was Mayor of Rio de Janeiro from 2008 to 2016, overseeing a cycle of great events in the city, from the Rio+20 Conference in 2012, through the 2014 FIFA World Cup to the 2016 Summer Olympic and Paralympic Games, which accelerated major transportation, infrastructure and urban renewal projects. In 2020, he was elected Mayor of the city for a third term, taking office on January 1st, 2021 with a commitment to leading the city's recovery from a fiscal crisis and the impacts of the Covid-19 pandemic.

Chris Wood
Chief Executive Officer, WIOCC Group

Chris Wood joined the WIOCC Group as CEO in 2008, driving the company through its start-up phase and into full-scale operations. Chris is the Co-Chair of the EASSy Management Committee, his career having spanned over 20 years in the telecommunications industry. A qualified accountant, Chris Wood has held leadership positions in a variety of fields in major telecommunications companies. Before joining WIOCC in 2008, he was VP Commercial Operations, Marketing & Product Development at FLAG Telecom (now Reliance Globalcom), a global network services provider.

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Senior investment officer, Proparco

Luis Andres is a senior investment officer at Proparco's Energy & Infrastructure team and leads urban mobility debt investments worldwide. He notably led the financing of three landmark e-mobility transactions: Electribus (2021, 259 e-buses), Green Móvil (2022, 406 e-buses) - both in Colombia, and more recently Dakar Mobilité in Senegal (2023, 121 e-buses) – Africa's first e-BRT. Luis Andres is Bolivian, British and French. Previously at IFC and BNP Paribas, he holds a Masters' Degree from SciencesPo Paris.

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Bertrand de Dianous is Head of the Local Finance and Decentralisation division at Agence française de développement (AFD). Since 2019, he has been in charge of financial and non-financial support for local authorities and their operators in AFD's countries of operations, focusing in particular on problems accessing financing. Bertrand is a graduate of EM Lyon Business School and holds a postgraduate degree in Local Planning and Development Economics from Paris I - Panthéon-Sorbonne University.

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Matias Kalfon is a senior investment officer and Proparco's digital infrastructure expert within the Energy, Digital and Infrastructure Team. Matias has over 15 years' experience in infrastructure finance, with insights from both the public and private parties. In the digital infrastructure sector, Matias contributed the French national broadband plan (Plan France THD, launched in 2013). Matias is also an external lecturer at ESSEC Business School since 2016 (classes Project finance, Public-Private Partnership).

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Marianne Pallez is a senior investment officer within the Energy, Digital and Infrastructure division of Proparco, she is also contact person for water and sanitation projects. Holding a Master degree from Sciences Po Paris and Fundação Getulio Vargas (Brazil), she joined Proparco in 2017 after having worked for several years at BNP Paribas within the Energy and Infrastructure (Project Finance) department in Paris and São Paulo. She was involved in the financing of two landmark e-mobility transactions: Electribus (2021, 259 e-buses), Green Móvil (2022, 406 e-buses) - both in Colombia.

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Channelling private sector investment into sustainable urban planning

Frédéric Audras, Head of the Urban Development, Planning and Housing Division, AFD
Christel Bourbon-Séclet, Director City Finance Programme, C40

Cities are critical players in the deployment of inclusive and sustainable public policies. If they are to provide their growing populations with the economic, social and cultural services and resources they need to combat climate change, they must have access to additional funding. More specifically, this requires greater private sector involvement.

As UN-Habitat reiterated in the report it published at the World Urban Forum in Katowice (Poland) in 2022, "*Cities are here to stay, and the future of humanity is undoubtebly urban*". As engines of economic growth[1] and home to the bulk of the population,[2] cities are at the very heart of sustainable development issues. The challenges are enormous: ensuring access to essential services for newly-arrived urbanites and strengthening urban planning by mainstreaming practices that are resilient to climate change and improving city governance.

These challenges vary, depending on a country's wealth, the geographical location of its cities and the scale of both current and projected urban growth. More specifically in Africa, which will have nearly 900 million new urbanites by 2050, these challenges are exacerbated by the poor technical and financial capacities of cities, their vulnerability to climate change[3] and inadequate urban planning. While governments throughout the world see cities as key actors in implementing inclusive, resilient and sustainable public policies, they are not given the financial resources needed to achieve the objectives assigned to them. Cities are usually responsible for laying on essential urban services like public transport, access to drinking water, sanitation, collection and treatment of solid waste, affordable housing, economic infrastructure, sport, culture or managing health crises such as Covid-19. But they do not receive the financial transfers from central government or the local tax revenues needed to grapple with the challenges of climate change and build economically, socially and spatially inclusive infrastructure. At the same time, particularly in developing countries, cities have little or no access to long-term financing (in phase with the periods over which infrastructure is depreciated) from local public or private banks.

1 ‣ Cities contribute over 70% of global GDP (source: World Bank/UN-Habitat).
2 ‣ According to the UN, 56% of the world's population lived in cities in 2021, and this will rise to 68% by 2050.
3 ‣ According to the UN, rising sea levels could directly endanger more than 800 million people in coastal cities by 2050, yet only 9% of climate action funding is invested in urban adaptation and resilience.

BREAKDOWN OF FUNDING SOURCES FOR CITIES

While this situation is especially acute in poor countries, it also affects the vast majority of cities in emerging economies. There are many reasons for this. First, increasing levels of national debt are undermining the financial autonomy of cities: the bulk of tax revenues are still collected at central government level and only a small proportion is redistributed to decentralised local authorities. Second, there is still insufficient knowledge of the local tax resources that could be used (type and quality of housing and land). Lastly, local public service management (markets, waste, water, transport, etc.) is coming under increasing strain due to higher demand (urban growth) and pressure to improve or renew infrastructure that is often in a very poor state.

Consequently, to achieve the eleventh Sustainable Development Goal (SDG 11)[4], we need to either provide cities with access to public and private sources of finance or strengthen existing access. Historically, urban development has been underpinned by public funding, via central government subsidies for specific infrastructure projects or financial transfers (i.e. national tax revenue allocated on a pro rata basis, or taxes collected at local level by government departments and partially redistributed to decentralised authorities). To ensure their economic attractiveness and improve public services, cities have also got private investors involved. Partnerships have been set up in commercial or market-based sectors such as transport, water and sanitation, solid waste and tourism infrastructure. This has led to public resources being used to finance essential services (health, schools, etc.) or projects whose economic 'return' is either deferred - in the case of urban developments that help regions adapt to climate change, for example by increasing the proportion of natural areas (urban cooling) - or not immediately measurable. In the urban arena, the private investor business model is based around charging a fee to the user (who pays for a service) and, in certain cases, payment of a balancing subsidy by the local authority which imposes affordable rates for users that do not cover all irreducible investment and operating expenditure or specific operating constraints. The business model for the city as a whole is much broader - and therefore more difficult to calculate - and determined over a longer timeframe that factors in improvements in quality of life, economic attractiveness (which helps maintain or boost local tax revenue) and "future costs avoided" by adapting urban infrastructure to climate change (e.g. energy efficient buildings, protection of riverbanks, redevelopment of waterways, etc.). In several countries, this model is rounded out by extracting the positive externalities of investments, such as higher land values at the end of a real estate development project.

> ***To achieve the eleventh Sustainable Development Goal (SDG 11), we need to either provide cities with access to public and private sources of finance or strengthen existing access.***

AN ARTICLE BY
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4 ‣ Goal no. 11: "Making cities and human settlements inclusive, safe, resilient and sustainable." https://www.un.org/sustainabledevelopment/fr/objectifs-de-developpement-durable/

CHANNELLING PRIVATE SECTOR
INVESTMENT INTO SUSTAINABLE
URBAN PLANNING

CONDITIONS AND PROGRAMS TO ENCOURAGE PRIVATE FINANCING

FOCUS

AFD

Agence française de développement (AFD) helps implement France's development and international solidarity policy. It finances, supports and accelerates the transition to a fairer and more sustainable world through its public sector and NGO financing activities, research and publications (Editions AFD), sustainable development training (AFD Campus) and awareness-raising activities in France. Its teams are involved in more than 3,250 projects for the common good – focusing on climate, biodiversity, peace, gender equality, education and health – on the ground in French overseas departments, in 115 countries and in territories in crisis.

C40

C40 is a network of nearly 100 mayors of the world's leading cities, who are working to limit global heating to 1.5°C and to build healthy, equitable and resilient communities. C40's staff is headquartered in London, with offices in six other countries, and staff across more than 25 locations. Its staff work with city authorities to deliver its mission. The team identifies and promotes the exchange and implementation of proven programmes and policies; provides research, technical expertise and access to key partners.

This division of roles between the public and private sectors requires cities and governments to create robust frameworks for managing decentralised budgets. The institutional framework must allow for a clear division of responsibilities between central and decentralised government as well as for regular legal and financial management control. This first condition provides the private sector with a basis for assessing the organisation of local project ownership and management quality. Secondly, the degree of financial autonomy, in other words, the share of financial resources over which the city has decision-making power (particularly the power to set local tax rates or public service charges) is an essential lever that enables it to trace out its future financial trajectory and to programme investments. Financial autonomy creates trust in the city's relationship with citizens and with private investors: the objectives of balanced budgets and investment planning are set in the medium or long term, external financing requirements (subsidies from central government or other institutions, loans or sustainable and green bond issues) are evaluated and scaled in phase with the city's financial sustainability, and public-private partnerships created to build infrastructure form part of a strategic trajectory that can be clearly analysed by private investors.

Getting the private sector involved in financing local public infrastructure is also contingent on the quality of project preparation. The lack of "bankable" or viable projects is recognised as one of the major reasons why the private sector invests so little in infrastructure. To try to remedy this, public development banks across the world provide cities with "project preparation facilities" that enable them to assess municipal projects from a technical and financial perspective, prepare their financing arrangements (public, private, PPP, joint investment in a special purpose investment vehicle involving the city and private players) and get projects up and running on the back of technical assistance (financial management, accounting, project risk management). Data collection is essential at this stage, particularly in rapidly growing urban areas as this makes it possible to optimise the city's infrastructure requirements and develop predictive models of sector-based trends.

Technical assistance is also provided at national or local level to devise robust sectoral contractual models (transport or water supply contracts, etc.) inspired by successful experiences in other cities: "city networks" (e.g., C40, Global Covenants of Mayors, FMDV, united city and local government initiatives) or decentralised "peer-to-peer" cooperation arrangements can be very effective here.

> *"The emergence of the "cities of tomorrow", capable of housing almost two-thirds of the planet's population and offering inhabitants a better quality of life, calls for a paradigm shift in the relationship between the public and private sectors."*

THE NEED FOR A PARADIGM SHIFT

The emergence of the "cities of tomorrow", capable of housing almost two-thirds of the planet's population and offering inhabitants a better quality of life, calls for a paradigm shift in the relationship between the public and private sectors. Given the need for a change in scale, recognition that cities are in the vanguard when it comes to tackling climate issues could go hand in hand with better access to dedicated, scaled-up financing instruments. Examples include investor guarantees from the State or international financial institutions to underwrite "climate bonds" issued by cities, showcasing "green" assets (preserved biodiversity) in municipal budgets to encourage private banks to finance the expansion of natural spaces within urban areas, or ramping up "impact" investment programmes to encourage the private sector to implement local public policies that promote social and economic inclusion and protection of the environment.

Beyond current forms of partnership, the future basis for cooperation between cities and the private sector could be co-construction as a means of developing a shared long-term regional development perspective. As part of this new relationship, extending guarantee mechanisms for major financial backers (e.g., payment for public services, debt repayment, exchange risk guarantees - project revenues are often denominated in local currency) could accelerate the movement of private investment to the countries of the South, and to cities in particular.

> *"Beyond current forms of partnership, the future basis for cooperation between cities and the private sector could be co-construction as a means of developing a shared long-term regional development perspective."*

A utopian vision? Perhaps, but the stakes are exceptionally high because they concern the very future of humanity. Cities are precious ecosystems, the spatial expression of the organisation of people and their activities.

In Europe during the Middle Ages, they were created around overlapping private interests and overseen by wealthy feudal lords. Transposing this to the present day, whereby international institutions support and secure access to private funding for cities could provide a source of inspiration. ■

Focus on local leadership and urban climate finance at COP28

COP28 (Dubai, November 30 to December 12, 2023) highlighted the leadership of mayors and local governments. An historic Local Climate Action Summit (LCAS) was held for the first time (December 1-2) alongside the World Climate Action Summit.

The summit – called by UN Special Envoy on Climate Ambition and Solutions, Michael R. Bloomberg, and COP28 President-designate Dr Sultan Al-Jaber, and opened in the presence of UN Secretary-General, António Guterres – brought together more than 450 subnational climate leaders – mayors, governors, businesses and non-government organizations.

LCAS – intended to foster international cooperation and support multilevel governance – invited national governments[1] to step up in three ways:

- Committing to consult with local climate leaders when they update their climate mitigation and adaptation targets. (Most existing national climate pledges under the 2015 Paris Agreement omit strong urban content.)
- Improving subnational access to direct finance for local-level action (in particular concerning adaptation) related to the new targets and promising to expand policies and financial mechanisms aimed at financing local climate action – to ensure that cities and local governments have the right resources and are equipping to reinforce climate resilience. (Today, only 10-15% of global climate finance reaches local governments.)
- Giving local climate leaders a real voice in global climate talks.

Also high on the agenda was Multilateral Development Bank (MDB) reform: to scale projects rapidly requires urban climate finance. It is widely recognized that cities, particularly in low-and middle-income countries, face unique challenges to attracting urban climate finance. The reasons for this include creditworthiness, access to capital markets, and political misalignment; however, MDBs are uniquely positioned to help cities overcome these challenges and catalyze urban climate finance flows.

A new report developed by the Cities Climate Finance Leadership Alliance (CCFLA) in collaboration with the C40 Cities and the Global Covenant of Mayors (GcoM) *Accelerating Urban Climate Finance in Low- and Middle-Income Economies: An important strategic dimension of MDB reform* paints a comprehensive picture of the current MDB landscape. It contributes to urban climate finance, presenting recommendations for how MDBs can play an even more significant role in financing urban climate projects. These include developing dedicated city climate investment strategies, with financing programmes that support project preparation and a significant increase in investment; coordinating with national governments to create better national enabling environments for city climate finance; and adapting financial instruments to localized realities for cities. Additionally, MDBs should prioritize urban adaptation finance for cities in the Global South.

1 › As part of LCAS, a multilevel initiative was launched, endorsed to date by 60+ national governments. CHAMP (Coalition for High Ambition Multilevel Partnerships) notably requires national governments to firmly commit to consulting with local climate leaders when submitting their updated Nationally Determined Contributions (NDCs).

Financing and supporting the transition to clean public transporation in Colombia

Francisco Lozano, President, Financiera de Desarrollo Nacional

The challenge facing Colombia in its transition to clean energy (including electric) public transportation is largely structural: transportation networks are managed independently by the cities, resulting in a lack of integration. The resultant redundancies need to be addressed, along other structural issues, such as contracting, making the clean energy transition viable and fundable.

REGARDING THE DEVELOPMENT OF SUSTAINABLE URBAN MOBILITY, PARTICULARLY ELECTRIC MOBILITY, WHAT ARE THE MAJOR CHALLENGES FACED BY COLOMBIAN CITIES?

Public transportation in Colombia is managed independently by each city. This reality has led to cities' transportation systems operating under different models, making the transition towards fleet electrification more complex. Furthermore, public transportation systems, except for Bogotá's, have significant structural problems. Most of them have not fully become integrated transportation systems. Today, they coexist alongside traditional public transportation[1] and compete for the same routes and passengers. This redundancy has lowered their utilization and their revenues. It has also led to financial problems and has limited access to financing sources. Currently, Colombia's public transportation systems operate at a deficit. Transitioning to electric systems (buses and metros) is costly, and covering this higher cost through tariff increases is not feasible. This would leave the cities to bear the costs. Yet, this would not be sustainable, due to their limited budgets. Thus cities and the Government must work together to identify additional sources of funding, and implement them to enable the transition.

FRANCISCO LOZANO

Francisco Lozano is one of the most experienced and knowledgeable professionals in Colombia's infrastructure sector, especially in the financing of projects, as well as in concessions and the structuring of transactions aimed at the privatization of energy companies and concessions. He has more than 25 years of experience in the public and private sectors. Since 2019, he has been President of the Infrastructure Development Bank of Colombia (FDN), where he has led the financing and structuring of several projects of national and regional importance. He has a Civil Engineering Bachelor from Universidad de Los Andes and has Masters degrees in Urban Economics from London School of Economics, Civil and Environmental Engineering and another in Technology and Policy, both from the Massachusetts Institute of Technology – MIT.

> "Currently, Colombia's public transportation systems operate at a deficit. Transitioning to electric systems (buses and metros) is costly, and covering this higher cost through tariff increases is not feasible."

1 › Consisting of obsolete diesel-engine buses, owned by small companies, who lacked consideration for safety and quality.

FINANCING AND SUPPORTING
THE TRANSITION TO CLEAN PUBLIC
TRANSPORATION IN COLOMBIA

IN RECENT YEARS, WHAT HAS THE ROLE OF FDN, AS A PUBLIC DEVELOPMENT BANK, BEEN IN THE DEVELOPMENT OF SUSTAINABLE AND INCLUSIVE URBAN MOBILITY SYSTEMS IN COLOMBIAN CITIES?

FDN has been supporting the development of urban transportation for several years, especially projects and programs aimed at promoting clean technologies. Some examples are as follows. We restructured several concession contracts for the public transport system in Bogotá (Transmilenio), allowing this segment to access finance through bankable contracts and to renew 1600 buses with cleaner technologies. We also recently restructured the transportation system for the city of Cartagena, involving new contracts with private operators, a new remuneration scheme, and new commitments and contributions from the city. Additionally, we conducted the technical, legal, and financial structuring of the first and second lines of the Bogotá Metro, two of the largest infrastructure projects in Latin America. Both are expected to have important benefits, like a reduction of nearly 300,000 tons/year of CO2 emissions, a decrease of about 40 million gallons of fuel used, and a saving of nearly 400 million hours of travelling time each year. Also, we structured the extension of Transmilenio to Soacha (a city neighboring Bogotá), the commuter train of Valle del Cauca, and the light rail on Calle 80, in Medellín. In terms of project financing, we, along with Proparco, financed the concessionaires Electribus and Green Movil with nearly USD 250 million, for the purchase of almost 700 electric buses for the Transmilenio system in Bogotá. These long-term loans were significant because, in addition to consolidating our role as the largest financiers of electric buses in Colombia, they were disbursed at a time when local banks were not interested in the sector. As a development bank, we renewed confidence among members of the sector and gave them an opportunity to grow. Additionally, we participated in financing the city of Medellín for the construction of the USD 250 million light rail on Calle 80; for Sotramac, in Cartagena; and for the construction of Transmilenio Soacha.

> *"In terms of project financing, we, along with Proparco, financed the concessionaires Electribus and Green Movil with nearly USD 250 million, for the purchase of almost 700 electric buses for the Transmilenio system in Bogotá."*

WHAT NEEDS HAVE THESE URBAN MOBILITY SYSTEMS MET, AND WHAT CHALLENGES HAVE THEY FACED?

The major organizations in many cities are serious about bus electrification. This acknowledgment is the starting point: migrating towards electrical systems requires political will. Also to be emphasized is the need for new funds and technology cost reductions. Both could improve cities ´access to electric buses, without deepening their deficits or leading to cuts in their priority investments.

HOW DO YOU SEE URBAN MOBILITY IN COLOMBIA DEVELOPING IN THE UPCOMING YEARS, AND WHAT SUPPORT DOES FDN INTEND TO PROVIDE, FOR BOTH PRIVATE AND PUBLIC ACTORS?

I believe that urban mobility in Colombia will continue to diversify towards clean technologies. This is quite common in many other countries, but our cities developed primarily around bus systems. Nowadays, we are finally promoting metro lines, light rail systems, and commuter trains to connect smaller cities; cable cars for mountainous areas; and bicycles to cross cities through exclusive lanes. But to properly embrace these new opportunities, cities must prioritize solving their transportation systems ´structural problems. They must work together with Governments to identify and incorporate additional sources of payment, to cover the additional CAPEX required for electric alternatives. On the other hand, Governments should explore establishing permanent low-cost financing facilities and encourage banks to participate with more creative financing solutions. This involves every party being part of the solution.

We are perhaps one of the most experienced entities in structuring and financing urban mobility projects in Colombia. We know how to help cities to make their systems viable and how to successfully structure and finance new projects through creative, bankable and replicable long-term solutions. Sustainable mobility is a condition precedent for cities' development, and FDN will continue supporting Colombia's transition towards it. We have been working with the AFD Group for several years, especially with Proparco, with whom we have had the pleasure of consolidating an extraordinary partnership. The quality of their team and their level of commitment and focus on win-win solutions have been remarkable. To continue our support, we recently signed a credit agreement with AFD; these resources will be key to enabling us to provide financing for electric buses in smaller cities. ■

FOCUS
FINANCIERA DE DESARROLLO NACIONAL

Financiera de Desarrollo Nacional (FDN) is a Colombian private, specialized, technical and independent development bank that works to increase liquidity in the infrastructure sector. Its specialization and knowledge in structuring and financing, allows it to design sophisticated and innovative solutions, aimed at properly managing risks, outlining and attracting investors and financiers to participate in financing schemes for projects. The FDN, in its objective of overcoming barriers to financing and providing solutions, promotes efficient financial structures to obtain competitive sources of long-term financing and mitigate refinancing risks. Its shareholders includes: Grupo Bicentenario, IFC, Sumitomo Mitsui Banking Corporation and CAF.

Fostering a zero emission urban mobility in Latin America

Green Móvil is the largest of the three e-mobility projects worldwide that Proparco has financed (for a combined EUR 140M) over the last three years. Co-financed with FDN, it exemplifies a well-conceived and successful e-mobility project. With 406 electric buses serving Bogotá (and a green hydrogen bus to be incorporated), Green Móvil is the largest electric bus project in Colombia and the largest e-mobility operation in Latin America. It was implemented within a year, reflecting the experience of its sponsors, Transdev (a leader in urban mobility) and FANALCA (a top-tier local player). Operations started in 2022, and more than 35 million passengers are now carried every year on e-buses fuelled by clean energy only. Green Móvil and its 1200-plus employees are thus contributing to improving Bogotá's air quality (with its high level of urban pollution) and to avoiding 24 000 tonnes of CO2 emissions every year.

Implementing Smart Cities in Africa: a project framework

Simina Lazar, Participation and Civil society Project officer, AFD

According to the International Telecommunications Union and the UN, a smart city is, "… an innovative city that uses … ICT and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring … economic, social, environmental as well as cultural aspects". Back in 2019, ASToN programme sought to implement this vision. Questions arising included: how does this apply in real contexts, specifically African cities, often in the face of scarce infrastructure and urgency? The following feedback is from this flagship initiative.

FOCUS
AFD

Agence française de développement (AFD) helps implement France's development and international solidarity policy. It finances, supports and accelerates the transition to a fairer and more sustainable world through its public sector and NGO financing activities, research and publications (Editions AFD), sustainable development training (AFD Campus) and awareness-raising activities in France. Its teams are involved in more than 3,250 projects for the common good – focusing on climate, biodiversity, peace, gender equality, education and health – on the ground in French overseas departments, in 115 countries and in territories in crisis.

African cities are among the youngest and fastest growing in the world. While numbers vary, Lagos alone is said to welcome 4000 new persons every day, who are looking for better living conditions in the metropolis. Like everywhere else, this demographic increase puts enormous pressure on the infrastructure, housing and job opportunities available, not to mention on the public services and the development of the informal market. At the same time, this presents an opportunity to do things differently, to tap into Africa's innovation and creativity, and link it with potential technology offerings, by bringing people together to discuss solutions and ways forward. This was the approach ASToN[1] (African Smart Towns Network) programme took between 2019 and 2022.

The stimulus (the framework) provided, assembled the cities on an experimental learning journey. These are some of the lessons learned on this journey together.

PROVIDING CITIES A FRAMEWORK TO DRIVE DIGITAL TRANSFORMATION THAT UNLOCKS MOMENTUM AND RESOURCES FOR THEIR TEAMS

While digital transformation was at the core of ASToN, as the programme got started, it quickly became evident that some challenges were cross-cutting, to varying degrees, among the cities, in the follow respects. Building digital capacities inside a municipality takes time, especially where faced with limited human resources. Also, all of the cities were confronted with the make-or-buy dilemma, besides the initial big investment that most digital projects require. Additionally, introducing digital and tech in city administrations often clashed with traditional ways of working, especially where tasks were manual, and it implied potentially losing jobs for some city employees.

The digital maturity of both institutions and the territory was variable across the network, with some cities like Niamey (Niger) or Bizerte (Tunisia) kick-starting their first digital projects vs others like Kigali or Kampala, where smart city frameworks and strategies were already in place. Despite this variety, in working with peers, both locally and internationally, it soon became clear that this gave cities the necessary momentum to drive the process, establish powerful relationships, and find the necessary skills and resources to get to work.

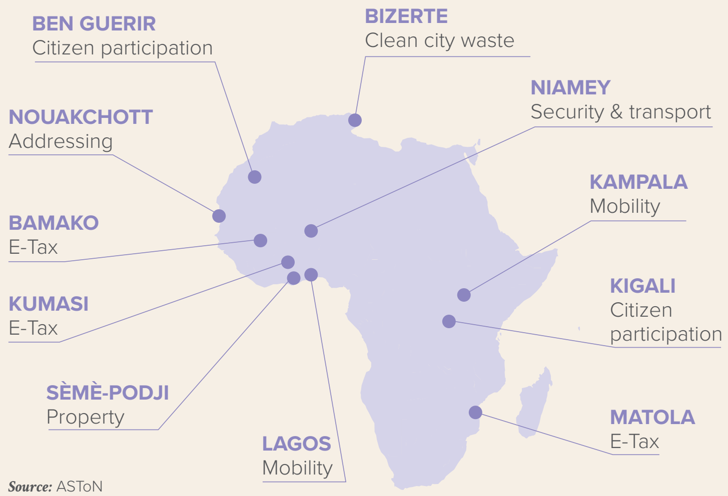
Agnes Khawa from Kampala Capital City Authority, Uganda and member of ASToN shared her experience:

"… Kampala has been able to come up with a digital mobility solution, also known as KlaConnect. With this …, citizens will be able to improve their mobility experience through viewing real time traffic information, incidents, road closures and diversions and receive feedback from the city authority. We have also been able to bring together various stakeholders in a local action group, comprising members from the public sector, private sector, politicians and also citizens."

By working with both an international group of peers and a local stakeholder group, cities like Kampala were able to escape the make-or-buy dilemma. The local authority in collaboration with private partners who were part of the local group, designed a solution that they owned fully.

Furthermore, working with other stakeholders ensures that the municipality follows through with the project and stays committed throughout the process. This is done through a mix of political will, team engagement and continuing relations with the other members of the network. Importantly, in the case of cities like Niamey (Niger) or Bamako (Mali), where decentralisation is ongoing, being part of a peer group of cities empowers municipalities to work with national bodies and build lasting partnerships with them.

Figure 1. ASToN cities network and their challenges



Source: ASToN

TESTING SMALL AND FAILING FAST: EXPERIMENTATION AS A TOOL FOR CITIES

The Experimentation phase of the Kampala project was designed to allow local authorities to learn non-linear ways of working, as with the Agile method, and to use it to test parts of their local action plan. The City's teams made assumptions about their project, which they then sought to validate or invalidate through experimentation, so that they could incorporate these learnings into their action plans. The ASToN approach was to support local authorities in embracing uncertainty and designing projects that would allow them to act on evidence, adapt or pivot, and place learning (about their solutions, their users and other stakeholders) at the heart of their project.

The Experimentation phase was not mandatory, and cities only accessed it if they wanted to and were ready for it.

When it joined ASToN, the city Sèmè-Podji, in Benin, aimed to develop a solution for the digitalisation of its land register. The local team was concerned with the rising number of conflicts and trials linked to land ownership, due to the manual land management system of the city.

Farid Salako, Municipal Councillor recounted, *"Our solution was tested in one neighbourhood of the city, on a 50ha area. Very quickly, the local team organised encounters and exchanges in the neighbourhood, with the citizens and the "wise man" of the community to explain the project to them. We also used the local radio and public criers. We are proud to say this worked and we were able to collect 80% of the data from the neighbourhood".*

1 See ASToN website: http://www.aston-network.org/

IMPLEMENTING SMART CITIES IN AFRICA: A PROJECT FRAMEWORK

AN ARTICLE BY
SIMINA LAZAR
For nearly 15 years, Simina Lazar has been working with local governments and organisations in Africa and in Europe to design sustainable urban policies, as well as developing digital services in a user-centred way. With a background in Social Anthropology and International Relations, she is looking at how both the human level and global systems can contribute to build thriving communities and cities, respectful of the planet. Early 2023, Simina Lazar joined the Citizens and Institutions team of AFD, as Participation and Civil Society Officer.

Farid added that this process worked so well that the citizens started organising themselves to provide the data. As a local authority, he said, this approach was a way to learn about the importance of testing something small before scaling up and of communicating well with the citizens.

One of the reasons why this worked so well in the case of Sèmè-Podji was because the Municipality was clear about the "why" or vision of the project. This allowed them, on the one hand, to communicate about it efficiently to the citizens, and on the other, to deal with the uncertainty of the "how". When the normal data collection process did not initially work, they were able to add a communication layer to their experimentation, using the tools most relevant for the locals, in order to achieve their results.

Focusing on the principles of experimentation, rather than on the methods, allowed cities to test their ideas in their own way. For ASToN, the lesson was that working through cycles of test-learn-iterate was often not just an unfamiliar and uncomfortable premise for public officials, but also went against the grain of both the mechanisms and regulations of municipal authorities. For example, when the Municipality of Bizerte was looking to source a partner to develop a minimum-viable-product (MVP) for their solution, they found that existing procurement processes required them to provide a detailed, long-term, fixed scope of work, which left limited space to iterate the product based on learnings. In short, a fixed experimentation method would have been ill-adapted or irrelevant for local authorities, and would not have supported them in actually testing their assumptions.

ASToN: supporting 11 African cities in their effort to make digital transition

ASToN (African Smart Towns Network) represents a network of 11 cities in 11 African countries, focusing on advancing their digital transition to become more inclusive and resilient. Convinced that digital tools can be a means to change, the cities embarked on a three-year learning journey to build sustainable solutions for their citizens. The programme gave local authorities in each of the 11 cities a framework to test and build a roadmap for digital transformation. This included an experimentation phase where each local team tried possible solutions, collecting data and insights to identify successful – and unsuccessful – approaches, and to gain a better understanding of how to scale up their ideas and improve their work. In this way, ASToN acted as a catalyst for lasting change, providing a foundation for cities to continue learning and improving their own digital solutions. ASToN's total budget was 2 995 000€ for 3 years. It was financed by AFD and used URBACT[1] European Programme methods and tools.

1 ‣ See URBACT website: http://www.urbact.eu/

DESIGNING AN ADAPTIVE LEARNING JOURNEY AND BUILDING SUSTAINABLE RELATIONS

One of the main assumptions of ASToN's core team was that cities would advance faster in their digital transition journeys by being part of a group of peers, rather than by doing it alone. This necessitated designing a process that would be flexible enough to take into consideration cities' specific challenges yet stimulating enough for them to continue coming back for more. The team did not know whether it would work. When Covid-19 hit, it was even less sure a project like this would be feasible.

But how to bring people from such diverse cultural contexts together and promote meaningful exchange? This would be the common challenge for learning across such a rich network and from experienced practitioners.

By testing, learning and iterating, a programme journey was designed that was adaptive and responsive to the needs of cities. It offered a regular rhythm and balance, bringing in technical expertise and city experience. These are the key ingredients of the method:

- **Action-oriented journey.** A three-year programme of events, workshops and guides for delivering local action plans, involving industry experts and investors, as well as opportunities for cities to showcase their work.
- **Peer learning.** Regular interactions with a network of city practitioners from across Africa, for learning and support.
- **Implementation and financial support.** Bespoke coaching and support from experts in developing a local action plan. Also, a budget for project implementation.

As implementation progressed and needs changed, redundant structures were relinquished. This was because the focus had moved to aspects such as finalising experimentation, searching for funding, and administrative closure.

Similarly, it became evident early on that to build a community, the programme needed to be taken to the people, and barriers to engagement needed to be removed. This flexibility, together with a quarterly rhythm, allowed cities to go silent for a while and then catch up, which all of them did.[2]

… AND WHAT ABOUT SMART CITIES IN ALL OF THIS?

At the beginning of the ASToN programme, as the core team was drafting the baseline and the methods and tools roadmap, numerous elected representatives and civil servants from participating cities were interviewed. All of them were asked, "What does "smart city" mean to you and your government?". Their answers were clustered into three main categories: 'citizen engagement', 'provision of services', and 'sustainable urban growth'. Every city had their own vision of what a smart city would entail for them, and the programme overseers soon realised that they did not need to align behind one definition, because the various aspects could be addressed throughout the programme. The team also realised that the common denominator among the responses was not technology. Of course, hardware and software can make a big difference when used smartly, but more importantly making smart, informed decisions, such as those made by officials from Sèmè Podji, Kampala and Bizerte can have a greater impact than sensors and AI.

2 ‣ Also see : https://aston-network-stand.org/tools-methods/the-learning-journey-of-building-a-city-network/

INTERVIEW

Enabling Africa's digital transformation with world-class technology

Chris Wood, Chief Executive Officer, WIOCC Group

A partnership between Proparco and pioneering digital network and data company WIOCC is contributing to enabling Africa's digital transformation. The initiative is creating a world-class technology environment for Africans to use to build better lives and better businesses. This includes local digital content creation, engaging users and promoting inclusive development.

HOW HAVE WIOCC AND OADC'S ACTIVITIES CONTRIBUTED TO CONNECTING AFRICA TO THE DIGITAL WORLD?

CHRIS WOOD

Chris Wood joined the WIOCC Group as CEO in 2008, driving the company through its start-up phase and into full-scale operations. Chris is the Co-Chair of the EASSy Management Committee, his career having spanned over 20 years in the telecommunications industry. A qualified accountant, Chris Wood has held leadership positions in a variety of fields in major telecommunications companies. Before joining WIOCC in 2008, he was VP Commercial Operations, Marketing & Product Development at FLAG Telecom (now Reliance Globalcom), a global network services provider.

WIOCC's transformative connectivity solutions link open-access subsea and terrestrial network infrastructures to the open-access digital hubs of fellow WIOCC Group company, Open-Access Data Centres (OADC), to provide a unique Converged Open Digital Infrastructure (CODI), an offering that is accelerating the continent's digital transformation.

The WIOCC Group's CODI offering enables cloud operators, content providers, telcos, and Internet Service Providers to quickly and cost-effectively take advantage of an open, scalable distributed infrastructure to extend their reach and capabilities into new markets. Within these markets across Africa, they can offer a wide range of digital products and services to business and domestic clients. CODI, and the ecosystems and opportunities it creates, is a catalyst for increased global investment in Africa. It encourages global businesses to further invest in the continent's rapidly developing markets.

The WIOCC Group is transforming digital Africa, with a commitment to invest almost $1Bn in facilitating and supporting the deployment of CODI across the continent. The group's commitment is to deploy and operate a CODI that will expedite digital transformation across the continent and create an environment in which all Africans can take advantage of world-class technology developments to build better lives, better businesses, and a better world.

> *"Africa's rapid technological advancement has created surging demand for internet connectivity and data services, placing a strain on existing infrastructure."*

WHAT ARE THE MAIN HURDLES YOU HAVE FACED IN ACHIEVING THIS MISSION?

The first challenge has been matching the supply of digital infrastructure to demand. Africa's rapid technological advancement has created surging demand for internet connectivity and data services, placing a strain on existing infrastructure. Building and maintaining a reliable and scalable network has been a complex task, requiring strategic investment in subsea and terrestrial cable systems and huge investment in constructing and operating data centres.

Another significant hurdle is the absence of diversity in the terrestrial network. This limitation has introduced vulnerability into the connectivity landscape, with many routes exhibiting poor reliability. Compounding this issue is the susceptibility of networks to disruptions caused by severe weather events and flooding, thereby compromising their overall reliability.

The scarcity of open-access networks and data centres has hindered establishing a well-integrated digital ecosystem. The lack of available open-access options further exacerbates the challenges faced in ensuring seamless connectivity solutions. Furthermore, the pricing strategies employed by incumbent entities for critical network infrastructure and pivotal data centre facilities often result in prohibitively high prices. This creates financial barriers to entry and expansion for potential competitors and hinders the development of a more accessible digital infrastructure.

In certain markets, the protectionist stance adopted by incumbent operators and major players further compounds challenges. These entities may resist open competition, thereby impeding the development of a healthy, competitive environment that could foster innovation, drive down costs, and enhance overall connectivity options. Despite these hurdles, the WIOCC Group's relentless commitment to innovation and strategic partnerships has allowed it to make significant strides in connecting Africa to the digital world, bridging the digital divide, and fostering economic growth across the continent.

HOW HAS PROPARCO BEEN SUPPORTING WIOCC IN TACKLING THESE CHALLENGES?

Proparco has provided access to capital and funding. With Proparco's financial support, WIOCC has been able to secure the resources needed to implement infrastructure upgrades and network expansion, delivering a reliable and robust interconnected digital ecosystem in Africa. Proparco has also brought expertise and knowledge of other industries to the table.

Leveraging its vast experience in various sectors, Proparco has offered valuable insights and advice, enabling the WIOCC Group to make informed decisions and navigate complex challenges more effectively. Furthermore, Proparco's financial strength, reputation, and credibility have instilled confidence in other potential investors and partners. This has helped the WIOCC Group in building strategic alliances and securing additional funding, beyond Proparco's support.

Moreover, Proparco's commitment to compliance with international standards and global best practice has bolstered WIOCC's reputation as a reliable and responsible player in the telecommunications industry, garnering trust from stakeholders and regulatory authorities.

Finally, by endorsing WIOCC as a leading provider in Africa, Proparco has further enhanced the group's market position and credibility, attracting more investors and partners to join forces in bridging the digital divide on the continent. Overall, Proparco's unwavering support has been instrumental in propelling WIOCC's efforts towards achieving its vision of a digitally connected Africa.

ENABLING AFRICA'S DIGITAL TRANSFORMATION WITH WORLD-CLASS TECHNOLOGY

FROM YOUR PERSPECTIVE, WHAT STILL HAS TO BE DONE TO CLOSE THE DIGITAL GAP IN AFRICA?

Sustained commitment to enhancing digital infrastructure is paramount for bridging the digital divide in Africa. This entails developing nationwide and urban fiber-optic networks, as well as bolstering core and edge data center facilities. Equally important is the facilitation of widespread access to affordable devices and internet connectivity solutions for the population.

Harmonising regulatory frameworks and simplifying policies will encourage cross-border connectivity and investment. Support for tech startups, internet service providers and SMEs, together with initiatives aimed at reducing the cost of internet access, will continue to drive innovation and increase adoption rates. Public-private partnerships offer the prospect of pooling resources and expertise to accelerate digital connectivity initiatives. Additionally, digital literacy and skills development programs must be implemented to empower participation in the digital ecosystem. Fostering the creation and promotion of local digital content will also engage users and promote inclusive development. With a comprehensive and inclusive digital strategy, Africa can bridge the digital divide, foster economic growth, and unlock the vast potential of an interconnected continent.

> *"With Proparco's financial support, WIOCC has been able to secure the resources needed to implement infrastructure upgrades and network expansion, delivering a reliable and robust interconnected digital ecosystem in Africa."*

HOW IS WIOCC ADDRESSING THE NEEDS OF LANDLOCKED COUNTRIES AND THE BROADER POPULATION?

The WIOCC Group is supporting infrastructure expansion by investing in and upgrading digital infrastructure – including fibre-optic networks and data centres – to extend connectivity beyond coastal cities and into remote and underserved areas, and by forging strategic partnerships with local telecoms operators in those regions. By collaborating with established local players, WIOCC is leveraging their expertise and market knowledge to navigate the unique challenges of these areas and ensure efficient service delivery. Also, by operating an open-access model, WIOCC is promoting competition, lowering costs, and encouraging stakeholder participation, thereby accelerating deploying connectivity.

WIOCC's capability of establishing a comprehensive turnkey connectivity solution that presents diverse pathways incorporates cross-border infrastructure and delivers a streamlined, all-in-one solution.

Through these concerted efforts, WIOCC is striving to create an inclusive digital landscape that benefits both large coastal metropolises and previously underserved inland cities and landlocked regions, ultimately contributing to Africa's overall socio-economic advancement. The continuum of Core to Edge DCs and the rapid speed at which they are being built is extending broadband penetration and unlocking GDP growth across African countries where it operates. Research shows that for every 10% increase in broadband penetration, there is an up to 2.5% increase in GDP.

WHAT IS THE IMPACT OF THE SURGE IN URBAN POPULATIONS IN AFRICA ON THE DIGITAL INFRASTRUCTURE AND ON DIGITAL SERVICES?

Rapid urbanisation increases demand for digital infrastructure, including internet connectivity and data centres, to cater for the higher concentrations of people in urban areas and to meet growing demands, necessitating upgrades and last-mile connectivity. Simultaneously, urbanisation leads to greater adoption of digital services such as e-commerce and online banking, driving digital transformation across sectors like healthcare, financial services, and education. The urban market presents lucrative opportunities for carriers, ISPs, MNOs, and businesses across Africa offering digital solutions, but it also intensifies competition, requiring constant innovation.

FOCUS
WIOCC GROUP

The WIOCC Group is the parent company of Group Companies WIOCC, comprising Africa's digital hyperscale carrier and Africa's fastest-growing and award-winning data centre company, Open-Access Data Centres (OADC). The Group is pioneering and accelerating Africa's digital transformation, creating an environment in which all Africans can take advantage of world-class technology developments to build better lives, better businesses, and a better world. It is achieving this by deploying a converged open-access digital infrastructure across Africa, an infrastructure that will underpin and expedite Africa's digital transformation.

HOW IMPORTANT IS LOCAL DATA STORAGE AND PROCESSING FOR YOUR CLIENTS?

Local data storage and processing are crucial for data sovereignty, reduced latency, data privacy and compliance, enhanced security, bandwidth optimisation, data accessibility, and support for the local economy. Storing data for clients within country borders ensures that sensitive information is governed by their local laws and regulations, strengthening data sovereignty and protection. Processing data locally minimises latency, benefiting real-time applications and providing a better user experience. It also helps organisations to comply with strict data privacy laws. Moreover, local storage enhances security, by reducing exposure to external cyber threats. Bandwidth optimisation and improved accessibility during disruptions are further advantages of local data storage and processing. For the first time in Africa, OADC's innovative, scalable, core and edge data centres extend data storage, processing, and content delivery to the network edge. This supports improved application performance, allows critical data to be processed locally, and reduces backhaul costs.

WHAT IS AT STAKE FOR THE NEW OADC ACTIVITIES?

OADC is part-way through a USD500 million-plus, multi-year investment programme, which will result in the construction and operation of a unique network of world-class, open-access, carrier-neutral core, and edge DCs across Africa.

The fastest growing data centre company in Africa, OADC has deployed more than 30 Core to Edge open-access DCs at strategic locations in South Africa and Nigeria in the past 12 months. OADC's DRC Core facility in Kinshasa will be next to go live, which is expected soon.

There have been several additional African countries identified where OADC's unique open-access core to edge DC architecture can be further deployed to continue expanding environments where enterprise and wholesale clients with digitally-enabled products and services can grow by quickly and cost-effectively expanding their markets. This will expedite deploying transformative products, services, and technologies across African markets, for the benefit of businesses and consumers.

KEY FIGURES

Building resilient and inclusive cities

The growing global phenomenon of urbanisation is generating economic, social and environmental risks. In phase with UN Sustainable Development Goal no. 11 focusing on urban regeneration and planning, sustainable urban development is a response to the major challenges of the climate crisis and to social exclusion.

Urbanisation: a global densification phenomenon

SHARE OF URBAN POPULATION

IN 2021 – **56%** of the world's population

IN 2030 – **60%** of the world's population

IN 2050 – **68%** of the world's population

Source: World Bank / United Nations

Cities occupy less than **3%** of the planet's surface

Cities and climate change

Cities account for **75%** of CO_2 emissions

Transport accounts for **1/3** of CO_2 emissions*

US$ **29,400** billion

INVESTMENT OPPORTUNITIES IN SIX SECTORS BY 2030

- Green building
- Waste
- Renewable energies
- Climate-smart water
- Electric vehicles
- Public transport

*According to C40, a network of around 100 of the world's largest cities.

Sources: The State of Cities Climate Finance / The Cities Climate Finance Leadership Alliance, June 2021 – www.citiesclimatefinance.org/wp-content/uploads/2021/06/2021-State-of-Cities-Finance-Executive-Summary.pdf / GPC inventories, October 2021.

The risks of uncontrolled urban growth

Definition

The United Nations defines a **slum** as *"a heavily populated urban area characterised by substandard housing and squalor"*.

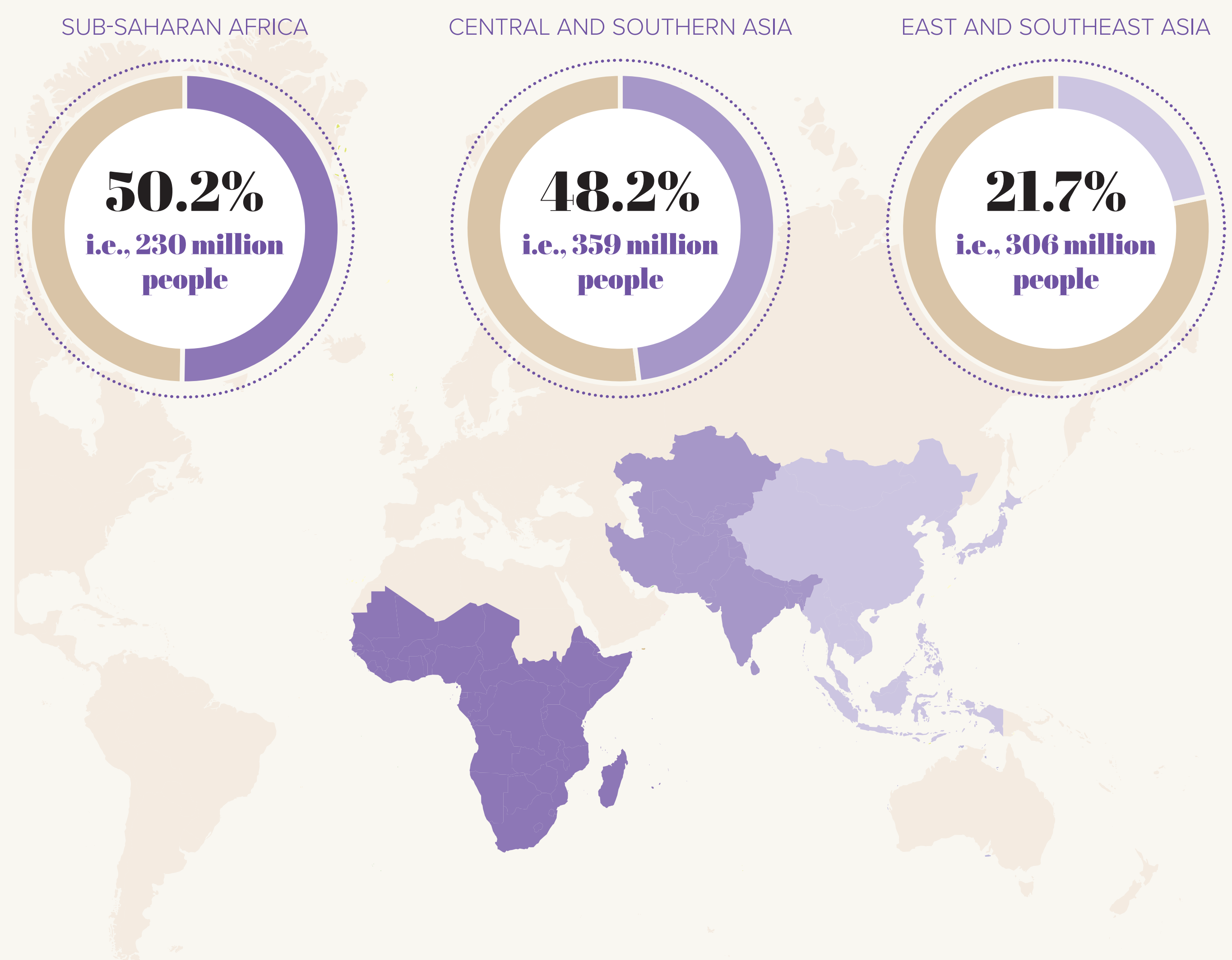
Number of people living in slums

IN 2003 – **895** million people

IN 2023 – **1.1** billion people

Worldwide, **1 in 4 city dwellers,** i.e. over 1 billion people, were living in slums in 2020.

SHARE OF URBAN POPULATION LIVING IN SLUMS



Source: GLOBAL ACTION PLAN: Accelerating for Transforming Informal Settlements and Slums / United Nations Human Settlements Programme (UN-Habitat), October 2022 - https://unhabitat.org/sites/default/files/2023/05/global_action_plan_22-05-23.pdf

Sustainable urban development: what role for the private sector?

Employment opportunities, renewable energy, sustainable mobility, access to basic services, decent housing and green spaces: private sector investment has a leading role to play in building resilient and inclusive cities.

Sustainable urban development opportunities

CITIES GENERATE → over **70%** of global GDP

Source: World Bank

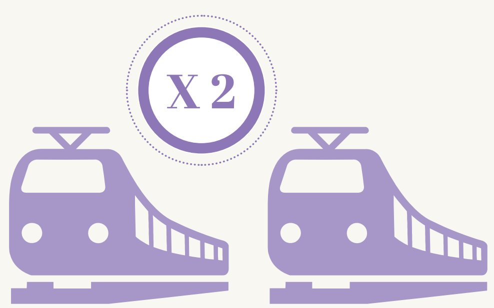
"Partnerships between cities and business can boost the development of green jobs, develop skills and accelerate the transition to a low-carbon economy [...], but no single player can bring about transformational change on their own."

Source: C40, Impliquer le secteur privé, 2023 - www.c40.org/fr/what-we-do/influencing-the-global-agenda/engaging-the-private-sector

Investing in infrastructure

Up to US$**5,000** billion a year needed to meet cities' basic infrastructure requirements

To achieve the Paris Climate Agreement objectives

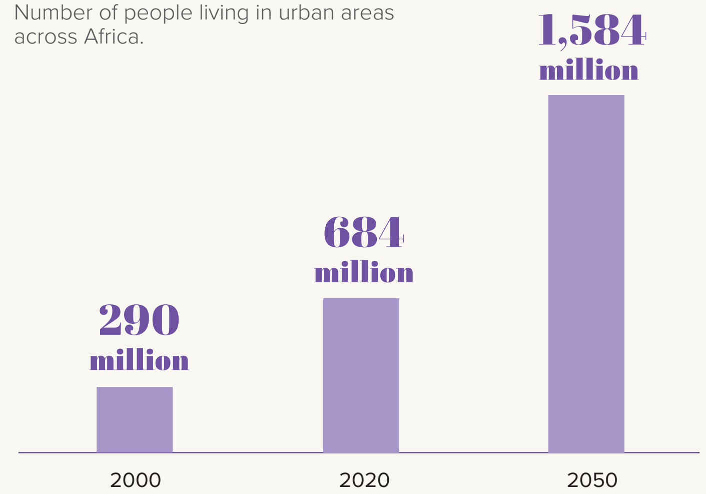


the use of public transport in cities needs to double by **2030**

Sources:
• Global Infrastructure Hub website - www.outlook.gihub.org
• *Financing Climate Futures* / OECD, The World Bank & UN Environment, 2018 - www.oecd.org/environment/cc/climate-futures/policy-highlights-financing-climate-futures.pdf
• C40 - Public transport must double in cities over next decade to meet 1.5°C target - C40 Cities

Focus: accelerating urbanisation across the African continent

Number of people living in urban areas across Africa.



Source: Africapolis, SWAC & OECD - 2023

US$150 billion a year needed to meet city dwellers' needs for basic infrastructure and essential services

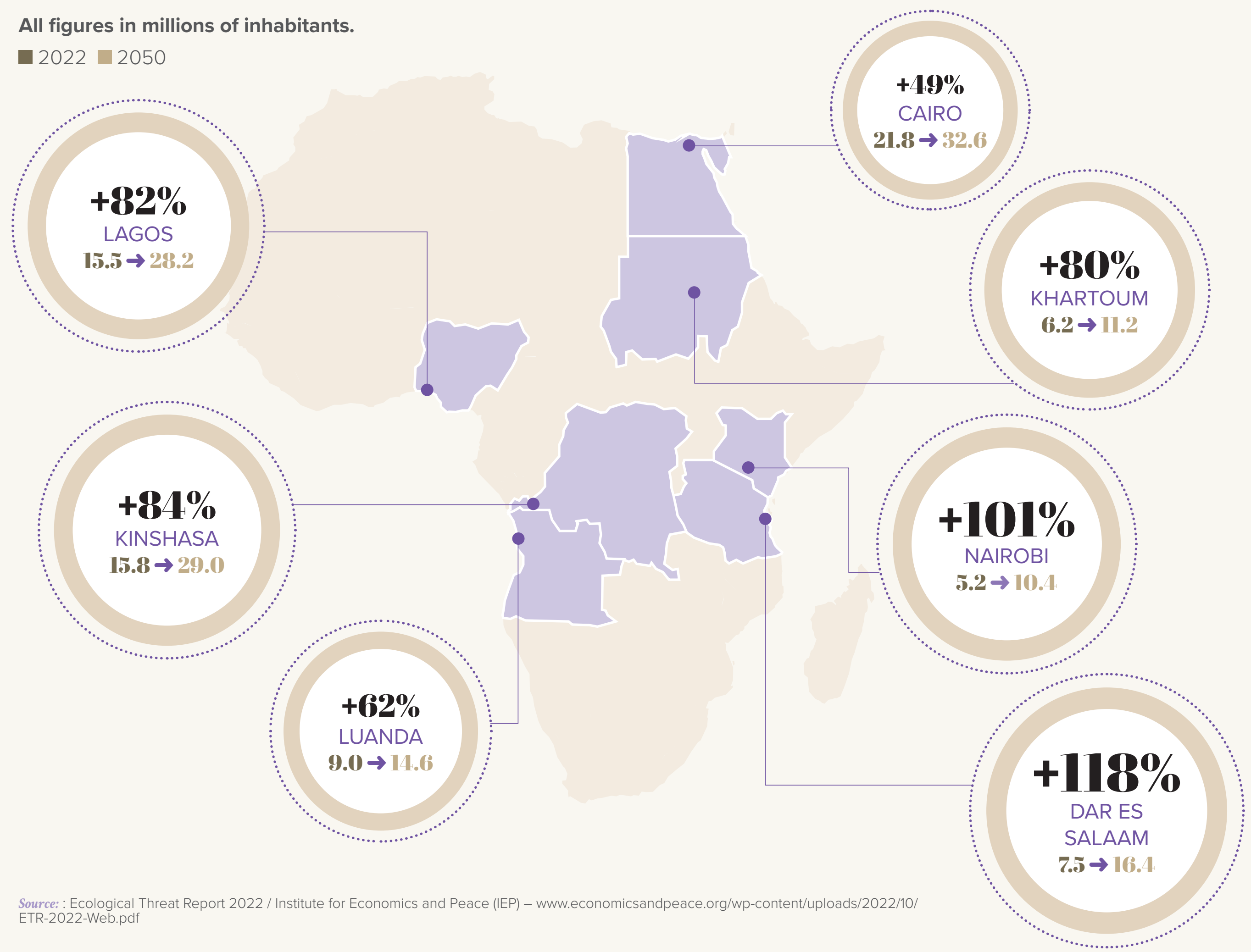
Source: African Development Bank – 2018

AFRICA'S NEXT MEGACITIES

Population growth forecast through 2050.

All figures in millions of inhabitants.

2022 2050



Source: : Ecological Threat Report 2022 / Institute for Economics and Peace (IEP) – www.economicsandpeace.org/wp-content/uploads/2022/10/ETR-2022-Web.pdf

FEATURE

The key role of private players in providing access to affordable housing in South Africa

By the Proparco Communication and Marketing Division

South Africa's private sector participates in real estate projects that provide low-cost, sustainable housing for the poorest sections of the population and for students. These building programmes reduce socio-spatial segregation and improve the living conditions of programme beneficiaries.

Access to sustainable and affordable housing is a major concern in South Africa. Urbanisation continues to gather pace, as rural dwellers migrate to urban centres in search of better job opportunities, access to quality education and health services. However, the infrastructure of these cities has struggled to keep pace with this influx of residents, leading to a severe shortage of housing. The national housing shortage is estimated at 3.7 million units[1] and needs are increasing in line with population growth and higher rates of urbanisation. According to government data, almost 13% of South Africans live in shacks or informal settlements.[2] Rural dwellers have migrated to urban centres in search of better job opportunities, access to quality education and health services. However, the infrastructure of these cities has struggled to keep pace with population growth. Social housing is a powerful vector for integrating divided cities by providing decent rental housing for working families on low or moderate incomes, as illustrated in a 2021 study published in AFD's *Research Papers* collection[3].

FROM DOWNTOWN TO TOWNSHIPS, A GENERAL HOUSING CRISIS

"*There is massive demand for housing that is not accessible to low-income households*", explains **Paul Jackson, CEO of TUHF**, a unique financial player in South Africa, to which Proparco granted a line of credit in local currency equivalent to €10 million in 2022. He points out that almost three decades after the abolition of the apartheid system, "*land redistribution and economic inequalities have still not been resolved*". By supporting small property developers who invest in affordable rental housing, TUHF plays a key role in financing the supply of quality housing for low-income families, in phase with the national strategy to facilitate access to housing.[4] This structure offers its customers both financial support, through long-term loans, and non-financial support, through customised training and mentoring programmes as well as through opportunities for networking with other investors. TUHF has developed an original business model that finances the renovation and conversion of derelict housing in city centres into affordable housing. The impact of this policy is visible on the ground. Since the structure was created in 2003, its teams have financed 46374 units, established 7 offices in 8 of South Africa's metropoles and grown the loan book to ZAR7.1 billion (around €355 million). In 2016, TUHF also incorporated environmental requirements into its financing assessments to promote energy efficiency standards wherever possible.

Soloman Ramalamula is one of TUHF's longest standing customers. He is a former police officer who switched to property management 20 years ago thanks to a dedicated loan from TUHF to convert a derelict dwelling in the centre of Johannesburg into nine units of housing. "*Traditional banks are reluctant to finance renovation in downtown districts because they consider them too risky, but this is not the case with TUHF, which also supports and trains us*", explains this entrepreneur, who has spearheaded a major renovation programme on a building in the Hollywood Drive district, costing ZAR30 million (around €1.5 million).

uMaStandi, a subsidiary of TUHF, operates mainly in the townships, the former ghettos reserved for non-whites, created on the outskirts of major cities during apartheid. Many townships have become active, promising economies since then, driving the demand for better quality affordable housing. Part of Proparco's funding (€3 million out of the €10 million granted) has been earmarked for uMaStandi to expand this business model into these working-class neighbourhoods to offer quality housing solutions to these somewhat neglected populations. **Lusanda Netshitenzhe, CEO of TUHF21 – the TUHF Group's incubation arm that developed uMaStandi into a standalone solution –**, explains that "*for many years, affordable housing was provided in the townships, but usually consisted of informal structures with very basic amenities and shared sanitary facilities. The small developers that we support have integrated these issues into their projects in order to provide quality housing complete with independent facilities.*" This is the case with **Nomakhosi Makolota** who has been able to develop a number of housing programmes in the country's townships thanks to the support of uMaStandi. "*Without the uMaStandi teams, I would never have been able to do business in these areas, which are of no interest to traditional developers*".

The national housing shortage is estimated at 3.7 million units and needs are increasing in line with population growth and higher rates of urbanisation.

FOCUS
TUHF

TUHF is a commercial property finance company that provides access to funding for entrepreneurs from all walks of life, enabling them to purchase, and subsequently convert or refurbish buildings in South Africa and deliver affordable residential units where they are most needed. Together with uMaStandi, a member of the TUHF group, believes in the resilience of South Africa's inner cities and townships, and in the power of the communities who live in them to stimulate thriving economies.

1 Sources: Centre for Affordable Housing Finance in Africa / Habitat for Humanity (2022) - Africa Housing Forum in Nairobi highlights need for innovative and inclusive approaches to solve housing challenges
2 Cited in "*Lutter contre le sans-abrisme en Afrique du Sud*", Entraide Missionnaire (April 2023) - https://lentraidemissionnaire.org/lutter-contre-le-sans-abrisme-en-afrique-du-sud
3 Source: "The role of social housing in reducing inequality in South African cities", by Andreas Sheba, Ivan Turok et Justin Visagie. Coordinator: Irene Salenson. Research papers, AFD éditions (February 2021).

4 Access to housing forms part of the Reconstruction and Development Programme (RDP), a flagship post-apartheid initiative that aims to provide standalone housing for the poorest households earning less than 3,500 rand a month (180 euros). In some cities - including Johannesburg - local authorities are encouraging the sale of derelict buildings located in employment hubs, enabling the private sector to renovate them and let them out at affordable rents.

FOCUS
DIVERCITY

Divercity is a South African property development and management company that invests in affordable rental housing in well-located urban precincts in South Africa's major metropolitan areas. This enables it to deliver solid commercial returns for its investors, while making a significant positive social and environmental contribution. Divercity currently owns roughly 7,000 affordable apartments and has over 2,000 currently in development.

How Divercity is delivering affordable rental housing in a challenging environment

Interview with Carel Kleynhans, CEO, Divercity Urban Property Group.

Could you briefly present Divercity?
Divercity develops, owns and manages affordable rental housing in centrally-located, neighbourhoods with good amenities in South Africa's major cities. Our portfolio of 6,500 apartments provide low-wage earning households with quality accommodation in areas where they could not otherwise afford to live. This model has a considerable social, environmental and economic impact, while also creating excellent investment-grade assets for institutional investors.

What are the specific features of the affordable housing market in South Africa?
The majority of affordable housing is located at the urban periphery, far from economic opportunities and essential amenities. This urban sprawl unfortunately perpetuates Apartheid-era spatial segregation while undermining numerous social, developmental and economic outcomes. Divercity's mission is to change this reality by developing a commercially viable alternative model.

What are the challenges of operating in this market?
Delivering a tried-and-tested housing product with good access to amenities that is easy to operate at scale requires extreme diligence and attention to detail at every step of the lifecyle through design, development and operations. Divercity prides itself on its 100% in-house structure which allows us to tackle this challenge holistically, end-to-end, and to deliver a quality product at an affordable price to the consumer.

How do the projects Divercity develops meet the needs of low- to middle-income households in South Africa?
Divercity's projects offer people who would otherwise have to spend 2 to 4 hours a day commuting to and from work – at a cost of up to 30% of their income – the opportunity to live in a better quality environment, close to their work, at a rent they can afford. This is literally life changing for these people, and unprecedented in South Africa.

What are the concrete impacts of your projects?
While the impacts are broad-ranging, we can summarize them under three different headings:
Environmental: our developments are extremely sustainable, not just at the building level (all EDGE certified), but also in terms of the proven sustainability benefits of the dense urban form (vs sprawl).
Social: our buildings are overwhelmingly favoured by woman because of their safety, both inside, and also because of the reduced risk of being a victim of gender-based violence while commuting. This is why Divercity is 2X Challenge-accredited.
Economic: it has been amply demonstrated that dense, mixed-use urban development is significantly more economically productive, especially for low-income households.

In December 2023, Proparco invested €15 million in Divercity. What impact will this investment actually have on your activities on the ground?
Proparco's significant investment in Divercity will enable us to develop over 2,500 new apartments that meet the aforementioned criteria, thereby helping us to further demonstrate the impact and commercial viability of this pro-poor, sustainable and fundamentally empowering urban development model.

REDUCING SPATIAL AND SOCIO-ECONOMIC INEQUALITIES

But the situation requires urgency. As the French newspaper Le Monde noted in 2019, while the country certainly has infrastructure and industry that is as developed as in Europe, *"in the townships [...], everything still remains to be done."*[5] There is a need for electricity, drinking water, schools and hospitals, and *"proper housing for millions of people crammed into temporary structures who have been kept in poverty for decades"*. **Wikus Lategan, CEO of Calgro M3,** a group specialising in building affordable housing in these priority urban areas, still shares this view. *"We provide rental accommodation for the least well off households, whose monthly per capita income is less than 3,500 rand (around €180). We also offer subsidised flats for sale"*. The group is South Africa's number one affordable housing provider. It is also the country's first private developer to design and build "integrated real estate projects" comprising residential units in all price ranges within the "low-income" sector, as well as integrated social amenities (including public gardens, crèches, schools and shops). The aim is to help create sustainable communities, promote integration and encourage social mobility. As **Allistiar Langson, CEO of Calgro M3 Developments** explains, *"Calgro M3 primarily targets the very large number of families in less well-off neighbourhoods who live in informal housing without a roof or running water. We place these families in secure housing developments with running water, electricity, etc., which enhances their dignity."*

In 2017, Proparco granted Calgro M3 Developments a local currency loan equivalent to €25 million, which subsequently enabled the construction of almost 3,000 units of affordable housing benefiting nearly 6,000 people. In Jabulani, in **Soweto township**, Porscha is one of these new owners. In a well-appointed four-storey building just a stone's throw from amenities and sports fields, this mother of four was able to buy "this little paradise", a four-room apartment for 580,000 rand (less than 30,000 euros). *"Everything is brand new and it's also very quiet and perfectly safe"*, she says with a smile. *"The property market in this country is very complicated. Without this subsidised programme, I would never have been able to buy my own home."*

FOCUS
CALGRO M3

Calgro M3 has been operating since 1995 and is a leading property developer in South Africa in the low-income housing sector, as well as the first private sector developer in the country to design and build "integrated developments", i.e. housing projects with units of all price ranges within the low-income sector, along with social amenities (e.g. parks, crèches, schools and retail spaces). The objective is to create sustainable communities and improve social integration and social mobility.

Proparco granted Calgro M3 Developments a local currency loan equivalent to €25 million, which subsequently enabled the construction of almost 3,000 units of affordable housing benefiting nearly 6,000 people.

5 ▸ *"En Afrique du Sud, des logements gratuits pour les plus pauvres"* (In South Africa, free housing for the poorest) (Le Monde – 2019)

SOUTH AFRICAN STUDENTS: OTHER VICTIMS OF INADEQUATE HOUSING

FOCUS
RESPUBLICA

Respublica is South Africa's leading provider of student accommodation with a national portfolio of over 10,000 beds across more than 9 campuses, servicing 8 public universities as well as numerous private universities and colleges. Respublica is an end-to-end specialized student housing expert providing services in property development, student community management, property administration and management, and investment portfolio management. The company's vision is to create nurturing student communities that redefine a student's living and learning experience through innovation and personal support.

Student accommodation is another supply-constrained sector. The South African student accommodation market is struggling to keep pace with the big increase in enrolments in higher education, which have more than doubled since the end of apartheid. Students from low-income households are especially heavily penalised by this shortfall. Developing affordable student accommodation is therefore essential to providing broader access to quality higher education and this is the *raison d'être* of the Respublica group. With almost 10,500 beds spread over 9 campuses, it is one of South Africa's leading student accommodation providers. Its residences are renowned for the quality of their buildings, their affordability (more than half of students housed there are on grants), and the range of additional services provided through the dedicated Res Life Program (comprising academic support, mentoring, mental wellness, enhancing employment prospects, sporting, community programs and cultural activities, etc.). To partner its expansion, Proparco along with IFC and Bopa Moruo Private Equity – together with RMB Ventures via Bopa Ventures – completed a combined equity investment of 516 million rand (approximately USD 36 million) in 2022. This deal will enable Respublica to add almost 9,000 new beds on campuses across the country by 2028 (including 5,000 from 2025). The group will also benefit from the support of IFC's EDGE initiative (Excellence in Design for Greater Efficiencies), a certification programme that enables environmentally-friendly structures to be built more efficiently.

As **Craig McMurray, CEO of Respublica Group** points out, "*South Africa is home to 27 universities with approximately 900,000 students - not counting those enrolled in private institutions, who number around 200,000. Based on this total, there is a potential shortfall of over 300,000 beds, which the private sector is seeking to provide.*" Most of the available supply is concentrated at the major universities in the country's main cities, with Johannesburg, Pretoria and Cape Town out in front. "*Secondary cities and campuses have been neglected. It is these under-serviced areas in particular that we are trying to focus on.*" The Group's aim is to develop sustainable, affordable housing, thereby promoting inclusive and equal access to higher education across the country. As **Goitse Moerane, Head of the Res Life Programme** puts it, "*Our priority is to provide a supportive stable and stimulating environment for students, especially poorly-served students from low-income backgrounds.*" Thanks to a number of support initiatives, the programme helps to "*reduce the sense of isolation and marginalisation often experienced by this section of the student population, thereby improving their academic output and personal development.*"

Sitting in his flat in a Respublica residence in Pretoria, doctoral student **Athenkosi Nzala** bears this out: "*I had been trying for a long time to get this quality accommodation. There's a serious supply issue. A student from a low-income background can easily find themselves alone and isolated*". **Ashe Naob**, a 21-year-old educational science student living in the same residence, agrees: "*As well as being affordable, Respublica residences offer a wide range of sporting and cultural activities. That's a really precious resource.*"

Since 1994, the South African government has invested massively in the low-cost housing sector through the Reconstruction and Development Programme (RDP), delivering over 2.8 million fully subsidised homes. But in spite of this colossal effort, the shortfall has actually grown, while the number of informal dwellings has grown exponentially. Involving the private sector, alongside central government efforts, is therefore essential. As well as helping to meet the demand for affordable housing, this also helps to redress territorial inequalities and issues of socio-spatial segregation.

Improving energy efficiency and minimising the effects of climate change in the hospitality sector

Ram Lokan, Principal – Investments, Kasada Capital Management

Hospitality is one of the most energy-intensive sectors in real estate. In many markets in Africa, energy represents a significant burden on profitability, yet the sector has never fully embraced energy-efficient solutions, due to high costs, fear of inconveniencing guests, and a lack of demonstrated savings. Kasada is innovating to change the mindsets of property owners across the continent

In the United States, where the clearest data on energy consumption exists, the Department of Energy estimates that the average guest room incurs nearly $2,200 in energy costs annually. This compares to the average consumer electric bill of $1,400 per year. In other words, a single hotel room consumes nearly 60% more than the average home. In certain parts of Africa where the grid is unreliable and the weather is hot all year-round, these numbers can be far higher.

What are these expenditures when itemized? Primarily cooling, which can represent up to 30% of costs; then lighting, which can form between 20-25% of costs, kitchen equipment (8-10%), and finally, back-of-house (7-8%). This energy expenditure can represent anywhere from 6 to 10% of revenues and is one of the fastest growing costs in the industry. With such a significant expense, one could understand any property owner wanting to seriously consider controlling it. Nevertheless, there are hoteliers who see guest satisfaction and cost reduction as being mutually exclusive, and prioritize guest satisfaction. So if a guest wants to keep the lights and air conditioning on, even while they are not in the room (which can be up to 60% of the time), they are welcome to do so. As a guest, even if you turn off the cooling system, often housekeepers will turn it back on while you are away.

AN ARTICLE BY
RAM LOKAN

Ram Lokan is an experienced global real estate investor with over 18 years of experience. He joined Kasada in 2019, where he leads transactions across the firm's target economies. He has closed and managed real estate transactions across North America, India and Africa. Prior to joining Kasada, he was based in Dar es-Salam, where he was CEO of Village Supermarket, a regional supermarket chain. He also spent eight years in real estate and infrastructure investments. Ram Lokan started his career as an M&A Analyst at Credit Suisse in New York. He holds an MBA with High Distinction from Harvard Business School and a Bachelor of Commerce from McGill University.

"This energy expenditure can represent anywhere from 6 to 10% of revenues and is one of the fastest growing costs in the industry."

IMPROVING ENERGY EFFICIENCY AND MINIMISING THE EFFECTS OF CLIMATE CHANGE IN THE HOSPITALITY SECTOR

COMMITMENT TO SUSTAINABILITY

Since its inception, Kasada[1] has been focused on delivering innovation to the African hospitality sector across all verticals, and this includes taking a hard look at controlling utility costs while maintaining, if not improving, guest satisfaction. As the leading hospitality investor on the continent, Kasada is a signatory to the United Nations Principles for Responsible Investing and has set the ambitious target of achieving EDGE certification of all its hotels within 18 months of acquisition. To obtain this green certification, we established a rigorous process, with strong collaboration between our in-house technical experts, hotel operations team, and external stakeholders relevant to each property, who review and vet all initiatives. This teamwork is especially important for the African continent, where cities and countries display significantly different weather patterns between in each other and compared to Europe or North America. Not only do we invest in our buildings, we are also introducing green labels inside the rooms and public areas. Our aim is to improve the entire guest experience through increased awareness while providing more support to our staff for these initiatives.

> *“The high average cost of utilities across our portfolio reveals the complexity accompanying operations across a vast geography: certain markets have better year-round weather (Dakar), whereas others exhibit water scarcity (Windhoek).”*

The high average cost of utilities across our portfolio reveals the complexity accompanying operations across a vast geography: certain markets have better year-round weather (Dakar), whereas others exhibit water scarcity (Windhoek). Each requires a specific, tailored approach to address the underlying causes of energy inefficiency and wastage.

Despite these high barriers to success, by the end of 2023, Kasada will have EDGE-certified all of its existing operating properties – 16 hotels totaling 2,903 keys, across seven countries. We have surpassed the 20% savings requirement on energy and water required for level 1 certification. In the case of Pullman Dakar, an hotel first opened in 1973, we even managed to achieve EDGE Advanced, which is awarded to projects generating over 40% in energy savings. Such an achievement on a 50-year-old building illustrates the kind of innovation Kasada is bringing to the market which can be replicated in Africa or anywhere else for that matter.

This is a considerable achievement given the complexities and nuances faced with each property, the various geographies involved, and that most of our acquisitions took place in 2022, putting us ahead of schedule for the latest hotels in the portfolio. These investments were all made with an envisaged positive return on investment. With such scale, Kasada stands out as a market leader in this regard in the industry, with no other hotel owners in Sub-Saharan Africa having as many certified properties.

1 ▸ See: www.kasada.com

BENEFITS OF GREEN CERTIFICATION

Across its portfolio Kasada estimates average annual reductions in energy and water usage per year to be 30-35% depending on the age of the property (some of our hotels were built in the 1970s). Not only are we pioneering in demonstrating that hotels can have it both ways (better energy control alongside guest satisfaction), but we are saving 1-2% of revenues. Across our portfolio hotels, this represents millions of dollars annually in savings and supports greater profitability. On a more general level, the certification is a signal to guests, investors and other stakeholders of our commitment to sustainability and alignment with global best practices.

Kasada has streamlined the green certification process across its portfolio, resulting in key efficiencies throughout the process and an optimized approach to certification. Through a rigorous Kaizen approach, each hotel undergoes an assessment across all departments and hotel areas to review and challenge the existing operational practices, which has direct and indirect impacts on energy and water consumption. Following this review, different measures are put in place that can range from capital-intensive investments in materials and equipment additions (such as solar panels) to less-capital-intensive, low-tech, behavioral interventions. For example, to reduce cooling needs in our West African hotels, we introduced a special coating on the roofs, which resulted in a 50% reduction in roof temperature and brought down the cooling needs of the entire buildings. Using air conditioning less results directly in lower operating costs and indirectly in a longer lifespan for the HVAC equipment. While technical improvements can be made across all our properties, it is behavioral interventions that remain a key way of mitigating high energy usage at the hotels. A key tenet of Kasada's strategy is to identify behavioral changes that can be implemented quickly, at low cost. Kasada invests extensively in training employees to recognize ways to mitigate spend. Turning off the lights when no one is around, whether in the hotel offices or guest rooms; learning from guests about their preferred room temperature, rather than keeping the rooms excessively cold: these are low-cost interventions any hotel owner can implement to make a difference. Getting employees on board with the approach has been fundamental to our success.

With brownfield investments we often need to work with (or against) 30-plus-year-old buildings with heavy structures and equipment built with inefficient materials that need to be worked against or altered. Greenfield investments are an opportunity to build with sustainability in mind from the onset. In Kasada's four greenfield projects, the technical teams are able to innovate with architecture and design to create buildings that minimize energy consumption by using natural cooling and sustainable materials. With the latest in building management technology, in-house maintenance teams are able to see electricity and water usage in near real-time, to proactively reduce consumption and identify potential issues such as leaks.

Over the last three years, Kasada has created a portfolio of over 3,300 keys across eight markets in Africa, and has managed to obtain green certification on hotel brands as varied as ibis to Fairmont. As sustainability innovators in the African hospitality industry, our hope is that this can be replicated across the entire industry. ■

FOCUS
KASADA CAPITAL MANAGEMENT

Kasada Capital Management is part of the Kasada group, an independent real estate private equity platform dedicated to the hospitality industry in Africa. The firm was established in 2018 with the support of Qatar Investment Authority, the sovereign wealth fund of Qatar and Accor, a global hospitality leader. Kasada's hotels are operated under the Accor umbrella, benefiting from the broad range of Accor brands and their international reputation. In April 2019, Kasada Group closed its first fund, Kasada Hospitality Fund L.P., with equity commitments of more than US$ 500 million.

Project preparation funds: an effective solution for unlocking investment in sustainable infrastructure in Africa

Samuel Lefèvre, Cities and Climate Coordinator, AFD

Financing of essential local services and sustainable infrastructure in African cities is not sufficient to meet current demand. Project preparation funds can provide both preliminary technical assistance and project support for resilient urban development programmes. In doing so, they facilitate both decision-making and financing, especially from private stakeholders.

AN ARTICLE BY
SAMUEL LEFÈVRE
Samuel Lefèvre is head of project teams at Agence française de développement's (AFD) Cities division after nine years spent working in the agency network (in Johannesburg, Beirut and Amman). His areas of expertise include financial engineering and financing urban infrastructure and local development projects. Samuel Lefèvre currently manages project preparation funds for the Cities & Climate in Africa (CICLIA) and Covenant of Mayors in Sub-Saharan Africa (CoM SSA) initiatives, co-financed by the European Union, the Swiss State Secretariat for Economic Affairs (SECO) and AFD, for the benefit of African cities. He also heads up AFD's Cities and Climate practice community.

African cities are at the heart of an accelerated transition (almost 684 million African urban citizens in 2020, compared with 290 million in 2000[1]) which, combined with very limited investment resources, is hampering their ability to build sustainable infrastructure and provide quality public services. Urbanisation is not just a phenomenon in "megapolises" (i.e., Kinshasa, Cairo, Lagos, etc.): Africa now boasts 8,500 urban areas with over 10,000 inhabitants[2], compared to 5,180 in 2000. African urbanisation requires estimated investment of US$150 billion a year.[3] With African countries only able to cover US$60 billion of this amount, funding requirements are estimated at US$90 billion. This will be essential for making cities more functional, meeting basic infrastructure requirements and providing essential services.

Alongside quantitative challenges, it is vital to trace a more sustainable development path for African cities faced with more difficult climatic conditions (average temperatures in Africa have already risen by 1.4°C since the pre-industrial era, compared with 1.1°C for the planet as a whole). Local authorities have an important role to play in implementing national commitments to reduce carbon emissions and adapt to climate change, either by implementing national strategies at local level, or by helping to achieve the country's climate objectives through innovative actions on the ground.

> *"Alongside quantitative challenges, it is vital to trace a more sustainable development path for African cities faced with more difficult climatic conditions."*

1 ‣ Source: Africapolis (SWAC/OCDE) - 2023
2 ‣ idem
3 ‣ Source: African Economic Outlook, African Development Bank - 2018

PREPARING RESILIENT INFRASTRUCTURES FOR AFRICAN CITIES

African cities have been particularly hard hit by natural disasters, exacerbated by climate change, despite contributing only a very small proportion of global greenhouse gas emissions (even today, Africa generally makes only a marginal contribution of around 9% to annual global emissions). These cities are often located in coastal regions or by rivers and are therefore more exposed to rising sea levels. Regardless of their location, they are also subject to extreme hydrometeorological events (devastating floods and heat waves aggravated by humidity in tropical areas, etc.). Moreover, their development is often unregulated: 40% of their growth takes place through the formation or densification of informal settlements. The lack of sustainable infrastructure and essential services reinforces socio-economic inequalities, deprivation and insecurity, especially for women and the most vulnerable, and exacerbates the impacts of climate change on people's daily lives.

It is therefore essential to help local authorities to produce operational studies that can generate financing for investments that make cities more sustainable and resilient. As part of this approach, AFD manages grant funds that enable local and international consultancy firms to prepare sustainable urban development projects. In sub-Saharan Africa, the CICLIA (Cities and Climate in Africa) and CoM SSA (Covenant of Mayors in sub-Saharan Africa) initiatives, co-financed by the European Union and/or the Swiss State Secretariat for Economic Affairs (SECO)[4], are the main programmes achieving tangible results on the ground.

> *"African cities have been particularly hard hit by natural disasters, exacerbated by climate change, despite contributing only a very small proportion of global greenhouse gas emissions."*

AFD has used CICLIA and CoM SSA to finance expertise and technical assistance for getting projects up and running. This support consolidates the preparation of resilient urban infrastructure projects and ensures they are more effectively aligned with UN Sustainable Development Goals (SDG 11: "Making cities inclusive, safe, resilient and sustainable"), meaning that these investments can be financed by national development banks, international financial institutions or the private sector. Consequently, 15 capital cities and 27 intermediate cities have been supported in 19 sub-Saharan African countries. They include Durban, Cape Town, Kigali, Lagos, Lomé, Abidjan, Yamoussoukro, Kampala, Yaoundé, Douala, Conakry, Bobo Dioulasso, Mwanza, Tanga, Ganvié and Djibouti.

With just €15 million in cumulative grant endowment funds within CICLIA and CoM SSA, over €1.7 billion in catalytic investments can be deployed in these cities thanks to financial engineering and project structuring overseen by AFD. More than €710 million of this amount has already been formally allocated by AFD, the European Union and other financial backers.

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4 ‣ Swiss State Secretariat for Economic Policy, Cooperation and Development.

PROJECT PREPARATION FUNDS: AN EFFECTIVE SOLUTION FOR UNLOCKING INVESTMENT IN SUSTAINABLE INFRASTRUCTURE IN AFRICA

EARLY LESSONS

FOCUS
AFD

Agence Française de Développement (AFD) helps implement France's development and international solidarity policy. It finances, supports and accelerates the transition to a fairer and more sustainable world through its public sector and NGO financing activities, research and publications (Editions AFD), sustainable development training (AFD Campus) and awareness-raising activities in France. Its teams are involved in more than 3,250 projects for the common good – focusing on climate, biodiversity, peace, gender equality, education and health – on the ground in French overseas departments, in 115 countries and in territories in crisis.

CICLIA
Cities and Climate in Africa

› https://comssa.org/fr

Covenant of Mayors in Sub-Saharan Africa

› https://www.afd.fr/fr/ciclia

Experience shows that "Cities and Climate" project preparation funds effectively deal with two shortcomings. They make it possible to bolster local teams (local authorities and ministries) by focusing expertise on specific project arrangements. They also make up for the lack of financial resources available to African municipalities wishing to commission costly project preparation studies.

They can help fund the emergence and operational deployment of core initiatives at local level, such as adapting urban infrastructure to extreme climate phenomena, preparing for natural disasters, preserving ecosystem services ("green infrastructure"), promoting low-carbon urban mobility, providing socio-collective amenities that improve quality of life in poor neighbourhoods, and so on. However, the role of these funds in supporting urban decarbonisation and climate adaptation may clash with the priorities of national and local authorities in terms of strengthening emergency services, without challenging norms, standards and operating methods and infrastructure maintenance. In certain cases, only limited consideration is given to the longer-term implications of climate change.

Lastly, it is essential to factor in the time needed to prepare and set up institutional arrangements for structuring investment projects in African cities. Identifying, planning and forging two-way political and technical dialogue between stakeholders takes time but this is a decisive phase. It makes it possible to perform in-depth preliminary analyses, to forge multi-stakeholder dialogue and co-design the project, and to work on ensuring that the proposed solutions are acceptable. It also enables the co-financiers to be coordinated and onboarded, thereby consolidating the large volumes of investment funding needed for the essential urban transition. ■

> *"It is essential to help local authorities to produce operational studies that can generate financing for investments that make cities more sustainable and resilient."*

Funding preliminary studies – a vector for private sector involvement

CICLIA and CoM SSA funds are paving the way for private sector involvement wherever possible. It is as much about encouraging partnerships with private companies to build and operate infrastructure or urban services as raising private funding. Street lighting, mobility and solid waste management are among the urban services most suited to private sector participation. When structured via these funds – i.e. with a constant focus on alignment with Sustainable Development Goals (SDGs) – these projects can become genuine "impact" investments for African cities, reducing inequalities and helping to preserve the environment and the climate. They are then likely to interest committed private players, specifically because the potential risks (financial, technical, environmental and social) are identified and managed more effectively thanks to the studies carried out and the multi-stakeholder dialogue that takes place in the pre-project phase. The studies are rooted in the areas in which the projects are located and focus on each city's specific "situation and development path" (i.e., a place-based approach).

For example, CoM SSA financed a feasibility study for the Aga Khan Foundation university hospital project (a private not-for-profit organisation) in Kampala, Uganda. This study was used to perform a cost/benefit analysis to improve the energy efficiency of the hospital building with a view to obtaining green certification. In 2020, **Proparco and the Aga Khan Foundation**[1] opted to pick up the additional cost of recommended energy efficiency measures amounting to US$ 1.5 million (2% of total construction costs).

In Djibouti, CICLIA has financed a feasibility study for a new sanitary landfill site that complies with waste treatment standards. The analysis included a diagnostic review of the local regulatory and institutional framework, as well as a comparison of possible options for operating the facility. It culminated in a pre-feasibility study of a public-private partnership and its potential features (contract term, division of activities between the parties, allocation of risks and risk mitigation measures, operator remuneration arrangements, operator performance criteria, etc.). Once the option has been validated by the Djibouti authorities, the work will continue with the drafting of the tender documents for a BOT-type contract (Build-Operate-Transfer), including pre-qualification, call for tenders and the draft contract.

In Yaoundé, CICLIA funded a feasibility study for the "Trans Yaoundé" Bus Rapid Transit (BRT) project, one of the city's flagship sustainable urban mobility programmes developed in 2019 as part of the MobiliseYourCity partnership. The project is headed up by the Yaoundé Urban Authority. The study proposes that BRT services be operated by a private company and suggests ways of managing the risks identified, especially the possible mismatch between passenger revenue and operating costs - for example, by guaranteeing cheap energy, providing the operator with an initial inventory of spare parts, or compensation payments to be made by the public authorities in the event of abnormally low passenger numbers. The project could be of interest to Cameroonian, African or international operators. To prepare as effectively as possible for a potential operating contract with a private operator, the study stresses that the Yaoundé Urban Authority should retain the services of a transaction advisor for the first two years of operation.

Lastly, it is also instructive to take **the example of a feasibility study financed by CoM SSA as part of the "Omi Eko" lagoon transport project in Lagos State (Nigeria)**. Alongside financial backers like AFD and the EIB, the EU and the State of Lagos, the project, with an estimated total cost of around €400 million, is expected to involve the private sector as part of a facilities and services contract. This contract would be used to operate intelligent transport systems covering both the supply of the systems (ticketing, passenger information and the control centre), operation and maintenance of said systems for a 10-year period, and operation of the pontoon bridges, terminals and control centre throughout the concession period.

1 › The project was halted by the Covid-19 epidemic.

Tackling the dual challenge of urbanisation: support from the private sector

Salim Bensmail, Head of The Urban Resilience Fund, Meridiam

All twenty-first century cities have to both meet the essential needs of their populations and adapt to the effects of climate change. In emerging countries, this dual challenge is being exacerbated by constantly increasing rates of urbanisation. To cope with this situation, we need to foster partnerships between the public and private sectors, as demonstrated by the projects supported by Meridiam.

AN ARTICLE BY
SALIM BENSMAIL
Salim Bensmail is senior investment director at Meridiam and has been in charge of The Urban Resilience Fund since October 2021. He previously held a number of different positions in the French public sector, notably as head of the infrastructure funding support programme (FININFRA) at the French Treasury between 2014 and 2018, and as Deputy Director of Finance in charge of public-private partnerships for the City of Paris.

By 2050, almost 70% of the world's population will live in cities, meaning an extra 2.5 billion urbanites over the next 30 years. However, urbanisation differs from one region to another. In North American and European cities, the population is actually shrinking and ageing, whereas emerging countries are experiencing sustained urban growth - almost 950 million people are expected to move to African cities by the middle of the century.[1] This growth means an exponential increase in the need for essential infrastructure. But as cities are developing, they need to reinvent themselves in order to combat the effects of climate change and reduce their carbon footprint.

These challenges are as diverse as they are urgent. Coastal cities in China, Latin America and Africa are exposed to risks from rising sea levels, while inland cities in Africa and India have to grapple with the threats of extreme heat and drought. These developments represent a massive challenge for both the public sector (i.e., governments and municipal authorities) and the private sector (developers and managers of essential infrastructure, investors, insurers, etc.). Cities need to grow and invest in protecting themselves, while at the same time reducing their environmental impact.

INVESTING IN THE DUAL CHALLENGE OF URBANISATION

But this context also provides an opportunity to rethink urban spaces in a more sustainable way, based around renewed partnerships between the public and private sectors. For many years now, Meridiam has been a developer and investor in large-scale essential infrastructure projects in partnership with central governments and the local authorities of major cities in Europe, North and South America and Africa. The company's funds are aligned with United Nations' Sustainable Development Goals (SDGs): clear objectives are set out (and measured) for each of its investments.

Meridiam focuses primarily on SDG 11, "Making cities and human settlements inclusive, safe, resilient and sustainable." This covers all the sectors in which Meridiam invests: from essential public services to delivering sustainable mobility and carbon-light solutions. In 2021, Meridiam launched "The Urban Resilience Fund" (TURF) in partnership with the Rockefeller Foundation, an initiative aimed specifically at helping European and African cities to tackle the dual challenges of urbanisation and managing the consequences of climate change. TURF invests in high-impact infrastructure projects to build resilient and sustainable cities. It allows Meridiam to work with cities in the pre-project phase to devise innovative solutions designed to meet multiple challenges. TURF is supported by a catalytic fund of almost €20 million, which can be used to finance project preparation studies.

In partnership with public authorities, Meridiam has developed a range of projects to help make cities more resilient, sustainable, inclusive and safe. For example, as part of a joint venture with the Mauritanian government, the TURF fund is working on a project to safeguard the Nouakchott coastline that will protect over 75,000 people living in areas at risk of flooding (because of rising water levels). Dakar Bus Rapid Transit (BRT), for which Meridiam is the concession holder, will deploy some 121 electric buses onto the roads of the Senegalese capital, transporting almost 300,000 people, while avoiding almost 59,000 tonnes of CO2 emissions every year. Meanwhile, in the Finnish town of Espoo, 4,000 places in schools and crèches - developed and financed by Meridiam - provide the population with a functional and healthy early learning environment.

FOCUS
MERIDIAM
Meridiam is a company with a mission (B Corp) founded in 2005 by Thierry Déau and specialised in developing, financing and long-term management of sustainable public infrastructure in three sectors: essential public services, sustainable mobility and innovative low-carbon solutions. Meridiam currently has over 20 billion dollars under management and more than 120 projects in Europe, Africa and the Americas.

DIFFERENT MODELS FOR LONG-TERM PARTNERSHIPS

Obviously, to tackle the multiple challenges involved in building sustainable cities, public players play a key role in setting the objectives, devising the sustainable development strategy and the priorities to be deployed. Private players for their part, develop the projects and provide technical expertise together with their innovation capabilities. Various legal structures and business models can be deployed for these purposes. Obviously, these include concession-based public-private partnerships as well as private arrangements featuring medium- or long-term buy-back commitments by public operators, such as those existing in the energy sector. Project development joint ventures offer a transparent framework for flexible cooperation between public authorities and private players, especially in the project design and development stage (as illustrated by the Nouakchott project).

Aside from their diversity, what all of these models have in common is that their success depends on a close alignment of public and private stakeholder objectives and values. As a company with a mission, Meridiam has mainstreamed the UN SDGs into its corporate purpose, strategy and the design of its infrastructure projects. Its strategy as a long-term investor (with project investment horizons of at least 25 to 30 years) is also conducive to a very close alignment of interests with public players and a capacity to make long-term commitments to project objectives.

As we know, private investors play a key role in supporting public players, however the total volume of investment in climate change mitigation remains largely insufficient. It is by focusing on these long-term partnerships that the necessary funds can be raised. ■

> *"Obviously, to tackle the multiple challenges involved in building sustainable cities, public players play a key role in setting the objectives, devising the sustainable development strategy and the priorities to be deployed. Private players for their part, develop the projects and provide technical expertise together with their innovation capabilities."*

1 ▸ Source: Africa's Urbanisation Dynamics, OECD (2020)

Rio de Janeiro deepens engagement in global climate action

Eduardo Paes, Mayor, Rio City Hall

As the site of the 'Rio Declaration' and host of the G20 Summit in 2024, Rio de Janeiro has embraced international objectives with its Plan for Sustainable Development and Climate Action. Two core initiatives in actualizing the Plan are The Neutral ISS Law and the Center for Tomorrow's Energy and Finance, currently under construction. Both are aimed at spearheading the City's sustainable energy transition and nurturing its green finance ecosystem.

AN ARTICLE BY
EDUARDO PAES
Eduardo Paes was Mayor of Rio de Janeiro from 2008 to 2016, overseeing a cycle of great events in the city, from the Rio+20 Conference in 2012, through the 2014 FIFA World Cup to the 2016 Summer Olympic and Paralympic Games, which accelerated Mayor transportation, infrastructure and urban renewal projects. In 2020, he was elected Mayor of the city for a third term, taking office on January 1st, 2021 with a commitment to leading the city's recovery from a fiscal crisis and the impacts of the Covid-19 pandemic.

The City of Rio has stood as a stronghold for sustainable development since the Earth Summit of 1992. We have embraced the commitment to achieve carbon neutrality by 2050 and the objectives of the 2030 Agenda, which are reflected in our Plan for Sustainable Development and Climate Action. But more than 30 years after the 'Rio Declaration' we must face the fact that the 'global partnership' established then to "conserve, protect and restore the health and integrity of the Earth's ecosystem" still has a long way to go.

As the capital hosting the G20 Summit next year, we are committed to advocating for the much-needed structural changes to speed up the pace towards our common goals. Furthermore, we are strengthening our efforts to bring about fundamental transformation through local action. Our priority lies in public policies geared towards the transition to a low-carbon economy and stimulating the sustainable development of the city. The Neutral ISS Law, sanctioned this year, and the Center for Tomorrow's Energy and Finance, currently under construction, are two of our core initiatives in this endeavor.

A CORE STRUCTURAL INITIATIVE

Law No. 7,907, of June 12, 2023 –, the Neutral ISS Law -, is an innovative law that aims to stimulate the voluntary carbon credit market in the city. Rio will deduct up to R$60 million a year of the Tax on Services of Any Nature (ISS) applied to companies based in Rio that buy carbon credits voluntarily in order to mitigate their damage. Furthermore, the ISS rate has been reduced from 5% to 2% on emission inventory activities and on project development and auditing; this is in addition to registration activities and the development of transaction platforms linked to carbon credits.

This groundbreaking law - drafted by the municipal Secretariats for Economic Development, Innovation, and Simplification (SMDEIS) and Finance and Planning (SMFP), which is the first of its kind in Brazil, is intended to encourage participation in the voluntary carbon credit market. As part of our broader vision to position Rio as the epicenter of green investment in the country, this move is simultaneously aiding us in achieving our CO2 emission neutrality goals: 5% by 2024, 20% by 2030 (both in relation to 2017), and 100% by 2050. The incentive is temporary (effective until the end of 2030) and requires compliance with international certification standards for its benefits to take effect, thereby bolstering the credibility of the compensations.

Despite its significant potential, the carbon market in Rio and Brazil remains nascent, with no current regulations in place, although the matter remains on the National Congress's agenda. Therefore, facilitating companies' entry at this juncture could prove pivotal, so that when the market solidifies, these companies are already rooted in the city and will be encouraged to remain. Recent studies conducted by C40 Cities highlight that apart from aiding countries and cities in meeting their emission reduction targets, green investments create opportunities for local green job creation, serving as a crucial catalyst for sustainable economic growth. The law is also expected to have a positive impact on the health of Rio residents. Neutralizing emissions using locally generated carbon credits will improve air quality in the city, countering spikes in pollution and long-term exposure to pollutants, both of which are known to cause an increase in mortality and morbidity.

> *"Cities still face an enormous financing gap for green infrastructure, and boosting the public and private financing available is an urgent matter."*

COLLECTED UNDER ONE ROOF

Another groundbreaking initiative, The Center for Tomorrow's Energy and Finance, will consolidate in one place the various actions of the Rio City Hall on the topic of green economy, effectively working as the city's 'green brain'. The Center's mission is to spearhead a sustainable energy transition and nurture the green finance ecosystem in Rio de Janeiro. By fostering the development of novel technologies, financial tools, and entrepreneurship, the Center will serve as a nexus for universities, the government, and the private sector. Construction of the Centre - spanning an area of 4,440m² on Rua do Passeio in Rio's historic center - commenced in the first quarter of 2023, with an anticipated completion timeline of 18 months. The restoration project is estimated to cost R$37.6million (more than €7million). Located in what will soon be the first low-carbon emission district in Brazil (Rio decree 51.047/22), the property is positioned in front of Passeio Público, the oldest public park in the Americas. As a global city, we believe in global cooperation, welcoming both national and international partners to the Center. Ahead of the G20 and in accordance with our belief that we must scale up sustainable development financing and the green energy transition at the city-level, Rio is surveying cutting-edge financial mechanisms to accelerate local action. Blended finance structures and urban biodiversity credits are some of the avenues open to explore. These ideas and projects will be gathered in the Center, there by ensuring the alignment of all stakeholders and initiatives in this arena

Urban communities are the vibrant heartbeats of our societies. By 2050, two out of every three people are likely to be living in cities or other urban centers. While local efforts like the ones of Rio carry significant weight, we cannot bear them alone. Cities still face an enormous financing gap for green infrastructure, and boosting the public and private financing available is an urgent matter. Hence, we must make a collective effort towards integrating the global financial architecture and sustainable urban development needs. Without a global commitment to action and change, commendable local efforts notwithstanding, the 2030 Agenda will soon become a mirage.

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4TH QUARTER 2023

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