Contropolitan Assembly 100 Resilient Cities

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LETTER FROM MAYOR ADJEI SOWAH

Dear friends,

I am delighted to share with you the City of Accra's Resilience Strategy, the culmination of three years of rigorous research and exploration, extensive stakeholder engagement, and widespread commitment. This tremendous milestone marks the first of its kind for our city and only the second in West Africa!

Accra's Resilience Strategy represents the dawn of a critical moment in our Nation's history, and our City's future. You will find in the strategy a shared identity which celebrates our rich cultural heritage while capitalising on opportunities to become a better, stronger, more resilient Accra.

Accra's Resilience Strategy offers a roadmap and an action plan towards becoming the city that we have long desired; a city that is poised to anticipate, mitigate, and respond to whatever acute or chronic challenges that we may face now and in the future. It positions us towards becoming a city that values and exemplifies data-driven policy development and decision-making; a city that is capable of transforming the challenges with which we have long grappled into new opportunities; an inclusive city that cares for and is accountable to all of its residents, be they young, old, or vulnerable.

The United Nations estimates that more than half of the world's population currently resides in urban centres, a number expected to reach 68% by 2050. Projections show the fastest rates of urbanisation occurring in the developing world, especially in Sub-Saharan Africa. Accra's Resilience Strategy demonstrates our City's visionary role and establishes us as regional leaders in addressing the challenges of rapid urbanisation that we, like many of our neighbouring cities, face. We hope that this strategy will foster greater inter- and intra-regional collaborations with our neighbours. The implementation of Accra's Resilience Strategy will enable us to build a truly resilient city; one that is smart, sustainable, and which anticipates and plans for different shocks and stresses, come what may.

I would like to applaud the efforts of the Accra Resilience Team, our partners at 100 Resilient Cities, and the residents of Accra, without whom this tremendous undertaking would not be possible. I look forward to our continued partnership towards building a stronger, safer, more resilient City of Accra for the benefit of all her residents!



Mayor Mohammed. Adjei Sowah

Executive Summary

From a small town, Accra has blossomed since 1877 into the capital city of Ghana. Today Ghana is considered as the gateway to West Africa and Accra plays a major role in achieving this accolade. Major institutions, including government, private sector, and multinationals are located in Accra, which has also become a major tourist destination in the region.

Accra's recent history has been characterised by rapid growth — because it is the economic centre of the country. This accelerated rate of growth and associated population increase has effectively outpaced urban planning, presenting the city and administration with a range of complex urban challenges. The earthquake of 1939 additionally serves as a reminder that we are not immune to natural disaster. Today, Accra remains vulnerable to earthquakes as well as flooding, sanitation challenges, building collapse, expanding informal settlements, high unemployment, an inadequate transportation system, and severe traffic congestion.

Previous administrations of the Accra Metropolitan Assembly (AMA) have made attempts through various initiatives to address these challenges. A number of efforts are currently underway at the AMA to adopt a resilient and holistic approach in addressing our city's challenges. These range from the launch of the Accra Road Safety Strategy supported by the Bloomberg Initiative on Global

Road Safety (BIGRS) to the Sustainable Greening and Beautification of Accra Project. With the advent of this Resilience Strategy, the first of its kind in Ghana, the city is committing to a comprehensive strategy that actively builds upon previous initiatives and efforts to ensure that a set of integrated solutions benefit all those living and working in Accra. Making Accra more resilient requires an ambitious strategy that lays the groundwork for transforming the city's shocks and stresses into longterm opportunities.

In 2014, the City of Accra joined 100 Resilient Cities - Pioneered by The Rockefeller Foundation (100RC), a global network that helps member cities around the world become more resilient to the physical, social, and economic challenges that are a growing part of the 21st century. As part of the process, the City created a new Chief Resilience Officer (CRO) position to lead city-wide resilience building efforts. Supported by a resilience team, the CRO has led the development of this strategy — the result of three years of effort including workshops, studies, and a comprehensive engagement process involving residents, businesses, and government from across metropolitan Accra. These inputs are reflected in the strategy and we sincerely thank every individual and organisation who took part in this process. As such, this strategy speaks to our collective aspirations for our city and our future, and the resources needed to get there.

Our vision for Accra is "A smart, sustainable, and resilient city that anticipates and plans for shocks, rather than reacts to them. We will transform the city's ongoing stresses into opportunities: by embracing informality as an engine of growth, designing infrastructure to improve our natural and built environments, and optimising our resources and systems for greater efficiency, accountability, and transparency."

Accra's Resilience Strategy is organised into:

3 pillars, or strategic directions that we are pursuing to achieve our vision;

and



8 goals, or tangible and attainable objectives;

27 initiatives which collectively attempt to address the city's shocks and stresses.



An Integrated Approach to Infrastructure Planning and Service Provision

Accra is growing, and investment in infrastructure development lags behind. This first pillar outlines an integrated approach to infrastructure planning and service provision to account for changing climate patterns, economic trends, and population growth. These include addressing challenges with inadequate transportation and mobility options; management of waste, sanitation, flooding; and a growing demand for electricity which can outstrip supply.

Further confounding these vulnerabilities is the evergrowing threat of climate change. To address and mitigate these risks, we believe infrastructure planning and delivery should incorporate both systems and resilient thinking, anticipating — as opposed to reacting to — the shocks and stresses that threaten our city. We must ensure that our infrastructure and service delivery can adapt to new and unforeseen challenges in the future. Benefits generated that contribute to individual, community, or systems resilience — what are known as co-benefits — must be identified, maximised and supported. This will enable us to optimise the social, environmental, and economic impact of our investments in infrastructure and enhance service provision.



Constituting almost 80% of the economy, the informal informal systems can serve to increase inclusion as well sector is a vibrant and growing phenomenon in Accra, offering both opportunities and lessons on resilience and livelihoods. Undoubtedly, rising urbanisation will lead to increasing informality, both in the economy and in the built environment. If properly understood and managed,

Delivering on the pillars, goals, and initiatives of Accra's Resilience strategy requires collaborative effort and unflinching support of local, national, and international partners and stakeholders. While the pages that follow do not provide a single direct solution, they do outline a series of opportunities that will bring us closer to our goal. Join us as we build a more resilient Accra.



Optimise New and Existing Resources with Accountability and Transparency

Like many cities globally, the City of Accra aspires to build and support healthy and resilient urban communities, where residents thrive and can realise their full potential. The human and financial resources available to Accra to achieve such an ambitious goal are however limited. Therefore, accountability and transparency in resource management, allocation, and in outcome measurement are particularly crucial for advancing this agenda. Creating a culture of accountability and transparency

will require the collective efforts of the AMA, residents, and a broad stakeholder community.

Through this second pillar, the City of Accra seeks to effectively and efficiently leverage limited existing and emerging resources, in order to optimise planning and implementation efforts which promote multiple benefits — thereby improving municipal service delivery for all, especially our city's most vulnerable populations.



Embrace Informality's Contributions to Resilience

It was with great excitement that Accra joined 100 Resilient Cities in 2014.

Our hope and ambition were to draw on the tremendous support of the global network, to create a pathway by which to better serve and meet the needs of all residents for a more resilient future. The City of Accra's aim is to become a model for urban development in Ghana and the sub-region by offering better livelihoods, increasing economic growth, improving urban land-use systems, reducing pollution, and ensuring resilience to climate change and other stresses.

For Accra, building resilience means bringing together systems, institutions, and all the resources with which we are endowed — to enable the city to prepare for and mitigate the effects of climate change and become more responsive to acute and slow-burning disasters, especially in vulnerable communities.

Today we are proud of the journey we have made in developing our Resilience Strategy, which will serve as a holistic roadmap and which clearly illustrates the necessity of collaboration in building resilience. This Strategy could not have been completed without the support of our stakeholders and city partners who recognised the importance of this initiative and drove it with passion. We equally recognise the hard work and commitment of the Accra Resilience Team.

Now we can collectively begin implementing the initiatives presented in the pages that follow, which have the potential to positively affect all who call Accra home. For example, integrating informal waste collectors into the current waste management plan while boosting the availability of waste transfer sites, will help to ensure that collection rates increase. It will, at the same time, serve as a source of sustainable income for individuals in the informal sector; their employment will be effectively regulated by the City Authorities. Through this process, we can improve the livelihoods of residents as well as achieve the goal of making Accra the cleanest city in Africa.

It is our deepest hope that our citizens will take advantage of the opportunity to contribute and take ownership of this strategy so that they can share in our collective pursuit of building a resilient city. Together with our partners and stakeholders and all who call the City of Accra home, let us come together to build an Accra that we can LIVE IN & LOVE.



FROM LEFT TO RIGHT: Andrew Fleming, Dalberg Advisors; Akua Serwaa Ansah, AMA; Dr. James Mensah, AMA; Liz Agbor-Tabi, 100RC; Nse Umoh Esema, 100RC; Abubakari Gindo Ali, AMA; Andrew Sweet, Dalberg Advisors; Alex Johnson, AMA.

LETTER FROM 100 RESILIENT CITIES

On behalf of the entire 100 Resilient Cities team, I want to congratulate Mayor Adjei Sowah and the Accra Metropolitan Assembly (AMA) on the release of Accra's Resilience Strategy, a major milestone for the city and for our partnership. As the second strategy to be published in West Africa with 100RC, this ambitious document paves the way for leadership from Accra on African urban resilience.

Rapid growth in Accra presents a host of complex challenges for the city's residents and administration. Yet buoyed by the AMA's vision for a smart, resilient, and sustainable city, this ambitious strategy lays the groundwork for transforming such shocks and stresses into long-term opportunities.

In the following pages, we see a clear and thoughtful framework for addressing increasingly urgent urban trends in Accra — from improving the city's processes for planning and engagement, to upgrading infrastructure and delivery of services such as energy, waste management, and transportation in both the formal and informal sectors. The three overarching pillars of the Resilience Strategy are grounded by eight goals and twenty-seven initiatives — that are not just actionable but also have the potential to produce multiple benefits. For example, in a city with high traffic congestion and pollution levels, the strategy proposes integrating the vast network of trotros into the city's nascent Bus Rapid Transit (BRT) system and upgrading vehicles to lower Green House Gas (GHG) emission rates. With dedicated support from the AMA and global partners, this project has the potential to reimagine mass transit in Accra.

This innovative Strategy would not be possible without the tireless efforts of the Resilience Team and various departments of the AMA, which lent their support to this process throughout a broad and inclusive engagement period. In the last months, we have seen the team set the stage for the successful implementation of this document. By developing and deepening strategic partnerships with international financial institutions, as well as regional and domestic institutions, throughout the strategy's development, AMA will be able to galvanise the backing needed to sow transformative change.

Through this work, and under the vision of Mayor Adjei Sowah, the city is poised to confront some of its most intractable resilience challenges. In that way, the hard work is just beginning. 100 Resilient Cities is eager to be a resource and partner as Accra continues on its resilience journey, implementing and bringing this Resilience Strategy to life.



Sincerely,

Michael Berkowitz President, 100 Resilient Cities

100RC	100 Resilient Cities — Pioneered by The Rockefeller Foundation		
AMA	Accra Metropolitan Assembly		
BIGRS	Bloomberg Initiative for Global Road Safety		
BRT	Bus Rapid Transit		
CBD	Central Business District		
CRF	City Resilience Framework		
CRO	Chief Resilience Officer		
DVLA	Driver and Vehicle Licensing Authority		
ESPA	Environmental Service Providers Association		
GAMA	Greater Accra Metropolitan Area		
GARID	Greater Accra Clean, Resilient and Inclusive Development Project		
GAPTE	Greater Accra Passenger Transport Executive		
GHAFUP	Ghana Federation of the Urban Poor		
GHG	Greenhouse Gas		
GUMAP	Ghana Urban Mobility and Accessibility Project		
MDA	Ministries, Departments and Agencies		
MiDA	Millennium Development Authority		
MMDAs	Metropolitan, Municipal and District Assemblies		
MTTD	Motor Transport & Traffic Directorate		
MTDP	Medium Term Development Plans		
MMTD	Motor Transport & Traffic Directorate		
NADMO	National Disaster Management Organisation		
NDPC	National Development Planning Commission		
NHIS	National Health Insurance Scheme		
NTHC	National Trust Holdings Company		
RIPS	Regional Institute of Population Studies		
SECO	Swiss State Secretariat for Economic Affairs		
SDGs	Sustainable Development Goals		
SWM	Solid Waste Management		



Introduction to 100RC



The 100 Resilient Cities (100RC) initiative was founded chronic stresses which weaken the fabric of a city on a on The Rockefeller Foundation's centennial anniversary day-to-day or cyclical basis. Stresses include high unemas a way of extending the Foundation's work in the fields ployment, inefficient transportation systems, prevalence of urban planning and public policy. 100RC is financially of crime, chronic water shortages, the challenge of poor supported by The Rockefeller Foundation and managed municipal waste management, and more. Although as a sponsored project by Rockefeller Philanthropy Advistresses are generally considered slow moving, they often sors, a non-profit organisation providing governance and exacerbate shocks when they do occur, or may in certain operational infrastructure to its sponsored projects. instances trigger major shocks if not addressed.

100 Resilient Cities supports cities around the world to become more resilient to the physical, social, and economic challenges that have become an increasing part of the 21st century. 100RC defines urban resilience as "the capacity of individuals, communities, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience." A city's challenges can be divided into one-time shocks — earthquakes, fires, floods, etc. — and



City Resilience Framework

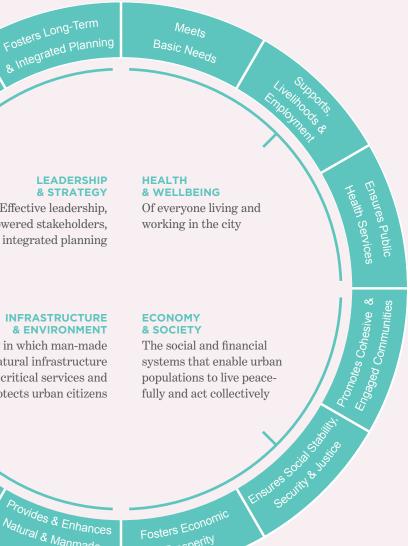
The City Resilience Framework (CRF) provides a lens to understand the complexity of cities and the drivers that contribute to their resilience, and a common language that enables cities to share knowledge and experiences. The CRF is built on four essential dimensions of urban resilience:

> LEADERSHIP & STRATEGY Effective leadership, empowered stakeholders, and integrated planning

INFRASTRUCTURE & ENVIRONMENT

Assets

The way in which man-made and natural infrastructure provide critical services and protects urban citizens



^{Vatural} & Manmade

Prosperity

Accra's Resilience Journey

Rapid urbanisation and increasing challenges due to climate change have made resilience building at the city level more important than ever. Ghana's population has officially crossed the 50% threshold where more people live in urban than in non-urban areas.¹ As the country's capital and its most influential city, this trend presents Accra with both developmental opportunities and pressing challenges that need to be carefully managed. It is for this reason that the Accra Metropolitan Assembly embarked on the journey of mainstreaming resilience within City governance.



Timeline of Process

December 2014

ACCRA JOINS 100RC

100RC announced the inclusion of Accra as one of 35 new cities selected to join its global network.



April 2015

AGENDA SETTING WORKSHOP

Following this announcement, AMA in partnership with 100RC convened a wide range of stakeholders in a Resilience Agenda Setting Workshop.

2016-2017 **€**

ENGAGE, ASSESS, AND SYNTHESIZE

Phase 1 established the foundation for building resilience in Accra.

- its first Chief Resilience Officer (CRO), a new position in city government.
- The CRO and team conducted preliminary desktop analysis on documents related to the AMA and Accra's resilience.
- A landscape scan identified projects and stakeholders related to resilience-building in Accra.

- The City of Accra appoints Stakeholder engagement by 228 residents informed Accra's Resilience Strategy, through in-person and online surveys.
 - The CRO and team undertook data analysis using specific tools provided by 100 Resilient Cities.
 - areas of focus and deepened exploration around key challenges and



March 2017

NEW MAYOR APPOINTED

sworn in.

M. Adjei Sowah

The Accra Resilience team joined the Cape Town Resilience team at the University of Cape Town's African Centre for Cities' "Urban Informality and Building a More Inclusive, **Resilient African City.**"



International Urban Conference. The two cities engaged in an important dialogue on

• Held various focus groups Capitalists and technoloon urban mobility, citizen gy entrepreneurs. engagement and the

INNOVATE, PARTNER, AND DESIGN

informal economy

involving the private

sector, informal sector

workers and residents from the city's sub-met-

ros. A focus group with

key players from the

water sector explored

water access in Accra.

• Held a workshop in

CitvMart, to surface

challenges at the inter-

section of waste manage-

viable solutions to

address the city's

ment, flooding and

 Attended CityXChange 2018 to discuss challenges

in waste management

network cities, Venture

with other 100RC

sanitation.

partnership with

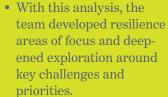
and initiatives. The Accra Resilience Team:

- Held an Opportunity Assessment Workshop where key stakeholders convened to decide on final initiatives for inclusion in the Resilience Strategy.
- Participated in a 100RC workshop in Singapore with the AMA's Head of Transport, to focus on strengthening the city's *trotro* upgrading initiative.
- Attended Slum Dweller International's Collaborative Urban Resilience Building learning exchange in Cape Town, to deepen partnerships and links between resilience processes and informal settlement upgrading.

March 2018

PRELIMINARY RESILIENCE ASSESSMENT AND RESILIENCE DIALOGUE

AMA hosts convening of key donors and partners (45 participants in total including C40, IFC, AFD, EU, SECO, World Bank) – to present an analysis of Accra's prioritised resilience challenges and discuss future opportunities for collaboration.







March 2019

RESILIENCE STRATEGY

Release of Accra's Resilience Strategy.

IMPLEMENTATION

Putting Accra's Resilience Strategy in action.

February-December 2018

Phase 2 opened up opportunities for partnership and explored innovative solutions

• Organised a two-day CoLab in partnership with 100RC, Princeton University Wilson School of **Public and International** Affairs, and University of Pennsylvania School of Design focused on opportunities to improve transportation, economic and social functions of Accra's major street corridors.

• Participated in a 100RC Network Exchange, with a representative from the waste management department, on integrating urban informality for stronger city resilience, hosted by 100RC and the City of Addis Ababa.



Accra History & Context

Accra's recent history has been characterised by rapid growth, much more than that experienced in all other parts of Ghana. This accelerated rate of growth and associated high population density present the City and its administration with a range of complex challenges.

Yet, since its founding as a small coastal fishing village in the 16th Century, the City of Accra has managed to sustain itself in the face of great challenges and calamities. The earthquake of 1939 serves as a reminder that we are not immune to natural disasters; today we remain vulnerable to earthquakes as well as flooding and coastal erosion caused by tidal waves. High unemployment, civil unrest, and building collapse are new threats to overcome.

Under this context, the Accra Metropolitan Assembly (AMA) seeks to create a smart, resilient, and sustainable city which will prepare its citizens and systems to withstand such shocks and stresses — and to grow stronger as a result.

About the AMA and the **Resilience Journey**

Accra, the capital city of Ghana, is the Greater Accra Region's economic and administrative hub, and serves as the anchor of the larger Greater Accra Metropolitan Area (GAMA), which is inhabited by about 4 million people, making it the thirteenth-largest metropolitan area in Africa³. Strategic initiatives, such as transportation, are coordinated between the local government authorities, while the Accra Metropolitan Assembly, based in West Ridge, is responsible for the administration of the City of Accra.

Building a resilient city means the systems and structures of governance and service provision can withstand shocks and stresses, and assure continuous growth, development, and a thriving society; in the context of Accra, this could not be limited to the traditional boundaries of AMA. Decentralisation has been promoted as government policy since the late 1980s, aimed at bringing governance to the doorstep of the citizenry. This has necessitated a reorganisation of the structure and a review of the functions of Assemblies from time to time. Armed with this insight and knowledge, the Resilience Team has ensured the involvement of adjoining Assemblies and all critical stakeholders whose actions and inactions can invariably impact projected outcomes of the strategy from the very beginning of the process.

Ensuring effective implementation of this Resilience Strategy with outcomes that assure a thriving City, requires fostering greater collaboration amongst and between all Assemblies in the Greater Accra Metropolitan Area. Resilience challenges are very rarely contained by jurisdictional boundaries, so for Accra to be a more resilient city, there must be regional coordination, a concept which all governmental development planning efforts are currently following. Regional level solutions are being pursued to address some of the challenges being encountered across Ghana and in the greater Accra area in particular. To ensure coordinated development planning, the Greater Accra Metropolitan Area (GAMA) is the operational basis for most planning in Accra in relation to development partner engagement.

The Assembly, in pursuit of the agenda of building a resilient city, is in full support of the Ministry of Local Government and Rural Development's plan to create Joint Development Planning Areas across metropolitan, municipal, and district assemblies to strengthen interjurisdictional coordination and improve overall metropolitan planning.

All references to "the City" throughout this document are referring to the Accra Metropolitan Area and aligns with the current development coordination paradigm of Government in the Greater Accra Region.

Building a resilient city means the systems and structures of governance and service provision can withstand shocks and



A History of Urban Resilience in Accra

15th Century

Migrants from present-day Nigeria, Lower Banks of the Volta River, and Western Ghana begin to migrate to Accra and establish a prominent trading centre.

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1877

The British Colonial Authority transfers the seat of Government to Accra, paving the way to later become the capital city of Ghana and the capital of the Greater Accra Region.



May 4, 1986

Flooding in Kwame Nkrumah Circle, Aladjo, Avenor, Odawna, among other areas, results in 3 lives lost and damage to P&T switching equipment. The damage totals 3.6 billion cedis.



July 5, 1995

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Heavy flooding in Accra, particularly in low-lying areas of the metropolis, affects many commuters and vehicles. An inundated Achimota Volta River Authority substation causes power failures.



June 22, 1939

An earthquake in Accra claims the lives of 17 people. Low casualty count due to the high number of people outdoors at the time, along with a much smaller urban population.

March 6, 1957

Ghana gains independence from Britain. Inaugural president Dr. Kwame Nkrumah declares Accra as the country's first city in 1961.

June 28, 2001

Heavy flooding in Accra, the worst since July 1995, affects Madina, Achimota, Dzorwulu, Avenor, Santa Maria and Adabraka Official Town – submerging portions of the city and damaging many houses and structures.





November 7, 2012

Collapse of the Melcom Shopping mall building located at Achimota, killing 14 shoppers and workers and seriously injuring more than 78 people.

March 13, 2014

Grand View Hotel building located at Nii-Boi Town collapses, resulting in 4 deaths.



June 2014

Ghana's worst cholera outbreak in 30 years impacts over 20,000 people in Accra.



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May 3, 2018 Fire destroys over 50 structures at Abofu slum.

November 1, 2011

Heavy flooding in Accra results in 14 deaths and 43,087 displaced or affected residents.



Heavy floods in Accra affect 52,622 people. A fire explosion at the GOIL station near Kwame Nkrumah Interchange, being used as a temporary shelter, results in 150 casualties.

July 15, 2015

Fire destroys over 200 structures in Abuja, a slum in Accra. The same location was gutted by fire in 2013, razing several wooden structures to the ground.

2015

Ghana experiences 159 days of blackouts; entire neighborhoods switch off in an instant with no public load-shedding schedule previously publicised.



September 2016

Accra institutes a polluter pays policy where private companies are contracted and regulated by the AMA to provide waste collection services to citizens, businesses and institutions at a fee to the beneficiaries.

City Context

Using data available at the time of stakeholder engagement in Phase 1 (2015-2017).

Population



Accra's 1.6 million population represents 42% of the total population of the Greater Accra Region.



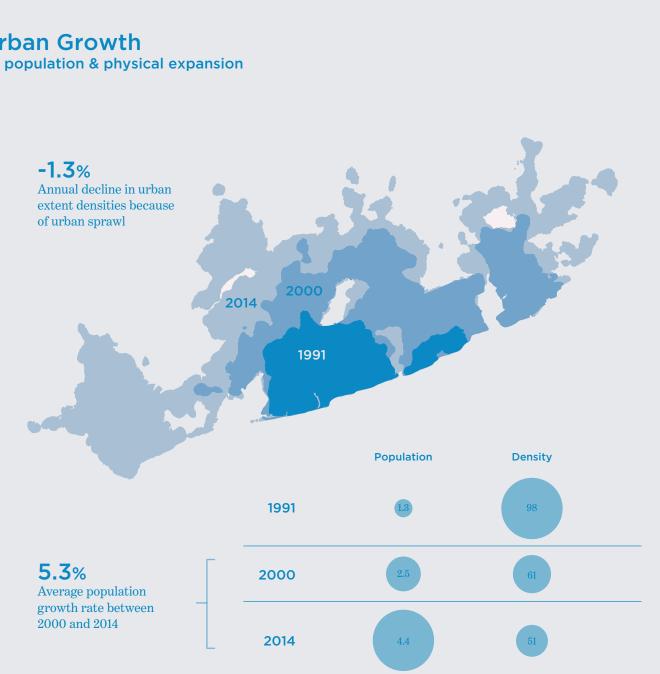
2 million Estimated daily commuters into Accra





51 people/hectare Accra is sprawling: Density in Accra declined from 98 people/hectare in 1991 to 51 people/hectare in 2014

Urban Growth By population & physical expansion



Modal Split of Commuting Journeys

By Purpose, 2017

	School	Health	Work	Shopping
Taxi	• 3.7	33.5	14.9	• 3.3
Trotro	15.3	2.5	19	15
Bus	• 4.3	0	• 1.4	0.2
Motorcycle	0.4	• 1.6	4 .1	0.4
Car	• 2.4	• 3.6	• 5.7	• 1.3
Bicycle	1	0.7	5.1	0.2
Walking	72.9	58	47.4	72.9
Other	0	0.2	2.4	

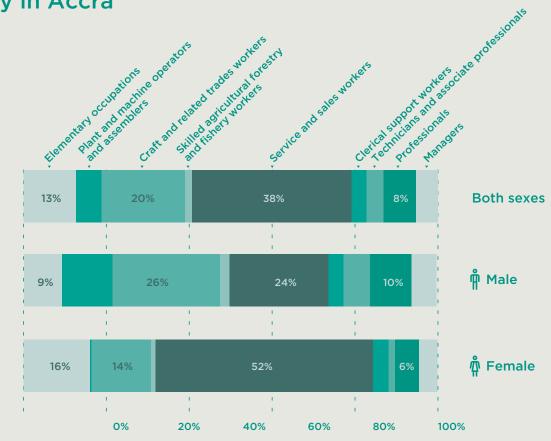
Economy, Employment & Education





89% of the population within the AMA can read and write in one or more languages. This compares to 71.5% nationally. 70% of the population in Accra is economically active. This is on par with the national rate.

Economy in Accra Occupations



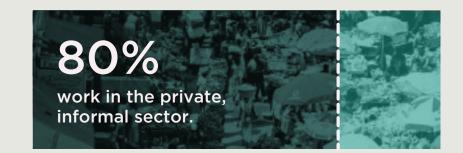
15#

Most people 15 years and older are employed in the informal sector.



7% of the economically active population in Accra is unemployed, compared to 5% of the national economically active population that is unemployed.

Informal sector



At a national scale, the biggest sectors of informal non-agricultural urban work are:



of women work in the informal economy

64.7% of men work in the informal economy

trade

manufacturing

non-domestic private services

Housing & Sanitation

58%

of the population live in informal housing; there is an estimated backlog of 300,000 houses in Accra.



Prior to September 2016, when a "polluter pays" policy was instituted, 58% of AMA's sanitation funds were spent on waste collection & transportation.



Accra Metropolitan Assembly has an average household size of 11.1 people, compared to an average of 8.4 people per house in GAMA and 7.3 at the national level.



Waste is not collected on house-to-house basis for over 30% of city households.



* Pit latrines are banned by the AMA ** Other facilities add up to 0.5%



68.8[%]

of the population nationally lives within compound houses. Many have inadequate basic facilities such as potable water, toilets, and/or a proper sewerage system.

51.5%

of the population nationally lives within compound houses.

6%

Solid Waste Collection

Estimated total solid waste generated





Sources: Waste Management & Research Volume 35, Issue 11, November 2017. AMA Medium Term Development Plan 2018. 24



Accra's Resilience Challenges

The Greater Accra Region, within which the Accra Metropolitan Area is located, accounted for 17% of Ghana's GDP in 2014⁴. The country's GDP growth averaged 7.8% between 2005-2013⁵ and in 2018 was one of Africa's fastest growing economies⁶. From a small Ga fishing village, Accra has grown to become a dominant urban centre due to its concentration of assets, economic activities, and government.

Today, Accra is on the move — economic growth is robust, foreign investment is growing, and an expanding urban middle class is creating an internal market of global scale. The Accra Metropolitan Area serves as the focal point for the Greater Accra region's economic development, with the service industry employing over 530,000 people.⁷ Most of the country's manufacturing industries, oil companies, financial, telecommunication, tourism, education, health institutions, and other important establishments are hosted by Accra. Their existence in Accra continues to attract people from all parts of Ghana and beyond to seek economic opportunities and a better quality of life. This influx of people into the city has led to rapid urbanisation.

Despite these remarkable developments, the city is also saddled with enormous challenges in sanitation and the environment, traffic, growing slums, poverty, and unemployment, among others. Urbanisation has far outpaced planning and available services and infrastructure, with implications for the living conditions of residents. Low-income communities, in particular, find themselves living in informal and overcrowded housing with limited or no access to urban services. This haphazard urban development represents a challenge for the city. Furthermore, Accra faces a number of shocks and stresses that heavily affect the city. Some of these shocks include fires, floods, disease outbreaks, building collapse, and earthquakes. The stresses include ageing infrastructure, poor waste management and sanitation, inefficient transportation system, high cost of living and proliferation of informal settlements. The city also has an unemployment rate, estimated at 7.2 percent in 2016⁸, that is less than the Greater Accra Region's 13.4 percent⁹, but nonetheless is still high and increasing further.

These challenges often bring Accra to an economic and social halt and are predicted to intensify as a result of climate change. Many shocks and stresses that Accra faces are largely cyclical; nonetheless, they have been left unaddressed. To become a world-class city, we must address Accra's resilience challenges and position ourselves for a vibrant, smart, and inclusive future.

The priority shocks and stresses that follow are a result of surveys and interviews conducted between 2016 and 2017.

What are shocks and stresses?

Shocks are typically considered single event disasters, such as fires, earthquakes, and floods.

Stresses are factors that weaken the fabric of a city on a daily or reoccurring basis, such as poor waste management, an inefficient transportation system, or high unemployment.







High cost of living

Inefficient Transportation System

Poor Waste Management

Poor Sanitation and Water Scarcity



The individual and aggregate costs of food, rent, transport, and utilities make affordability the biggest challenge facing Accra's population.

While numerous public transportation options exist, they are often unreliable and unsafe.





This is attributable to limited waste and sanitation management infrastructure, poor education on and behavior in waste disposal, and extremely low enforcement of regulations.

At a household level, a lack of adequate and safe sanitation and water translates directly into increased health challenges, with diarrhea and other health complications a regular part of peoples' lives. This indirectly reduces time for studying, employment, and leisure, leading to a stark decrease in quality of life.







Shocks are not listed in order of severity or magnitude and are based on analysis of stakeholder engagement.

Accra's Priority Shocks

Dumping of waste in drains results in choked drains, which reduces drain efficiency and

The need for an upgraded drainage system is also rarely addressed, as is the inconsistent application of land use policies which also compound flooding problems.

Risks of fires are aggravated by electrical faults, illegal power connections, and lack of enforcement of proper wiring by electricians. Recent cases of mass fires include market fires recorded from 2014 through 2015. Fire-fighting infrastructure including installed hydrants, fire-tenders and other fire equipment are in dire need of upgrades.

Cholera has dominated the charts in recent times when it comes to epidemics within the city. Yet it is not the only disease that impacts people's lives. Digestive diseases, bacterial infections, and other infectious and communicable diseases are more easily spread in Accra due to the infrastructure challenges related to sanitation and water





Poor application of building standards increases the risk of building collapses.

Accra sits on an earthquake fault line. The last substantial earthquake occurred in 1939, claiming 17 lives. Presently, most of the areas vulnerable to earthquake impact sit outside of the control of the AMA but would however look directly to the AMA for support in the event of an occurrence—placing high demands on an already resource-constrained city.



Vision

Accra is a smart, sustainable, and resilient city that anticipates and plans for shocks, rather than reacts to them. We will transform the city's ongoing stresses into opportunities: by embracing informality as an engine of growth, designing infrastructure to improve our natural and built environments, and optimising our resources and systems for greater efficiency, accountability, and transparency. Whilst Accra is the premier economic centre of Ghana, significant challenges persist that Accra needs to be able to manage in order to be a truly resilient city.

Our vision will be achieved through a Resilience Strategy that seeks to make it more feasible, safe and convenient for all in Accra to access jobs, opportunities, facilities, and infrastructure. The AMA is well-positioned to address the challenge of enhancing resilience, through pursuing a number of initiatives which address those shocks and stresses that seem to serve as a stumbling block for our city. There is strong commitment from the City Authorities and allied Ministries, Departments, Agencies, as well as development partners to work collaboratively. The rapid urbanisation that Accra is experiencing should be seen as an opportunity: it highlights the pull of the city as an engine of economic growth and an important gateway into West Africa.

Ongoing efforts by the AMA are already contributing to strengthened resilience. Some of these are included or referenced in the pages that follow, such as the Accra Road Safety Strategy, Sustainable Greening and Beautification of Accra Project, Clean Accra Project, waste segregation in schools throughout Accra, and the distribution of reduced-price household toilets. In addition to building on this current work, transformative change in Accra will require doing things differently as well as focusing on catalysts in a collaborative way. The goals and initiatives contained in this Resilience Strategy will help Accra address her shocks and stresses. Most importantly, these goals and initiatives highlight the need for a long-term vision for the city that takes into consideration projected population increase, climate change adaptation, and unanticipated challenges.

Connection to the United Nation's Sustainable Development Goals (SDGs) for 2015-2030

Ghana has committed to both the SDGs and the Africa Union's Agenda 2063. The SDGs, or Global Goals, focus not only on ending extreme poverty and hunger, but also seek to ensure more equitable economic growth and environmental sustainability. There are 17 goals in total, with 169 targets and 230 indicators¹⁰. At the national level in Ghana, the SDGs are reflected in the President's Coordinated Programme of Economic and Social Development Policies (2017-2024) which sets out national development goals and aspirations. The National Development Planning Commission (NDPC) has integrated the SDGs into the Medium-Term National Development Policy Framework (2018-2021); the associated Results Framework includes many of the SDGs indicators.

All 17 SDGs are inter-linked, and actions to achieve one goal can positively contribute towards one or several others. In addition to national governments, regions and cities will play an essential role toward achieving the Goals. As such, they need to adopt relevant goals and include the SDGs in planning processes. As a major economic, financial, and transportation hub in West Africa, with a high concentration of people and relevant challenges, the City of Accra is well positioned to contribute to the success of the Global Goals. This section demonstrates the links and synergies between the City's local Resilience Strategy to the global Sustainable Development Goals.

Pillar 1 -

An Integrated Approach to Infrastructure Planning and Service Provision

Pillar 2 -

Optimise New and Existing Resources with Accountability and Transparency

Pillar 3 -**Embrace Informality's Contributions** to Resilience Building

SDGs





SDGs



SDGs



In Ghana, the SDGs and the Africa Union's Agenda 2063 SDG #6 "Clean Water and Sanitation" is highly are being implemented and tracked through the decenrelevant to Accra's Resilience Strategy and connects to tralised planning system as set out in the National Develboth Pillars 1 and 2. Communities throughout Accra are opment Planning Act. In September 2018, Ghana's first prone to flooding and drainage problems. Through initiatives under Pillar 1 the City will improve management of SDGs Indicator Baseline report was released, providing the baseline status against 69 indicators. The implemenits stormwater and drainage systems to reduce the risk tation of initiatives within Accra's first-ever Resilience of flooding, improve the quality of local waterways, and Strategy will contribute to the achievement of many of ensure better access to basic services for residents. the SDGs both nationally and globally.

On SDG #1 "No Poverty," Ghana's Baseline report notes that while poverty is largely concentrated in rural areas of the country, there exist high variations in the levels of poverty among districts in the Greater Accra region, with some specific districts facing high poverty incidence (e.g. Shai Osudoku, Ningo Prampram, and Ga South Municipal).¹¹ As such, addressing Accra's urban poverty and equity issues will be important to contributing to the overall achievement of SDG #1. Pillar 3 of the Resilience Strategy aims to improve the quality of life for people living and working in informal settlements, by facilitating access to critical services and safety nets.

SDG #3 "Good Health and Well-Being," which includes a target to reduce the death rate from road traffic injuries, links directly to Pillar 1 of Accra's Resilience Strategy. This pillar includes a number of different initiatives that together seek to improve Accra's transportation infrastructure. This will make transportation both safer and more efficient; reduce the risk of accidents and personal harm; and provide a safe environment for pedestrians and drivers alike. Likewise, SDG #9 "Industry, Innovation, and Infrastructure" includes an indicator on increasing urban mass transit which is applicable to the goals and initiatives under Pillar 1.

SDG #7 "Affordable and Clean Energy" connects to Pillar 1, Goal 3 in Accra's Resilience Strategy: "to promote a sustainable energy future to accommodate climate and population change pressures." This goal recognises that to mitigate resource scarcity, climate change impacts, and an increasing population, Accra must look to clean and efficient energy resources as well as green solutions.

SDG #11 "Sustainable Cities and Communities" intersects across all three Pillars. For example, targets around ensuring access to safe and affordable housing, basic services, and slum upgrading directly connect to the focus on urban informality in Pillar 3 of the Resilience Strategy. SDG #11 also contains a target around waste management which is addressed through multiple initiatives in both Pillars 1 and 2.

Connection With the AMA's Medium Term Development Plan

As part of the implementation of effective decentralisation in Ghana, MDAs and MMDAs are mandated to prepare Medium Term Development Plans (MTDP) in line with the Ghana Shared Growth and Development Agenda. This Agenda provides a consistent set of policy objectives and strategies to guide the preparation and implementation of medium-term and annual development plans and budgets at sector and district levels. It also serves as a platform for donor coordination. Development of the

MTDP itself is a highly participatory process, which draws input from a wide range of stakeholders. At its core, the Medium Term National Development Policy Framework aims to reduce poverty and improve the social wellbeing of Ghanaians.

In accordance with this, the AMA has formulated and outlined development programmes, projects, and activities to achieve five key goals in the 2018-2021 MTDP¹²:

- **1** Build a Prosperous Society
- **2** Create Opportunities for All
- **3** Safeguard the Natural Environment & Ensure a Resilient **Built Environment**
- **5** Strengthen Ghana's **Role in International** Affairs
- 4 Maintain a Stable, **United and Safe** Society

Planning and Coordination Unit to ensure coherence between the Resilience Strategy and MTDP, as the latter is the nationally recognised and statutory document for planning and projecting the Assembly's programs and projects. Each of the initiatives in the Resilience Strategy correspond to strategies and actions adopted in the MTDP and are mapped to one of the five goals above to help Accra be a smart, sustainable, and resilient city. Compared to previous MTDPs developed by the AMA,

The Accra Resilience Team has worked with the Metro the current plan features much greater drive for resilience building and climate action at the city level. This has been spurred by the Resilience Strategy development process and efforts to ensure departments incorporate plans, programs, and actions into the MTDP that will provide multiple benefits for citizens.





	GOALS	INITIATIVES
E E E E	1.1 Upgrade transport and trading infrastructure to ensure systems are safe, robust, and inclusive	1Upgrade trotro system and increase enforcement of road rules and regulations2Upgrade marketplace infrastructure to ensure safety, security, and adequate services3Redesign major crossings at junctions to enhance pedestrian safety and optimise for multiple users
An Integrated Approach to Infrastructure Planning and Service Provision	1.2 Design and adapt infrastructure to maximise co-benefits and simultaneously address Accra's flooding, waste, sanitation, and climate challenges	 4 Strengthen drain design and performance through an assessment of existing and proposed road and drainage infrastructure, incorporating meaningful community engagement 5 Construct new micro and large waste transfer stations 6 Launch the Sustainable Greening and Beautification of Accra Project
	1.3 Incentivise energy efficient and renewable energy generation to promote a sustainable energy future that accommodates climate and population pressures	 7 Design a Green Building certification program to raise awareness and encourage adoption of green and energy-efficient construction in Accra 8 Formalise an incentive program for developers to integrate renewable and energy efficient technologies 9 Launch Streetlight replacement drive to upgrade lighting in Accra
Image: Constraint of the constra	2.1 Improve the use of data for sound long-term integrated planning and reflective decision-making	 10 Create a Data Unit within AMA to help collect and analyse data for better long-term planning 11 Launch an employer / AMA transit task force 12 Launch a research and data collection program on transport, to holistically understand commuting patterns and transportation trends 13 Collaborate with the Ministry of Sanitation and Water Resources (MSWR) on the development of the Accra Climate Strategy and Integrated Urban Environmental Sanitation Strategy and Master Plan 14 Conduct an assessment of Accra's vulnerability to seismic activity and its preparedness to respond to seismic shock, and identify legislative and other actions required to improve the city's resilience to earthquakes
	2.2 Foster better citizen engagement to improve collaboration and increase trust between citizens and City Authorities	 15 Strengthen the existing capacity of the AMA's Community Development Department through training and strategic planning, enabling staff to expand outreach 16 Develop a citizen engagement platform and protocol within the AMA that allows for proactive, responsive mechanisms for increasing transparency and improving accountability
	2.3 Improve AMA capacity to better enforce regulations and provide services to Accra's residents	17 Improve oversight of waste collection service providers through better deployment of data and development of stronger enforcement mechanisms18 Improve capacity of building inspectors through comprehensive training in building codes, technical approaches to enforcement19 Improve revenue collection
Image: Second state	3.1 Improve the quality of life for citizens working in the informal sector and/or living in informal settlements	 20 Upgrade selected informal settlements 21 Collaboratively design and implement flood-hazard land management guidelines with residents by leveraging ongoing data collection and mapping efforts 22 Explore the creation of an informal trade department, guided by locally-informed and action-based policy 23 Facilitate access to safety nets for people working in the informal economy 24 Brand the WATO Junction Area as a site of cultural heritage 25 Facilitate the subscription of informal workers to the NHIS platform
Contributions to Resilience Building	3.2 Facilitate robust integration between the formal and informal sectors for improved economic, social, and environmental benefits	26 Launch program to integrate informal waste collectors into the municipal waste management system27 Explore the feasibility of legalising and optimising okada taxis, informally-run commercial motorcycles

100RC Network Connections

GOAL 2.2

TULSA is developing a number of "Resilience Hubs" which will prepare residents for emergency and disaster response, as well as forge connections among neighbors. When combined with Emergency Mobility communication technology, a residents will also receive real-time disaster information.

GOAL 1.1

SANTA FE will continue to restore "Mercado Progreso," a dynamic marketplace hosting different community activities and cultural events. At a broader scale, the city's Street Markets Support program takes a critical step toward regularizing informal business activities in popular markets and fairs.

GOAL 1.3

NEW YORK CITY's Green Property Certification program provides formal recognition for properties that have met strict government standards for environmental protection, ensuring that these properties are safe for new occupants and everyone in the surrounding community.

GOAL 2.1

RIO DE JANEIRO's Rio Operations Centre integrates the data and monitoring functions of approximately 30 municipal and state agencies and corresponding utilities under one roof. The centre is meant to optimise city functions and respond proactively to emergency situations.

GOAL 2.1

7 2

DAKAR is taking action to improve sanitation services, by installing public recycling bins throughout the city, collaborating with informal waste pickers, and launching a digital platform to disseminate best practices and increase technical expertise in sanitation.

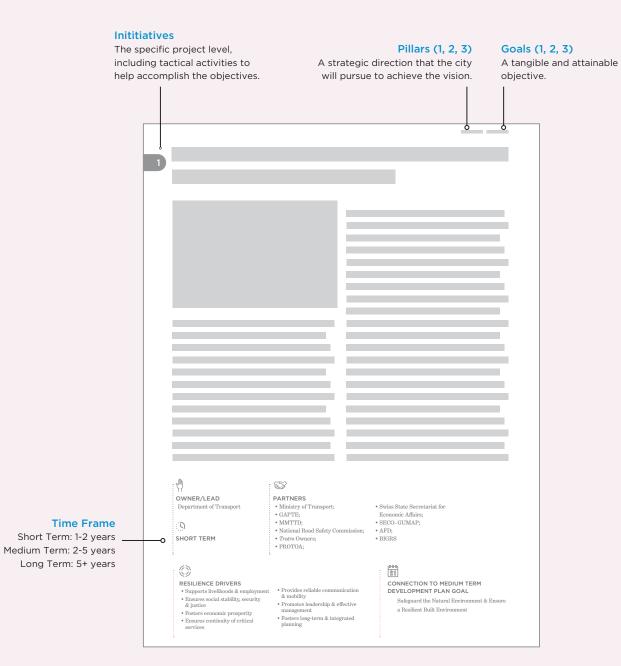
GOAL 2.1

BANGKOK is establishing an integrated information system to optimise traffic management and planning, and reduce congestion in the city. A reduction in transit times will encourage a more active lifestyle, providing residents with greater opportunities for recreation and economic growth.

GOAL 3.1

BANGKOK is conducting a series of impact studies to inform new flood preparedness guidelines, with the aim to minimise the impact of flooding on communities living in high-risk areas. A Community Based Disaster Risk Management pilot will further build community awareness and capacity.

How to Read this Strategy



A City that takes an integrated approach to infrastructure planning and service provision to account for changing climate patterns, economic trends, and population growth.



PILLAR 1

Accra is growing, yet investment in infrastructure development lags behind. This first pillar outlines an integrated approach to infrastructure planning and service provision to account for changing climate patterns, economic trends, and population growth. These include addressing challenges related to inadequate transportation and mobility options; management of waste, sanitation, and flooding; and a growing demand for electricity which can outstrip supply.

"Building resilience in the City of Accra is not an option but the option. In the face of increasing physical threats from flooding to terrorism, the City of Accra does not have any choice but to develop and implement strategies to match the evolving risk profile and to reduce fragility to disasters."

> - Mr. Kenneth Owusu, National Development Planning Commission

Further confounding these vulnerabilities is the evergrowing threat of climate change, rapid population growth, and a fast-growing economy but unequal income gap. To address and mitigate these risks, we believe infrastructure planning and delivery should incorporate both systems and resilient thinking, anticipating — as opposed to reacting to — the shocks and stresses that threaten our city. We must ensure that our infrastructure and service delivery can adapt to new and unforeseen challenges in the future. Benefits generated that contribute to individual, community, or systems resilience — what are known as co-benefits — must be identified

and supported. This will enable us to optimise the social, environmental, and economic impact of our investments in infrastructure and service provision.

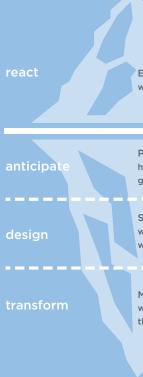
By undertaking the following initiatives, we hope that Accra will become a city that not only plans for today's residents and current context, but one that anticipates future growth, challenges, and is prepared for future unknown social, environmental, and physical risks that our city may face.

Ghana's Decentralisation Act of 2017, strives to improve financial and resource management, increase efficiency, and ensure judicious use of public assets. Though the Decentralisation Act may limit AMA's geographic coverage, this is unlikely to decrease population flows into and out of AMA's jurisdiction for official, recreational, or commercial purposes by residents and non-residents alike. Given the intersectionality of the proposed investments in infrastructure and service provision, this approach will require greater cross- jurisdictional cooperation between AMA and the surrounding MMDAs to ensure adequate provisions for both residents and non-residents.

What is Systems Thinking?

Systems thinking is an approach to problem solving that attempts to balance holistic thinking and reductionist thinking to allow people to better understand complex problems and effectively make change. To understand systems thinking an iceberg is a useful metaphor.

About 90% of an iceberg lies below the surface, underneath the water. This part of the iceberg is not easily visible. The visible tip of the iceberg is equivalent to the events that happen in a system. Underneath those events are patterns of systems behaviour, systems structures, and mental models that need to be understood in order to change the system.



EVENTS what just happened? what is happening now?

PATTERNS OF SYSTEMS BEHAVIOUR how do elements in the system change over time, generating patterns and trends?

SYSTEMS STRUCTURES what has influenced the patterns? what are the relationships between the parts?

MENTAL MODELS what assumptions and beliefs do members of the system hold?

æ æ £ £ æ æ æ æ æ æ æ \$ æ æ £ æ 器 æ 器 æ æ æ æ 器 æ æ æ \$ 器 £ æ æ æ £ GOAL **Upgrade transport & trading** æ B infrastructure to ensure systems are safe, robust and inclusive æ æ 器 æ £ æ ध æ æ æ æ æ æ æ æ æ æ 器 æ æ æ 器 æ £ æ æ æ æ æ æ æ æ æ æ æ æ 器 器 æ æ æ æ æ æ 舒 æ 器 器 器 æ

Accra is a major regional trading and transportation hub. Rapid urbanisation and its attendant traffic congestion, as well as limited attention paid to designated spaces for commerce, have resulted in an inability to meet the population's transportation needs and have led to stymied economic growth. As a result, many users of Accra's transport and trading infrastructure face safety, security, and accessibility issues.

For instance, many of Accra's residents walk to get to school or work, to access healthcare, and for shopping. Over 47% of trips to work and 72% of trips to school are completed by walking.¹³ For residents using motorised transport, *trotros* — an informal and loosely regulated transportation network of owner-operated mini busses — are their primary means of commuting to work and for leisure.¹⁴ Transportation policies at both national and local levels have nonetheless largely focused on the realisation of a Bus Rapid Transit (BRT) system. Despite an estimated US \$46 million invested by the Government of Ghana and donor partners to launch the BRT,¹⁵ the system remains partially developed and underutilised.

Accra's rapidly growing population requires an efficient, readily accessible, safe, and affordable multi-modal transportation system. A robust transportation system that is capable of withstanding sudden shocks would positively impact economic development in Accra, both in times of crises and stability. It would help to improve businesses' ability to provide goods and services as well as people's ability to access services, education, and employment.

Relatedly, one of the limitations to economic growth are insecure environments¹⁶ for both business and customers in Accra's many markets. Markets are crucial sites of economic activity in Accra. Positively impacting economic development and resilience for the city will require addressing the insecurity of these environments for both traders and customers. A particular focus on integration and inclusiveness will be critical in upgrading both the public transportation system and Accra's markets so that there is a shared sense of ownership amongst the many relevant stakeholders and an ability to coordinate efforts across multiple institutions in order to catalyse multiple benefits.

The initiatives that follow embrace new methods of creating a more robust system that will serve all segments of society and contribute to boosting the economy of the region. <u>૱</u>૿ૹ૿ૻૹ૿ૻૹ૿ૻૹ૿૿૿ૹ૿

Upgrade trotro system and increase enforcement of road rules and regulations



RESILIENCE CHALLENGE

Trotros are the most widely used form of motorised transportation in Accra. Passengers find them to be readily available, accessible, convenient, and affordable. On the other hand, trotros have poor operational and safety standards and records. Often ignoring traffic regulations, their drivers contribute heavily to traffic congestion and road accidents in the city. *Trotros* are also usually heavy polluters because the vehicle fleet is old and inefficient. Individuals with financial means tend to avoid using *trotros* whenever possible. This has contributed to an increase in the number of private vehicles in the city, further worsening congestion.

In 2016, the Government of Ghana launched a Bus Rapid Transit system in Accra, the Aayalolo Service, in part to address the traffic, quality, and safety issues commuters experience on trotros and to expand Accra's public transportation system with new options. New large buses operating in dedicated bus lanes with better emission standards were expected to increase mobility, provide access to more job opportunities, reduce the use of private cars, and contribute to a reduction in CO2 emissions. The BRT has unfortunately struggled to operate successfully, failing to deliver on these expectations.

INITIATIVE IN BRIEF

Acknowledging the significance of the *trotros* in meeting the transportation needs of Accra's residents and the interdependencies between the trotro system and the BRT, the AMA in partnership with key actors will embark on a *trotro* upgrading program with the goal of improving the quality of the entire public transport system in Accra.

The program will include:

- the creation and enforcement of regulations aimed at improving urban passenger transport regulations, including those governing registration, licensing, roadworthiness, environmental impact, and other quality standards;
- the establishment of a vehicle-based data system, which will be used in part to track the maintenance of upgraded *trotros* through bi-annual roadworthy checks;
- trainings on safe driving, professionalism, and waste management aboard *trotros*;
- the facilitation of partnerships between *trotro* owner associations and financial institutions that result in support for owners and/or drivers to secure tailor-made investment packages for the acquisition of safer and more environmentally friendly vehicles;
- engagement with owners of existing trotros to understand the economics of trotro holding and their operational models in order to enable value conversion to upgraded operational regimes, including support for a BRT feeder system; and
- integration of fare collection systems across all public transport services.

OWNER/LEAD Department of Transport

 \mathcal{O} **TIMELINE** Short-term STATUS New

ES

- PARTNERS • Ministry of Transport
- GAPTE
- MMTTD
- National Road Safety Commission
- Trotro Owners
- GPRTU

- PROTOA
- SECO- GUMAP
- Swiss State Secretariat for Economic Affairs
- AFD
- BIGRS

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RESILIENCE DRIVERS

- Supports livelihoods & employment
- Ensures social stability, security & iustice
- Fosters economic prosperity
- Ensures continuity of critical services
- Promotes leadership & effective management • Fosters long-term & integrated
- planning

mobility

Successful implementation of this program will have

multiple benefits. It will help to strengthen the image

of Accra. Better enforcement of urban passenger

transport regulations will improve quality in transport

options, thereby encouraging citizens to patronise

public transportation and ease congestion created by the

growing number of private vehicles on the road. This will positively impact Accra's economic and social resilience,

increasing productivity, stabilising revenues for road-

based commercial services, decreasing stress levels of

individuals and improving health outcomes, enabling

more time with family, increasing disposable incomes

that are no longer diverted to high transport costs, and

decreasing the risk of accidents and personal harm. Bi-

annual roadworthy checks will allow for the prevention

of unsuitable vehicles from operating, thereby reducing

CO2 emissions and mitigating the impacts of climate

change to Accra. Better integration between the BRT and

trotro systems will facilitate a healthy balance between

terminal-based operations and route-based operations

using passenger and land-use accessibility parameters

as determinants for achieving network and connectivity

efficiencies, ultimately creating a more robust transport

system that can support Accra's growing population.



• Provides reliable communication &

000 21

CONNECTION TO MEDIUM TERM **DEVELOPMENT PLAN GOAL**

Safeguard the Natural Environment & Ensure a Resilient Built Environment



Upgrade marketplace infrastructure to ensure safety, security, and adequate services



RESILIENCE CHALLENGE

Marketplaces are crucial sites of economic activity in Accra. Yet they are often plagued by poor security and inadequate services. As a result, street vendors and market traders are often disproportionately vulnerable to shocks, including fires, flooding, various risks related to traffic, and crime. The majority of vendors and traders are women, many of them single mothers, whose socioeconomic rights and health are compromised in the city's markets. They often also experience abuse from city guards (abayiae) who harass them and charge excessive taxes in the form of fees, daily tolls for use of space, and levies.

1 OWNER/LEAD Public Private Partnership Unit

0 **TIMELINE** Short-term **STATUS** Ongoing

ES

- PARTNERS
- Metro Finance Department (Markets Unit)
- Works Department
- MiDA
- Mmofra Foundation

RESILIENCE DRIVERS • Supports livelihoods &

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- employment • Ensures social stability,
- security & justice Fosters economic prosperity
- Ensures continuity of critical services

MEDIUM TERM DEVELOPMENT PLAN GOAL Safeguard the Natural Environment & Ensure a Resilient Built Environment

000 21

CONNECTION TO

To solve for inadequate services and infrastructure, market

vendors often resort to homegrown solutions which may

further exacerbate risk exposure. For example, markets

often have poor or inadequate access to electricity. To

meet their needs, vendors may set up or obtain faulty and

inferior electrical cables and illegal electricity connections.

This has led to a scenario where markets in Accra are particularly prone to electrical fire outbreaks. In 2012, the

Greater Accra Region recorded 330 fire outbreaks in

major markets like Kantamanto, Makola Number Two,

Agbogbloshie, and the Makola Shopping Mall¹⁷. These

fires cause damage to businesses as well as settlements,

as many traders live close to or in the markets. Fires

typically lead to increased economic insecurity for traders

because they do not have fire insurance to compensate for their losses and have little or no economic safety nets.



INITIATIVE IN BRIEF

Working with the Access Project being implemented by the Millennium Development Authority, AMA is addressing constraints in access to electricity that affect micro, small, and medium enterprises in selected marketplaces within Accra. Electrical infrastructure will be provided to improve the reliability of power supply, which will in turn help to reduce the incidence of fires that occur in the markets due to illegal connections. At selected markets, the Access Project will provide streetlights and security lighting and replace defunct existing infrastructure to provide better lighting for market vendors, thereby extending their business hours and leading to improved income.





The AMA will expand the Access Project to include older and smaller markets in Accra. Some of the hallmarks of the program will include:

- installation of LED street lighting and security lighting;
- · deployment of safety personnel across markets to improve safety and alleviate security threats;
- sensitisation and training for safety personnel to equip them for professional interactions with market women and their clients, in order to ensure that they are truly assets to the markets; and
- education or day care centres to provide a safe haven and learning opportunities for the children of market workers.

Redesign major crossings at junctions to enhance pedestrian safety and optimise for multiple users

RESILIENCE CHALLENGE

Since the introduction of the automobile, cities and towns have experienced major challenges in relation to pedestrian safety. In most parts of Accra, pedestrians are at frequent risk of injury and death. According to the National Road Safety Commission, in 2015 there were 13 traffic fatalities per 100,000 residents in Accra; 64% of which were incurred by pedestrians.¹⁸ With the increase in Accra's population, number of motor vehicle, and traffic, there has been a surge in competition for the use of Accra's streets, which function as important market spaces as well as transportation corridors. Despite the dangers faced by pedestrians, transport and planning policy in Ghana to date has not adequately addressed their needs.



OWNER/LEAD Metro Transport Department

TIMELINE Short-term STATUS Ongoing

E.S

PARTNERSAMA-BIGRSNational Road Safety

Commission

• MTTD

• Princeton University Woodrow Wilson School

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• Supports livelihood and employment

Fosters economic prosperity
Provides reliable communication & mobility 21 CONNECTION TO MEDIUM TERM

DEVELOPMENT PLAN GOAL Create Opportunities for All PILLAR 1



INITIATIVE IN BRIEF

The goal of this initiative is to reduce the exposure to traffic risks by improving pedestrian spaces and reducing fatalities in Accra. This will be done through:

- collaborating with partner agencies to redesign high fatality intersections to acknowledge the needs of multiple users and multiple functions;
- building on Accra's Pedestrian Safety Action Plan where critical intersections within the city with high fatalities in Accra have been identified; and
- testing on a pilot basis the alternative corridor and intersection designs and interventions identified at the 'CoLab' on Safe and Inclusive Streets, hosted by 100 Resilient Cities and academic partners.¹⁹

Improving the design of these intersections has multiple resilience benefits, including:

- capitalising on the health benefits of walking;
- improving connections to economic opportunities and livelihoods activities, given that 47.4% of people in Accra walk to work;
- acknowledging the multiple users (including street vendors) and the multiple functions for which they use these intersections; and
- promoting effective coordination with other government bodies, as this is an area where multiple government bodies at both the national and municipal level play a role.

æ æ æ £ 器 æ æ æ æ æ æ æ 器 æ æ æ æ æ æ £ £ **Design and adapt infrastructure** GOAL to maximise co-benefits and B simultaneously address Accra's flooding, waste, sanitation, and æ B climate challenges **9**77 æ £ æ æ æ æ £ Æ æ £ £ £ æ æ æ æ £ £ £ æ æ £ æ 器 æ

Flooding is one of Accra's greatest urban challenges, and one of the most critical threats to its resilience. While Accra has a longstanding history of flooding, recent floods have grown more frequent and more destructive. Between 1955 and 1997, flooding destroyed about 150 million cedis worth of property (US \$30 million), rendering 10,000 people homeless, with over 100 lives lost. More recently, the consequences of flooding have grown in severity as Accra has expanded. Between 2000 and 2012, 83 lives were lost as a result of floods and 178,750 displaced from their homes, with damages adding up to an approximate US \$43.7 million.²⁰ The 2015 Accra flood was particularly destructive, affecting 52,622 residents and claiming 150 lives following an explosion at a flooded fuel station at the Kwame Nkrumah Circle.

Accra's low-lying topography, its high levels of seasonal rainfall, and its vulnerability to coastal inundation and storm surges contribute to the city's flooding challenges. Insufficient drainage networks and poor waste management (leading to illegal dumping of refuse in drains) serve to worsen outcomes. Flooding, waste, and sanitation challenges cannot be tackled in isolation. Improper waste management is one of the most significant contributors to flooding in Accra; the city's natural and man-made water drainage systems are often clogged with solid waste, blocking water-flow and causing both short- and long-term flooding as well as spreading water-borne diseases.

Waste management — including collection, transportation and disposal — continues to be a major challenge for the AMA. In order to avoid the dangerous interaction between poor waste management, flooding, and disease epidemics, the AMA will develop holistic, cross-cutting solutions that capitalise on these interconnected challenges. We will pursue innovations in waste management that also provide flood management benefits and help mitigate GHG emissions, all the while engaging and involving citizens and local experts.

Climate change will further exacerbate Accra's vulnerability to shocks and stresses. The AMA is acutely aware of expected increases in the frequency and intensity of rainfall, rainwater flow, and coastal flooding. We will pursue solutions that ensure our built and natural environments are prepared for the future. Strengthen drain design and performance through an assessment of existing and proposed road and drainage infrastructure, incorporating meaningful community engagement



RESILIENCE CHALLENGE

Drains play an essential role in managing water flow in Accra. However, as Accra has grown, both in physical extent and population, the drainage network and infrastructure has lagged behind. Channels can be found at the sides of roads and houses, open to the elements or covered with paving slabs. Accra's drains have been plagued with many challenges that limit their ability to effectively manage water flow and mitigate flooding in the city. These challenges include poor design, limited retention capacity, and very little maintenance. Moreover, drains within the AMA are often blocked with solid waste or silt, or are left otherwise ineffective. Accra's drainage system is a major cause for the intense perennial flooding in the city, particularly in low-lying areas. The June 2015 floods and associated disaster is an example of the ongoing problem, having been aggravated by the blockage of primary and secondary drains by non-degradable solid waste materials.

The AMA Drains Maintenance Unit is responsible for periodic cleaning and maintenance of drains, though efforts are often adversely impacted by poor coordination between this department and other stakeholders engaged in the planning, design, and construction of drains. Other stakeholders in drain construction and management include the Ministry of Water Resources, Works and Housing's Hydrological Services Department, and the Department of Urban Roads in the Ministry of Roads and Highways. A lack of coordination has many troubling consequences for Accra, such as instances where large drains carry water to smaller drains.

Drains are often designed and built uncovered making it easier for dumping of refuse — which further worsens flooding. Roadside drain construction is also often poorly executed, a challenge of limited supervision and poor quality control. Drains are not installed in a way that can deal sufficiently with the volume of run-off water.

OWNER/LEAD Drains and Maintenance Unit (AMA)

(0)**TIMELINE** Short-term **STATUS** Ongoing; workshops are new

ES PARTNERS

- Metro Works Department
- Ministry of Works and Housing
- Ministry of Sanitation & Water
- World Bank
- Resources
- AMA
- GAMA Sanitation & Water Project
 People's Dialogue

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Accra; and

INITIATIVE IN BRIEF

will include:

assessed:

best to address them. Key components of the initiative

members will interact with experts to share their local

knowledge of drainage functionality and flow issues;

management models to decrease flooding;

RESILIENCE DRIVERS

- Ensures public health services
- Promotes cohesive & engaged communities
- Provides and enhances natural and
- manmade assets
- Ensures continuity of critical services
- Empowers a broad range of stakeholders
- Promotes leadership & effective
- management
 - Fosters long-term & integrated planning

GOAL 1.2 ஐ ஐ ஐ ஐ இ

PILLAR 1

· a comprehensive assessment of all the drainage infra-This initiative will seek to build on existing stakeholder structure in the city, especially in areas that are vulnerengagement techniques to work directly with communities able to flooding, where the functionality and effectiveto understand the challenges with local drains, and how ness of all drains will be noted.

All of these components will inform our long-range planning efforts around drain and flooding management, • periodic participative community audits where comincluding development of the Accra Climate Strategy and prehensive information about the provision of phys-Integrated Urban Environmental Sanitation Strategy ical infrastructure in selected communities will be and Master Plan (IUESSMP) being led by the Ministry of Sanitation & Water Resources. This initiative is • drainage system design workshops, where community complementary to Initiative 13.

• experts combining community knowledge with their modelling experience to design new drains and apply

• engagement of the array of stakeholders involved in

drains planning, design, construction, and mainte-

nance in order to strengthen stakeholder capacity and

foster collaboration, to ensure that drains are well con-

structed and can minimise the incidence of flooding in



CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL

Safeguard the Natural Environment & Ensure a Resilient Built Environment

Construct new micro and large waste transfer stations

RESILIENCE CHALLENGE

Illegally dumped waste throughout Accra, in drainage channels and other sites, contribute to environmental and health shocks like flooding and disease outbreak. The Greater Accra Metropolitan Area currently operates with only one engineered landfill at Kpone. This landfill is situated 37 kilometres from Accra's city centre and has a remaining lifespan of less than two years of waste receivable.

This presents three major challenges for Accra. First, faced with over 3,000 metric tonnes of waste produced daily,²¹ the capacity of the landfill is quickly being reached. Second, private waste collectors contracted by the AMA are loath to make multiple long-distance trips to the landfill every day. As such they are leaving significant amounts of waste uncollected and/or dumped in illegal locations throughout the city. Third, the future of an available final disposal site in reach is in limbo. In focus groups discussions conducted by the Regional Institute of Population Studies (RIPS) in two major flood-prone areas within the AMA, anywhere from a third to 45% of households mentioned the untimely or late collection of waste by private waste collection companies as one of the biggest waste-related challenges they faced.

Accra's residents appreciate that there are opportunities for diverting waste from landfills. In the RIPS focus groups, more than 40% of households were found to perceive plastics, metals, and wood/twigs to be useful.

A number of ongoing education and behaviour change efforts are in place to encourage and create avenues for Accra's residents to engage in waste diversion through recycling and reuse, in order to manage the challenge of limited landfill capacity. For example, the AMA is working with Jekora Ventures Ltd, a waste management firm, to implement a waste segregation program for basic public schools within Osu Klottey.

Effective management of illegal dumping will additionally require the building of new waste transfer stations to ease the transportation burden to the final waste disposal facility. Construction of micro and larger stations will reduce the cost of transfer by consolidating smaller loads into larger transfer vehicles, thereby reducing hauling costs. This will enable the waste collectors to spend more time collecting waste and less time traveling to and from distant disposal sites.

INITIATIVE IN BRIEF

We plan to develop many micro transfer stations and a minimum of two larger transfer stations at strategic locations accessible to all waste collectors serving the Accra Metropolitan Area. As these stations will be sited within residential areas, community-wide outreach and education will be important to secure buy-in from residents.

The city will also partner with the new Greater Accra Clean, Resilient and Inclusive Development Project

OWNER/LEAD Metro Waste Management Department

 \mathcal{O} TIMELINE Short-term STATUS Ongoing

(GARID) funded by the World Bank, whose objective is to improve flood and solid waste management and provide public services to targeted communities within the Odaw Basin of the Greater Accra Region.²² One key component of this project is the construction of two waste transfer sites within GAMA.



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RESILIENCE DRIVERS

- Supports livelihoods & employment
- Ensures public health services • Ensures continuity of critical
- services
- Fosters economic prosperity
- & man-made assets • Ensures continuity of critical services

This initiative is complementary to Initiatives 17 and 26 which together seek to address the complex challenges related to solid waste management in Accra.



• Enhances and provides protective

CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL

Safeguard the Natural Environment & Ensure a Resilient Built Environment

Launch the Sustainable Greening and Beautification of **Accra Project**

RESILIENCE CHALLENGE

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One way the AMA is mitigating the impact of flooding is through the development of more green space within the city, including community green spaces and parks. In addition to serving as permeable surfaces for flood retention, these sites will contribute toward improved air quality in the city. This is critical as air pollution, from vehicular emissions, biomass burning, electronic waste, and construction, which can all be found in Accra, are some of the highest and fastest rising causes of ill health in Ghana. In 2016, an estimated 28,210 Ghanaians died prematurely as a result of exposure to air pollution. Specifically in Accra, average annual air pollution levels are about five times the WHO guidelines average for the most health-damaging fine particles of PM 2.5.23

INITIATIVE IN BRIEF

The Greening and Beautification project will be completed in two phases, in order to pave the way for the AMA to effectively circumvent challenges around land acquisition and securing financing for implementation on larger plots of land. Phase one is focused on the greening and beautification of interstitial spaces, including main avenues, triangles, circles, and open spaces along busy roads in the Central Business District (CBD). These areas will be targeted with new landscaping, planting, and benches for relaxation, leisure, and shelter from the heat. The AMA is currently tapping private sector actors through an "Adopt a Space" campaign, including those adjacent to the identified sites, to provide funding for this development. Phase two will be the expansion to 21 green spaces throughout the Metropolis.

In order to sustain this initiative, extensive community involvement and public education programs targeting schools, private owners of land, property management companies, and others are critical. These efforts are underway and will help to foster an attitude of care for the environment. The AMA will continue to enhance efforts to introduce more green spaces to the urban environment.



Þ OWNER/LEAD Office of the Mayor

 \mathcal{O} TIMELINE Short-term **STATUS** Ongoing

ES

PARTNERS

- Metro Parks and Gardens
- Metro Education Directorate Forestry Commission
- Metro Physical Planning
- Department
- Metro Social Welfare and
- Community Development

RESILIENCE DRIVERS • Ensures public health

- Provides & enhances natural and manmade assets
- Ensures continuity of critical services
- Fosters long-term & integrated planning

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services

000 21 CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL Create Opportunities for All



 \mathbf{O} \mathbf{O} æ æ 器 æ æ æ æ æ æ æ £ æ æ æ æ æ æ æ æ æ æ £ æ æ 器 æ æ æ æ æ æ æ क्ष æ æ 器 器 器 £ æ æ æ æ £ Incentivise energy efficiency and GOAL renewable energy generation to æ £ promote a sustainable future that F anticipates climate and population Ħ \mathfrak{B} Ę £ pressures H $\overline{\overline{}}$ देर ন্ট नान 3 æ æ æ 器 æ æ æ æ æ 器 ध æ æ æ Ħ æ æ æ æ æ æ र्श्व æ æ æ æ æ æ æ æ æ Ħ æ र्श्व æ æ æ 器 æ 器 æ æ æ H

As Ghana's economy has grown, so too has the demand for electricity. Electricity regulation and distribution is managed by the central government and remains outside the remit of the Accra Metropolitan Assembly (AMA); however, as a City we have a crucial role to play in supporting governmental efforts to ensure that the energy needs of Accra's residents are met through greater efficiency including supporting the enabling environment for the production of renewable energy locally. The Accra Metropolis alone consumes approximately 10% of the total megawatts generated in the country²⁴ and was heavily affected by national load shedding in 2015.

Ensuring access to reliable and affordable energy is complex and requires interventions focused on policy, regulation, technology, and behaviour change. Accra's strategy will look to increase renewable energy generation and to improve energy efficiency because both are within the remit of local government.

Design a green building certification program to raise awareness and encourage adoption of green and energyefficient construction in Accra

RESILIENCE CHALLENGE

The Ghana National Building Regulations, which shape how buildings throughout Ghana are designed and constructed, historically have not considered energy efficiency measures. As a result, in Accra, building aesthetics tend to take priority over energy efficiency and contractors often ignore the designs of architects and build based on their own understanding. A review of the Ghana National Building Code Act is currently underway by the Ministry of Works and Housing with the assistance of the Energy Commission of Ghana. Incorporating energy efficiency measures into the Act can lead to savings of substantial amounts of energy and reductions in associated greenhouse gas emissions.

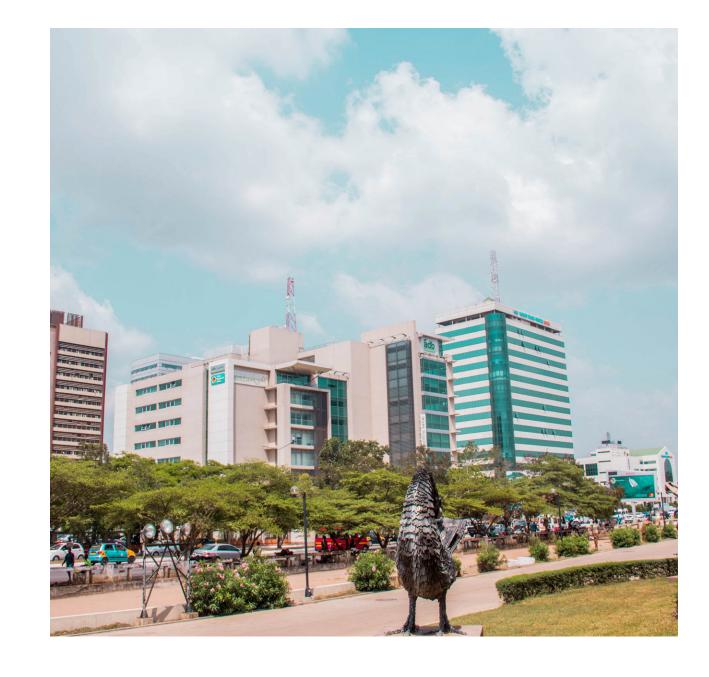
INITIATIVE IN BRIEF

Green building rating systems recognise newly constructed or retrofitted buildings that achieve high levels of energy efficiency. Third-party verification serves to confirm that a building or community was designed and built using strategies aimed at improving performance across a number of sustainability metrics. Rating systems are one of the most important strategies for promoting the adoption

of green building technologies. A green building rating system in Ghana, with Accra at the forefront, provides an opportunity to encourage the adoption of energy efficiency measures and other environmentally friendly practices in newly constructed or retrofitted buildings.

As part of this initiative, the AMA will:

- explore partnerships with the IFC's existing Excellence in Design for Greater Efficiencies (EDGE) tool, which includes software for determining the optimum combination of building design strategies for the best return on investment, is oriented around a global standard of a 20% reduction in energy and water use, compares embodied energy in materials as compared to a standard building, and offers certification that validates the developer's achievement;
- offer trainings for building inspectors and other relevant officials on the rationale and importance of energy code compliance;
- develop, through a partnership between the Department of Works and the Spatial Planning Department, an education toolkit that lays out the codes, the energy savings, and the business case for adhering to them.



OWNER/LEAD Metro Works Department

(D) TIMELINE Short-term **STATUS** Ongoing

ES

- PARTNERS • Energy Commission
- Electricity Company Ghana
- Kumasi Institute for
- Technology and Enterprise
- IFC EDGE Program
- Ghana Green Building Council
- (GHGBC)

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- **RESILIENCE DRIVERS** • Supports livelihoods & employment
- Ensures continuity of critical services
- Fosters long-term & integrated planning

CONNECTION TO **MEDIUM TERM** DEVELOPMENT PLAN GOAL **Create Opportunities** for All

оо 21



PILLAR 1



Formalise an incentive program for developers to integrate renewable and energy efficient technologies



RESILIENCE CHALLENGE

Accra has seen a steady growth in the number of commercial buildings, which has significant implications for energy consumption in the city. For example, in 2011 the commercial sector accounted for about 24% of the electricity consumed in Ghana.²⁵ Incorporating renewable energy systems into the design and construction of commercial buildings in Accra is one important strategy for achieving energy sufficiency, by reducing the energy demand on the national grid.

INITIATIVE IN BRIEF

A handful of building developers in Accra have already voluntarily incorporated renewable energy systems in their office, commercial, and housing developments. The City is interested in actively incentivising a greater number of developers to incorporate renewable energy into building projects. In July 2017, the Accra Spatial Planning Committee initiated an incentive program which offers a 10% reduction in the building permit fee if the application incorporated a 20kW roof-mounted solar PV system in the design.

The AMA plans to build on this pilot by institutionalising an incentive structure to promote the integration of renewable energy into new construction. We have tasked the Energy Commission of Ghana with the development of clear guidelines for use by the City in the administration of incentives for building permit applications with renewable energy systems.

OWNER/LEAD Metro Works Department Metro Physical Planning Department

TIMELINE Short-term

E.S

PARTNERS • Energy Commission, • UN Environment Program

• UN Environment Program

Ensures continuity of critical services
Fosters long-term & integrated planning

assets

RESILIENCE DRIVERS

• Provides & enhances

natural and manmade

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6000 21 CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL

Safeguard the Natural Environment & Ensure a Resilient Built Environment



HALLENGE: Rapid development and urbanisation in India has materialised with the use of outdated construction methods — resulting in significant increases in energy use and related greenhouse gas emissions. The housing sector accounts for nearly 40% of energy consumption, yet developers have been deterred from using more efficient building practices due to the additional costs incurred by green building technologies.

NTERVENTION: Intended to promote greener building practices and techniques, the Government of India's Ministry of New and **Renewable Energy developed the national** five-star Green Rating for Integrated Habitat Assessment (GRIHA), a rating system which recognises newly constructed or retrofitted buildings that achieve high levels of energy efficiency. GHIRA has become the preferred and mandated green certification program for public entities and municipalities in India, and a number of municipal corporations offer tax and premium rebates for buildings that meet GRIHA standards. For example, Pimpri **Chinchwad Municipal Corporation (PCMC)** in Maharashtra State offers various financial incentives to developers and occupants of **GHIRA-compliant buildings, including rebates** on premiums paid by developers as well as property tax discounts to residents. PCMC also offers expedited approval processes for developers meeting GRIHA standards and has now adopted regulation for all future buildings to be GRIHA rated.



DUTCOMES: The number of certified green buildings in India has exploded over the past four years. In 2003, only 20,000 square feet of green building area existed in the country. Today, India can count more than 1.35 billion square feet. Like Pimpri Chinchwad, cities in the state of Maharashtra are becoming centres of green building activity by offering property developers, owners, and residents various financial incentives and rebates.

KEY LEARNINGS: The use of financial incentives successfully transformed the construction market in several Indian cities, and can serve as a blueprint for cities around the world as they seek to encourage widespread adoption of green building practices and techniques.

Launch streetlight replacement drive to upgrade lighting in Accra



RESILIENCE CHALLENGE

Streetlights are a critical service that the AMA provides to residents of Accra. The multitude of benefits from this service include improving public safety and security, and enabling social and economic activity in the evenings.

Over the last few years, the AMA, along with the Government of Ghana and various partners, have invested heavily in enhancing visibility on the city's roads through a range of street lighting projects. In 2015, the City utilised a grant from the Chinese government to embark on a solar powered street lighting program, installing a total of 1,000 solar streetlights at bus stops and public areas to improve security.

With the assistance of the Ministry of Energy, the City has also completely replaced high-pressure sodium lamp streetlights with LEDs on all the principal streets of Accra.

INITIATIVE IN BRIEF

The Assembly is building on these efforts by collaborating with the Millennium Development Authority (MiDA) and other assemblies on a comprehensive Energy Efficiency and Demand Side Management (EEDSM) project, aimed at ensuring energy efficiency and sustainable power consumption. Working with other assemblies, MiDA will replace an estimated 18,000 streetlights within Accra West and Accra East areas with LED bulbs, and engage in an energy efficiency survey targeting 1,000 households across the country. The project will also train energy auditors to help public institutions conserve energy with retrofit work in six public buildings, including supporting the Adabraka Polyclinic to convert its energy supply to solar.

OWNER/LEAD MiDA Metro Transport Department

Q. TIMELINE Short-term **STATUS** Ongoing

ES PARTNERS Metro Plan Coordination

Roads

Unit

• Ministry of Energy • Department of Urban

• Provides reliable communication & mobility

RESILIENCE DRIVERS

• Ensures continuity of

critical services

21 CONNECTION TO **MEDIUM TERM** DEVELOPMENT PLAN GOAL



Create Opportunities for All

Designation 18077.1

A City that optimises the use of new and existing resources to proactively serve citizens with greater accountability and transparency.

PILLAR 2



Like many cities globally, the city of Accra aspires to build and support healthy and resilient urban communities; where residents thrive and can realise their full potential. The resources available to Accra to achieve such an ambitious goal are however limited. Therefore, accountability and transparency in resource allocation and outcome measurement are particularly crucial for advancing this agenda. Creating a culture of accountability and transparency will require the collective efforts of the AMA, residents, and a broad stakeholder community.

"Citizen engagement is important to the extent that it ensures involvement, participation, ownership and buy-in to the city's agenda."

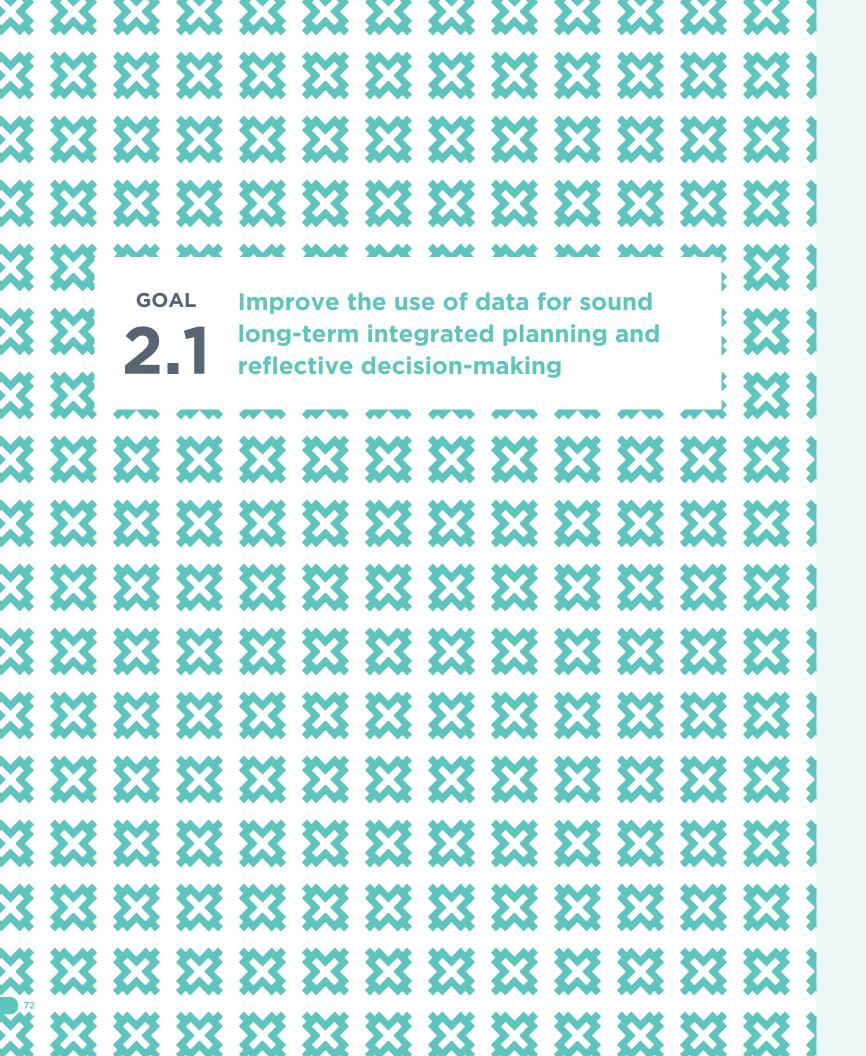
> - Mr. Abdul Mujeeb Salifu, People's Dialogue on Human Settlements

Our city must embark upon a new social contract to improve residents' trust in the spirit of civic partnership. We believe resident engagement and feedback are important elements for increasing accountability of the AMA and service providers, that will warrant greater accountability for all. Engendering trust between Accra's residents and the AMA will require strengthening our existing assets: our staff capacity, revenue mobilisation, and the collection, deployment, and analysis of data for evidence-based decision-making.

Increasing engagement between the AMA and its people is a core part of shaping Accra's resilience. Doing so will lead to greater citizen support for, willingness to invest in (through taxes and rates), and use of AMA's programs and development efforts. Expanded engagement with citizens will also allow for better data collection to ensure that the AMA's investments are meeting the specific needs of the community.

As one of the more established MMDAs, the Decentralisation Act positions the AMA as a leader and facilitator towards improving cross-jurisdictional collaboration, managing new and existing resources, and promoting transparency with newly formed neighbouring municipalities. To this end, Accra's Resilience Office is poised to work with neighbouring MMDAs to effectively and efficiently leverage limited existing and emerging resources to optimise planning efforts which promote multiple benefits — thereby improving municipal service delivery for all, especially to our city's most vulnerable populations.





To capitalise on the opportunities associated with urbanisation, and given the limited resources within the AMA, we recognise the need to be strategic about investments made across different sectors.

To achieve this goal and ensure sustainable development, the City of Accra seeks to deepen its collection, management, and use of data, as well as its ability to engage in data-driven planning processes. A data-driven city is better able to optimise resources, monitor outcomes, and most importantly, make informed decisions. Data leads to insights; and we can turn those insights into plans, decisions, and actions that support us in achieving our objective of making Accra a more resilient city. Becoming smart with our data is a key part of our path towards becoming more resilient. We aim to make the use of data and strategic planning integral to the City's efforts around addressing its key shocks and stresses, including inadequate transportation, poor waste and sanitation management, and seismic risks. In taking a data-driven approach and prioritising planning in these areas, the AMA will be able to take an integrated approach to service delivery and decision-making. 10

Create a Data Unit within AMA to help collect and analyse data for better long-term planning



RESILIENCE CHALLENGE

A critical step toward Accra becoming a data-driven city is establishing a data unit at the Assembly. There is currently no systematic way of collecting, analysing, and maintaining city specific data for easy retrieval, which impacts decision-making by city leaders. There is a need for comprehensive data collection and mining for the purposes of planning the city – building off of Accra's vision to be a "smart, sustainable and resilient city."

INITIATIVE IN BRIEF

The AMA, in partnership with Bloomberg Philanthropies, as part of the Bloomberg Initiative for Global Road Safety

(BIGRS) and in line with the Road Safety Action Plan, has recently set up and established a new Data Unit, which will initially focus on the collection of data on road safety.

Essential roles of the Data Unit are to include: evaluate existing data sources, to understand quality of data and potential gaps; enable the development of credible and robust data-collection processes, which are essential in producing reliable outputs; convert existing data into useable forms, and ensure the continuous availability of data for use by the city's departments or agencies; and most importantly, convert data into useable information.

The newly established Data Unit will eventually be expanded to manage data from other AMA Departments, including waste management, transport, metropolitan health, physical planning, and disaster prevention and management. This will enable integration between stakeholders and departments and new types of resource sharing. Furthermore, the Data Unit will establish a datadriven culture at the heart of the AMA, which can serve as a model for other city authorities in Ghana.

Launch an employer / AMA transit task force

RESILIENCE CHALLENGE

While the majority of workers traveling by vehicle commute into their places of work in Accra using trotro Accra has also seen an increasing trend of privat vehicle ownership and usage, both of which contribut to road congestion. Large-scale employers are one the main levers to help enact positive change in Accra transportation system and influence behaviours commuters.

During a focus group of large employers based in th Central Business District, held as part of the Resilience Strategy development process, participants were vocal about their desire to see City government facilitate a greater dialogue with employers on mobility solutions. They would like to hear more from government about ways to partner, and to receive new and improved data that can help to make the business case for improved transport and mobility. They also expressed an eagerness to directly support improved mobility in Accra by taking independent action, particularly through working with their own employees. Examples of actions that could be taken by large employers, and which demonstrate multiple resilience benefits, include:

• reviewing their internal transport policies and incentives (e.g. eliminating private car financing mechanisms,

OWNER/LEAD Metro Statistics Unit

() TIMELINE Short-term **STATUS** Ongoing

ES

PARTNERS

- Bloomberg Initiative for Global Road Safety
- Institute of Statistical and
- Social Research · People's Dialogue

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- **RESILIENCE DRIVERS** Provides reliable communication & mobility • Promotes leadership &
- effective management
- Empowers a broad range of stakeholders
- Fosters long-term & integrated planning

CONNECTION TO MEDIUM TERM DEVELOPMENT **PLAN GOAL** Maintain a Stable. United and Safe Society

21

OWNER/LEAD Metro Transport Department Resilience and Sustainability Unit

Q'

PARTNERS

ES

• Large formal employers within the AMA (20 or more employees)

()

TIMELINE Short-term **STATUS** New

RESILIENCE DRIVERS • Supports livelihoods & employment

es	transport use, etc.);
os,	• expanding work-life flexibility (e.g. piloting remote
ite	working and flexible work policies, providing on-site
ite	day care facilities for dependents); and
of	• elevating best practices (e.g. publicly acknowledging
a's	employees for taking public transport, launching plat-
of	forms to coordinate carpooling).
	INITIATIVE IN BRIEF
he	The AMA will launch a taskforce comprised of large
ce	employers within the AMA's jurisdiction that will engage
eal	in multiple activities. They will:

reducing the volume of free parking, incentivising public

• meet to strategise and collaborate on solutions to mobility challenges faced by employees in Accra;

- build strong datasets on journeys to and from places of work, to help the AMA better understand commuting patterns and their impacts on employee productivity; and
- work with the AMA and employers to design programs that improve mobility and decrease traffic congestion in Accra. Examples of incentives the AMA might design include green award schemes and awarding service delivery preference status to participating institutions.

- Promotes cohesive & engaged communities
- Fosters economic prosperity Provides reliable
- communication & mobility
- Promotes effective leadership & effective management
- Fosters long-term and integrated planning

21

CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL Maintain a Stable. United and Safe Society

INSPIRATION Travel SMART Programme in Cape Town, South Africa²⁷

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CHALLENGE: In Cape Town, a rise in vehicle ownership and usage, particularly of single occupancy vehicles, has led to increased traffic congestion, resulting in longer peak periods and lengthier commutes throughout the city.

INTERVENTION: In 2011, the City of Cape Town piloted the Travel SMART programme, originally known as the Employee Trip **Reduction Programme, to improve mobility** and reduce congestion. Partnering with the city's private sector, the programme assisted large employers in fostering behaviour change among their staff toward more sustainable methods of urban transport. Seven participating organisations received tailored trip reduction plans, establishing target goals and possible incentives. Each plan was based on a thorough analysis of the organisation's background, core business functions, employee demographic and volume, and a review of existing facilities, policies, and procedures relevant to the transit program.

OUTCOMES: Intended to encourage large employers and their staff to move towards sustainable transport behaviour, the Travel SMART Programme encouraged the reduction in single occupancy vehicle use through a variety of initiatives and projects. Specifically, the programme aims to reduce: the use of single occupancy vehicles, vehicle emissions, costs for commuters, and road congestion.

KEY LEARNINGS: This case study demonstrates how the City of Cape Town municipal government convened a group of employers to align on mobility challenges and worked toward collective action. An internal evaluation of Cape Town's Travel SMART Programme highlighted a series of key

- Corporate transit initiatives should be managed by external transportation engineers to avoid municipal bureaucratic and political
- Corporations should financially contribute to the planning and implementation of transit initiatives to incentivise engagement and interest;
- Programs should be implemented within realistic time frames tailored to targeted corporations:
- Legislation mandating some degree of participation is necessary to ensure project sustainability;
- Programs must be appropriately staffed with sufficient capacity to ensure long-term viability;
- A clear line of communication needs to be established to ensure corporations understand their programmatic roles and responsibilities;
- Programs must be regularly evaluated, and surveys of corporate staff should be done in a positive manner which encourages a high level of participation.

Launch a research and data collection program on transport, to holistically understand commuting patterns and transportation trends

RESILIENCE CHALLENGE

As Accra's population has grown, the total number of vehicles on the road has increased dramatically. This has led to severe traffic congestion, an increase in roadrelated accidents and deaths, environmental pollution, loss of productivity, and stress for workers and residents as they seek to move around the city.

Baseline data is critical for understanding the dynamics and patterns of urban transportation systems and their users. However, good quality, up-to-date data of this type to effectively manage transportation challenges.

urban public transport through collecting:

is lacking in Accra, stymieing the efforts of city authorities • In order to collect this data, we will expand transport research engagements by collaborating with both local and international research and donor partners. For **INITIATIVE IN BRIEF** example, a critical partnership with the Ghana Urban The City seeks to gather data on household travel Mobility and Accessibility Project (GUMAP) funded patterns, demographics and location, freight transport, by the Swiss State Secretariat for Economic Affairs and travel demand load to better inform investments and (SECO) will be built upon. Under the GUMAP project, policy. As part of this program, the AMA aims to better studies will be conducted on the accessibility needs of understand road traffic, transport infrastructure, and the population of the AMA and neighbouring MMDAs, as well as on passenger demand and operator capa-• key travel demand metrics, including number of trips bility. These will be complemented by the development and trip rates, trip purpose, origins and destinations, of an urban mobility database at the regional scale. travel times, distance, and mode;

þ **OWNER/LEAD** Metro Transport Departmen

ES PARTNERS

- University of Cape Coast • GUMAP
 - GPRTU
 - Sam Schwartz Engineers
 - SECO
- **TIMELINE** Short-term **STATUS** New
 - Ministry of Local Government and Rural Development-
 - Urban Development Unit

(D)

- · road traffic indicators, including road accidents and safety data, vehicle age, vehicle fuel types (important for assessing pollution/GHG emissions), and traffic volume occupancy; and
- data on road infrastructure, including road network total length, road density, road quality, etc.
- This data will support decision-making, planning, management, and urban transport operation processes, contributing to the development of safe, convenient, efficient, affordable, equitable, and sustainable urban transport systems in Accra.

()**RESILIENCE DRIVERS** Provides reliable

- communications & mobility • Promotes leadership &
- effective management
- Fosters long-term & integrated planning

21

CONNECTION TO **MEDIUM TERM** DEVELOPMENT PLAN GOAL Maintain a Stable, United and Safe Society

Collaborate with the Ministry of Sanitation and Water Resources (MSWR) on the development of the Accra **Climate Strategy and Integrated Urban Environmental** Sanitation Strategy and Master Plan

RESILIENCE CHALLENGE

Poor sanitation leads to significantly polluted waterways in Accra, turning floods into events that spread waterborne diseases and infections, such as cholera, thereby weakening Accra's resilience. At a household level, a lack of adequate and safe sanitation translates directly into increased health challenges, with diarrhoea and other health complications a regular part of peoples' lives. This indirectly reduces time for studying, employment, and leisure, leading to a stark decrease in quality of life. Further, the need to rely on informal sites for sanitation, such as fields and abandoned buildings, has been shown globally to be a strong factor in increasing violence; assaults against people while defecating is a serious threat to personal safety and property. This is particularly notable for women, who have an increased need for regular spaces of sanitation during menstruation.

INITIATIVE IN BRIEF

One important effort to improve this dangerous situation in the AMA and GAMA is the development of a Master Plan for Drainage, Sanitation and Solid Waste management. The GAMA Sanitation and Water Project, under the Ministry of Sanitation and Water Resources,

has procured the consultancy services of the Indian firm WAPCOS Limited with its local partner, Watertech Limited Ghana, to undertake this assignment. The Master Plan will provide a strategy for the effective management of environmental sanitation including solid and liquid waste as well as storm water runoff from the GAMA area, solutions to existing environmental sanitation and drainage problems, and guidance for the implementation of future environmental sanitation and drainage improvements.

As an MMDA in the Greater Accra Metropolitan Area, the AMA is an active stakeholder in this process and is contributing to the preparation of this Master Plan. The Assembly will build on the plan, and ongoing primary research, to develop a city-level Solid Waste Management (SWM) Strategy. This plan will include a review of current SWM infrastructure, the existing management system for partner franchise agreements, and sector governance and policies. To secure buy-in from citizens, community consultations will be held to ensure that citizens have ownership of both strategies. This initiative is complementary to Initiative 4.

and identify legislative and other actions required to improve the city's resilience to earthquakes

RESILIENCE CHALLENGE

The AMA suffered the impact of damaging earthquakes Partnering with the National Disaster Management in 1862, 1903, and 1939.²⁸ In the event of an earthquake, Organisation (NADMO), the AMA will conduct a buildings within an eighty-kilometre radius from the vulnerability and capacity assessment to determine epicentre could experience medium to serious destruction populations and systems at risk, and ascertain the depending on the sub-surface conditions. Earthquakes preparedness of systems to withstand and respond to can trigger building collapse, fire outbreak, flash floods, earthquakes. This initiative will include: or a combination of all three.

• a review of existing statutes and protocols (including ACT 927-National Disaster Management Act, ACT Existing barriers to ensuring seismic resilience in Accra include haphazard land use management and controls, 925-Land Use and spatial Planning Act, ACT 819-Engiunqualified building professionals, the use of inadequate neering Council Act, LI 1630-National Building Regulaconstruction practices and materials to save costs, and tions, National Building Code, National Building Guide, gaps and undue delays in the building permitting process and National Platform for Disaster Risk Reduction) that encourage hasty construction. Awareness of the risk to determine any required changes that would help accompanied with enforcement of quality control and strengthen Accra's resilience towards earthquakes; and assurance measures in the areas of land use planning, • collaboration with the Engineering Council to organise geo-technical studies, design, and construction will be key training workshops for artisans and technicians to mitigating the impact of a future earthquake shock on around appropriate implementation of the National the AMA. Building Guide to minimise the risk posed by unqualified building professionals in the construction industry.

OWNER/LEAD Metro Waste Management Department

D. TIMELINE Short-term **STATUS** Ongoing

ES PARTNERS

- All MMDAs within GAMA • World Bank
- Metro Public Health Unit
- Ministry of Sanitation and Water Resources
- manmade assets • Ensures continuity of critical

()

services • Fosters long-term & integrated planning

RESILIENCE DRIVERS

• Ensures social stability,

security and justice

• Ensures public health services

• Provides & enhances natural &

CONNECTION TO MEDIUM TERM DEVELOPMENT

0-0-0 21

PLAN GOAL Create Opportunities for All

þ OWNER/LEAD Metro Disaster Management and Prevention Department

TIMELINE Medium-term

STATUS New

(D)

53

PARTNERS Ghana Geological Survey Authority (GGSA)

- Ghana Standards Authority (GSA)
- Land Use and Spatial Planning Authority (LUSPA), **Engineering Council**

14

Conduct an assessment of Accra's vulnerability to seismic activity and its preparedness to respond to seismic shock.

INITIATIVE IN BRIEF

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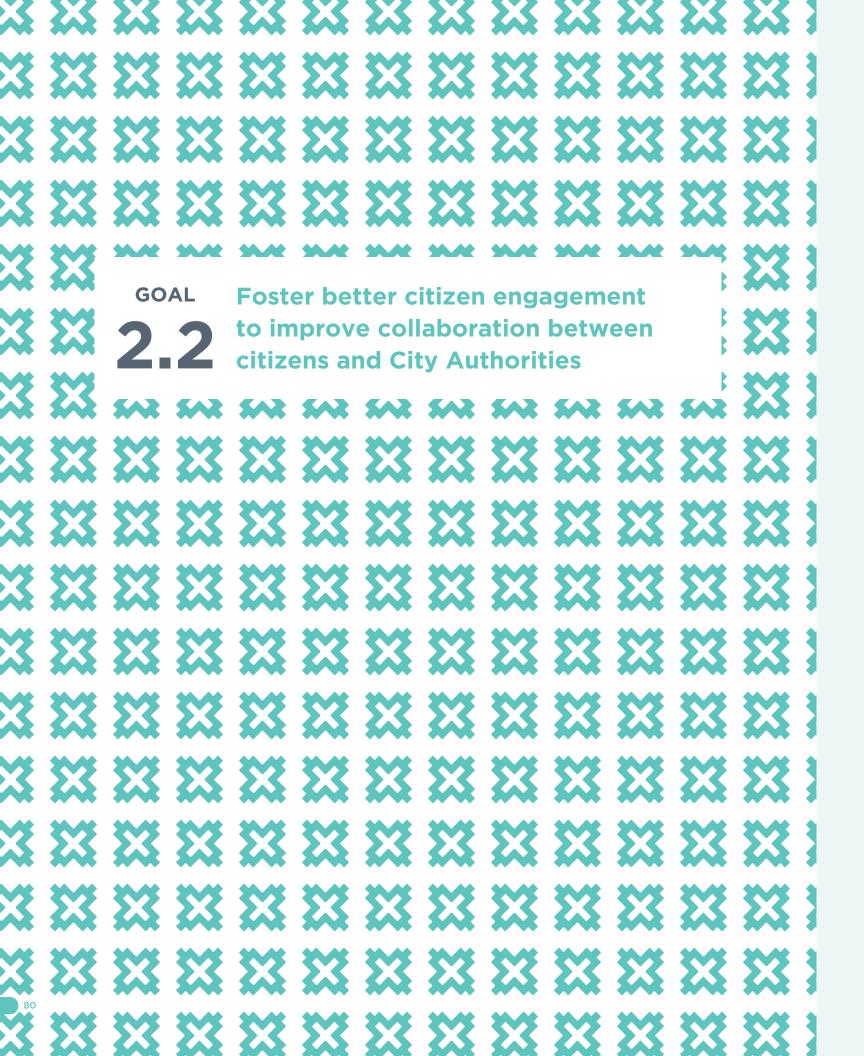
RESILIENCE DRIVERS

- Supports livelihoods & employment
- Provides & enhances natural and manmade assets
- Ensures continuity of critical services
- Promotes leadership & effective management



CONNECTION TO **MEDIUM TERM** DEVELOPMENT **PLAN GOAL**

Safeguard the Natural Environment & Ensure a **Resilient Built Environment**



Currently residents' willingness and ability to engage with the AMA is made challenging by a lack of transparency and trust, limitations in effective communication systems, difficulty in accessing information, and poor planning of engagement efforts. Building a more resilient Accra requires pro-active and extensive collaboration and cooperation between individuals, civil society, businesses, institutions, and city authorities. This will require open and interactive communication between the AMA and citizens, and help build the public's trust in local government and promote accountability, engagement, and collaboration. Improving engagement will lead to greater citizen support for, and use of, AMA's programs and development efforts. It will also help the AMA to support citizens during periods of shocks and stresses, like floods and other natural disasters.

The AMA will strive to support effective civic engagement through participatory methods (e.g. bringing together politicians, policymakers, residents, and experts to actively participate in the formulation of ideas and to drive a sense of ownership and inclusion); guaranteeing an inclusive approach that gathers inputs from a wide range of stakeholders; ensuring ongoing engagement with continuous feedback loops. This will pave the way for all content, process, and information to be transparent and accessible, with clear objectives and expectations. Strengthen the existing capacity of the AMA's Community **Development Department through training and strategic** planning, enabling staff to expand outreach



RESILIENCE CHALLENGE

Within the AMA, the Social Welfare & Community Development department is tasked with planning, initiating, and coordinating community-based projects, amongst other responsibilities. This role is critical, working in partnership with other departments in the AMA on a project-by-project basis to assist with the coordination of community engagement efforts. A recent internal AMA assessment revealed a gap in the department's capacity and skills to effectively and properly engage with communities. The department staff's understanding of issues of resilience in relation to the shocks and stresses the city faces is crucial to facilitate their community engagement.

INITIATIVE IN BRIEF

To address these gaps, the AMA will launch a program to build the capacity of staff in the community engagement division through workshops on stakeholder engagement, communication, and delivery. Acknowledging the critical role this department plays in strengthening the resilience building efforts of the AMA, the Resilience Office will also provide trainings on urban resilience so that this lens can be integrated into the cross-cutting work undertaken by the community engagement division. The Resilience Office will also assist this department in the development of a strategy to ensure regular engagement with the various communities in the AMA.

OWNER/LEAD Metro Human Resource Management Unit;

Social Welfare and Community Development Department

0 TIMELINE Short-term **STATUS** New

ES

PARTNERS Metro Information Service Unit

- Metro NCCE
- Metro Public Relations
- Department
- Metro Plan Coordination Unit
- Resilience and Sustainability Office

- **RESILIENCE DRIVERS** • Promotes cohesive & engaged communities
- Empowers a broad range of stakeholders

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• Fosters long-term & integrated planning

21

CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL Safeguard the Natural **Environment & Ensure** a Resilient Built Environment

accountability

RESILIENCE CHALLENGE

Citizen access to the AMA is currently limited by several challenges, top among them being the inconvenient timing and location of in-person engagements and a lack of trust and confidentiality in the process. Increasingly, local governments around the world are addressing similar issues and are leveraging e-governance platforms to expand the reach and impact of civic engagement.

INITIATIVE IN BRIEF can also increase the feelings of having spoken to actual In light of this global trend and the challenges faced in City officials — increasing levels of trust, accountability, Accra, the AMA will set up a call centre whereby a and success for citizens. front line of call takers, reachable through a toll-free number, can receive citizen complaints or requests The AMA's decision to launch a new call centre builds related to any municipal function. This will allow citizens off a pilot launched using a WhatsApp-based platform to report problems and issues either directly to the where residents could report illegal dumping of refuse relevant departments or to a general centre for onward within the AMA by sending messages which describe referral; report illegal or inappropriate behaviour that is the problem, supported by photographs. These messages in contravention of AMA bye-laws; access information were passed on to the Waste Management department about community development topics; share opinions and for immediate action. The Assembly has since established priorities from the community level; and seek clarity on a Rapid Response Team to address challenges reported events happening within the community. The AMA will by residents as quickly as possible. The new call centre commit to rapid responses to calls, with a turnaround will leverage the existence of this team in addressing time of 24 hours to 5 days. complaints.

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OWNER/LEAD	PARTNERS
Resilience and Sustainability Unit (AMA)	Metro Social Welfare and Community Development Department
TIMELINE Short to medium term STATUS New	 App developers Public Relations Departme Information Service Depart NCCE

16

Develop a citizen engagement platform and protocol within the AMA that allows for proactive and responsive mechanisms for increasing transparency and improving

Call centres are one of the most impactful forms of e-governance due to their relative simplicity and high accessibility. They are easily understood by most people and use technology that is more simple than other forms of ICT, such as internet-based applications that require a smart phone. Call centres can be easily accessed by a wide spectrum of income levels due to the high levels of mobile phone penetration in Accra. Speaking with an actual person can not only be more efficient for residents, but

lic Relations Department rmation Service Department $\langle \rangle$ **RESILIENCE DRIVERS** • Promotes cohesive &

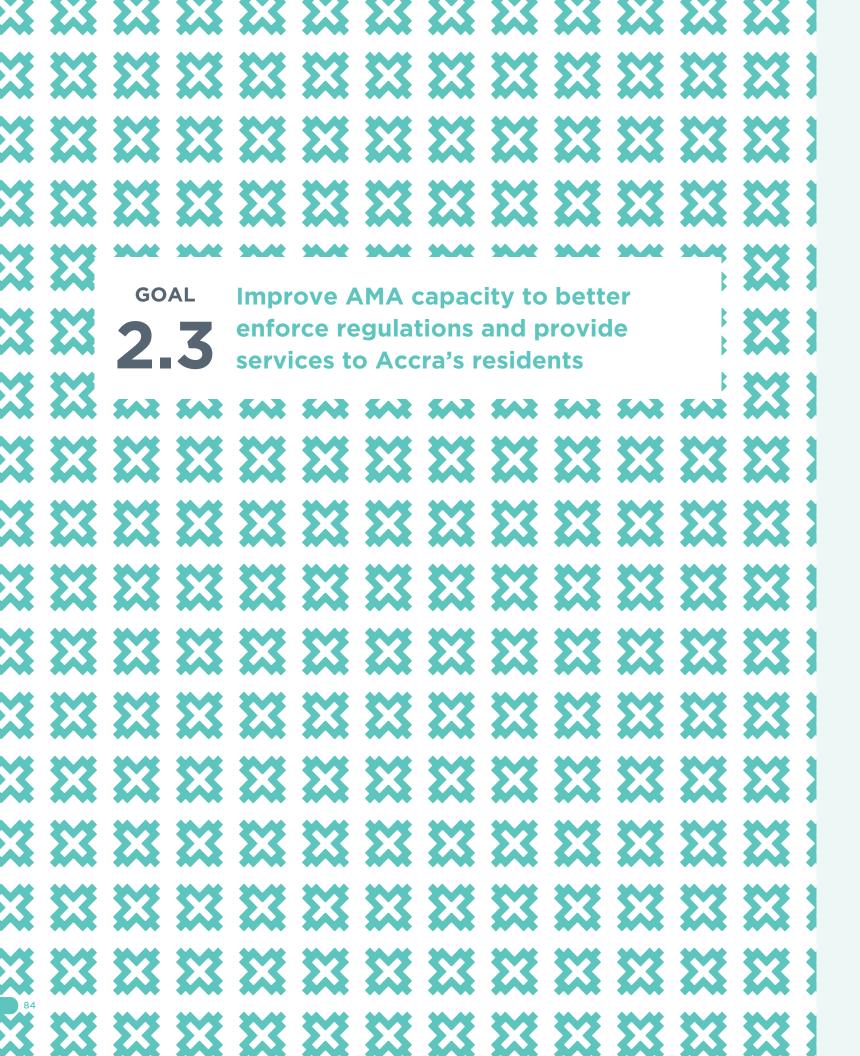
engaged communities • Ensures social stability, security & justice • Provides reliable

communication & mobility • Provides leadership &

effective management



CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL Maintain a Stable, United & Safe Society



As a local government which aims to provide efficient services, our staff need to be well equipped, well trained, and have the appropriate tools to effectively implement and deliver policies and programs in times of stability, as well as in times of crises. As an institution, we also need to have the financial resources to fulfill our mission. We aim to improve existing staff's productivity and capacity through specific training and by being more proactive with employee mentoring and coaching. We will also ensure that appropriate technology and tools that can help the AMA staff to be more effective and efficient are available and utilised. Finally, we will engage in new approaches for collecting revenue from our residents and businesses.

Improve oversight of waste collection service providers through better deployment of data and development of stronger enforcement mechanisms

RESILIENCE CHALLENGE

Until recently, solid waste collection was the direct responsibility of the AMA, which was a significant burden on the city's annual budget. Records from the AMA's 2014 Annual Action Plan indicates that prior to 2010, the Assembly was spending more than 60% of its budget on waste collection.

In 2011, formal solid waste collection within the jurisdiction of the AMA was privatised, operating on a franchise basis. Service providers are obliged to collect waste and corresponding fees from service beneficiaries (e.g. households, businesses, other institutions) under a polluter-pays policy termed Fee and Performancebased Solid Waste Collection Service. The arrangement was implemented in order to improve service coverage and transfer some of the financial responsibilities to beneficiaries, in order to increase the financial sustainability of the waste collection system.

Service providers are required to adhere strictly to the terms of reference of their franchise agreement, which subject them to activity and performance monitoring by the AMA. The City is responsible for tracking and following up on quarterly and annual reports, and the assessment of progress on key performance indicators, including: service coverage, frequency of collection, collection effectiveness (e.g. amounts collected), quality of service (e.g. cleanliness of container sites, assigned markets and lorry parks, health and safety of frontline staff, covering of waste in transit), vehicle and operational performance, cost effectiveness, and affordability.

The current system of outsourcing waste collection to private contractors is reflected on paper but in reality, the AMA does not have sufficient capacity to collect and deploy data to fully monitor and enforce the terms of these contracts.

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OWNER/LEAD

Metro Human Resource Management Unit; Social Welfare and Community Development Department

D.

TIMELINE Short-term **STATUS** New

ES PARTNERS

- Metro Information Service Unit
- Metro NCCE Metro Public Relations
- Department
- Metro Plan Coordination Unit • Resilience and Sustainability
- Office

じじ **RESILIENCE DRIVERS**

- Promotes cohesive & engaged
- Empowers a broad range of stakeholders
- Fosters long-term & integrated

CONNECTION TO MEDIUM TERM DEVELOPMENT **PLAN GOAL** Safeguard the Natural Environment & Ensure a Resilient Built Environment

21



INITIATIVE IN BRIEF

To improve the capacity of AMA staff to regulate a enforce waste collection in Accra, the AMA will:

- conduct a review of all existing service provider co tracts, and conduct interviews with relevant sta holders to develop a baseline evaluation of the curre collection system and identify KPIs that are measured able and enforceable;
- develop a training in the areas of results-based mo toring and contract management to enable AMA sta to more effectively monitor and manage services redered by waste management service providers;
- partner with the Environmental Service Provide Association (ESPA) to explore available technology solutions to be used by service providers and city staff for tracking and measuring performance of waste collection (examples include technology focused on collection effectiveness, such as GPS systems in trucks, weight sensors, and digitisation of dump tickets, to technologies focused on customer engagement);
- convene ESPA and other relevant partners to discuss results of the audit and leverage data to collaboratively develop a monitoring framework; and
- · coordinate across newly formed MMDAs to build their capacity to oversee waste collection.

PILLAR 2

GOAL 2.3

and	This initiative is complementary to Initiatives 5 and 26 which together seek to address the complex challenges
on-	related to solid waste management in Accra. Successful
ıke-	implementation of this initiative will have multiple
ent	benefits:
sur-	• improved enforcement of waste collection by-laws
	• optimised management and execution of service pro-
oni-	vider contracts
taff	enhanced sanitation management
en-	• reduced flood risk
ers	



CHALLENGE: India's Department of Information Technology (DoIT) works with local governments to expand ways of connecting with citizens using ICT and e-governance practices. In the early 2000s, part of their program included a strong focus on call centre implementation, to expand people's access to critical information and government services.

INTERVENTION: Together with the DoIT, Thiruvananthapuram, the capital city of Kerala State, launched a one-stop integrated citizen service centre in 1999. The municipality made use of a Citizen Call Centre (CCC) to provide information related to citizens' transactions and government services. Additional functionality was later added to the CCC. including facilitating utility bill payments and applications, providing information on government programs and schemes, accessing other specialty services, and accepting university fee payments. Further, the CCC serves as an official complaint department for citizens. The call centre can be reached between 9AM and 7PM every day (excluding public holidays) and can be accessed toll-free.

OUTCOMES. The success of the Thiruvananthapuram pilot encouraged the government of Kerala State to roll out more call centres, which can now be found in each of the state's 14 districts. The state is currently exploring the potential for expanding the CCC into a more expansive contact centre — which will include an email and web portal, social media integration, online chat interfaces, SMS/MMS integration, and more.

KEY LEARNINGS: The call centres have greatly expanded citizen engagement and their access to government in Kerala. Their success demonstrates that a) call centres hold immense potential as an engagement platform, and b) implementing a call centre requires several key design principles. By gradually rolling out a call centre and growing it slowly (in both size and available services) based on learnings from earlier phases, Kerala created a thriving engagement platform where citizens can access municipal services and input free-of-charge. They did this by also ensuring the following components in the system: free access, extensive infrastructure support, gradual programmatic expansion, usability for multiple purposes, alignment to topics and uses that are important to citizens, and integration across government departments so that callers could be effectively directed from one department to the next.



CHALLENGE: The Pune Municipal Corporation (PMC) grapples with inefficient waste management; this in combination with an upsurge in demand, yet diminished consumer confidence, has resulted in poor service delivery. A baseline evaluation of the city's waste management system identified gaps related to inadequate processing capacity, limited collection services at the primary household level, poor coordination and outdated equipment for collection at the secondary level, pervasive citizen apathy directed toward proper waste collection, insufficient monitoring and governance of the services and staff, and a lack of clear policy, land provisions, or infrastructure.

INTERVENTION: To address these gaps, the PMC set out to improve accountability and better manage waste collection via an integrated waste management system focused on leveraging citizen engagement, minimising waste generation, and cutting the rates of uncollected and unprocessed waste. The municipality has undertaken a series of regulatory and awareness-raising actions, including:

- Launching an intensive campaign on source segregation
- Promoting processing of wet waste at the household and city level

- Incentivising compliance by waste collectors and service providers
- Levying a component of property tax for solid waste management
- Restructuring the Department of Sanitation and building capacity of existing staff
- Instituting and deploying an IT-based system for operations monitoring, to improve evaluation and data aggregation
- Forming a Monitoring Committee comprised of the Mayor, Members of Parliament, head of the Department of Sanitation, community members, and diverse political leadership
- CUTCOMES: The PMC established a project management unit for a two-year period, responsible for preparing policy and tender documents, providing transaction advisory services, accessing private CSR funds to support the implementation of sanitation department initiatives, and fundraising for and managing the project budget.
- KEY LEARNINGS: Addressing the sanitation challenge in Pune required deployment of a cross-sectoral, multi-prong approach. Additional learnings have included the following:
- Early consideration of revenue generation and sustainability planning
- Consideration of current waste management needs as well as those of the future, given the reality of rapid urbanisation
- A comprehensive waste management plan that addressed the issue of inadequate cost recovery for rendered services
- Investment in an extensive community sensitisation campaign on the new policy and consideration of residents as part of the solution
- Integration of informal waste collectors allowed for a more responsive plan
- Recognition that an over-dependence on landfills could result in environmental and social challenges
- Use of available technology solutions to track and measure performance.

Improve capacity of building inspectors through comprehensive training in building codes, technical standards, and risk-based approaches to enforcement

RESILIENCE CHALLENGE

Building inspectors are important stewards of the physical development of Accra, working to monitor general construction, physical development, and planning requirements in all settlements of the city. Despite these critical responsibilities, inspectors typically may not have all the basic skills and training to perform their work to satisfaction. This has contributed to a number of stresses experienced in Accra, including uncontrolled development, construction on water courses, and non-compliance by developers with planning bye-laws, building regulations, and standard construction practices. These slow-burning stresses often lead to some of the deadly shocks Accra has faced, including building collapse, fire outbreaks, and flooding.

INITIATIVE IN BRIEF

As part of building the city's resilience to these shocks and stresses, the AMA is committed to providing the requisite training and capacity building for building inspectors. First, building inspectors will be trained on the National Building Regulations 1996 (L.I.1630) with particular emphasis on the engineering standards. This will help them to appreciate their role as frontline individuals in achieving the National Agenda for a Sustainable Built Environment and enable them to actively play their respective role. Second, building inspectors will be trained on the Land Use and Spatial

4 OWNER/LEAD Metro Works Department, Metro Physical Planning Department

0 **TIMELINE** Medium-term **STATUS** New

ES.

- PARTNERS Ghana Geological Survey
- Authority Ghana Institution of Engineers
- Architectural and Engineering Services Ltd.
- National Disaster Management Organisation

٢ **RESILIENCE DRIVERS**

- Enhance and provides protective natural & manmade
- assets • Ensures continuity of critical services
- Promotes leadership & effective management
- Fosters long-term and integrated planning

Planning Act 2016 (Act 925) and the Ghana building codes (currently under development). Third, the AMA will also that ensure building inspectors are trained on current trends in construction as well as on technical report writing, to better understand and articulate the structural and engineering conditions of the building. Finally, the AMA will incorporate existing hazard mapping into the training to educate building inspectors about vulnerability and risk as a first step towards developing a risk-based approach to construction inspections.

These trainings will improve the capacity of building inspectors to:

- review building plans to ensure they meet the building code;
- work effectively with architects, engineers, and contractors;
- monitor construction sites periodically to ensure overall compliance;
- use instruments, devices, and test equipment to effectively perform inspections;
- inspect structural, mechanical, plumbing, electrical, and other systems to ensure that buildings are safe and have structural integrity;
- keep daily logs, including photographs taken during inspections; and
- produce technical reports of their findings.

Improve revenue collection

RESILIENCE CHALLENGE

It is the responsibility of MMDAs to provide critical As such, the AMA is embarking on efforts to improve services as well as maintain law and order. These revenue generation. The AMA will engage the private responsibilities require sufficient financial capital and sector to outsource the collection of rates and other funding. Since Ghana adopted decentralised governance payments from businesses and households. By using in 1988, MMDAs have been given the mandate to generate companies with proven expertise, this will reduce leakage revenue. MMDAs are required to generate enough and non-payment. An increase in the city's own revenues Internally Generated Funds to enable them carry out will reduce its dependence on other funding sources and will increase the availability of resources for the City. development projects. This revenue is used to support the statutory District Assemblies Common Fund (DACF) for the provision of infrastructural development and services to residents.

However, year on year, both the central government and many MMDAs have been experiencing budget deficits. The AMA is not immune to this challenge and spends more than it is able to generate as revenue. Collecting revenue of property rates and business operating payments has proven challenging due to issues such as leakage, unmotivated staff, and non-payment. Improving revenue collection and generation is key to improving city services.

1 **OWNER/LEAD Finance Department**, **Revenue Unit**

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TIMELINE Short-term **STATUS** Ongoing

Systems Unit • Budgeting and Rating

Public Relations Unit

• Metro Social Welfare and

Community Development

Management Information

ES

PARTNERS

Market Unit

Department

Department

CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL Maintain a Stable United & Safe Society

21

PILLAR 2 GOAL 2.3

INITIATIVE IN BRIEF

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RESILIENCE DRIVERS

- Fosters economic prosperity
- Promotes leadership & management
- Ensures continuity of services
- Fosters long-term & integrated planning

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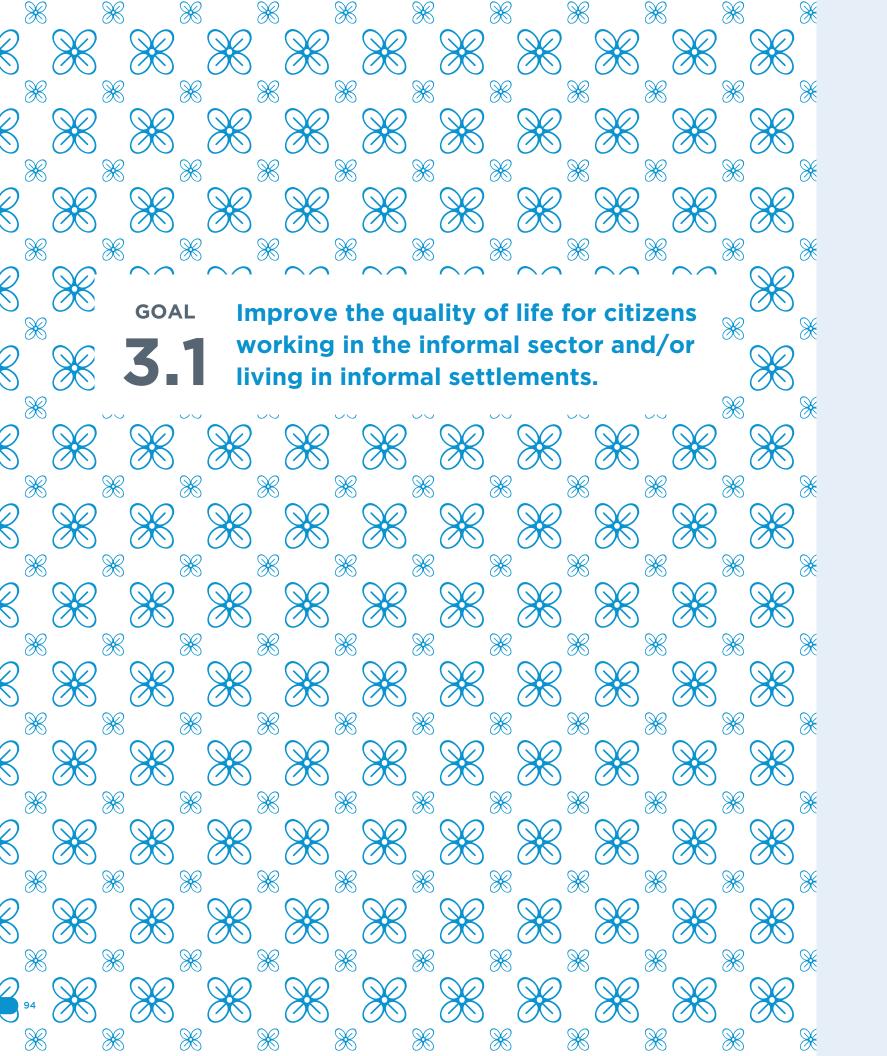
CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL Build a prosperous society

PILLAR 3

A City that embraces informality in its urban systems to harness its contribution to resilience building. The informal economy is heterogeneous and complex, offering both opportunities and lessons on resilience and livelihoods. Over the years, cities throughout Africa have viewed informality either as a phenomenon to be ignored or dealt with through attempts at removal and demolition. In Accra the informal sector has reached such a significant scale that it cannot be ignored. There is growing An informed and engaged citizenry acknowledgement of informality as a mainstay is a prerequisite for developing in Africa's urbanisation narrative. Much of structures and systems that the region's economic growth is taking place enhance resilience building. Accra in the informal sector. Over 80% of Accra's has a large informal sector which is population participates in the informal dominated by women. Having such economy, making this a critical contributor a large and influential segment of to the nation's GDP.³⁰ Undoubtedly, the society knowing, understanding, rising urbanisation will lead to increasing and appreciating the need for informality, both in the economy and in the systems that support resilience built environment. If properly understood building is an asset and can help to and worked with, informal systems can ensure a thriving city. increase inclusion as well as strengthen the - Mr. Desmond Appiah, performance of the formal sector. Office of the Mayor

Past attempts at removal and demolition have not worked. Demolished informal settlements have triggered violent protests and former and new residents with limited options return and rebuild. Removal of itinerant vendors in decongestion exercises also tends to be short lived. Accra must approach informality with a hybrid of innovative approaches, both new and existing, that can improve the quality of life and reduce harm for residents that work or live in this sector. The human rights of residents of informal settlements need to be recognised through access to basic services, including safe drinking water, sanitation, and shelter. Workers in the informal economy need access to appropriate safety nets. The recognition of the symbiotic relationship between the informal and formal sectors will aid in developing a resilient city.

Informality knows no geographic boundaries. Informal settlements and an informal economy will continue to be a reality and an intrinsic component of Accra's urbanisation narrative, along with that of other emerging economies. The Decentralisation Act shifts the geographic boundaries of areas to be prioritised for slum upgrading and urban renewal beyond the AMA's previous borders. While this represents a slight deviation from the AMA's previous vision, the Assembly remains poised to provide leadership in cross- jurisdictional coalition building and capacity building towards optimising informality's contribution to resilience. Finally, a new approach to informality must consider integration between the formal and informal sectors to ensure a co-existence, which ultimately fosters improved economic, social, and environmental benefits for all of Accra's residents.



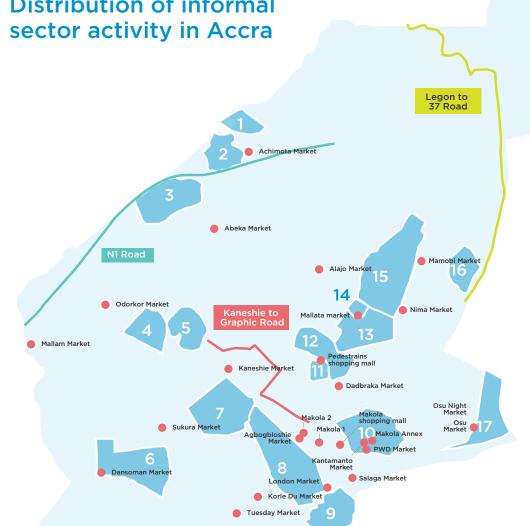
In cities of the Global South, the informal economy accounts for up to 40% of GDP.³¹ Informal settlements are home to as much as 25% of the urban population, and informal transport provides mobility for upwards of 60% of the populace. The informal economy has become especially prominent in the lives of Africans in recent years, stemming from the opportunities it offers to the most vulnerable urban populations, such as the poor, women, and youth. In total, the informal sector contributes about 55% of Sub-Saharan Africa's GDP and comprises 80% of the labour force.

With 80% of Accra's urban population employed in the informal sector, and where 90% of non-agricultural employment is informal, Accra epitomises the informal city.³² Accra's informal sector plays an important role in the city's economic development by creating employment opportunities and housing for a significant proportion of the populace. From public transport to domestic labour, the vast majority of goods and services in the city are procured informally. In spite of its importance, workers in the informal economy and residents of informal settlements are faced with many challenges, and their day-to-day realities experience an increase in vulnerability when the city is struck by unforeseen shocks. Improving the quality of life for these residents will contribute to strengthening the economy and the overall resilience of the city. Actors in the informal sector are the most vulnerable of the populace.

Furthermore, as Accra's economy rapidly evolves, it is critical to understand the lives of its informal participants, and design services that align with the social networks and informal services on which people currently rely. Through this, we can help lift thousands of previously neglected citizens into the stability they need to improve their economic situations and help them seize the opportunities they need to thrive.



Distribution of informal



		Trotro and Okada	Traders in Markets and Open Spaces	Street Vending	Spare Parts Dealers	Car Fitting Shops	Hawking	Kayaye
1	Achimota Market							
2	Achimota							
3	Lapaz							
4	Kokompe							
5	Kaneshie							
6	Dansoman							
7	Abossey Okai							
8	Agbogbloshie							
9	London Market							
0	СВО							
11	Odawna Market							
12	Circle							
13	New Town							
4	Mallam Atta Market							
15	Nima							
6	37 Military Hospital			•				
17	Osu			•				

Source: AMA, 2018. Understanding and Supporting Accra's Informal Economy. Unpublished.



Upgrade select informal settlements

RESILIENCE CHALLENGE

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In Accra, it is estimated that about 60% of the population live and work in slums.³³ In 2016, People's Dialogue on Human Settlements, a Ghanaian development organisation, worked with Ghana Federation of the Urban Poor (GHAFUP), to conduct a community-led profiling, mapping, and enumeration exercise in many of Accra's slums through a process known as "Know Your City." Their research found poor levels of infrastructural facilities in all of Accra's slums, and that slum dwellers faces constant threat of eviction. Water supply is also a major challenge, as is poor sanitation and waste collection. On average people wait 10 minutes to use public toilet facilities, and about 43% of individuals in slums located close to the sea defecate in the open. Finally, slums are disproportionately negatively impacted by the various shocks experienced by Accra, including perennial flooding, fires resulting from poor and irregular electricity connection, and outbreaks of diseases such as malaria, cholera, diarrhoea, and typhoid.³⁴

INITIATIVE IN BRIEF

Through this initiative, the AMA will:

• partner with the new Greater Accra Clean, Resilient and Inclusive Development (GARID) Project, funded by the World Bank, on participatory community upgrading;

- support neighbouring MMDAs on the upgrading of four selected informal settlements (namely, Alajo, Akweteyman, Nima, and Alogboshie³⁵) through a number of mechanisms including: brokering negotiations amongst key stakeholders, reviewing environmental approvals, providing engineering insights around acceptable infrastructure for these communities, and helping to navigate any legal tensions that arise;
- collaborate with People's Dialogue and their partners - GHAFUP, Slum Dwellers International, UN-Habitat, the World Bank and its partners — to support the upgrading exercise of providing basic infrastructural services for the residents of these informal settlements;
- support the implementation of this upgrading programme through capacity building and learning to the relevant MMDAs; this will in turn inform subsequent AMA efforts in slum communities within AMA's jurisdiction.

Successful implementation of this initiative will deliver multiple resilience benefits, including:

- Improved safety and security for residents
- Better public health conditions
- Reduced risk from fires, floods and disease outbreak

OWNER/LEAD

Resilience and Sustainability Unit. Metro Development Planning Coordination Unit

Ū. **TIMELINE** Medium-term STATUS New

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- PARTNERS • People's Dialogue
- World Bank
- Ministry of Inner Cities and
- Zongo • GHAFUP
- UN-Habitat
- Slum Dwellers International
- management

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21

- Meets basic needs • Ensures Public Health Services
- Promotes cohesive & engaged

RESILIENCE DRIVERS

- communities • Provides & enhances natural and manmade assets
- Ensures continuity of services • Promotes leadership & effective

CONNECTION TO MEDIUM TERM DEVELOPMENT **PLAN GOAL** Safeguard the Natural

Environment & Ensure a Resilient Built Environment



Greater Accra Clean, Resilient and Inclusive Development (GARID)

The World Bank Project Information Document notes that GARID will likely support the upgrading of basic most vulnerable communities, and will be informed by geospatial, social vulnerability, or rehabilitation of tertiary drains, local roads, pedestrian paths, schools, health centres, community sanitation facilities and open spaces, street lighting, informal safe housing improvements; measures to and Zongos with surrounding settlements access roads and other measures identified based disaster warning and preparedness activities including identification of safe



CHALLENGE: Ashaiman municipality in Greater Accra lies adjacent to Tema, Ghana's largest seaport. The Amuj Djor community located within Ashaiman has long housed low-skilled labourers primarily employed in the industries located in Tema. Many residents in the Amui Djor live in poor slum conditions lacking basic services.

INTERVENTION: For years, the Ghana Federation of the Urban Poor (GHAFUP), a network of community savings groups in informal settlements and poor communities, has been mobilising their membership base in Amui Djor, helping members to build savings, providing low-cost loans, and hosting discussion and support groups. A recurring issue of concern was nevertheless the inability of members to access bank loans to build or improve their living conditions. In 2009, Ghana Federation for the Urban Poor, the Government of Ghana, UN-Habitat, and People's Dialogue, a local NGO and affiliate of Slum Dwellers International, completed an onsite, participatory pilot for slum upgrading in Amui Djor. With resources from UN-Habitat's Slum Upgrading Facility, a local financing facility was created to bring stakeholders together, help structure the upgrading project, and provide technical advice and mobilise financing.

OUTCOMES: Funds from the facility, along with savings from members of the Ghana Federation for the Urban Poor, financed the construction of the Amui Dzor project — a three-story structure with 15 commercial units, 31 one- and two-bedroom apartments, and a 12-seater public toilet managed by a cooperative of residents. The land on which the project stands formerly housed 10 families; after the completion of the project, about 31 households pay monthly instalments for their ownership share.

- KEY LEARNINGS: One of the biggest, yet underestimated challenges in this upgrading project were of a legal and regulatory nature. Details around navigating land tenure, building permits, and utility connections were not sufficiently considered during the design stage. As such, a Cities Alliance evaluation of the project found that the granting of land to the Amui Djor Cooperative Housing Society was a time-consuming process involving both the formal municipality and the traditional council.
- Also important to note is that this upgrading project, which resulted in the development of the three Amui Djor buildings, required direct and indirect subsidies of almost US \$3000 per family. Such subsidies are typically not sustainable. As recommended by the Cities Alliance project evaluation, other municipalities should consider upgrading efforts focused on financing of home improvements, neighbourhood infrastructure, and/or modest core houses that can be expanded and improved upon over time. Finally, critical to the success of this upgrading case study was a strong and organised intermediary, capable of mobilising the community. In this case, People's Dialogue played this indispensable role.³⁷

Collaboratively design and implement flood-hazard land management guidelines with residents by leveraging ongoing data collection and mapping efforts

RESILIENCE CHALLENGE

A significant amount of Accra's new growth happens in an unplanned manner, and often takes place in the periphery of the city, in coastal areas, hazardous floodplains, or lowlying, sensitive wetland environments. This is particularly true for informal settlements. The majority of Accra's informal settlements are located in flood-prone areas. Specifically addressing and supporting flood-hazard protection in informal settlements will greatly improve the resilience for residents of Accra's informal settlements.

OWNER/LEAD Metro Physical Planning Department

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TIMELINE Short- term STATUS Ongoing

PARTNERS

- Works Department
- People's Dialogue
- National Disaster
- Management Organisation
- Ministry of Sanitation and
- Water Resources
- Public Relations Unit
- Community Development and
 Social Welfare Department,
- World Bank

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INITIATIVE IN BRIEF

The AMA will:

- engage residents through a comprehensive stakeholder consultation process with significant involvement of community-based organisations (CBOs), community leaders, and residents;
- develop guidelines for community-level structural improvements that suggest changes residents could make to their homes; and
 - augment communications to residents around risks and storm water management.

Resilience benefits include:

- improved stormwater management and reduced flood risks for poor and vulnerable populations; and
- improved engagement and public participation.

RESILIENCE DRIVERS

- Provides & enhances natural and manmade assets
- Promotes cohesive & engaged communities
- Ensures continuity of critical services
- Empowers a broad range of stakeholders
- Fosters long-term & integrated planning

21

CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL Safeguard the Natural Environment & Ensure a Resilient Built Environment

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Cities continue to grow at a rapid rate, frequently seeing their population expand by 2% or more annually — the benchmark of rapid means for urban resilience, 100 Resilient Cities collaborated with New York University's Marron expanding cities located in the Global South.

urban areas but also account for projected urban growth - and use it as an opportunity to accelerate resilience-building. Failure to cities is the root cause of a number of serious to labor markets and public space, natural hazard risk to communities, loss of natural cost of installing the basic trunk infrastructure

Historically, Accra grew from a population of 1,307,784 in 1991 to 4,429,649 in 2014, at an annual rate of 5.3%. The area inhabited by extent, increased at an annual rate of 8.1%, from 13,324ha in 1991 to 87,212 ha in 2014. That means Accra's density declined from 98 people per hectare in 1991 to 51 people conversion to urban use of unbuilt land. Only 66% of the residential areas built between developed. This means the opportunity for orderly provision of public transportation and infrastructure was missed in 34% of the residential areas.

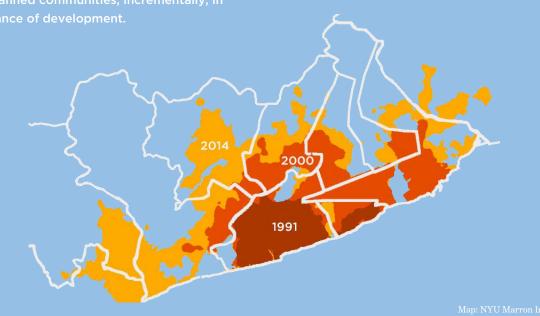
that Accra will continue to grow rapidly in population and area. By 2050, the area's 10,505,000 people and population density could decline from 48 people per hectare to 29 people per hectare in that same time period.

Explore the creation of an informal trade department, guided by locally-informed and action-based policy



RESILIENCE CHALLENGE

The informal economy constitutes about 80% of Accra's economy, yet no single department in the AMA is The subcommittee's efforts will lead to a clear policy responsible for the informal economy. For example, framework for managing the informal economy — with more focus on creating an enabling environment for research during the Resilience Strategy development process found that the Markets Unit is unable to respond income generation and opportunities for work, rather to many of the issues (e.g. sanitation, infrastructure, etc.) than control over the sector. reported by the informal sector.³⁸



OWNER/LEAD Office of the Mayor

STATUS New

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ES

PARTNERS

- Rural Enterprises Program National Board for Small Scale
- Industries
- Local Government Service
- TIMELINE Short-term • Ministry of Local Government
 - GAMADA



INITIATIVE IN BRIEF

The AMA will explore the creation of a unit that will be responsible for the management of the informal economy. This will require the formation of a subcommittee, which, in engaging the various stakeholders of the informal economy, will draw up recommendations for the roles and responsibilities of this unit. Possible responsibilities include demarcating official trading areas, issuing permits, providing capacity building and training for leaders from informal associations in the development of occupational skills, leading sensitisation and enforcement of regulations, and provision of basic financial support on an integrated basis.

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RESILIENCE DRIVERS

- Supports livelihoods & employment
- Fosters economic prosperity
- Promotes leadership & effective management Empowers a broad range of stakeholders
- Fosters long-term & integrated planning



CONNECTION TO **MEDIUM TERM DEVELOPMENT PLAN** GOAL Build a Prosperous Society



CHALLENGE: By 1994, following the end of Apartheid and the election of the first South African democratic government, the municipal government of eThekwini (Durban) recognised the need to integrate the informal economy into city planning efforts. The city began removing restrictive trade policies, making it easier for informal traders to move freely about the city and access new markets and trading areas. For example, over 4,000 traders moved into what is now South Africa's largest transportation and trading hub, Warwick Junction. However, the city neither provided nor facilitated the management of trading activities or facilities. Lack of management at Warwick Junction and other burgeoning trading sites in the city eventually became a challenge to broader city management.

INTERVENTION: In 1999, the eThekwini Municipality formed a subcommittee to draw up recommendations for new policies to govern the informal economy. One such recommendation was the establishment of the Department of Informal Trade and Small Business Opportunities (DITSBO), with the mandate to: declare management zones; demarcate official trading areas; issue permits; organise traders into area committees, which then feed into citywide forums; and enforce regulations and resolve disputes between informal sector parties. After nearly a year of substantial stakeholder consultation, the subcommittee additionally formulated, approved, and adopted policy on the informal sector — recognising the role of the informal economy in creating jobs and income for many of Durban's residents.

- OUTCOMES: Today, Durban is a city that integrates street traders into how the city plans. Warwick Junction is characterised by attractive and appropriately designed trader infrastructure, as well as services like childcare facilities and affordable overnight accommodation. Deep consultation with stakeholders has produced an unprecedented level of self-regulation that keeps the area clean and crime-free. In Warwick Junction and elsewhere, the city has launched innovative programs such as health training for food traders, low-fee rates for use of urban space, new market construction as well as upgrading existing market facilities, providing shelters for street traders, and helping informal businesses develop both hard and soft business skills.
- **KEY LEARNINGS:** The city's response to informal traders and more broadly the informal economy elevates a number of relevant insights. First, it is important for municipal governments to start small and pilot new policy shifts. Second, municipal governments must remove by-laws that erroneously hinder positive contributions of the informal economy. Finally, consultation with informal traders was a hallmark of Durban's success.

Facilitate access to safety nets for people working in the informal economy



RESILIENCE CHALLENGE

Safety nets for informal economy workers can help reduce risks by building individual and household-level resilience to physical and economic shocks, stresses, and personal crises. In Accra, safety nets are not the norm, though some instances exist for the workers of the informal economy. In Agbogbloshie, for instance, slums dwellers operate a welfare package which can be used to support their businesses in the event of shocks and in some cases as capital for their businesses.

Nonetheless, in general, workers in the informal sector struggle to benefit from social security because of irregular incomes and job insecurity. In Ghana 56.6 percent of employers in the informal economy do not contribute to any pension.⁴⁰ It also appears that most workers in the informal economy are not aware of the available pension

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OWNER/LEAD	PARTNERS
Metro Cooperative Unit, AMA	Social Security and Natio
	Insurance Trust (SSNIT
0	• Ghana Federation of the U Poor
TIMELINE Short-term STATUS New	National Trust Holdings Company
	Ghana Insurance Commis



schemes available to them, such as the people's pension trust, informal sector fund, provident funds, etc.

INITIATIVE IN BRIEF

The City plans to increase access to safety nets to help informal workers respond better to physical risks, economic crisis, and other shocks. The Assembly will do this by:

- facilitating the registration of informal sector workers to the national pension scheme through collaboration with the National Trust Holdings Company (NTHC);
- engaging in periodic sensitisation and education programs to spread awareness and understanding of the benefits of pension schemes to informal workers;
- exploring the option of collaborating with GHAFUP to establish a City Pension Scheme to increase reach, as GHAFUP is trusted among the informal economy workers;
- establishing a pension collection outlet in places where informal economy workers are based;
- providing technology-enabled options that allow for flexibility in how contributions are made; and
- negotiating with the NTHC and local banking institutions, insurance companies, and relevant experts to create a platform that will have continuous interaction with the members and leadership of GHAFUP, to teach informal workers about issues of insurance, health, retirement, and financial management.

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RESILIENCE DRIVERS • Supports livelihoods & employment

- Fosters economic prosperity
- Promotes leadership & effective management

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CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL Create Opportunities for All



24

Brand the Wato Junction Area as a site of cultural heritage

RESILIENCE CHALLENGE

The pattern of development in Accra, particularly in the CBD, has led to a near total transformation of informal areas to more modern urban space, threatening the city's cultural heritage and history. In Accra today there remain very few areas whose unique local culture and history deserve to be preserved. We must carefully balance the integration of cities into the globalised world while protecting distinct local culture.

The Wato Junction Area situated in James Town is one of the oldest neighbourhoods on downtown Accra's coast. The area is of historical significance, with unique architecture, colonial buildings, and a vibrant local community. The area first emerged as a community around the 17th-century British Fort and Dutch Fort, now known as Ussher Fort. The forts were used as cross-Atlantic trading posts for barter and distribution of items such as palm, ivory, and gold, bringing revenue to their inhibitors and contributing to the development of the area.

INITIATIVE IN BRIEF

Through this initiative, the AMA plans to:

- preserve this historical space by raising awareness about the value of the Wato Junction as a place and not simply a road intersection;
- · compile an inventory and status assessment of the area's assets:
- engage with vendors and other major businesses to develop a place branding strategy which articulates a vision for the area and helps to increase awareness of the historical and cultural assets that exist there;
- in partnership with the GAMADA office and supported by the Culture Unit, strengthen awareness of the area's assets in order to encourage community members and other citizens to see the importance of its history and culture;
- push for the preservation of the area in order to further attract tourist activity while boosting ongoing small- and medium-scale commercial activities;
- · leverage bye-laws and other tools, such as development and building permits, to shift the type of development happening in the area to align with the vision articulated in the place branding strategy; and
- · creatively inform the public of the shared vision for the neighbourhood and promote activities, services, and events in the area that are aligned with that vision, through the AMA's Public Relations Unit.

1 OWNER/LEAD **Resilience and Sustainability** Unit

0 **TIMELINE** Short-term STATUS New

ES

PARTNERS • Ga Mashie Development

- Agency
- Department of Chieftaincy and
- Culture • Metro Development Planning
- **Coordination Unit**
- Public Relations Unit
- Ministry of Tourism

RESILIENCE DRIVERS • Supports livelihoods & Fosters economic prosperity

- Promotes leadership & management
- Empowers a broad range of stakeholders

employment

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• Fosters long-term integrated planning

21 **CONNECTION TO** MEDIUM TERM DEVELOPMENT **PLAN GOAL Build a Prosperous** Society

Facilitate the subscription of informal workers to the NHIS platform

RESILIENCE CHALLENGE

Ghana's National Health Insurance Scheme (NHIS), Recognising the importance of health insurance as a launched in 2003, is innovative in that it extends coverage safety net for informal economy workers and the urban to subscribed informal workers. While awareness of poor, and as a crucial mechanism for strengthening the NHIS is high amongst informal workers in Accra, their resilience, the AMA will assist informal workers to there is significant confusion over basic details of the access NHIS coverage. The AMA will lead negotiations scheme, particularly the cost of premiums. In addition with the NHIS for 1) lower premiums, in order to ensure to misinformation, a major barrier to joining the NHIS is affordability of the health insurance scheme, and 2) the introduction of instalment options, to make it flexible for the cost of the premium for informal sector workers. An AMA-hosted focus group of informal economy workers informal economy workers to pay. found that most participants felt premiums were too expensive. This feeling is a deterrent to their enrolling.

4 **OWNER/LEAD** Metro Health Directorate \mathcal{O} **TIMELINE** Short-term

STATUS New

ES

- PARTNERS
 - National Health Insurance Authority (NHIA)
 - Ghana Federation of the Urban
 - Poor
 - AMA Cooperatives Department





INITIATIVE IN BRIEF

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()**RESILIENCE DRIVERS**

- Supports livelihoods & employment
- Ensures public health services
- Fosters economic prosperity
- Promotes leadership & management



CONNECTION TO **MEDIUM TERM DEVELOPMENT PLAN** GOAL Build a Prosperous Society



An important, complementary, and synergistic relationship exists between the formal and informal sectors in Accra. If effectively nurtured, this can promote resilient growth and reduce urban poverty. In recognition that the informal economy is here to stay, and that the informal and formal economies are intrinsically linked, the City seeks to advance strategies which promote more equitable linkages between the two systems and which balance the relative costs and benefits of work that is done formally and informally. The nature of Accra's informal economy presents a number of specific opportunities for better integration into the formal economy. For instance, the informal waste collection system works hand-in-hand with the formal waste collection system in the cleaning of the city. The initiatives in this goal will result in better integration of actors across these sectors — to strengthen livelihood opportunities and the city as a whole.

Launch program to integrate informal waste collectors into the municipal waste management system



RESILIENCE CHALLENGE

The City aspires to achieve 100% waste collection coverage by 2030 at the household level. The formal service providers currently contracted by the City to collect waste, however, use trucks that cannot navigate many of Accra's markets and informal settlements. In recognition of this, the City has initiated a registration program for informal waste collectors who typically use smaller, more nimble vehicles (i.e. motorised tricycles like Motorkings and borla taxis), to integrate them into the formal waste collection system.

Ą OWNER/LEAD Metro Waste Management Department Resilience and Sustainability Unit D. **TIMELINE** Short-term **STATUS** Ongoing

ES

- PARTNERS • ESPA
- Ministry of Sanitation and
- Water Resources
- Ghana Borla Taxi Union
- Private Enterprises Federation
- GHAFUP
- TransGov

INITIATIVE IN BRIEF Because the tricycles used by informal waste collectors are

unable to travel the long haulage distances to existing final disposal sites, which are located outside Accra, informal waste collectors will be provided with designated transfer stations for dumping waste, which can then be collected for aggregation and onward transport to the final disposal site (refer to initiative 5). This will discourage illegal dumping activities within the city. The service providers will be expected to participate in results-based tailored trainings to ensure they adhere to existing waste management regulations and best practices. The association of informal waste collectors will also be strengthened to guarantee they hold their members accountable.

٢ **RESILIENCE DRIVERS**

- Supports livelihoods & employment
- Ensures public health services
- Fosters economic prosperity • Provides & enhances natural
- and manmade assets • Ensures continuity of services
- Promotes leadership & effective
- management
- Empowers a broad range of stakeholders

21 CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL **Build a Prosperous** Society

Lastly, the city is exploring the potential use of track devices to monitor operations and ensure waste collect ends up at the designated sites.

A number of specific steps will be enacted in order to effectively regulate the operations of these informal collectors:

- the AMA will begin by registering and licensing informal collectors with visible embossments on their vehicles, enabling them to work with the formal waste service providers under strict supervision and in collaboration with the AMA:
- because the tricycles are unable to travel the long haulage distances to existing final disposal sites, which are outside Accra, the AMA will designate transfer stations for dumping waste, which can then be collected for aggregation and onward transport to the final disposal site;
- the AMA will develop and deliver results-based trainings for informal waste collectors to ensure they adhere to existing waste management regulations and best practices;

GOAL 3.2 % % % % %

PILLAR 3

king	\bullet the AMA will work with civil society and the associated as the second sec
ected	tion of informal waste collectors to enhance accounta
	bility; and

• lastly, the City will explore the potential use of tracking devices to monitor operations and ensure collected waste ends up at the designated sites.

Lessons from this program will inform the AMA's efforts to support integration across other industries. Support for this and similar programs will come from a newly-created, external working group on the informal economy, run by the Resilience and Sustainability Unit. The working group will meet regularly and include representatives from the trade unions and industry associations of informal workers, to help expand understanding and synergies between informal and formal components of the economy.

- This initiative is complementary to Initiatives 5 and 17, which together seek to address the complex challenges related to solid waste management in Accra.

27

Explore the feasibility of legalising and optimising okada taxis

RESILIENCE CHALLENGE

INITIATIVE IN BRIEF

Increasing traffic congestion in Accra has created demand for the informally-run commercial motorcycles known as *okada* taxis because of their ability to more easily navigate traffic than conventional vehicles. They are fast becoming a major mode of public transport in Accra. Proponents of *okada* extol the virtues of manoeuvrability, compatibility with poor or narrow roads, responsiveness to demand, and the avenue they create for economic opportunity for drivers. *Okada* taxis are nevertheless also known to contribute to traffic congestion, represent a danger to public safety, and release emissions that have damaging environmental impact. Gaps in public transportation may continue to sustain demand for okada taxis, despite existing legislation banning the use of motorcycles for commercial purposes. As such, the AMA seeks to proactively explore the possibility of legalising and optimising okadas in Accra. Steps in this exploration may include:

- surveying *okada* drivers to understand how they operate and the economic benefits for drivers and users;
- researching other city contexts where *okadas* currently operate as commercial entities (e.g. Kigali and Bangkok);
- initiating a policy discussion on okada taxis;
- formulating a draft Okada Taxi Act and draft rationale for Driver and Vehicle Licensing Authority (DVLA);
- registering existing okada taxis and provision of special license plates;
- piloting a permitting regime;
- researching regulation of fares or other service fees charged by and to *okada* taxis; and
- assessing driving and other training needs for *okada* taxi operators.



OWNER/LEAD Office of the Mayor Metro Transport Department

TIMELINE Short-term STATUS New

E.S

 PARTNERS
 Motor Traffic and Transport Unit of the Ghana Police Service
 Ministry of Transportation

ministry of Transportation

communication & mobility

Promotes leadership & effective management

Fosters economic prosperity

• Fosters long-term & integrated planning

RESILIENCE DRIVERS

• Supports livelihoods &

employment

• Provides reliable

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CONNECTION TO MEDIUM TERM DEVELOPMENT PLAN GOAL Build a Prosperous Society

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Commitment to Implementation

After several years of participatory meetings, stakeholder outreach, and engagements, Accra's Resilience Strategy is poised for implementation. Its framework of 3 pillars, 8 goals, and 27 initiatives address a range of challenges affecting not only Accra but also many other African cities undergoing rapid urbanisation: flooding, the exponential growth of informal settlements, inadequate waste management, traffic, congestion, infrastructure collapse, fire outbreaks, and poor community engagement, among others.

Led by the Chief Resilience Officer (CRO) and the city's Resilience Team within the AMA, this strategy's development has benefited significantly from insights shared by donor and development partners, research institutions, consultants, AMA staff, community leaders, and most importantly, the residents of Accra. It provides a framework for protecting the city against potential known and unknown shocks and stresses that we may encounter now and in the future.

The City of Accra is committed to the implementation of this strategy. The CRO and the Resilience Team together with other departmental staff within the Assembly, Central Government Ministries, other MMDAs, and external partners will work to overcome barriers to implementation, connect people and resources, track strategy progress, and mitigate risks as necessary. A framework for monitoring and evaluation to track and report on implementation progress will be developed. Implementation will require significant coordination and collaboration, similar in many regards to the efforts required to develop this ambitious vision for resilience.

Strategy, we appreciate that successful implementation necessitates shared responsibility and contributions of actors organisations, and residents.

Leadership on strategy initiatives will be assigned to key AMA staff and close partner institutions who will serve as project managers. However, these projects will require cross-jurisdictional collaboration, resource allocation, and management for success. The Resilience Office will lead efforts on regional capacity building for newly-formed districts, existing MMDAs, and other partners. Now more than ever, this level of collaboration is critical for ensuring our city's future. The AMA is committed to approaching implementation and partnership in a more integrated way. We call upon all to support these efforts in whatever capacity possible.

The Accra Metropolitan Assembly is committed to playing a key role to facilitate and initiate projects and the necessary strategic framework. The Resilience Office is available for consultations, advice, and support, and is ready to learn from the experiences of other cities and resilience building organisations around the globe.

While the AMA remains the primary custodian of the Resilience and effort within the municipal government and beyond. These include government agencies, businesses, civil society, non-profit

Acknowledgements

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Endnotes

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Summary of Pillars, Goals and Initiatives

INITIATIVE	OWNER	TIMEFRAME	STATUS		
PILLAR 1 - AN INTEGRATED APPROACH TO INFRA	STRUCTURE PLANNII	NG AND SERVICE PR	OVISION		
GOAL 1.1 - Upgrade transport and trading infrastructure to ensure systems are safe, robust, and inclusive					
1. Upgrade <i>trotro</i> system and increase enforcement of road rules and regulations	Department of Transport	Short-term	New		
 Upgrade marketplace infrastructure to ensure safety, security, and adequate services 	Public Private Partnership Unit	Short-term	Ongoing		
3 . Redesign major crossings at junctions to enhance pedestrian safety and optimise for multiple users	Metro Transport Department	Short-term	Ongoing		
GOAL 1.2 - Design and adapt infrastructure to maxin flooding, waste, sanitation, and climate challenges	mise co-benefits and	simultaneously addr	ess Accra's		
 Strengthen drain design and performance through an assessment of existing and proposed road and drainage infrastructure, incorporating meaningful community engagement 	Drains and Maintenance Unit (AMA)	Short-term	Ongoing		
5 . Construct new micro and large waste transfer stations	Metro Waste Management Department	Short-term	Ongoing		
6. Launch the Sustainable Greening and Beautification of Accra Project	Office of the Mayor	Short-term	Ongoing		
GOAL 1.3 - Incentivise energy efficient and renewals that accommodates climate and population pressur		n to promote a sustai	nable energy future		
7. Design a green building certification program to raise awareness and encourage adoption of green and energy- efficient construction in Accra	Metro Works Department	Short-term	Ongoing		
8. Formalise an incentive program for developers to integrate renewable and energy efficient technologies	Metro Works Department & Metro Physical Planning Department	Short-term	Ongoing		
9. Launch Streetlight replacement drive to upgrade lighting in Accra	MiDA & Metro Transport Department	Short-term	Ongoing		
PILLAR 2 OPTIMISE NEW AND EXISTING RESOURC			PARENCY		
GOAL 2.1 - Improve the use of data for sound long-	term integrated plan	ning and reflective d	ecision-making		
10. Create a Data Unit within AMA to help collect and analyse data for better long-term planning	Metro Statistics Units	Short-term	Ongoing		
11. Launch an employer / AMA transit task force	Metro Transport Department & Resilience and Sustainability Unit	Short-term	New		
12. Launch a research and data collection program on transport, to holistically understand commuting patterns and transportation trends	Metro Transport Department	Short-term	New		
13. Collaborate with the Ministry of Sanitation and Water Resources (MSWR) on the development of the Accra Climate Strategy and Integrated Urban Environmental Sanitation Strategy and Master Plan	Metro Waste Management Department	Short-term	Ongoing		
14. Conduct an assessment of Accra's vulnerability to seismic activity and its preparedness to respond to seismic shock, and identify legislative and other actions required to improve the city's resilience to earthquakes	Metro Disaster Management and Prevention Department	Medium-term	New		

INITIATIVE GOAL 2.2 - Foster better citizen engagement to imp **City Authorities 15**. Strengthen the existing capacity of the AMA's Community Development Department through training and strategic planning, enabling staff to expand outreach **16**. Develop a citizen engagement platform and protocol within the AMA that allows for proactive, responsive mechanisms for increasing transparency and improving accountability GOAL 2.3 - Improve capacity of AMA staff to better to strengthen the city's resilience 17. Improve oversight of waste collection service providers through better deployment of data and development of stronger enforcement mechanisms **18**. Improve capacity of building inspectors through comprehensive training in building codes, technical standards, and risk-based approaches to enforcement **19.** Improve revenue collection PILLAR 3 EMBRACE INFORMALITY'S CONTRIBUTIO GOAL 3.1 - Improve the quality of life for citizens working in the informal sector and/or living in informal settlements **20**. Upgrade selected informal settlements New Resilience and Medium-term Sustainability Unit & Metro Development Planning Coordination Unit **21.** Collaboratively design and implement flood-hazard land Metro Physical Short-term Ongoing management guidelines with residents by leveraging **Planning Department** ongoing data collection and mapping efforts **22.** Explore the creation of an informal trade department, Office of the Mayor Short-term New guided by locally-informed and action-based policy 23. Facilitate access to safety nets for people working in the Metro Cooperative Short-term New informal economy Unit **24**. Brand the Wato Junction Area as a site of cultural Resilience and Short-term New heritage Sustainability Unit **25**. Facilitate the subscription of informal workers to the Metro Health Short-term New NHIS platform Directorate GOAL 3.2 - Facilitate robust integration between the formal and informal sectors for improved economic, social, and environmental benefits **26.** Launch program to integrate informal waste collectors into the municipal waste management system

27. Explore the feasibility of legalising and optimising okada taxis, informally-run commercial motorcycles

OWNER	TIMEFRAME	STATUS
rove collaboration a	nd increase trust betw	veen citizens and
Metro Human Resource Management Unit & Social Welfare and Community Development Department	Short-term	New
Resilience and Sustainability Unit	Short to medium- term	New
enforce regulations a	& provide services to	Accra's residents
Metro Waste Management Department & Office of the Mayor	Short-term	Ongoing
Metro Works Department & Metro Physical Planning Department	Medium-term	New
Finance Department, Revenue Unit	Short-term	Ongoing
ONS TO RESILIENCE I	BUILDING	
which in the informed	ecotor and (or living	in informal

Metro Waste Management Department & Resilience and Sustainability Unit	Short-term	Ongoing
Office of the Mayor & Metro Transport Department	Short-term	New



