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Celebrating 60 years of Independence



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2017: a year of celebration, change and opportunity

Over the past 20 years Ghana's economic growth has outpaced that of most of its lower-middle-income peers in Africa. This, among other factors, lead to its achievement of middle-income status in 2011. Economic growth has been consistently high since then, and has accelerated in the past 10 years. Together with the country's continued political stability, this makes Ghana the go-to investment destination in West Africa, and a safe springboard from which to begin investing into the rest of the region and across the continent. Having such an exemplary reputation is something Ghanaians are very proud of, but this is only one of many things Ghana has to celebrate in 2017.

Ghana at 60

2017 marks 60 years of independence for Ghana from British colonial rule, and Ghanaians have marked the occasion with a variety of celebrations nationwide. Ghana was the first sub-Saharan country to gain independence in 1957. This acted as a beacon of hope for other African countries under colonial rule, and by 1960 seventeen others had also achieved their liberation.

Ghana has achieved a number of key accomplishments over its 60 years. The following are some of the most recent and pertinent to potential investors.

Politics

Ghana's democratic record is also unparalleled within Africa, and it has had 24 years of unbroken constitutional development. Many of Ghana's leaders are well respected among their international colleagues and have gone on to hold various regional and international offices, for example Dr Kofi Annan (Former Secretary General of the UN), H.E John Agyekum Kufuor (Former Chairperson of the African Union) and H.E John Dramani Mahama (Former Chairperson of ECOWAS).

Also, with the global economic impact of violence estimated at US\$13.6 trillion, remaining peaceful is truly imperative.

According to the Global Peace index report for 2016, Ghana ranked as the 6th most peaceful country in Africa, and 44th globally.

Economy

In 1983 Ghana began to move away from state control over productive activities, and undertook a more open and liberalized economic system. Currently, the country has a market-based economy with few barriers to international trade. Ghana was one of Africa's most dynamic economies for many years, and is generally regarded among the strongest policy performers in Sub Saharan Africa.

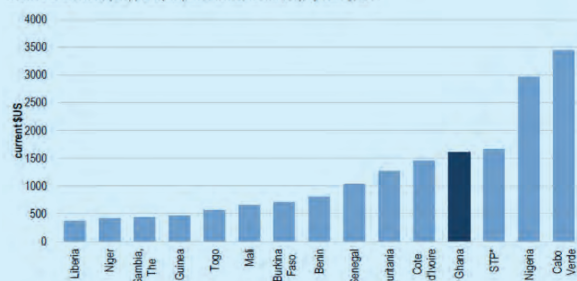
Between 1991 and 2000 real gross domestic product (GDP) growth rates averaged more than 4.3%, increased to around 5% between 2000 and 2005, and accelerated further to 8 % between 2006 and 2012, peaking at 14% in 2011, when Ghana started producing oil. In 2012,

One of the richer countries in West Africa



Ghana is positioned among the richer countries in the West Africa region. This can be credited to an extended period of sustained and broadly inclusive growth, together with relatively sound governance. These successes are buffered by the country's position as the world's second largest cocoa producer after Côte d'Ivoire, and Africa's biggest gold miner behind South Africa. It is also a significant and promising oil producer.

Figure 1. Ghana is positioned among the richer countries in the West Africa region
Gross national income (GNI) per capita (Atlas method, current \$US), by country, 2014



Source: Child labour and the youth decent work deficit in Ghana, UCW Inter-agency country report, 2016

the GDP growth rate slowed down, and slumped to 4% in 2014 as commodity prices fell and a fiscal crisis led to a widening budget deficit and rising inflation.

Despite its economic strife, Ghana remains the world's second largest producer of cocoa and Africa's second largest producer of gold. Therefore, under assumptions of continued fiscal consolidation, no further major negative terms-of-trade shocks, improved stability in prices and exchange rate, as well as improvement in electricity supply, Ghana's economic prospects are expected to improve. The Government also aims to strengthen the country's macroeconomic stability through the provision of jobs, reduction in taxes, as well as major improvements in the export and import sector. Given these factors, Ghana's GDP growth rate is expected to rise to 7.5% in 2017.

Health and education

Two decades of sustained economic growth have contributed to a dramatic decline in poverty rates in Ghana. Between 1991 and 2012 the incidence of extreme poverty across the country dropped from 37% to 8%. This is a remarkable result, which is almost unprecedented in Sub-Saharan Africa, and is consistent with the achievement of the first Millennium Development Goal.

According to the National Development Planning Commission and UNDP report, Ghana has taken important steps in improving maternal health and combating HIV, malaria and other diseases. These include the construction of many modern hospitals and clinics equipped with technology such as state of the art theatres, X-ray machines, MRI and CT scan equipment. Past government have also ensured that the deficiency in the number of well-trained doctors and nurses is reduced.

The country has also matched some of the Millennium Development Goal targets in achieving a universal access to primary education, and in improving gender equality at school.

Change in government

Ghana witnessed a peaceful transfer of power in its December 2016 elections in which Nana Dankwa Akufo-Addo, of the opposition New Patriotic Party, defeated the incumbent John Dramani Mahama

Ghana in a nutshell

Capital City

Accra

Commercial Language

English

Currency

Cedi (1 USD = 4.2 GHC)

Population

27.4 million (2017 est.)

Form of Government

Presidential democracy

Executive

President, Cabinet

Official Language

English

Climate

Tropical (21° C – 34° C)

Religion

Mostly Christian; Muslim; Animism

GDP Growth

Projection for 2017

8.7% (African Development Bank)

in a tight presidential race. The electoral process was peaceful with Akufo-Addo receiving 54% of the vote to former President Mahama's 44.5%, thereby averting a second round of elections. Akufo-Addo was sworn-in as president on January 7th 2017. In his maiden State of the Nation address President Akufo-Addo pledged to reduce the budget deficit and cut waste in all sectors of public life.

Speaking later, at the Independence Day celebration at Black Star Square in Accra on March 6th 2017, he implored Ghanaians to mobilize for a better future that will give every citizen equal opportunities to realize their potential. He further emphasized the theme of the Diamond Jubilee celebration, 'mobilizing for Ghana's future', which is leading the new government's agenda across all sectors and through a variety of policy mechanisms, particularly those related to investment, with the aim to create opportunities, inspire more people to start new businesses, and encourage existing businesses to grow and expand through investment.

Furthermore, the new Government of Ghana aims to empower and enable the private sector and encourage private sector investment by, among other measures, reducing the cost of doing business, reducing interest rates and increasing infrastructure expenditure. By these means they hope to create growth that is beneficial and fair to Ghanaians and other participants in the economy.

Macroeconomic stability is at the heart of this government's fiscal policy, and restoring and maintaining it is their ultimate goal.

General economic overview

While it is true that Ghana's economy has been enduring choppy waters, its fundamentals, including a developed private sector, transparent regulatory frameworks, and a wealth of natural resources, remain attractive. Short-term pressures and external factors, such as weakness in key exports, have however led to marked economic downturn. These were further exacerbated by a depreciating currency, high interest rates, elevated inflation, and a rapidly expanding fiscal deficit.

The knock-on effects could be witnessed when, having made solid progress on fiscal consolidation in bringing the fiscal deficit down from 10.2% of GDP in 2014 to 6.3% in 2015, the target to narrow it further to

5.3% of GDP in 2016 was missed with the deficit widening to 9% of GDP. Despite this, however, GDP growth at 3.6% was slightly higher than the forecast of 3.3%, and inflation, after remaining stubbornly above 17%, fell a little to 15.4% in December 2016 and further to 13.3% in January 2017.

Given that Ghana is largely reliant on the importation of finished goods and export of raw commodities it is reassuring to note that, in spite of weak commodity prices worldwide, Ghana's external balance improved in 2016, reflecting increased exports and a fall in imports. Also, in 2016 the country's current account deficit narrowed to 6.4% of GDP from 7.6% of GDP in 2015.

Ghana's short term prospects look positive, and, without any further fiscal slippage, economic growth is expected to accelerate in 2017, encouraged by on-going improvements in both the oil and non-oil sectors. The anticipated rebound in international commodity prices will go far in supporting Ghana's commodity exports, the growth necessary to stabilize the country's exchange rate, and the creation of jobs moving forward.

Experts maintain that the key to Ghana sustainably reducing macroeconomic vulnerabilities is to diversify and broaden the base of the economy by increasing productivity, particularly in agriculture and by stimulating the growth of SMEs. This goal is at the core of Ghana's development strategies, and is being supported by the IMF through a fiscal consolidation programme commenced in 2015.

Labour market

According to the Understanding Children's Work (UCW) Programme's 2016 inter-agency country report, the growth in Ghana's population, from 15 million in 1991 to more than 27 million currently, has been accompanied by an increase in people of working age, i.e. 15 to 64 year olds, whereas the share of children under 15 has gradually declined. This rapid rise in the potentially active population has resulted in a major increase in the Ghanaian labour force, is therefore having significant effect on the structure of the Ghanaian labour market.

Also, Ghana's growth performance has been driven by natural resources and has been characterized by a rapid expansion in the services sector, particularly in recent years, while the contribution of agriculture has steadily declined and become less

Economic overview



Region:	Sub-Saharan Africa
Income category:	Lower middle income
Population:	27,409,893
GNI per capita (US\$):	1,480
DB2017 rank:	108
DB2016 rank:	111*
Change in rank:	3
DB 2017 DTF:	58.82
DB 2016 DTF:	57.87
Change in DTF:	0.95

* DB2016 ranking shown is not last year's published ranking but a comparable ranking for DB2016 that captures the effects of such factors as data revisions and the changes in methodology.

Source: World Bank, Doing Business 2017: Ghana Report

GHANA'S ECONOMIC GROWTH IS EXPECTED TO ACCELERATE IN 2017

appealing to job seekers. Unlike in Asian countries, the structural transformation in Ghana skipped the intermediate stage of moving from agriculture to traditional manufacturing industries. Because of this, workers leaving agriculture have been absorbed mostly into the services sector in urban areas, accommodating the higher demand created by the recent rapid rise in urbanization.

According to the World Bank, projected annual population growth rates indicate that Ghana will need to create about 1.5 million jobs by 2020 in order to absorb the new labour force entrants. Together with the expected future growth rate of the working-age population, these numbers translate into approximately 300,000 additional labour market entrants per year.

Labour force participation rates and employment-to-population ratios are high in Ghana, and so, in this context, employment policy has gained increasing attention in the national policy agenda. Thus, Government is encouraging commitments of skills development and training from new and existing businesses and investors.

Ghana's competitive advantages

As described previously, there are many factors that make Ghana a favourable place for investors, not just in Africa, but compared to developing countries in general. These can be summarised as follows:

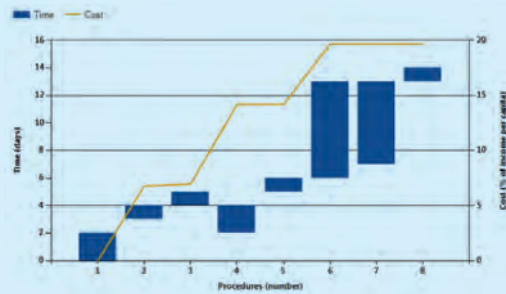
Stable political environment

Its peaceful and smooth transitions of

Starting a business in Ghana

According to the World Bank's 2017 Doing Business report, starting a business in Ghana requires 8.0 procedures, takes 14.0 days, costs 19.7% of income per capita. A requirement of paid-in minimum capital of 2.0% of income per capita is legally mandatory. Most indicator sets in the chart below refer to a case scenario in the largest business city of an economy.

Figure 2.1 What it takes to start a business in Ghana
Paid-in minimum capital (% of income per capita): 2.0



Ease of doing Business in Ghana

Ghana is ranked 108th among 189 countries in the aggregate Ease of Doing Business 2017. This is up six places from 114th in 2016.

While better than the regional average for Sub-Saharan Africa, Ghana's performance is below its country average in seven out of the ten criteria considered: starting a business, dealing with construction permits, getting electricity, paying taxes, trading across borders, enforcing contracts and resolving insolvency.

Figure 1.3 Rankings on Doing Business topics - Ghana
(Scale: Rank 190 center, Rank 1 outer edge)



Source: World Bank, Doing Business 2017: Ghana Report

**GHANA HAS
ACHIEVED
MIDDLE
INCOME
STATUS**

government from one political party to another during election years, and its consistent general lack of violence overall, has been commended by such esteemed global leaders as former US President Barack Obama and former UK Prime Minister Gordon Brown.

Macro-economic policies

In the face of global fluctuations in crude

oil prices the rate of inflation in Ghana has been unstable. However, despite these external challenges, the Government's sound macroeconomic policies continue to drive the process of growth and transformation of the economy under competitive conditions.

Foreign ownership

100% foreign ownership is permitted



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under Ghana's on-going privatization program.

Access to the ECOWAS market

The Economic Community of West Africa (ECOWAS), with its population of approximately 300 million people, provides great opportunity for the consumption of a multitude of services and products; particularly FMCGs. Ghana provides easy access to these markets.

Good physical infrastructure

Ghana's seaports, airports and major road networks are capable of meeting the needs of businesses looking to operate throughout the country. There is an effort to upgrade the rail network to make it easy to transport goods from further inland to the ports. Telecommunication facilities in Ghana are excellent, with private service providers offering telephone, internet and other services. Basic utilities such as water and electricity are readily available in most areas.

Excellent labour force

Ghana offers a large human resource base, of both skilled and unskilled labour, which can be sourced at relatively low rates. The National Daily Minimum Wage in the country is currently GH¢8.00 Ghana cedis per day.

Access to international markets

Ghana's geographical location and airline and shipping links mean it has easy access to the USA, UK, and European Union markets. The flight time to almost all EU countries is approximately 6 hours and roughly 9 hours to the USA.

Availability of fund sources

Ghana has a large number of financial institutions that are fast developing to meet investors' needs, many of which are already making it possible to raise long-term capital at competitive rates. These institutions include banks, insurance, venture capital companies, and the Ghana Stock Exchange.

High safety standard

There are high standards of safety and security in Ghana, with low violent crime rates compared to many other developing nations.

Warm and friendly people

Ghana, nicknamed the "Gateway to Africa", is known internationally for its hospitality to investors and foreigners as a whole.

High quality of life

Ghana has achieved middle income status, and made remarkable progress in increasing living standards, and reducing poverty and deprivation in a multitude of measurable ways. Extreme poverty in the country was halved in the past two decades and educational attainment has also increased.

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GHANA INVESTMENT PROMOTION CENTRE (GIPC)

Interview with Mr. Yofi Grant, CEO of the GIPC

The Ghana Investment Promotion Centre (GIPC) is a Government agency, responsible under the GIPC Act, 2013 (Act 865): to encourage and promote investments in Ghana, to provide for the creation of an attractive incentive framework and a transparent, predictable, and facilitating environment for investments in Ghana. The new appointed CEO at GIPC (February 2017), Mr. Yofi Grant, says the centre has already begun a consultative process to amend the current investment law and make the investment environment more friendly. One of his objectives is to make GIPC a one-stop shop for registering and doing business in Ghana, and, according to him, this can only happen when certain clauses and sections in the current act are repealed to make the country a preferred place for doing business. Here is the interview he gave to Top Guide.



This year we celebrate 60 years of Ghana's independence. With this historic occasion, and the country's abundant potential in mind, please comment on your vision for future investment promotion in Ghana for both the domestic and international business communities?

For me, investment is not something that I would segregate into foreign investment or domestic investment. To me investment is generic, and it's the base stock and trade in what I do. Domestic investment is just as important as foreign investment. The reality is though that, with foreign investment, we expect much larger sums from investors than we do in domestic investment, but, having said that, it doesn't mean that you can't have domestic investment that's also significant in size.

At the end of the day you can judge an

economy by how its people invest back into it. If you have an economy where people are leaning more towards capital flight and taking their money externally, then you know that you don't have a good investment or business opportunity. So, that is one of the things that one should look for; to judge whether our own indigenous citizens are interested in investing in the economy or not. There are many other factors as well. Of course you must have macro-economic stability.

Now that Ghana is 60 years old it has become even more clear that we don't have to always go outside the country to attract investors, but internally we need to go out and market the opportunities to our own people. GIPC, apart from Accra, has three other outposts, which is totally inadequate. This is inadequate in the sense that this makes it difficult to expose investment opportunities to our own people. And so, for us, the domestic investor universe has taken a notch up. We will speak to as many people internally as possible to first understand what they think about the economy, and where it's going and what opportunities there are. Then we'll also go around nationwide, and collect all the opportunities we can collect into a database. Depending on the priorities, we would then package them either as documents that investors can look at to make an informed decision, or see how best to make them actual real opportunities.

If you look at our law, anyone who registers with GIPC is qualified to get whatever waivers, reliefs and incentives that we give. We don't make the distinction of whether it's a foreign or local investor, except that the GIPC act goes further to categorise who a foreign investor is, what he's entitled to, what he's not entitled to, etc. By our core mandate we are supposed to register all businesses, or register a record of all businesses, in Ghana. So, we should have a database of all businesses in Ghana.

I believe that there are so many opportunities around this country that are either not being marketed adequately, or even exposed adequately, especially in the area of tourism, for example. There are so many places in Ghana that offer such interesting perspectives to life. I'm sure if you go to the indigenous investor pool and say "there is this opportunity that can make you big money", you will find investors. I can give you an example; I belong to a group called "BraveHearts Expeditions". We do hiking,

abseiling, climbing, etc., and before joining them I never really looked at these activities as a real opportunity here, but the more I did with them the more I realised what an opportunity it is, and it's taken me to see some amazing places in Ghana: waterfalls, cliff edges, etc. that nobody had thought about as tourist sites before. The person who set up "BraveHearts Expeditions" is a Ghanaian. He didn't need foreign capital to do that. So, it's a matter of highlighting opportunities and showing their potential to our own people.

The other side of the coin though, is that there is some lack of long term capital within the economy from indigenous people. You must understand that, over our economic history, the private sector has never been as dynamic as it should be, and therefore it has affected capital formation in a significant way. Without capital formation, and without increasing domestic savings and investments, it gets difficult for domestic people to invest in the economy. That in itself is a real issue; you may not find the capital. And the truth of the matter is that most banks do not provide venture capital. So, most people who invest in their businesses do that by either having friends, or relatives, join up and invest.

I look at it this way: Ghana has been exporting cocoa for how many years? Maybe about 200 years? We don't find any millionaire or billionaires from cocoa here. That's sad. Ghana has been exporting gold for how many years? Maybe 300 or 400 years plus? But we don't have any indigenous millionaires in the gold industry. But I can bet that some people have made millions out of Ghana's cocoa or gold. So, the other thing is to encourage our people to believe in our own and ourselves; that we can actually get in there and mix it up and build businesses.

The new government administration has promised to create an investment friendly environment in Ghana. Assuming the 2017 budget reflects this, what does this budget mean specifically for the investment community in terms of the general outlook for businesses?

The Budget definitely has significant impact on the forward direction of investments. Amusingly, this is the first time I've heard of a budget being read and people were cheering! Usually when the budget is read people frown and say, "Oh gosh, more taxes, more costs on us..." This budget sought to bring,

first of all, macro-economic stability by bringing some discipline into the fiscal space expenditure. Then, of course, have some control over the currency, so that it doesn't slip beyond our control, because that has a lot of impact on the payment of our country's debts, etc.

Having said that, there is also what that means to the ordinary man on the street. There were seven taxes that were rolled back out of the economy and abolished. So, practically, what that meant is that about a billion Cedis was put back into the economy, which existing business people, and people who pay all these taxes, could deploy as investments. So, it signalled a business-ready government, because when you lower taxes then people say, "OK, I can have more resources to plough back into my business." Whenever you fix your business environment, or you make it easier and more interesting for people to do business, you are also attracting investment, because every investor wants a business-friendly environment.

The challenge is that, if we want to be the best place to do business in Africa, then we must be pitching ourselves against countries like Mauritius, Rwanda, Senegal, Morocco, etc. who are all striving to be attractive investment destinations. So, we will look at what they've done to their laws, we will look at what they are doing for their investment attraction plans, and make sure that we are very competitive in there.

Also, we have monitoring and information systems as part of the GIPC, which we are going to strengthen with technology to be able to track and record data. We will analyse the data to see whether it's impactful or not, how many jobs are being created or lost, etc.

According to GIPC figures total Foreign Direct Investment (FDIs) to Ghana dropped from the 2.7 billion dollars recorded in 2015 to 2.4 billion dollars in 2016. Meanwhile, the total of GIPC registered projects for the period increased from 170 to 180. This year the GIPC is targeting 5 billion dollars of investments. That's more than double the total FDIs recorded in 2016. How do you aim to achieve this?

It may seem a huge undertaking, but I'm not so sure it's as big as that. The really important thing is how you position yourself to the investment world, and how you

THERE ARE SO MANY PLACES IN GHANA THAT OFFER SUCH INTERESTING PERSPECTIVES TO LIFE

position yourself to the business world. As you know, Ghana is rich in resources, and we want to really get away from the factor driven export economy (where we export raw materials, minerals, resources, etc.) to one that is value-added and industrialised, even at the rudimentary level. So, we want to add value to all our resources and raw materials before export. That in itself can create value.

Some of the very important strategic areas that we are focusing on in the next two years would require significant investment, for example in energy and gas. Especially while we are moving from hydroelectric to renewable and sustainable power. Also, we want to significantly improve the transport and communications infrastructure to one of integrated rail, airlines, and road.

So, I think, if we were to package potential investments well, 5 billion shouldn't be a huge headache to achieve. For example, if we want to develop the railway, that alone is anything up to a 3 billion dollar investment. If we want to turn the bauxite deposits into an integrated aluminium industry, that's probably another 1 to 2 billion investment. If you look at the iron ore deposits in Northern Ghana, that can be used as the foundation for a steel industry; that's anything from 3 to 5 billion dollars. If you look at, in Accra or elsewhere in Ghana, putting in a new airport that will serve as a regional hub and at creating free trade zones around that hub; that is another 2 or 3 billion. So, it adds up pretty quickly.

My strategy is first to look for the big hitters; the big ticket items of our shopping list of investments, and try and fulfil them, because those ones not only have a demonstrable effect of showing other investors that there's room and potential, but also that you are fixing your infrastructure. If you fix your energy and you fix your infrastructure, you have a greater chance of even further attracting more investments. Then you supplement that by creating a growing business environment to make sure that the people don't just invest, but they invest happily and sustainably, and create a good business environment.

This whole economic development plan that we have is for two main reasons. First of all, to create jobs for our people, to bring some money into the economy, and to grow the economy. Second, is to really position Ghana truly as a gateway into West Africa, and then into all of Africa. So, if you are targeting the 350 million plus market in West Africa, we need to do the things that will enable that to happen. An integrated transportation network is one such thing as it will make

sure that going out in the sub-region is not as difficult as it currently is.

Ghana is very well positioned; we are in the middle of the world. To fly to Europe is 6 hours; to the US is 10 hours; to South Africa is 6 hours; to North Africa is 5 hours, etc. It means we are close to everybody. So it means we need to position ourselves to be a hub for finance, aviation, transportation and business for West Africa and Africa. All we need is political will to do the right things. We need the right policy initiatives, and to engage in the right partnerships. There's no doubt in my mind that it's achievable.

In the past there have been some companies who have monopolised certain sectors, or sub-sectors, in Ghana. What is your personal view on how the country could best improve the competitiveness of the Ghanaian business environment?

This is very simple: open the investment space and let there be competition. I can tell you, for example, in the cement industry I have seen at least four players (two of them very big) trying to come into this space. I think, in the end, this bodes well for the construction industry, because we are likely to see the price of cement in the long term come down.

For me that's very important, but it's not as bad of an issue as the fact that we import almost everything. The construction industries, and the housing or real estate industry, seem overpriced because we import everything. Why can't we create the space for people to manufacture here and supply these industries? It's not difficult, we just have to put in the right policies. Even food; despite the fact that we have half a million arable land lying fallow, we are not food self-sufficient, and we do not have the food security that we so desire. Food security is also a political issue, and so we need to go beyond importing food and move towards growing our food.

If you look at the demography of Ghana, I am told that 55% of the population are below the age of 35. That represents a market waiting to develop. So, the good thing to do now, having sight of this market in the future, is to start putting in the foundations and the building blocks of a vibrant economy to accommodate that market that is waiting to happen. So, whilst looking at transport and the infrastructure, we are also looking at how we can create an environment where fast moving consumer goods can grow. Consumer power will grow, consumptive power will grow, and then people can live a good and happy life. ■TG



Ghana
On the go!



Mr. Michael Okyere Baafi, Executive Secretary of the Ghana Free Zones Board, is proud to celebrate the Agency's milestones over the past 20 years. Here is his message for Top Guide readers.

GHANA'S FREE ZONES IN 20 YEARS

"As Executive Secretary of Ghana Free Zones Board (GFZB), I am thrilled to commemorate the 20th anniversary of the implementation of Ghana's free zones programme which also coincided with Ghana's 60th Independence Anniversary celebrations.

I am proud of GFZB staff and my predecessors for their accomplishments and look forward to enhancing operations at the Secretariat.

To our private sector participants; investors, both local and foreign, I applaud your faith in the programme and for making Ghana your preferred investment destination.

The Free Zone Act, 1995 (Act 504), was enacted by Parliament to give effect to government policy on economic development through the establishment of free zones.

Ghana's Free Zones programme is a principal agent for industrial and export-



oriented development in the country. The programme has become an important proposition attracting businesses (local and foreign) to locate their companies in Ghana to manufacture for export. The main objective is to develop Ghana into a hub for manufacturing and processing through value-addition to Ghana's richly endowed natural resources for export to the West Africa sub-regional market of around 350 million, the rest of Africa, Europe, Asia and the Americas".

Why invest in Ghana?

Ghana's strategic location as a middle coastal belt with two seaports serving the land locked countries (Mali, Niger and Burkina Faso), makes it an ideal and preferred investment destination in the West African sub-region. This has become possible as a result of Ghana's unique selling proposition as an investment hub reinforced by its conducive business environment,



democratic credentials, peaceful and stable political climate, respect for the rule of law, investment guarantees, among others. The free zones programme is completely private sector driven. Government's role is limited to facilitating, regulating and monitoring activities of free zone developers/operators and enterprises.

Enclave and single factory free zones

Ghana's free zones programme combines both the enclave and single- factory enterprise schemes. Ghana is accessible to potential investors who have the opportunity to use the free zones as focal points to produce goods and services for foreign markets, differentiating Ghana's operational scheme from most countries where free zone companies are restricted to locate within the designated and approved Export Processing Zones (EPZs) only.

Priority sectors

As Ghana continuously re-strategises to diversify its export base, some sectors have been identified as priority areas for investment.

- Agro-Food Processing
- Textile/Apparel Manufacturing
- Seafood Processing
- Jewellery Production
- Pharmaceuticals
- Floriculture
- Metal Fabrication
- Ethnic Beauty Products

- Light Industry/Assembling Plant
- Oil and Gas
- Information Communication Technology (ICT)

Export processing zones

The GFZB has four designated land banks in Tema in the Greater Accra Region, Sekondi and Shama both in the Western Region. Boankra in the Ashanti Region.

The **Tema EPZ** is our flagship and home to about fifty, of the listed two hundred and twelve licensed Free Zone companies. The list include world renowned cocoa processing companies like Cargill Ghana Ltd and Barry Callebaut Ghana Ltd.

An example of a Single-Factory Enterprise.

The largest cashew processing company in the world, Usibras Ghana Limited, Brazilian owned, headquartered in Camden, New Jersey, USA has a subsidiary in Ghana operating as a single factory free zone located near the Tema EPZ.

Investment Opportunities in Infrastructural Development

The GFZB is looking for strategic investors to partner with to develop land banks in Shama (3200 acres), Sekondi (2,200 acres) and Boankra (1,099 acres). These land banks have been earmarked for Petroleum and Petrochemical activities, Mineral Processing Hub and a Technology Park respectively. ■TG

THE MAIN OBJECTIVE IS TO DEVELOP GHANA INTO A HUB



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Heavy duty investment in Dawa Industrial City (DIC)



Established in 1992 as John Murphy Construction, LMI Holdings has grown consistently over the last 25 years to become the multi-faceted investment holding company that it is today with over 400 employees working across 6 primary business units in 5 offices across Ghana. LMI's primary business units are as follows:

1. John Murphy Group – Construction
2. Land Investments Group – Industrial and Commercial Property Development
3. Southern Utilities – Utilities (Power, Gas, Water)
4. Murphy Homes – Affordable and Middle Income Housing
5. International Warehousing & Logistics Group – Warehousing & Logistics
6. Datacom – Information Technology Services

LMI is currently developing 4 Regional Industrial Zones (RIZs) across Ghana. Each of these 1,000 acre plus facilities will offer competitively priced, litigation free and fully serviced plots within secure enclaves equipped with reliable power, water and data connections.

The sites for the 4 Regional Industrial Zones are:

- Dawa – Greater Accra
- Asuogyaman – Eastern Region / Volta Region
- Yapei – Northern Region
- Takoradi – Western Region

The development of these RIZs will complement the government's One Region - One Industrial Zone policy by creating regional hubs for medium to large scale industry, where infrastructure and services can be concentrated in order to achieve economies of scale.

Dawa Industrial City on the Accra – Aflao highway is most advanced of the planned RIZ. It is a 2,600 acre industrial park development with adjoining residential developments.

Project Description Dawa Industrial City (DIC)

is the West Africa's newest and most modern industrial enclave. And at the centre of the main trans-West Africa highway linking Nigeria, Ghana and Ivory Coast, the regions three biggest economies; it is truly at the gateway of West-Africa.

This hub, consisting of a broad ecosystem of industrial, residen-

tial/ commercial developments is designed to serve as the factory area to the regions 350 million population.

Dawa Industrial City comprises of the following 3 developments:

- A 2,000 acre purposed planned Industrial Zone (Dawa Industrial Zone)
- A 335 acre planned residential development (Dawa Residential Area)
- A 300 acre Energy park (Dawa Energy Park)

Project Summary

Dawa Industrial Zone

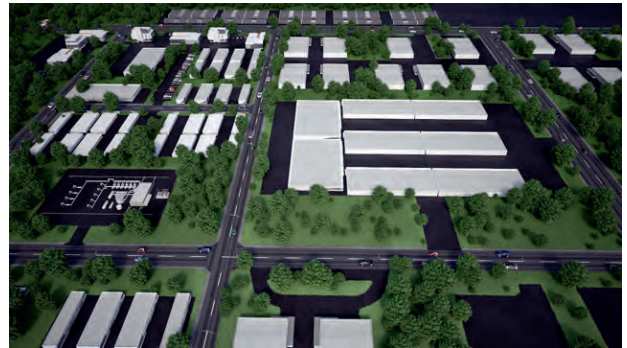
A purposefully designed industrial enclave intended to host a wide range of light and heavy industries across various sectors. These include the agro-processing, garments and textiles, logistics, materials and heavy/light metal sectors. At full capacity, Dawa Industrial Zone is expected to host over 500 companies.

Dawa Energy Park

A 300 acre Energy Park designed to host power plants and petroleum storage tank farms. Dawa Energy Park is located along Ghana's Atlantic Coast and will have a purpose built Single Point Moring (SPM) system for offloading light crude oil, finished petroleum products and natural gas. The park is also expected to tie into the BOST Gas transmission infrastructure once available.

Dawa Residential Area

A 335 acre residential estate comprising of low and middle income housing and other social amenities required for a development of this nature.




DAWA INDUSTRIAL CITY
an LMI company


LMI
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Enabling an emerging economy

As is common in many African countries, largely due to limited identification structure and a significant unbanked population, Ghana is heavily reliant on cash. This has, however provided opportunity for the growth of mobile financial transactions, and microfinancing. Irrespective of this, Ghana's banking industry remains one of the most prominent players in Ghana's economy.

Past financial sector reforms have resulted in the emergence of insurance, pension, and capital markets in recent times, but banking continues to lead the country's financial services sector. According to the government's vision, policy continues to work towards creating an enabling environment, with the necessary support from effective regulations, and with the objective that all savers and investors will enjoy the benefit of regulatory oversight.

This financial intermediaries currently operating within this sector include both foreign and local major banks, Rural and Community Banks (RCBs), Savings and Loans Companies (SLCs), other financial institutions, and leasing companies.

Above: Vice President of Ghana Mahamudu Bawumia speaks during a panel discussion on the State of the Africa Region at the World Bank IMF Spring Meetings April 22, 2017 in Washington, DC.

Market composition and trends

Banking industry

Banks generally used 2016 to consolidate and manage their risks exposure and weaknesses in their loan portfolios held over from 2015. In 2017 the sector's prospects look good, and there is ample opportunity as far as the country's unbanked population is concerned. Also, based on the stability of the currency in 2017, Ghana's economic growth should gain ground and generate demand for banking products and services.

At December 2016 Ghana's banking industry comprised 33 Deposit Money Banks (DMBs), 65 Non-Bank Financial Institutions (NBFIs), 148 Rural and Community Banks (RCBs) and 402 Forex Bureaux. The number of DMBs branches increased from 1,150 in 2015 to 1,341 at the end of December 2016.

Ecobank is the largest bank in Ghana when considering assets, deposits, and loans. GCB (formerly Ghana Commercial Bank) is the largest locally owned financial institution in the country.

In fulfilment of the Bank of Ghana's directive on recapitalisation, all 33 banks in the industry have met the minimum paid-up capital requirement of GH¢60 million as at end of December 2016.

In terms of regulation, the Bank of Ghana (BoG) serves as the industry regulator, and has a positive reputation for effective oversight, and pursuing monetary policy in a way that creates opportunities for banks.

Mobile money

According to the World Bank, by 2014 only 40% of Ghana's population had a bank account. Such low formal financial inclusion is not unusual in Sub-Saharan Africa, and this figure was, in fact, better than some other West African countries. However, the spread of technology across the market is playing a key role in expanding financial inclusion in Ghana. Aside from the efforts of the microfinance industry and NBFIs, the telecoms sector's mobile banking platforms are playing a key role in this. Although mobile money programs have yet to see the same level of success as that of the M-Pesa system in Kenya, by tapping into the 90% of the adult population with mobile phones, the prospects for these platforms is very promising as active mobile money users accounted for only 3.9% of mobile subscribers in 2016.

The International Finance Corporation

(IFC), a division of the World Bank, has been working with both telecommunications companies and banks to expand mobile money services and promote financial inclusion. These collaborations have facilitated over 970,000 million additional non-cash transactions per month, and have reached over 21,600 remittance customers. This was further extended when, in March 2016, the IFC and Fidelity Bank, agreed to work together to support 600,000 new mobile money users.

Microfinance

Microfinancing has provided an invaluable lift to Ghana’s unbanked population, particularly those in the informal sector. By 2015 the number of MFIs in the country had grown to over 500, and their product offering had improved significantly. Unfortunately, lapses in governance and instances of fraud lead to the closure, by the BOG, of over 70 MFIs for failing to comply with requirements. This tarnished not only the reputation of MFIs, but has led to a general mistrust of financial institutions among the average population. The BoG is, however, now maintaining far stricter supervision over the industry, and MFIs are likely to continue to be a first option credit service for many Ghanaians.

Insurance industry

In January 2016 Ghana was ranked by EY among the countries with the highest potential for growth in insurance premiums and least country risk. As Ghana’s

THE SPREAD OF TECHNOLOGY ACROSS THE MARKET IS PLAYING A KEY ROLE IN EXPANDING FINANCIAL INCLUSION IN GHANA

middle class grows along with the economy over the next few years, the demand for insurance is expected to increase, with life insurance seeing the greatest rise. The industry’s expected annual growth rate by 2018 is 8.5%, which would take its value up to \$600 million.

Competition in the insurance sector has deepened in recent years with the entry of new institutions, increase in the minimum capital requirement from GH¢1million to GH¢15million, the introduction of innovative insurance products and the enforcement of the compulsory insurance of commercial buildings. Despite these recent developments, insurance penetration is still below its 2% targeted benchmark, and insurance penetration declined from 1.89% in 2010 to 1.17% in 2015. Irrespective of this decline, Ghana’s insurance industry is set to grow and develop as minimum capital requirements encourage stronger underwriting capacity, and more micro- and mobile-insurance products are developed.

The non-life insurance sector currently dominates the insurance sector in terms of gross premium income. However, the life insurance sector continues to register relatively higher growth. This is largely due to growth in life savings products, bancassurance, and the separation of life and non-life companies.

The asset base and the capital position of the insurance industry have improved. The industry’s asset base, which stood at GH¢3.06 billion in 2015, grew by 20% (31% in 2014 and 35% in 2015) to

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reach GH¢3.67billion in 2016. Out of the GH¢3.67billion long-term insurers' asset accounted for 60% (GH¢2.18billion) while short-term insurers' asset constituted 40% (GH¢ 1.48billion). Fixed deposits continue to account for the greater share of the investments portfolio mix of both life and non-life insurers.

Although foreigners are permitted to hold a majority stake in insurance firms in Ghana the stake is limited to 60%, and the remaining 40% must be held by a Ghanaian citizen. Despite this, the industry is gaining increasing interest among foreign investors, including significant UK and Europe based insurers, seeking to gain entry to the market.

There are a number of common insurance products that are not available on the Ghanaian market, and that could provide opportunity for future growth. These include medical malpractice insurance and professional liability / indemnity insurance. Opportunities also exist in training and recruitment, particularly for loss adjusters or assessors.

Securities Market

The number of listed Companies on the Ghana Stock Exchange (GSE) increased marginally from 35 in December 2014 to 39 in December 2015, and further to 41 in December 2016. Similarly, the number of stockbrokers also rose from 18 to 21 over the same period. Trading on the GSE was generally slower in December 2015 and

2016, compared to December 2014. This can be seen as the growth rate in GSE Composite Index deteriorated from a negative rate of 11.77% to a further negative rate of 15.33% in December 2015 and 2016 respectively. There was also a lower year-to-date change in the financial stock index from a negative rate of 13.98 % in December 2015 to a further negative rate of 19.93% in December 2016.

Total market capitalization of the GSE as at December 2014 stood at GH¢64.35 billion. It declined marginally to GH¢57.12 billion in December 2015, and further to GH¢52.69 billion in December 2016. The total volume traded increased from 10.1 million in December 2014 to 56.03 million in December 2015, and further to 129.05 million in December 2016.

Investment Opportunities

As evidenced by the consistent and continuing high growth of companies in the sector there is still a high demand for various financial services in Ghana. The relatively underdeveloped financial services sector in neighbouring countries is also an opportunity for financial service firms in Ghana to supply sought after services to those countries.

Credit Reference Bureaux

The availability of credit information is generally accepted to be crucial for the development and maintenance of an effective financial sector. Investment opportunities

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exist for financial institutions to acquire licenses for the operation of credit reference bureaux in the country.

The Credit Report Act, which became law in June 2007 (Act 726), provides a legal and regulatory framework for credit reporting in Ghana to the banks. As at December 2016, the number of licensed credit bureaux numbered three, namely XDS Data Limited, Hudson Price Data Solutions, and Dun and Bradstreet Credit Bureau Limited. These credit bureaux use data validation tools and credit reports to assess the credit worthiness and risk profiles of potential borrowers. There has been a growing interest by financial institutions in the credit bureaux.

Oil Industry Support

Ghana's discovery and exploration of oil in commercial quantities has provided enormous opportunities for the banking and financial sector to develop appropriate products to support the industry.

The total volume of crude oil exported in 2016 was 28.77 million barrels, compared with 27.3 million barrels in 2014. 2016 was also marked by significant increases in world crude oil prices from US\$31.9 per barrel in Jan 2016, to US\$54.9 per barrel by Dec 2016.

General investment opportunities exist for the following range of companies:

- Universal banks
- Development banks
- Insurance companies

- Reinsurance companies
- Mortgage finance institutions
- Leasing companies
- Venture capital companies
- Hire purchase companies
- Export finance companies
- Investment banks
- Mutual funds
- Investment trusts
- Savings and loans companies
- Specialized finance houses

Investors can expect the following advantages from Ghana's financial sector:

- Availability of skilled financial professionals
- Improved academic and training institutions with a financial focus, including the Ghana Stock Exchange, which also provides training.
- ICT infrastructure is increasing being put in place to enhance competitiveness and efficiency of operations.
- A more highly developed Legal and Regulatory Environment in comparison with neighbouring countries.
- New financial instruments, such as asset-backed securities, dollar-denominated bonds, and inflation-indexed bonds, have been introduced
- The regulation and supervision of financial institutions has been actively improved.
- Introduction of off-shore banking has opened new channels in business and options in the sector. ■TG

GHANA'S DISCOVERY AND EXPLORATION OF OIL IN COMMERCIAL QUANTITIES HAS PROVIDED ENORMOUS OPPORTUNITIES FOR THE BANKING AND FINANCIAL SECTOR



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Access to finance and credit

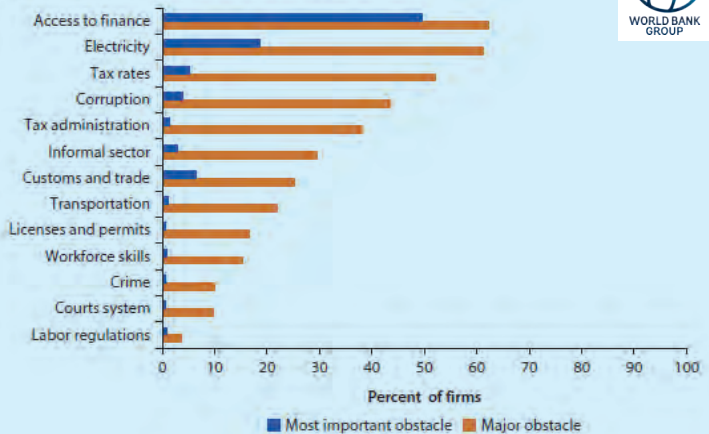
Access to finance is rated as the main business constraint by firms of all sizes in Ghana, formal and informal. The high interest rate environment in the financial sector is a deterrent for borrowing by firms of all types, particularly small ones. More than half of microenterprises and small registered firms report access to finance as the top obstacle to grow their business.

The majority of household enterprises operate without access to external finance (91% of household enterprises are clearly capital constrained); only 6% have tried and successfully gotten credit from banks or other financial institutions; and another 3% have tried to get credit, but unsuccessfully. They do not even rely on informal credit from money lenders, relatives, and proceeds from other household activities (farming, gardening, fishing, etc.); household savings are the main source of capital.

Microenterprises and small and medium formal firms also mostly rely on internal funds to finance their operation and on informal sources of finance; only about one-quarter of formal firms (larger firms) rely on bank financial services and equity. Lack of access to appropriate financing translates into insufficient levels of investment in innovation and firm growth.

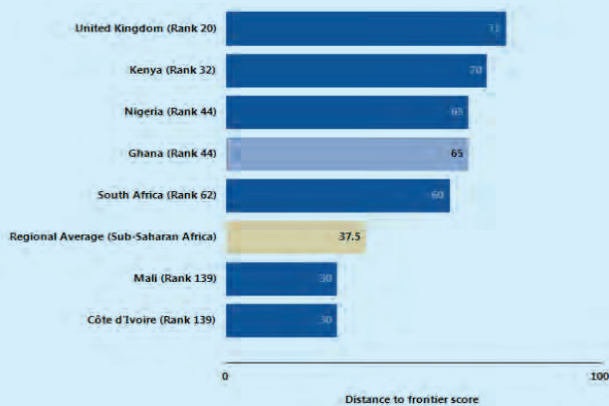
Even liquidity credit in Ghana is prohibitively expensive and not accessible for most firms, particularly SMEs. As the riskfree rate had ballooned to more than 26% in January 2016, and real interest rate levels were at 10%, these became an impediment for both firm growth and debt stabilization. The lack of access to external finance also affects the ability of firms to manage liquidity, making them vulnerable to even small financial shocks and unable to invest in innovative activities.

Figure 4.15 Obstacles to Investment and Business In Ghana



Source: World Bank, Honorati & de Silva, "Expanding Job Opportunities in Ghana" 2016

Figure 6.1 How Ghana and comparator economies rank on the ease of getting credit



Source: World Bank, Honorati & de Silva, "Expanding Job Opportunities in Ghana" 2016

Figure 6.2 How strong are legal rights for borrowers and lenders?
Economy scores on strength of legal rights index

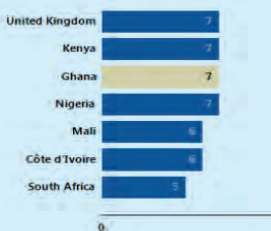
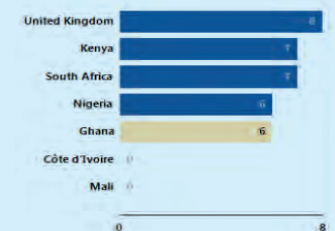


Figure 6.3 How much credit information is shared—and how widely?
Economy scores on depth of credit information index



Source: World Bank, "Doing Business 2017, Equal Opportunity for All, Economy Profile 2017, Ghana"



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Central Region: Dunkwa-on-Offin, Cape Coast, Winneba, Kasoa; Eastern Region: Koforidua; Abetifi, Mamfe Western Region: Takoradi, Tarkwa; Ashanti Region: Harper Road; Suame-Kumasi, Golden Tulip Kumasi, Roman Hill, Tafo, Kejetia, KNUST,

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2015: Growing Bank

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2015: Corporate Social Responsibility

2nd Runner-up

Other Awards

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2015: Best SME Bank in Ghana

**2015: Best Enterprises Award
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Providing power to deliver stability and drive development



The Ghanaian economy relies heavily on the energy sector to provide stable power and fuel supplies, thereby driving the country's overall development.

Ghana's demand for power has continued to rise sharply, despite the broader economic slowdown of the past two years. This is straining the existing generation and distribution capability of the country's energy sector. As a result, the availability, reliability, and quality of electricity service remains unsatisfactory, with frequent blackouts, known locally as "dumsor", causing major disruptions to economic and social activities. Increased access of households and industry to reliable and adequate energy supply, as well as the diversification of the national energy mix, are therefore a high priority for Government.

The Government's energy policy is embodied in the Strategic National Energy Plan of 2006-2020. This policy aims to develop a sound energy market that would provide sufficient, viable, and efficient energy services for Ghana's economic development through the formulation of a comprehensive plan that will identify the optimal path for the development,

utilization, and efficient management of energy resources available to the country.

Market composition and trends

Until 1998 Ghana relied mainly on hydro-power plants for electricity generation. Currently the country's hydroelectricity capacity makes up 49% of the country's energy mix. Thermal energy production accounts for just below 50% of the country's generation capacity, and thermal plants are used to regulate the peak load. However, recently the net demand for electrical power has been considerably greater than the supply. With the rapid rise in urbanization, and growing industrialization, oil and gas consumption has also increased, and is set to grow by 10% to 15% annually. Due to increased use of private generators to bridge the shortfall in electricity supply diesel is particularly in high demand. In this regard, the energy sector has been undergoing a number of developmental initiatives to improve overall operational efficiency and provide security.

With the assistance of the IFC among others, Government has been able to commit to providing adequate, reliable, and cost effective electricity supply

through timely power generation capacity additions, modernization of transmission and distribution infrastructure, as well as ensuring universal access to electricity by 2020. While working to achieve this by streamlining the sector and expanding installed capacity to improve efficiency and ensure supply, Government is also actively searching for private partners to help in securing funding and updating some key public projects and bodies.

Currently, the Energy sector in Ghana can be divided into two main sub-sectors: petroleum and power.

Petroleum

Ghana's petroleum sector involves upstream and downstream activities. The upstream activities include the production, procurement and refining of crude oil. The downstream activities include production, distribution and marketing of petroleum products, as well as the premixing of petroleum product for industrial uses, including fishing.

Distribution of petroleum products in Ghana is dominated by multinational oil marketing companies. Following the deregulation policy of the government, the oil marketing companies have increased in number, and include several local Ghanaian companies. Their products are retailed through gas stations, which are either owned by the Oil Marketing Companies (OMCs) or private individuals.

There are 138 accredited oil marketing companies held in good standing for business in Ghana. The private sector, including the OMCs and others, source and supply finished products through an open competitive tendering system.

Further liberalization of the industry has been achieved through the deregulation of the price of petroleum products, thereby allowing bulk oil distribution companies and OMCs to enact better control over their own prices, instead of following a fixed price set by the National Petroleum Authority.

Power

Ghana has one of the highest rates of electricity distribution in Africa. However, soaring demand and low levels of rainfall have hampered the ability of Ghana's dams to produce enough hydroelectric power. With rainfall unlikely to be reliable in coming years, due to climate change, this situation is set to continue.

The country's thermal power production facilities have also faced production challenges. Infrastructure damage, and lack of adequate supply of gas via the West African Gas Pipeline, have forced a number of thermal plants to switch to more expensive fuels.

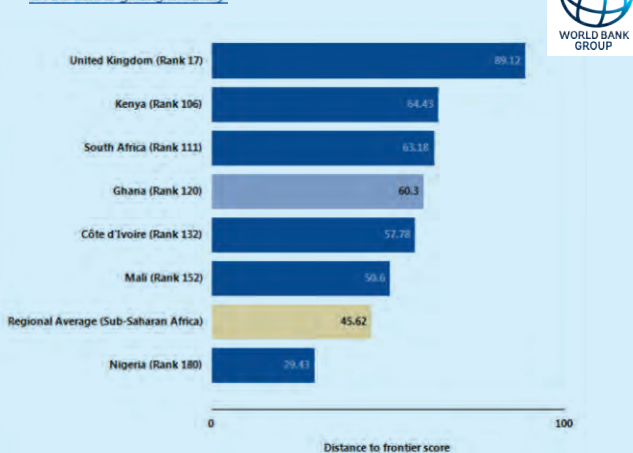
Ghana has lost millions of dollars in productivity due to the resulting power outages, and although power supply has become marginally more stable, the country still struggles with intermittent disruptions. It is estimated that between 16,398GWh and 17,350GWh will be required to keep pace with the country's future industrial and residential power needs. This is between 4000MW and 4200MW above current capacity.

Peak electricity demand was at 1853MW in 2014. Government's policy objective is to increase installed generation capacity from the current 1,986MW to 5,000MW by 2020. In order to achieve this, the Government has initiated feasibility studies for the construction of further hydro dams, and entered into contracts with international firms to construct a number of hydro and coal power plants. Gas production at the Sankofa field is also expected to boost thermal supply.

Short term generation solutions include the leasing of two power barges for ten years. Although these operate on heavy fuel, they do have the capacity to run on gas, and are likely transition to this once local gas

OIL AND GAS CONSUMPTION IS SET TO GROW BY 10% TO 15% ANNUALLY

Figure 4.2 How Ghana and comparator economies rank on the ease of getting electricity



Source: World Bank, "Doing Business 2017, Equal Opportunity for All, Economy Profile 2017, Ghana"



production comes on-line.

Thus, the Sankofa Gas Project is now high on the Government's agenda. This project complements the World Bank's and IMF's macroeconomic and fiscal support programs by supporting the Ghana's Government strategy to leverage domestic gas and oil resources to green the economy by reducing use of heavy petroleum in electricity generation and removal of the main bottlenecks to economic growth – including inadequate and unreliable electricity supply. Sankofa will require significant investments in infrastructure through effective public-private partnerships. In 2016, to support this effort, the World Bank Group provided an IDA guarantee of US\$125 million and a complementary guarantee of US\$200 million to unlock needed infrastructure investments.

Renewable Energy

In light of the substantial drop in oil prices, the uncertainties associated with short-term gas supplies, the effects of climate change on a number of sectors, and the time it will take for domestic natural gas to meet the economy's demand for electricity, development of cleaner domestic energy sources is a high priority. The diversification of energy sources required to meet and surpass these challenges provide numerous opportunities for investment in and development of alternative energies, and in 2016 80 licences were issued to companies investing in alternative energy sources in Ghana.

The main policy issues in the renewable energy sub-sector surround the low level of application of new renewables (small hydro, modern biomass, wind, solar, and bio-fuels) in the national energy mix, and over dependence and inefficient utilization of wood fuel resources. Consequently, the policy goals of the renewable energy subsector are to achieve 10% contribution of modern renewables (excluding large hydro and wood fuels) in the electricity generation mix by 2020, reduce the demand on wood fuels from 72% to 50% by 2020, as well as the promotion of the development and use of other biomass technologies, including biogas, biofuels, gasification and waste-to-energy.

Research has found that, driven by the growing affordability of LED colour TVs and other appliances (reflecting consumer aspirations for modern energy services), rural households in off-grid areas are



Above:
Workers carry out soldering work on the Akosombo dam.

willing to pay for quality solar energy services (World Bank, 2016). Potential for solar energy production lies in the northern regions, and the northern parts of Brong-Ahafo and Volta Regions, where there are very high solar radiation levels received, with monthly average of between 4.4 and 6.5kWh/m²/day. Despite this abundance, solar power is still contributes very little to energy production in Ghana.

Ghana has about 2,000MW of raw potential for wind energy. The best locations for wind power are on the country's eastern coastline, on hills surrounding Lake Volta, and along Ghana's border with Togo. It is currently reliably projected that wind farms with 300 MW installed capacity could be established along the coastal areas to generate over 500 GWh to supplement the nation's energy supply.

Agencies in the Energy Sector

The Ghana electricity supply industry is largely managed by state-owned entities. It is unbundled, with separate jurisdictions and entities regarding activities of electricity generation, transmission and distribution. The Power System of Ghana is run by seven public institutions. These are the Ministry of Power (MOP), Energy Commission (EC), Public Utility Regulatory Commission (PURC), Volta River Authority (VRA), Ghana Grid Company (GridCo), Electricity Company of Ghana Limited (ECG), and the Northern Electricity Department Company (NEDCo) a subsidiary of the VRA.

Electricity generation is undertaken by the state-owned Volta River Authority (VRA), which operates 83% of the country's power plants, including the Akosombo Hydro Power Station, Kpong Hydro Power Station and the Takoradi Thermal Power

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To meet Francophone standards and market demand, Nexans operates two manufacturing units in Morocco, producing cables and transformers. To serve Anglophone West African countries, Nexans is strategically represented by Nexans Kabelmetal Gh Ltd (NKG) in the port city of Tema, Ghana. NKG, incorporated in 1968, was the first cable manufacturer in West Africa and operates under ISO 9001, 14001, and OHSAS 18001, ensuring top international standards.

In order to strengthen and maintain our leadership and commitment in West Africa, Nexans is building a state-of-the-art manufacturing plant in Côte d’Ivoire scheduled to be operational in 2018.

Our presence in these key countries allows us to support regional content policies by localizing our products and capabilities to respond to a fast-growing consumer economy. We are also able to participate in the rapid infrastructure expansion in the region through the development of distribution partnerships in all business areas.

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PARTNERSHIP**

Plant (TAPCO) at Aboadze. The VRA is also a minority joint partner with TAQA, a private sector company which owns and operates the Takoradi International Power Company (TICO) thermal power plant, also located at Aboadze. Bui Power Authority (BPA), another state-owned entity, is charged with the implementation of the Bui Hydroelectric Power Project. In addition, independent power producers have been licensed to build, own and operate power plants.

The grid transmission network connecting the main production plants to consumption centres has been modelled and categorized into five zones under the Ghana Grid Company (GridCo). GRIDCo was established in accordance with the Energy Commission Act, 1997 (Act 541) and the Volta River Development (Amendment) Act, 2005 Act 692, which provides for the establishment and exclusive operation of the National Interconnected Transmission System by an independent Utility and the separation of the transmission functions of the Volta River Authority (VRA) from its other activities within the framework of the Power Sector Reforms.

There are four voltage levels, in the power grid: 330kV, 225kV, 161kV and 69kV. The total length of the transmission line is 4315km, comprising 219km of 330kV line, 73km of 225kV line, 3,888km of 161kV line, and 132km of 69kV line. There are 53 substations, and about 100 transformers, in the transmission grid of Ghana. In terms of the power grid planning of Ghana, it is expected that the 330kV backbone grid will form all over the country's grid by 2020. The 161kV voltage level will serve as the regional transmission voltage.

There are three distribution companies currently operating in Ghana, with some 69 Substations scattered around the country. The Electricity Company of Ghana (ECG) serves customers in the south, Northern Electricity Distribution Company serves the northern part of the country, and Enclave Power serves companies at the Tema free zone enclave.

The National Interconnected Transmission System (NITS) for electricity is owned and operated by the Ghana Grid Company (GRIDCO). GRIDCO is a state-owned company. The distribution of electricity is undertaken by the Electricity Company of Ghana (ECG), a state-owned company, and the Northern Electricity Department (NED), a subsidiary of the

Volta River Authority (VRA).

The Energy Commission (EC) and the Public Utilities and Regulatory Commission (PURC) regulate the electricity supply industry. The Energy Commission, in addition to being responsible for technical regulations in the power sector, also advises the Minister for Energy on matters relating to energy planning and policy. The PURC, on the other hand, is an independent regulatory agency responsible for the economic regulation of the power sector with the mandate to approve rates for electricity sold by electricity distribution utilities.

The Ministry of Energy is responsible for formulating, monitoring and evaluating policies, programmes and projects in the energy sector. It is also the institution charged with the implementation of the National Electrification Scheme (NES) which seeks to extend the reach of electricity to all communities in the long term.

Section 11 of the Civil Service Act, 1983 (PNDCL 327), has amended the Civil Service (Ministries) Instrument, 2013(E.I.1) from "Ministry of Energy and Petroleum" to "Ministry of Petroleum" and "Ministry of Power". By this new development, agencies under the former Ministry of Energy and Petroleum have been assigned to the two new Ministries accordingly.

The Petroleum Ministry includes Bulk Oil Storage & Transportation (BOST), Ghana Oil (GOIL), Ghana Cylinder Manufacturing Company (GCMC), Ghana National Gas Company (GNGC), Ghana National Petroleum Corporation (GNPC), National Petroleum Authority (NPA), Petroleum Commission (PC), and Tema Oil Refinery (TOR).

The Power Ministry includes Bui Power Authority (BPA), Energy Commission (EC), Electricity Company of Ghana (ECG), Ghana Grid Company (GRIDCO), Northern Electricity Distribution Company (NEDCO), Volta Aluminium Company (VALCO), Volta River Authority (VRA), and VRA Resettlement.

Investment Opportunities

As part of the strategies to achieve the National Energy Strategic Plan objectives, the Ministry of Energy is encouraging public-private sector partnership by securing private sector investment partnerships for the re-capitalization of Ghana's energy supply system.

Investment opportunities in this sector:

- Energy service companies to provide energy services in these areas:
 - Energy audits & management strategies
 - Power factor correction
 - Electrical load management
 - Boiler efficiency/heat recovery
 - Monitoring and targeting energy management
 - Tariff analysis
 - Refrigeration and air conditioning
 - Compressed air systems
 - Kilns and furnaces
 - Fuel substitution
- Energy Manufacturing Companies to supply energy-monitoring equipment to better meet the increased requests for power monitoring and tariff analysis from industry in the country.
- Companies to provide an alternative decentralized sustainable energy system that can easily be deployed in remote and deprived communities into the overall national energy mix.
- Companies to provide solar vaccine refrigerators for the preservation of vaccines for child immunization programmes in remote and off-grid areas
- Provision of solar energy systems to schools and health centres in off-grid communities.
- New, higher quality and cheaper energy services to the poor, for cooking, transport, water and heating.

Further investment opportunities in demand in this sector include:

- Penetration of rural electrification by decentralized renewable energy complementation
- Penetration of solar energy in hotels, restaurants, and institutional kitchens using solar water heaters
- Increased LPG penetration
- Improved efficiency of cook-stove penetration
- Penetration of biogas in hotels, restaurants and institutional kitchens
- Increase in the penetration of modern energy into agriculture for increased agricultural production, to help achieve Ghana's food supply security objectives
- Substitution of diesel with bio-diesel in agricultural mechanization
- Replacing the use of diesel for irrigation with grid electricity and mechanical wind pumps
- Assisting large-scale commercial poultry farmers to meet at least 10% of their electricity needs from biogas, using the droppings from their birds

Investment Incentives

Incentives to the sector may apply under the following provisions:

- All companies enjoy a corporate tax rate of 25%, except mining companies which attract corporate tax of 35%.
- Location incentives (between 25 and 50%) for industries located in and outside the regional capitals as applicable.

■ **TG**

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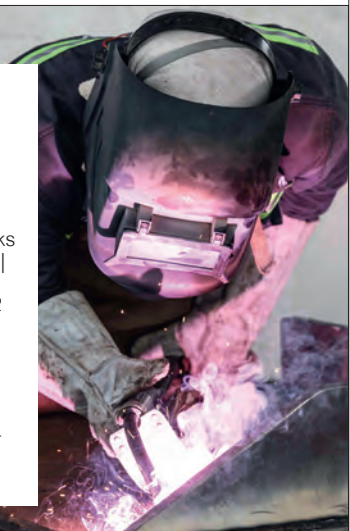
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Oil going strong, gas has great potential



Although the low global oil price has severely impacted Ghana's oil industry and the economy as a whole, the oil and gas sector is continuing to move ahead positively. Two new oil and gas fields are scheduled to come on-line soon, and improved regulation, through revised exploration and production legislation governing the upstream sector, is making interactions more transparent for investors. Also, Ghana's urgent need for gas to fuel its thermal power plants and thereby relieve its energy shortages, means that there is a market ready to absorb any gas reserves.

Ghana's current oil and gas sector's genesis is attributed to the announcement of discoveries, in June and September 2007, by a consortium of companies comprising Kosmos Energy Ghana, Tullow Ghana Limited, Anardarko Petroleum

Above:
A view of the natural gas processing plant in Atuabo, outside a village on Ghana's remote west coast, on September 2, 2014. The plant in Atuabo is finally due to open in December, projecting a 500 megawatts of electricity.

Corporation, Sabre Oil and Gas Limited, E.O. Group, in conjunction with the GNPC, of significant quantities of oil and gas in the offshore deepwater Tano/Cape Three Points basins located in the southernmost part of Ghana. The two discovered fields were unitized and designated as the Jubilee Field, in commemoration of Ghana's Jubilee Year celebration. In 2010, then-president John Atta Mills ceremonially turned on the taps, signalling the commencement of commercial oil production in the country.

Since then Ghana's oil and gas industry has been growing at a steady pace, with production and liftings being 161.9mmbbls produced over the first 5 years, and average daily production above 100,000bopd since 2013. There are currently four major oil and gas fields in the country, namely: the Jubilee Field, sub-commercial Saltpond Field, the Tweneboea-Enyenra-Ntomme (TEN)



field and the Sankofa-Gye Nyame field. In addition to this, 23 post-Jubilee discoveries have been made in the Tano/Cape Three Points basin.

Between 2011 and 2015 the country's oil revenues came to \$3.2bn. The drop in global oil prices in 2014 and 2015 have proved to be a serious shock to Ghana's projected revenues, with 2015 earnings being 60% lower than in 2014 and 46% below revised projections. Actual payments fell too, and only 0.7% of gas export revenue was paid by December 2015. Despite this the sector continues to attract investors and its prospects look positive.

At December 2015 total proven oil and gas reserves stood at 1,247.5MMboe, and Ghana has over 36,000km² and 103,600km² of open offshore and onshore acreages. A gas transportation infrastructure and processing plant is in place for Jubilee gas, and the Sankofa - Gye Nyame field, due to produce its first oil in late 2017 and first gas in 2018, is seen as a game changer for the industry with over 1 trillion cubic feet of NAG.

Ghana has fifteen Petroleum Agreements (PA's) currently in operation and about eight new agreements under negotiation. In terms of transparency, the country has been EITI compliant since 2010, and the GNPC reports to the Public Interest and Accountability Committee (PIAC).

There are currently over 400 registered service companies with permits in this sector. The services offered cover the broad range of oil field services and other general ancillary services such as accounting, auditing and legal.

Market composition and trends

As mentioned, Ghana has four key crude oil and gas projects. The Jubilee field is where most of the country's current extraction activity takes place. It produces a lighter oil than standard Brent crude, and therefore usually fetches a higher price. This field has had an average daily oil production of over 100,000 bopd since 2013. Its average daily associated gas production has been 119.7MMScf/d since inception, and it is responsible for the exportation of 26.1MMScf for domestic power production. This field showed recoverable reserves of 466 million barrels and 465 billion cubic feet (bcf) of gas as at December 2015. Damage to a floating production, storage, and offloading vessel halted production between April and May 2016. Production

at this vessel is now up and running, and operating and offtaking procedures have been reviewed and adjusted.

The Tweneboa-Enyenra-Ntomme (TEN) field has had four declared hydrocarbon discoveries between 2009 and 2011. A total of 12 wells have been drilled in this field; two exploratory and ten appraisal wells. There are ten separate hydrocarbon pools: five oil and five gas condensate. TEN's total oil reserves consist of 239 million barrels (MMBO) and 360 billion cubic feet (BCF) of gas. This field's first oil was originally expected to begin by the end of 2017, but came on stream in the third quarter of 2016 (301MMboe). Peak oil production is expected to be 80,000bpd. This field is also expected to contribute significant amounts of natural gas that could help fuel Ghana's thermal power plants.

The Sankofa - Gye Nyame field is an integrated oil and gas development with two phases. Phase one comprises eight oil producers, three water injectors, three gas injectors, a spread-moored FPSO, and a subsea tie-back in a daisy chain. Phase two involves the development of NAG with oil, including five gas producers (four at Sankofa main and one at Gye-Nyame), an Onshore Receiving Facility (ORF) at Sanzule, and 63km of 22 inch OD Gas export pipeline. There are reserves of 162 MMBO of oil with 1,071bcf of gas at this field. The current project status is that the FEED work on the gas export sealine and ORF have been completed, three development wells have been drilled to completion, and an overall project progress of 32% achieved as at end of January 2016 with 347MMboe.

The fourth project is the Voltaian Basin Project or VBP. The Voltaian Basin is a huge inland sedimentary basin constituting almost 40% of Ghana's land mass. The GNPC is pioneering exploration activities in the inland Voltaian basin under its five year initial exploration programme from 2015 - 2019. This will cover 2D seismic data acquisition and processing, environmental impact assessment, community relations management and the drilling of two conventional wells

As the oil segment slows down somewhat so natural gas production is accelerating at a rapid pace. The Western Corridor Gas Infrastructure Development project, which will integrate offshore and onshore elements, is being developed in several phases, to evacuate, commingle,

and stabilise gas from the Jubilee, TEN and Sankofa offshore fields, before it is distributed. The project will eliminate the current practice of flaring and reinjection of gas into the reservoirs.

Completion of commissioning activities for the first phase of the project, dubbed as the Ghana Early Phase Gas Infrastructure Development Project, was completed in April 2015. Front end engineering and design (FEED) for phase two started in June 2015. Phase one primarily entailed the construction of an offshore raw natural gas pipeline, an onshore natural gas pipeline, a 150million ft³ gas processing plant at Atuabo, a processed (lean) natural gas pipeline, as well as a petrochemical industrial park to house the gas processing plant and ancillary industries. Phase two is being developed to enable the export of natural gas liquids (NGL) and condensates using offshore facilities, providing a safer alternative to the current use of existing road tankers.

Investment Opportunities

Due to the emerging nature of the sector, opportunities exist in virtually every area of the petroleum industry, both upstream and downstream.

Upstream petroleum opportunities include:

- Geophysical (site surveys, seismic data acquisition, processing and interpretation)
- Basin modelling
- Geological Studies
- Biostratigraphy sequence stratigraphy
- Sedimentology
- Geochemistry
- Geochemical Studies
- Geographical Studies
- Equipment supply and / or leasing (boats, barges, aircrafts, etc.)
- Supply of casings for boreholes

Drilling product and service opportunities include:

- Land drilling rigs, swamp drilling rigs, petroleum engineering and consultancy services
- Offshore drilling rigs (jack-ups, semi-submersible rigs, submersible rigs, etc.)
- Offshore rig towing services, rig move / positioning services
- Drilling mud, chemicals, mud logging and mud logging services
- Drilling site preparation, well control

and blow-out prevention

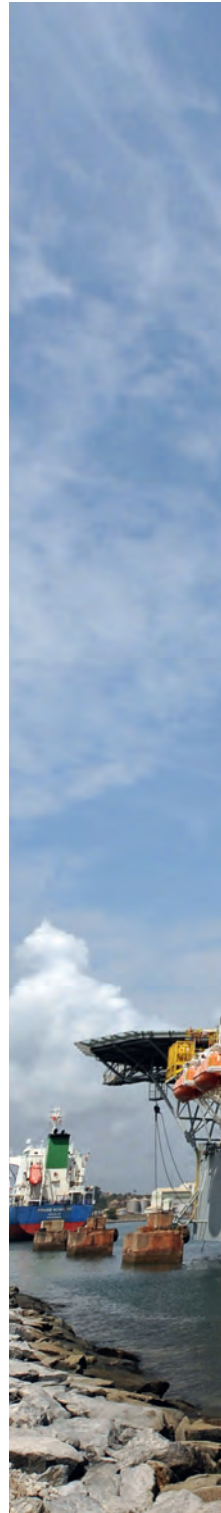
- Under-water inspection, sand control, fish and fishing tools
- Dry-dock facilities for offshore supply vessels, tugboats, and offshore rigs
- Measurement while drilling (MWD) and logging while drilling (LWD) services
- Casing and high pressure pumping, tubing services, tools and cased-hole electrical logging
- Directional drilling and survey as well as drilling and workover
- Surface and bottom hole sampling and tubing conveyed perforation (TCP)
- Fluid filtration, solid control and laboratory and pilling services as well as PVT analysis
- Mechanical wireline services and petrophysical and reservoir data services
- Coil tubing and electrical line and production logging
- Oil field waste management, jetty and shore support services and rigless workover services
- Well production testing, wellhead maintenance and well completion services
- Supply of drilling materials and equipment (drill bits, drill pipes, drill collars, cone bits, etc.)

The following production support services are needed:

- Wireline services and pipeline laying/ inspection
- Production chemical supplies and management
- Engineering design, procurement / construction of production facilities
- Corrosion engineering and environmental engineering services
- Blow out central services and flow line construction
- Oil expand terminal design and construction and crude oil lifting
- Fire fighting system design and installation and 2/3 phase meter supplies
- Supply and maintenance of safety equipment
- Gas valve supplies and installation

Reservoir engineering offers the following opportunities:

- Consultancy services
- Simulation
- Economic analysis
- Complete field study





OPPORTUNITIES EXIST IN VIRTUALLY EVERY AREA OF THE PETROLEUM INDUSTRY, BOTH UPSTREAM AND DOWNSTREAM

Downstream opportunities in marketing, storage, distribution, transport, and refining, include:

- Technical partnership
- Field development contractor financing
- Gas utilization
- Refineries maintenance
- Pipeline/ depots construction and maintenance
- Petroleum products haulage
- Petroleum products marketing
- Petrochemicals
- Gas development/conversion
- Butanisation project
- Fertilizer plants
- Vehicular fuels
- Methanol / MTBE plants

The following opportunities exist in the Gas industry:

- Production, transmission, distribution of natural gas – independent ownership
- Natural Gas Liquids (NGLs) – these liquids have high market value and find application either in their raw state as solvents, feed stock (for production of various chemicals) and liquid fuel or fractionated into their components, etc.
- Natural gas-fired equipment
- Independent Power Plant (IPP)
- Industrial market, commercial market and residential market
- Domestic natural gas sales and distribution
- Compressed natural gas as, (NG) automotive fuel, gas liquids (NGL), Gas to Liquid Conversion (GTL), methanol, etc.
- Ammonia/fertilizer plants

Investment incentives

Incentives to the sector may apply under the following provisions:

- All companies enjoy a corporate tax rate of 25%, except mining companies which attract corporate tax of 35%.
- Location incentives (between 25 and 50%) for industries located in and outside the regional capitals as applicable. ■ **TG**



Still booming and offering immense opportunity

The real estate sector in Ghana provides promising opportunities for private investors despite bureaucratic and infrastructure challenges. Mid-range and low-income housing is in particularly high demand. With improvements predicted in the country's overall economic outlook, and long-term fundamentals looking robust, office, retail, and industrial subsectors also offer favourable prospects.

The industry has seen appreciable expansion over the past few years, which can be attributed to the discovery of oil in 2007, and the country's consequent rapid economic growth. With a vibrant economy, a growing population, and a sophisticated and well-educated professional class, demand for residential and office accommodation, as well as hospitality services, reflects the growth of Ghana's middle-income class.

Bolstered by investments in real estate, improved public infrastructure, and investment in the mining, and the oil and gas sectors, Ghana's construction sector has consistently registered double digit growth. This sector contributed roughly GHC 13.7 billion to GDP in 2014 at current prices. This was 12.7% of the total GDP, and up to 26.9% from GHC10.8 billion in 2013. On average, registered growth rates of around 14% were recorded over 2011 to 2014. However, as real estate developments are indexed in foreign currency, the depreciation of the cedi in 2014 and 2015 has discouraged investors from developing or purchasing real estate, and this has had a significant effect on the market. Although the currency has stabilised, and the demand for housing is ever increasing, affordability issues remain.

In the country's cities overall populations are increasing rapidly, and the country's overall population is growing by over 2% annually. Currently 40% of the population are under the age of 15, which means that they will be in the market as home buyers by 2036. Rapid urbanisation and rising incomes are also driving demand, and has led to a housing deficit that is projected to reach 3.7 million units by 2018. While roughly 40,000 units are being built per year, there is an annual demand for approximately 170,000 houses.

Market composition and trends

Ghana's property development industry is divided into three areas, namely public sector real estate development, private sector real estate development, and construction by private individuals. The activities of these three groups are facilitated by the banks and the primary mortgage market, which, although at its early stages of development, has demonstrated enormous growth potential.

The real estate industry is mainly dominated by residential construction firms and private individuals, commercial real estate developers, and property management companies. The prime areas in Accra that have attracted high net worth Ghanaians and expatriates include Cantonments, Labone, East Legon and Airport Residential area. Homes in these neighbourhoods are often modern and of good quality, and aimed at higher income earners and expats.

The commercial property segment includes office accommodation and retail space, and is the second largest segment in the industry after the residential construction firms, with the industrial segment having a smaller portion. The property industry, especially the residential and commercial segments, is dominated by private companies, which control over 90% of Ghana real estates and property markets.

Real Estate Financing

As with all Sub-Saharan African Countries, Ghana has little formal sector finance to offer to the majority of prospective homeowners.

Most banks neglect the home loan market and focus instead on short-term lending and investment, such as risk-free government bonds and trade finance facilities that can offer higher returns while consuming less capital. A few banks that

offer tailored services to individuals are Home Financing Company Bank, Ghana Home Loans, and the Social Security and National Insurance Trust (SSNIT). The latter has constructed 7168 flats since 1974 as rental accommodation for civil and public sector workers. A number of foreign financial institutions also provide off-shore financing directly to companies in Ghana.

Most home financing options target middle to high income earners. To add to this, recent high interest rates, inflation, the depreciation of the cedi, and high construction costs, have led to a decrease in the number of Ghanaians eligible for a



mortgage. Homeownership is even more difficult for the approximately 80% of Ghanaians working in the informal sector.

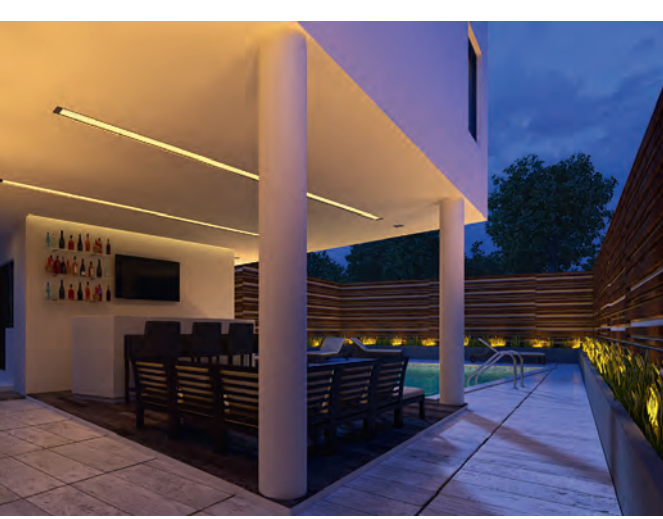
The vast majority of housing in Ghana is, therefore, supplied by individual households acting of their own volition to build a home for themselves and members of their family. This privately supplied housing is mostly financed from personal savings accumulated over many years, and construction often progresses in a stop-start manner as and when funds become available.

Providing affordable capital and access to mortgages could, thus, go a long way to reducing the housing deficit and the lack of institutions in this sector currently would allow for relatively easy access by new investors.

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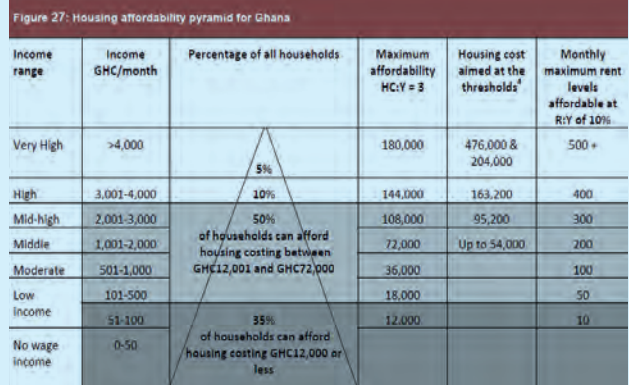
Evidence confirms that formal housing is unaffordable

The figure below depicts an affordability pyramid for Ghana based on a locally calibrated maximum house-to-income ratio of 3, which means that 85% of households are unable to access housing that costs above GH¢72,000. When starting from the price of formal housing aimed at particular income ranges, it is evident that only the top 20–25% of urban households can afford anything available, even with housing payments at one third of income. Rental levels at the current rent-to-household income ratio of 10% or less are also very low, showing 50% capable of paying GH¢300 or less per month and 35% requiring accommodation with rents of GH¢10 or less.

How Ghana tackles its housing development problems will become critical for growth of urban areas in the coming decades. Development policy will affect whether unplanned urban expansion will continue and create further inefficiencies in mobility

and service delivery, or whether cities can find sustainable ways to accommodate an increasing population through effective spatial planning. To address its housing deficit, which will have side effects on urban form, Ghana must urgently seek ways to reduce construction costs, address land market constraints, and make efforts to improve and enforce spatial planning and zoning.

Source: World Bank, “Rising through Cities in Ghana, Urbanization Overview Report” (2015)



Residential and Commercial Lettings

Ghana’s property market is dominated by residential and commercial development.

Letting is most active in the residential market, and the most common way to secure a house in urban areas. Over 90,000 residential transactions per annum have been recorded over the past decade, with an estimated value of about US\$1.7 billion. Letting rates vary across the country, with Accra and Kumasi being the most expensive. Rent is commonly paid between 6 months and 2 years in advance. If the amended Rent Act receives parliamentary approval payments will be limited to 6 months, which would make housing more affordable for many renters who cannot afford to pay more in advance. The market is ripe with opportunity for private investors willing to accept the risk of monthly payments, thereby requiring less capital upfront.

In 2007, prompted by the discovery of offshore oil fields, residential property developers began focussing mainly on high-end buy-to-let or rental consumers. Ghana has since seen a strong demand for upmarket residential developments in Accra. However, movement in this

LETTING IS THE MOST COMMON WAY TO SECURE A HOUSE IN URBAN AREAS

bracket has been slower recently due to the economic down turn.

Prime offices spaces in Accra let at an average of US\$37.50 per square meter per month, while a three to four bedroom house in a prime location averages between US\$2500 and US\$5000 per month. Similar properties in Nigeria and Cote d’Ivoire rent for between US\$3000 and US\$8000 per month.

The retail sector remains dominated by standalone retailers and the informal segment, which has grown rapidly. Despite this, the mall concept has also become very popular with Ghanaian shoppers. Foreign brands have taken advantage of this phenomenon; South African chains Game, Shoprite, and Edgars to mention a few.

Since 2008 Ghana’s premier retail centre has been the Accra Mall, which occupies about (23,000 sq. meters) of retail space, but other malls have since opened that are creating a healthy competitive landscape. These include A & C Square (10,000sq meters), Marina Mall (9000 sq. meters), West Hills Mall (27,000 sq. meters), and the Oxford Street Mall (5000 sq. meters), all located in Accra. Rental of prime retail space in Accra averages US\$42.50 per

square meter a month. Excitingly, income growth and changing tastes are seeing malls open elsewhere across the country. Most notable is the recently launched US\$95 million Kumasi City Mall in the capital of the Ashanti Region, with rental prices going for between US\$41 and US\$61 per square meter a month according to the mall's management company, Broll Ghana.

Affordable housing in Ghana

With the upsurge of urbanization, and increasing population, the housing sector has become a very important concern for public policy. The United Nations estimates that over 2 million houses will be needed to curb Ghana's rapidly rising housing demand and meet its required 5.7 million new homes by 2020. Also, with accelerated urbanisation, demand for lower-income housing specifically in and around urban centres is growing. Despite this Ghana is yet to see significant development of low to middle income housing within urban areas. This gap offers significant market opportunity.

Current affordable housing projects in Ghana are mostly on the outskirts of urban areas. Some affordable housing projects currently under development include:

- Affordable Housing project at Borteyman (1478 units), Kpone (1526 units), Asokore Mampong (1030units),

Koforidua (342units), Tamale (200units) and Wa (144units)

- Saglemi Housing project at Prampram (5000 units with 1502 units to be completed at phase 1)
- Nyame Dua Estates at Kpone (5000 units under a Private Partnership agreement)

Agencies in the real estate sector

Government participation in Ghana's property market has been minimal compared to that of the private sector. The Tema Development Corporation (TDC), State Housing Corporation (SHC), and the Social Security and National Insurance Trust (SSNIT), are the only public sector-controlled agencies involved in the property market.

In terms of regulation and oversight, the Ministry of Water Resources, Works and Housing (MWRWH) is responsible for developing policies and programs for housing and public utilities. The MWRWH's 2016 Real Estate Authority Bill is intended to regulate operations in the real estate sector, and professionalise the industry to prevent unfair practices. The Ministry's National Housing Policy, published in 2015, aims to encourage an enabling environment for both prospective home owners and real estate actors.

However, the Government's provision for



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funding this policy and executing specific incentives and initiatives to spur the sector is yet to be elucidated.

In terms of the private sector, the Ghana Real Estate Developers Association (GREDA) is an organization of private real estate developers, which has played an active role in property development in the country. They mainly service the middle, upper income and expatriate demand for housing, especially in Accra and Tema. Regimanuel Gray, Parakuo Estates, NTHC Properties Ltd, ACP Estates Ltd and Manet Housing Company Ltd account for about 75% of the GREDA group's residential property development.

Real estate companies primarily serving upper income earners include Trasacco, Devtraco, Imperial Homes, Clifton Homes, Vanguard Properties, and Buena Vista Homes. Sethi properties, BlueRose, Lakeside Estates, and GHS Properties are among the few property developers that provide homes for the middle class population.

Investment opportunities

Ghana has immense opportunity in property development and construction. A potential investor interested in the real estate sub-sector could find prospects within the construction of residential housing, industrial and commercial buildings, as well as shopping centres. Short to medium term residential accommodation, particularly hotels and hostels for tertiary institutions are also in significant demand. The most significant

area of need, however, remains the country's housing deficit, and particularly in the low and middle income brackets.

The Ghana Investment and Promotion Centre has identified the following specific opportunities within this sector:

- Production and marketing of construction equipment and building materials
- Residential: low cost housing, retirement villages, high rise luxury apartments
- Industrial: light industrial parks, warehousing facilities
- Commercial: regional shopping centres/ malls, office accommodation, storage

Investment Incentives

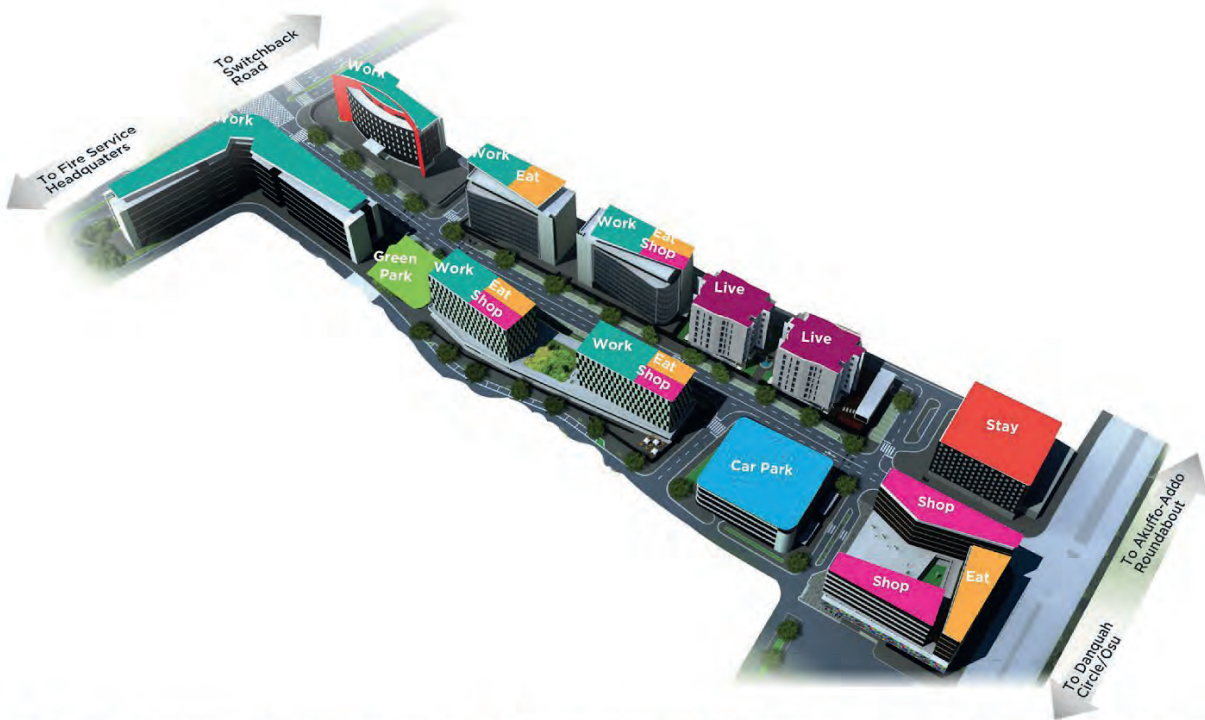
- Customs duty exemptions on specific equipment required for a construction project
- Graduated and reasonable corporate taxes of 25%
- Location incentives
- Tax holidays in consultation with the MWRWH
- Double Taxation Agreements (DTAs). Some of which have been signed and ratified with the United Kingdom, France, Germany and concluded with Belgium.
- Automatic immigrant quotas
- Repatriation of dividends and net profit
- Transfer of funds in respect of servicing of foreign loans
- Guarantee against expropriation
- Remittance of proceeds in the sale or liquidation of investment ■ **TG**

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IMMENSE
OPPORTUNITY
IN PROPERTY
DEVELOPMENT
AND
CONSTRUCTION**



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BAE builds on Ghana success

B Appah Electricals Ltd (BAE) is an electrical engineering and contracting company that provides electrical services for building projects and also supplies and distributes quality, yet affordable, electrical products. BAE also undertakes electrical installations and maintenance services and has accreditation for the distribution of the following brands:

- Schneider electric
- MK accessories and cable management
- Nexans Alcatel cables
- Furse earthing and lightning protection
- Thorn lighting
- Belotti automatic voltage regulators

BAE has undertaken several large projects in Ghana. Some of the projects executed are Achimota Retail Shop, National Communication Authority (NCA) Tower, 34 Court Room Complex, ICON House, SSNIT Emporium, West Hills Mall, Nester Square, etc

Due to continuous expansion, the company now has two main operational units, the Project Business unit and the Consumer Business and Retail unit.

The Project Business Unit provides electrical engineering and contracting services which includes design, installation, testing and commissioning.

The Consumer Business and Retail Unit is in charge of supplying and distributing quality electrical products which include lighting fittings and installation accessories.

With staff strength of approximately 200 employees including professionals of various disciplines, BAE is looking to expand its operations beyond the boundaries of Ghana to other African countries.

The underpinning of BAE's success has been its pursuit of high quality and on time delivery at a competitive cost, as well as building long-term working relationships with its customers, suppliers, and colleagues in the electrical industry. This is driven by our commitment to Honesty, Quality, Teamwork, Respect, Fairness and Total Client Satisfaction.

BAE is also committed to working according to electrical standards such as Institute of electrical Engineering (IEE) wiring regulations and ECG wiring codes and offering a safe installation to clients

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A national priority



Ghana's recent rapid economic growth and accelerated urbanization have placed a great deal of pressure on the country's pre-existing, and already strained, infrastructure. Although some significant infrastructure maintenance and new development projects have been completed in the past few years, closing the infrastructure gap continues to be one of the main areas of concern for Ghana. Urban environments are facing particularly difficult productivity and inclusion issues related to weak transportation planning and traffic management, inadequate land use, weak rural-urban linkages, and lack of services.

Estimates say government needs to spend in excess of US\$1.5bn per year for the next ten years to fully achieve its infrastructure goals. Several avenues and collaborations are being explored and employed to make this possible. In particular, the government is keen to encourage public-private partnerships and has passed the enabling legislations to drive this.

Market composition and trends

Electricity

Ghana has one of the highest rates of electricity distribution in Africa. The national access to electricity supply covers approximately 53% of the population. This

is a result of an aggressive electrification programme embarked on by successive governments over the last two decades. However, soaring demand and low levels of rainfall have hampered the ability of Ghana's dams to produce enough hydroelectric power. The country's thermal power production facilities have also faced production challenges. Although short-term solutions have been arranged the development of cleaner domestic energy sources is a high priority.

Government is pushing ahead with its desire to significantly increase the country's electricity generation capacity, exploring alternatives such as solar, wind and coal, while inviting new investors into the sub-sector.

Further information on opportunities in power generation can be found in the Energy Sector section of this guide.

As far as distribution is concerned, the Electricity Company of Ghana (ECG) is set to enter into a management arrangement with an investor from 2017, as part of a Millennium Compact Agreement entered into with the USA in which over \$05bn will be spent on improving the generation and transmission of power in the country.

Water

Approximately 14.9 million people in Ghana (50.5%) have access to improved water. For the 8.4 million residents in the country's urban areas this increases slightly to 61% with two thirds of these, or 40% of the population, covered by the Ghana Water Company's networks.

The major consumptive uses of water in Ghana are water for domestic and industrial uses, irrigation and livestock watering. Domestic and industrial urban water supplies are based almost entirely on surface water, either impounded behind small dams or diverted by weirs in rivers.

At present irrigation development does not play an important role in the overall water resources balance considerations. However, the potential for irrigation has been shown to be considerably larger than the present land area under irrigation.

The main non-consumptive uses of water are hydroelectric power generation, inland fisheries and water transportation.

On the basis of surface water resources alone, the consumptive water demand for 2020 has been projected to be 5.13 billion m³, which is 13% of the country's surface water resources. Likewise, the non-consumptive demand can also be met from

the surface water available. Rainwater harvesting has also become common and has a great potential to increase water availability in certain localized areas. It can be concluded, that if properly conserved and distributed, the surface water resources of the country should be adequate to meet future demands

Telecommunications

Ghana's telecommunications sector has registered one of the most significant growth rates in Africa. Proactive government policy and regulatory interventions, combined with support from the World Bank Group and other development partners, has resulted in a competitive and vibrant industry.

Currently, the country has two national fixed network operators, six mobile cellular network and twenty nine internet data service providers. Other telecoms providers include fifty seven VSAT data operators, twenty five public / corporate data operators, one hundred and thirty FM stations, eleven free-to-air and seven pay-per-view TV stations. There are ten direct to home satellite services (DTH) operational.

The telecoms sub sector has long been one of the fastest growing and dynamic parts of Ghana's telecommunications sector. The National Communications Authority estimates that the country had 37.2m mobile voice subscribers in 2016, with overall penetration of 133.35%. However, it is commonplace for users to have multiple SIM cards often leading to overinflated penetration figures.

Roads and transport

Transport improvement has been defined by the Ghana Poverty Reduction Strategy as an integral component for increasing national productivity and hence poverty reduction. In urban centres, especially large metropolitan areas where there is intense and high-volume movement of people and goods, the lack of intermodal transport systems causes severe traffic congestion and delays. This increases the costs of doing business and reduces the potential competitiveness of Ghanaian cities. Therefore, the fundamental policy objective of the transport sector is to establish an efficient, modally complementary, and integrated transport system.

Road transport is the major carrier for Ghana's land transport system, currently taking up about 98% of freight and 95% of passenger traffic.

Public transport

Transport infrastructure in Ghana has generally been undertaken as a result of development rather than in anticipation of it, resulting in piecemeal infrastructure provision that is not always adequate to effectively meet demand. The bulk of passengers on the road network are transported by public transport vehicles such as taxis, minibus taxis, locally known as 'trotros', and buses. The state owned bus provider, Metro Mass Transport Company (MMT), is available in selected urban and inter-city routes. The State Transport Company, which predates the establishment of the MMT and travels on all the main inter-city links, is in resurgence and is now partnering with private investors who provide it with buses. Private sector operators such as VIP Transport are also available to travellers on inter-city routes.

There is the need to provide more buses and improve on the quality of service and routes, thereby attracting more people to the mass transport system, lowering traffic congestion in cities, and connecting markets. Strong connectivity will enhance the competitiveness of an economy and generate a business environment conducive to firm growth and development.

The delivery of the planned introduction of a Bus Rapid Transit (BRT) system in Accra and other cities will be a move in the right direction, but expert analysis has revealed that Ghana's transport infrastructure requires greater intermodal coordination between the sub-sectors of road, rail, marine, and air networks. There is opportunity for capacity building and private partnerships in existing systems in order to achieve this.

Maritime transport

There are two main seaports (or harbours) in Ghana namely Tema and Takoradi. Tema is the biggest port and major operations at this port are skewed towards import commodities such as heavy machinery, containerized cargo, etc.

Operations at the Takoradi port are skewed towards the export trade with emphasis on commodities such as cocoa, timber, manganese and bauxite. Port facilities, and the domestic transportation networks serving them, are critical elements in Ghana's transportation system.

Ghana also has the opportunity to situate itself as a maritime trade hub for the West African region, and a transit point for

landlocked countries such as neighbouring Burkina Faso.

The country has large inland bodies of water that remain largely undeveloped in terms of the transport of passengers and cargo. Lake Volta is the exception. It is the only major inland body of water used for transportation, and handles cargo ranging between 50,000 to 80,000 metric tons per year. Many small towns rely heavily on this water transport, some of which are difficult to access by road. Opportunities exist for other inland water routes to be developed.

Container sea port traffic

Container seaport traffic increased steadily from 2001, and is expected to remain the preferred means of maritime cargo transport owing to its considerable advantages.

In June 2016 the IFC (World Bank) committed a loan to support Ghana's biggest port Tema, through a project that involves the development of a new container terminal intended to increase Ghana's competitiveness, and drive trade growth by introducing modern efficient container handling capacity. It is hoped that this development will help to improve logistics performance in Ghana; an area which is strongly associated with the reliability of supply chains and the predictability of service delivery for producers and exporters.

Aviation sector

West Africa is yet to have a single primary airline or airport hub, and Ghana aims to fulfil this need. Ghana's aviation industry has seen substantial growth in the last twenty years. The industry now provides valuable air transport services between cities in Ghana, across the West African sub region, and on to the rest of the world.

Air passenger traffic increased steadily year-on-year throughout the period 2006 to 2014. International arrivals rose from 754,553 in the first half of 2015 to 837,019 in the same period of 2016. Europe remains the dominant route, accounting for 52% of the total passenger throughput that was handled at the Kotoka International Airport (KIA); and the West African sub region contributed about 8%.

Construction of a new terminal is currently underway at KIA and expected to be completed in 2018. It is expected to service the growing number of international travellers, and aims to accommodate additional airlines. Plans have been proposed to upgrade the Tamale domestic

airport to an international terminal, which would increase employment opportunities and the overall growth of the city. Plans are also underway to construct a new international airport at Prampram, within the Greater Accra region, which is intended to relieve expected future congestion at KIA, and ultimately replace it as the country's international gateway, leaving it to function as a domestic airport.

Rail sector

The rail industry in Ghana has a total track length of 1,300km and operates a route length of 947km in a triangle that links Accra-Tema to Kumasi and Takoradi. Rail accommodates less than 10% of freight and passenger traffic per year and the subsector's poor infrastructure creates challenges for other sectors such as mining, agriculture, and oil in gas, and places larger than necessary pressure on the road networks to accommodate goods transport. Thus, railways in Ghana are in dire need of investment as government seeks to re-establish them as a reliable and cheap means of carrying people and goods around the country. A Rail Master Plan was released in 2015 that outlined rehabilitation projects aimed at improving the rail system and its regional competitiveness.

Port and rail linkage developments focus on Tema and Takoradi. A new centrally located "inland port" is being constructed at Boankra near Kumasi in the heart of the country. This is expected to be an important staging post for goods in transit to and from the landlocked areas in the north of Ghana. This will be a multi-modal facility handling both road and rail traffic.

ECOWAS market

ECOWAS, with a population of over 300 million, offers considerable demand for water for consumption. In addition, a large proportion of the sub-region is facing increasing desertification challenges which make the potential and future demand for water for consumption enormous. Water demand has also increased due to the growing population and higher standards of living, leading to more competition and conflicts between the consumers.

Experts agree that pressure on resources will be incomparably higher in 20 years' time than it is today. This will be true in Africa and West Africa in particular. The necessary and probable improvement of living conditions of the West African popula-



Above:
A street scene in the port of Takoradi, where operations focus on the export trade.



tion, the progress towards the Millennium Development Goals, as well as agricultural growth and industrial development all imply a significant increase in water consumption.

Investment opportunities

Ghana's water supply and sanitation infrastructure is insufficient, especially in rural areas. Major investments are needed to extend coverage, rehabilitate and maintain existing infrastructure and provide point sources (boreholes/ hand-dug wells), small town pipe schemes, rain harvest plants and household/institutional latrines.

Investment is needed to provide electrical services, particularly in the construction of physical facilities including street lighting, improved coverage / access and service efficiency, and manufacturing.

Considerable investment opportunities abound in the telecommunication sector. The sector requires service providers to connect international voice calls to the local public network. Technological and other support related services such as the supply of quality telecommunications equipment are also required.

Major investment opportunities for the roads and transport exist in the areas of construction and maintenance, services and sales.

Identified as one of government's priority areas to be developed under its medium term plan, transport services offer exciting opportunities, especially the following:

- In mass transportation – a scheduled bus system
- Traffic planning and management systems
- Rail upgrades and passenger rail transport on chosen corridors

MAJOR INVESTMENT OPPORTUNITIES EXIST FOR ROADS AND TRANSPORT IN THE AREAS OF CONSTRUCTION AND MAINTENANCE, SERVICES AND SALES

- Lake transportation systems
- Air transport operators for domestic and sub-regional services
- Development of regional airports
- Upgrading of existing trunk roads under BOT, BOO, BAT, BLT, etc. systems

Investment incentives

The infrastructure sector in Ghana has been subjected to structural reforms at various periods. The different reforms have taken the form of restructuring, commercialisation, increased competition, and privatisation. Over the years the government has initiated policies to rationalise the water, sanitation, and electricity sectors, and to promote and improve the delivery of water and electricity services in terms of economy, efficiency, effectiveness, and satisfaction.

The long-term goals of the policies are generally directed at providing the entire country with potable water and electricity by the year 2020, with emphasis on the payment of adequate tariffs by consumers to ensure full cost recovery, and to provide adequate revenue for operations and maintenance and replacement of systems. Private sector participation is a key element in the operations and management of the urban water supply.

The road and transport sector has a readily available and accessible market for prospective investors who want to invest. There are several automobile sales companies which sell different brands of cars and also provide after sales services. Moreover, hundreds of spare parts dealers support the industry all over the country.

The government has introduced new tolling practices paving the way for Build, Operate and Transfer (BOT) systems and other forms of private sector participation.

The roads and transport industry has available to it:

- Adequate transport fuel and a number of automobile service centres
- Raw materials for road construction, including affordably-priced gravel, chipping, sand and laterite

With the introduction of the new PPP Policy in 2011, Ghana has expanded options for establishing alternative mechanism for financing infrastructure. This could potentially open options in the future for municipalities to expand capital for infrastructure financing, but requires additional technical assistance and regulatory clarification to take off. ■ **TG**



Rising demand seeks rapid growth

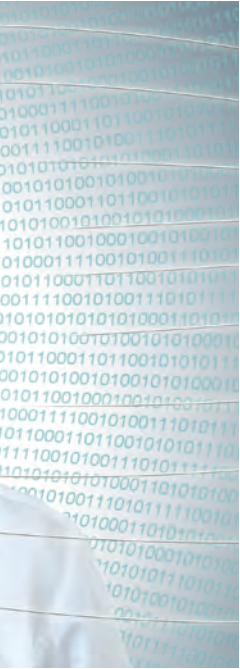
**MOBILE
PENETRATION
HAS
INCREASED
OVER TEN-
FOLD OVER
THE PERIOD
DEC 2008 TO
DEC 2016**

Ghana's ICT sector has developed rapidly over the last ten years, and continues to gain momentum for a number of reasons, but primarily due to mobile internet growth and the government's commitment to wide-ranging ICT development. Also, spurred on by the recent availability of 4G connectivity, as well as the rollout of new in-country cable networks, the public sector, private sectors, and individuals, are increasingly demanding more tech services and products. Furthermore, these elements are stimulating an exciting tech start-up scene; indicating that this sector will be developing at a continuous pace, and increasingly in demand of new services.

The sector currently comprises telecommunications operators, internet service providers, VSAT data operators, software manufacturers, broadcast institutions, ICT education providers, internet cafés, etc. Generally, the Ministry of Communications and the National

Communications Authority (NCA) oversee ICT activities.

The ICT for Accelerated Development (ICT4AD) Policy, a long-term strategy for developing the ICT Sector and expanding its role in the Ghanaian economy, is currently in place. The ICT4AD vision for Ghana is, "To improve the quality of life of the people of Ghana by significantly enriching their social, economic and cultural well-being through the rapid development and modernization of the economy and society using information and communication technologies as the main engine for accelerated and sustainable economic and social development." This program covers many different areas, including health care, job creation, public administration, education, and stimulating entrepreneurship. Its goal is to target all Ghanaians, but women and the youth in particular, in terms of strengthening public service delivery and improving access to ICT tools.



**THE MARKET
CONTINUES
TO GROW
AGGRESSIVELY
IN ALL
SEGMENTS**

Market composition and trends

Operators and service providers in ICT in Ghana include FM stations, TV operators, internet service providers, telecom operators and so on. Ghana currently has 6 registered mobile operators, all of which functional. These are MTN, Vodafone Mobile, Tigo, Expresso, Glo Mobile Ghana and Airtel Mobile. Additionally, Vodafone and Airtel are the only two fixed-line operators.

The market continues to grow aggressively in all segments, since the enabling environment provided by government continues to promote competition. Increased competition, a key driver of growth in the industry, is witnessed in terms of:

- Rising sale of SIM cards and airtime purchases
- Better and increased network coverage
- Improved quality of service on most networks
- Introduction of cheap mobile phone units increasing ownership
- More aggressive marketing promotions

In Dec 2008, there were just over 11.7 million access lines, comprising mobile subscriptions of 11.5 million and a relatively low fixed telephony of 143,244. As at December 2010, total access lines in operation rose to 17.7 million. The rise in subscriptions ascended continuously, with total access lines reaching 35.2 million and 38.5 million in December 2015 and December 2016 respectively.

Telephony penetration

The penetration rate increased consistently from 52.4% in December 2008 to 114.35% by the close of 2011. Mobile phone penetration increased steadily to reach a 127.63% mark in December 2015. By December 2016, penetration reached an all-time high of 136.34%. Fixed telephone penetration, on the other hand, has been relatively marginal over the years.

Mobile penetration has increased over ten-fold over the period Dec 2008 to Dec 2016. With 5 mobile operators, penetration was 51.8% (in December 2008), represented by 11.5 million subscribers. By December 2012, the rate had surged to 100.4%. As at December 2016, mobile penetration reached 137.24%.

In terms of market share, at December 2016 MTN was the leading mobile phone company with 19.2 million subscribers,

representing 50.37% of the market.

Vodafone Mobile followed with 8.2 million subscribers and 21.6% market share. Next was Millicom (Tigo), holding 13.94% market share with 5.3 million subscribers. Airtel took fourth position with a subscriber base of 4.5 million, representing approximately 11.99% of the market. Glo Mobile controls 1.82% of the market with a subscriber base of 695,306, and 0.24% of the market is controlled by Expresso, having 93,599 subscribers.

Internet and Broadband

As a critical source of information, the internet is viewed as a significant development enabler, therefore internet access and data provision is crucial for Ghana's ITC sector. Ghana has, cumulatively, approximately 7,160 Gigabytes (i.e. 7.16 Terabytes) of bandwidth capacity available.

Mobile operators currently dominate the internet market. Also, although Ghana's mobile market is quite saturated with over 120% mobile phone penetration and keen competition between the 6 mobile service providers, the internet market in Ghana presents an important potential for growth and development. At September 2016 mobile data subscription penetration was at approximately 69%. This improvement in internet penetration has also been partly facilitated by the licensing of 4G technology to mobile and wireless broadband networks.

- **Fixed Broadband**

In 2005, the number of fixed broadband subscribers stood roughly at 1,904, representing 0.01 per hundred inhabitants. By 2010, the number of subscribers increased by 2530.36% to 50,082 subscriptions, with roughly 0.21 per hundred inhabitants having fixed broadband services.

It is significant to note that the internet subscriptions per 100 inhabitants are lower than the internet penetration per year since, historically, the majority of Ghanaians made use of internet cafés. Despite this, the rise continued with 75,092 and 87,789 broadband subscriptions being recorded in 2015 and 2016 respectively. Broadband penetration has also increased from 0.07 per 100 inhabitants to 0.3 lines per 100 inhabitants over the years.

- **Wireless broadband**

As at the end of December 2016, the total number of subscription for Broadband Wireless Access data was 104,402. There are currently three market leaders in this category: Surfline, Blu and Broadband Home (BBH). Surfline leads subscriptions with 76,919. Blu Ghana recorded a total subscription of 1,081 and Broadband Home recorded a total of 26,402 subscriptions in 2016. In terms of traffic these three operators carried 8.9m GB in the second quarter of 2016.

- **Mobile broadband**

According to the National Communications Authority, mobile broadband penetration rose from 65.3% in 2015 to approximately 69% in 2016, with total mobile broadband subscriptions rising from 18 million to over 19 million, in 2015 and 2016, respectively. According to the GIPC, Ghana is presently the country with the highest mobile broadband penetration in Sub-Saharan Africa.

IT-enabled services

The 2016 A.T. Kearney Global Services Location Index™ (GSLI) ranked Ghana the top destination in Sub-Saharan Africa (ahead of Mauritius and Kenya), and 29th globally out of 51 countries. The country was earlier ranked the number one destination in Sub-Saharan Africa (ahead of Mauritius and Senegal) and 15th globally, out of 50 countries, by the 2009 A.T. Kearney GSLI.

Government remains interested in maintaining and developing Ghana's reputation as a competitive destination for Business Process Outsourcing, having identified it as a focus area for development, with much emphasis being placed on it as an economic driver. This galvanized the establishment of the IT Enable Services (ITES) Secretariat, an implementing arm of the Ministry of Communication, to promote and develop the sub-sector to become a very large source of income and employment generation.

The preference for Ghana in connection with this industry is supported by its large pool of skilled and trainable



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English-speaking labour, GMT time zone location, competitive labour costs, among other relevant advantages. Currently, the IT-Enabled Services sector provides approximately 3,000 jobs, and Ghana's potential to become a significant player in this industry is recognized as enormous.

e-Business

Aside computers, mobile phones are the dominant means of accessing internet services, and this continues to increase. Therefore, the use of services provided through the internet, such as e-commerce, advertising and marketing, are also on the rise.

Following the introduction of up-to-the-minute networks in Ghana, people can surf the net anywhere at any time, and mobile phone users can have easy and fast data exchange on the internet. More financial institutions and other businesses are undertaking internet banking and venturing into the use of electronic money transactions.

The Ghana Interbank Payment and Settlement Systems (GhIPSS), established by

GHANA IS PRESENTLY THE COUNTRY WITH THE HIGHEST MOBILE BROADBAND PENETRATION IN SUB-SAHARAN AFRICA

the Bank of Ghana to reform the country's payment system, has set up an e-commerce window which is scheduled to soon become operational. This infrastructure will make it possible for private sector businesses in Ghana to sell and receive payment online within and outside the country.

Infrastructure

The infrastructural base of the ICT sector includes licensed gateway operators, undersea cable links, private licensed VSAT systems, Fixed Centres, dedicated transition networks, public distribution networks, wireless mobile operators, public telephones systems, tele-internet service providers, the Ghana Interbank Payment and Settlement Systems e-commerce platform (GhIPSS), internet backbone connectivity throughout the country, and public access point and broadcasting systems.

As an initiative to support emerging technologies, the Ministry of Communication is also facilitating the establishment of Science and Technology Parks. The construction of an ICT park in Accra started mid-2012. Funds have also

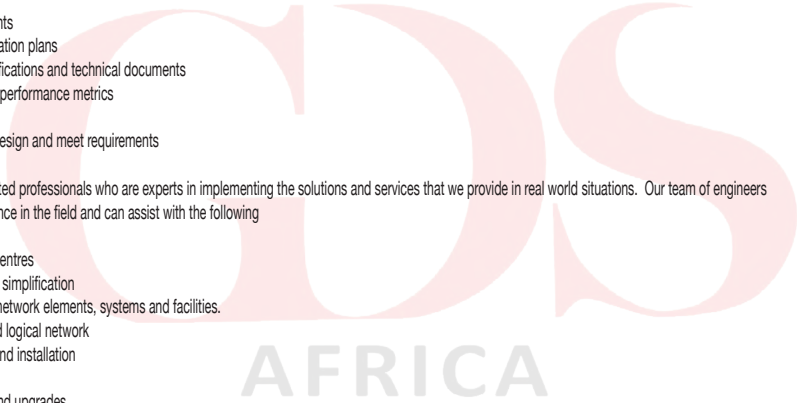
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- architecture design
- defining functional requirements
- developing multi brand integration plans
- developing engineering specifications and technical documents
- service level agreements and performance metrics
- security and firewall design
- proof of concept to validate design and meet requirements

We employ trained and accredited professionals who are experts in implementing the solutions and services that we provide in real world situations. Our team of engineers bring years of practical experience in the field and can assist with the following

- building network operations centres
- technology consolidation and simplification
- reconfiguring and upgrading network elements, systems and facilities.
- documenting the physical and logical network
- router, switch, configuration and installation
- carrier service management
- operating system migration and upgrades



been secured to commence the construction of a second ICT park at Cape Coast.

Over the years, broadband connectivity has improved significantly and this is partly due to the arrival of undersea cable links. Ghana's location on the West African coast has made it an organic landing point for five major submarine telecoms cables. This has subsequently improved internet speed and made prices more competitive. The five existing links are the South Atlantic (SAT-3), the West African Cable System (WACS), MainOne cable, Glo One cable (Glo-1), and the African Coast to Europe (ACE) submarine cable.

SAT-3 was the first undersea cable to be brought into Ghana. It arrived in 2001 and presently has capacity of 340GB per second. The MainOne undersea cable followed almost 10 years later in 2010, and has 5.12TB per second capacity. In 2011 Glo-1 arrived and has 2.5TB per second capacity. The WACS came on line in 2012, with capacity of 5.12TB per second. Early 2013, the ACE also became accessible with 5.12TB per second.

Due to the above nationwide ICT infrastructure developments Government sees country as well positioned as the potential ICT-enabled Services hub of the West African region. Internally, there are plans to develop e-Government Points of Presence through the linkage of all district capitals to the national high speed network.

Sectorial developments

National Fibre Communications Backbone Infrastructure

To complement the efforts of the private sector in the extension of affordable and efficient connectivity solutions, the National Fibre Communications Backbone Infrastructure Network, aimed at providing open access broadband connectivity, is being developed by government, international partners, and private investors.

Following the successful completion of the 800km north-south fibre-optic loop, linking Ho in the Volta Region to Bawku in the Upper East Region and running through 126 communities, the 2nd phase of the National Communication Backbone (from Tamale to the northern parts of the country and neighbouring countries) is being pursued. This is due to be completed in 2017. This second phase of the project is expected to have a significant impact on ICT access in various sectors in Ghana as it creates links across the country to Accra,

thus boosting connectivity and transfer speeds. It will also create ample opportunity for foreign direct investment into the distribution of connectivity, services, and products for homes and businesses.

Last Mile Effect

To ensure the continuous development of infrastructure, Government has particular interest in the "last mile effect", which encourages the extension of fibre optic networks by the last mile to enable all districts and communities get connected. Google has made major investments in developing fibre-optic links to connect the country's long-distance fibre cables with new urban networks that can be used to deliver high speed broadband to consumers. It is expected that this project will aid in both increasing access and decreasing the costs of internet connectivity nationwide.

In the interim, 4G network expansion in 2016 by large private sector telecoms companies, such as MTN, is driving rapid growth in broadband connections and capacity. This is consequently boosting the use of mobile applications and online platforms for sales and marketing across various sectors.



GHANA'S LOCATION ON THE WEST AFRICAN COAST HAS MADE IT AN ORGANIC LANDING POINT FOR FIVE MAJOR SUBMARINE TELECOMS CABLES

Ghana Investment Fund for Telecommunications (GIFTEL)

GIFTEL has been set up to facilitate the extension of communications services to underserved and un-served areas through the provision of common facilities. It has thus far completed a total of 39 Common Telecom Facilities, and this has enabled telecommunications providers to extend their services to over 273 communities. For instance, GIFTEL has undertaken the common telecom tower service facility at Nandom (in the Upper West Region), which is now offering transmission coverage to over 10 towns in the region.

Business Process Outsourcing (BPO)

The Ministry of Communications, in collaboration with the Ghana Telecommunications University College, has trained several call centre and data entry trainers. Furthermore, Government has formally adopted and identified priority skills development areas within the BPO/ITES industry. Further, the BPO/ITES training curriculum has also been streamlined with the skill requirements of the industry.

To bridge the technological gap between the served and underserved areas, 20 enhanced Community Information Centres (eCICs) were constructed in selected areas in the Northern part of the country. In addition, the Ministry of Communications completed and commissioned the refurbishment of the Public Works Department (PWD) warehouses into a world class Business Process Out-Sourcing (BPO) facility.

Mobile Number Portability (MNP)

Mobile Number Portability (MNP), a facility that permits a mobile phone subscriber to migrate from one telecommunication service provider to another whilst retaining the original mobile number, was launched by the National Communications Authority (NCA) in July 2011. This made Ghana the first country in West Africa to introduce the facility. The introduction of MNP was intended to enhance competition, improve quality of service and offer mobile customers freedom of choice.

The Digital Terrestrial Television project

The first and second phases of the Digital Terrestrial Television project, covering Greater Accra, Ashanti, Volta, Northern, Upper West and Upper East Regions,



was completed, with the third phase to be completed in 2017. Education and awareness campaigns were also commenced. In 2017 the Ministry of Communications will monitor and intensify sensitisation of the digital television transmission service nationwide before the planned analogue switch-off.

The National Information Technology Agency (NITA)

The National Information Technology Agency (NITA) will begin the process of commercializing its infrastructure to raise enough revenue, maintain, expand and upgrade the infrastructure, sell off the excess capacity, as well as expand and improve upon its business operations and modules for MDAs and MMDAs.

Investment Opportunities

The above advances, together with public

projects such as the Government and World Bank's drive to integrate ICT into health, education and public administration through their e-Transform program, are rapidly creating an enabling environment that calls for private investment into a variety of complimentary ICT services, products, and infrastructure.

Business opportunities in this sector include telecoms service providers to connect international voice calls to the local public network, Internet Service Providers to offer internet access to the public, especially the rural areas at less cost, and there is also a need for broadcasting operators to establish additional international standard radio and television broadcasting in the country.

In terms of hardware, Ghana requires the supply of quality telecommunications equipment, ICT equipment and office and network equipment.

Furthermore, there is a lack of ICT facilities and infrastructure on a broad scale across the nation. Specifically, investments are needed in the provision of software (standard and customised) for the country, extension of the broadband network to reach the whole country, and the provision of computer access to rural students.

There are also opportunities in the

following areas:

- Education in the area of software development, networking, VSAT, telecommunication, and IT engineering
- Production of ICT business solutions (software and networking services)
- Business Processing Outsourcing
- Supply of high-tech telecommunication equipment
- Back office operations (especially for financial institutions)
- Provision of broadband facilities and services
- Internet service provision
- Transaction processing
- Manufacturing, assembling and supply of computers and accessories
- VSAT services
- e-Commerce and legal database services
- Logistics management services and medical transcription services

Investment Incentives

Incentives to the sector may apply under the following provisions:

- Listed companies enjoy corporate tax of 25%, and newly listed companies enjoy 25% corporate tax for the first three years
- Location Incentives (tax rebate) for manufacturing industries located in the regional capitals ■ **TG**

**INVESTMENTS
ARE NEEDED IN
THE PROVISION
OF SOFTWARE
FOR THE
COUNTRY**



INTERVIEW WITH MR. ALWIN HOEGERLE GENERAL MANAGER GCNET



Who is GCNET and what is its mission?

Ghana Community Network Services Limited (GCNet) is an Information and Communication Technology joint venture company with a specific mandate to provide an Electronic Data Interchange (EDI) service and a computerised Customs Management System to Government. GCNet provides e-Solutions to Government, by offering electronic platforms for revenue mobilization and trade facilitation, easing trade processes with system availability nationwide.

GCNet has successfully deployed an EDI system namely Ghana TradeNet, a Customs system, the Ghana Customs Management System (GCMS), the i-Transit Systems for the processing of goods in transit, an Electronic Business Registration System and an Electronic Tax Administration System.

The mission of GCNet is to provide ICT based solutions that foster Trade Development and Facilitation, promote business competitiveness and ensure effective mobilization of revenue for Government.

GCNet's business goal is to be the leader in the provision of e-solutions in Africa with tailored service offerings to ease the burden of doing business and add value to the trade chain while maximizing revenue collection.

You have been the gm for many years now. What have been the most impressive developments in GCNET path?

THE MISSION OF GCNET IS TO PROVIDE ICT BASED SOLUTIONS THAT FOSTER TRADE DEVELOPMENT AND FACILITATION

There's been significant improvements in the streamlining of Trade processes and the way Taxes are administered and paid in Ghana. However, there are two areas that I would say GCNet has made a real impact: 1) the continued automation of the Ghana Revenue Authority Customs Division and Ghana Revenue Authority Domestic Tax Division.

Today you can do almost all dealings with the Ghana Revenue Authority electronically and online. You can for example apply online for your Tax Identification Number, submit your tax returns using the Internet and even pay your taxes through e-payment channels.

The second area is the introduction and implementation of a Single Window for Trade and Revenue Mobilization. Ghana was (after Mauritius) the second country in Africa to adopt this concept and all stakeholders attest to its benefits for the way it has positively impacted their way of doing business with Government.

What are the major milestones in your cooperation with the government?

The implementation of the Single Window for Trade and Revenue Mobilization started in 2003. The introduction of a processing platform for regulatory agencies i.e Food and Drugs Authority (FDA), Ghana Standards Authority among others commenced in 2008. Today 23 Ministries Departments & Agencies are connected to the GCNet ecosystem. In 2010 GCNet with support from the World Bank embarked on the automation of the Domestic Tax (Income Tax, Vat etc) and the Registrar General's Department(in charge of Company Registration in Ghana). In 2014 GCNet piloted the 'Paperless Customs' with the aim to make it no longer necessary to carry paper to the Customs Offices. There are many more examples we could talk about. This cooperation between Government, GCNet as well as other stakeholders in the process has yielded significant improvements.

What are the most remarkable awards GCNET has won over the years?

GCNet has been recognised in a number of ways both nationally and internationally. At the international level, the World Customs Organization (WCO) has recognized the efforts of GCNet for deepening trade facilitation, improving business competitiveness and enhancing revenue mobilization with the Award of Certificate of Merit

for rendering exceptional service to the International Customs community.

At the national level, the partner of GCNet – Ghana Revenue Authority – has acknowledged us as the most dependable partner in our business relationship with them. GCNet is ranked high performing companies in the Ghana Club 100 awards, being recognised as the best ICT Company in 2015, award by GITTA in 2016 as the Best Public Sector ICT and e-solutions Company among others.

Other awards include the ‘Best Public-Private Partnership’ Company in West Africa at the 4th PPP Med Afrique Awards, held in Paris and an award by the World Customs Organization for its deployment of Ghana Customs Management System for Customs operations.

GCNET plans for the future: medium to long term projects.

GCNet has adopted a long term perspective in its corporate strategy in ensuring it delivers on its core mandate to support revenue mobilisation by Government and foster trade facilitation. In the medium term, GCNet will invest heavily in renewing and improving its platforms and applications to align with latest developments in I.T such as cloud computing, mobile apps and improved security.

I must say that GCNet is focused on value migration to the extent there is a business case to engage in data warehousing and data analytics to support GRA's risk management processes as well as the Ministries of Trade, Finance and Communications.

The long term position of GCNet is to be able to remain a reliable, robust database manager and e-solutions provider that enable players in the eco-system to enhance their business operations while diversifying into other markets in the private sector space to build our clientele portfolio.

This means that GCNet will seek to expand its scope of delivery of e-governance services to fill the existing void for such services which ultimately should encompass a wider comprehensive vision for a digital government machinery that is responsive, efficient and effective the vision of making hub in Africa and the global platform.

As a GM, but also as a foreign businessman, what is your personal opinion on the business climate in Ghana? Where do you see opportunities for foreign investors?

Ghana has for many years been an excellent

place and preferred investment destination in the West African Region. Solid growth rates over a prolonged period and political stability has attracted investment from all over the globe. The country offers diverse opportunities – not only in the extractive sectors like minerals and oils but also in agriculture, transport, tourism, health. I would say there is no sector where opportunities do not exist. The country has a young and well educated population and the regulatory environment keeps on improving

GCNET is a successful example of a ppp. What are the core principles of this successful cooperation?

As one of the foremost Ghanaian Public-Private Partnerships (PPP), GCNet's brand has been duly recognised by the World Bank and other Institutions with many international honours. GCNet is internationally recognized as a trailblazer in the provision of e-Solutions to Government and as the foremost Single Window operator in Ghana with many International Organizations paying courtesy calls to hear its success story and understudy its model and citing GCNet as a reference point in Single Window operations in Africa.

The success of GCNet as a model example has been underpinned by the strength in the core values of integrity, service professionalism and innovation, which the over 200 members of staff subscribe and adhere to. These values have been anchored on transparency, accountability and leadership in delivering on our mandate of deploying tried and tested systems such as the Ghana Customs Management Systems (GCMS), the Ghana Integrated Cargo Clearance Systems and e-Registrar system among others to facilitate trade, enhance business competitiveness and increase revenue for the Government.

What would you say is your personal major achievement in GCNET?

The GCNet business environment is challenging and our 24/7 service operations require a lot of dedication and hard work. Having the opportunity to work with a great group of Ghanaian professionals in this company, seeing it grow and develop to new heights is great. Building a sustainable business over the years, providing value for our shareholders, stakeholders, employees and the Government of Ghana has always been my personal goal. ■TG

Towards greater diversification



The mining sector plays an essential role in the Ghanaian economy as, for most of the last decade, it has drawn more than 50% of all foreign direct investment, generated more than 30% of all export revenues, been the largest tax revenue sector, and contributed significantly to the country's GDP and employment creation.

Mining has been an active industry in Ghana since the country's pre-colonial era, accounting for approximately 36% of the total world output of gold between the late 1400s and early 1600s. In recent years the country's mining sector has become more formalised, and there have been increased FDI flows to it. The resulting rise in the number of operating mines have benefitted Ghana in terms of continuously increasing annual mineral outputs, the rising value of mineral exports, and increased exploration activities. The minerals and mining sector currently contributes about 16% of government's revenue in terms of domestic tax.

Previously most of the sector's focus and resources have been placed on the major minerals currently mined in Ghana, namely gold, diamond, manganese and bauxite. Significant deposits of iron ore, limestone, quartz, salt, kaolin, mica, brown clays, silica sand, etc. are known to also exist in the country; however these have been left under-exploited at best. According to estimates by Ghana's Minerals Commission, Ghana's identified iron ore deposits alone stand in

excess of 1.62bn tonnes.

Gold production in Ghana has recently suffered considerably as a result of the reversion in international prices after 2012, as well as domestic difficulties such as access to reliable energy supplies, causing several gold mines to close. Despite this, gold remains the sector's primary foreign exchange earner, and is credited with having bolstered the currency and contributed to its stability in 2015. It is estimated that the country's remaining gold reserves are at approximately 1,200 tonnes, which represents 2.14% of the total world estimate. Rising gold prices, which have rebounded following the initial drop after the 2016 US election, are expected to continue to increase steadily. This trend is expected to assist in sustaining Ghana's gold production growth between 1% and 2.5% annually from 2017-2020, particularly due to recent cost cuts.

However, policy developments may see a change in focus from gold to other minerals. In February 2016 the Government launched a Minerals and Mining Policy to create a framework for the guidance of mining and mineral industries. The policy document acknowledges that if the country is to secure the maximum benefits from its mineral resources, then its less traditional and lesser known minerals, such as solar salt and base metals such as copper, zinc, nickel and chrome, should receive better attention. This diversification will enable the continued development of a thriving

**GHANA'S
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mining industry that contributes to Ghana's sustainable economic development. In order to achieve this the policy aims to encourage an enabling environment for investors through modern regulatory arrangements and attractive terms. Ghana is among three African countries to develop a comprehensive policy in the mining sector. Already increased exploration expansion activities are expected to result in rising annual mineral output and higher values of mineral exports.

Market composition and trends

Since the reforms in the 1980s the mining industry has been the leading contributor to Ghana's economy. A marked decline in mining revenues was seen in 2015, with a contribution of only GH¢1.3 billion to direct domestic revenue; a decrease of 26.43%. It was the unfavourable price of gold, Ghana's flagship mineral, on the international commodity market that resulted in a decline in gold production and the decrease in revenue for the gold that was produced. However, in 2016, mining revenues rose to GH¢1.6 billion, representing 23% growth.

According to the GIPC, Pay As You Earn (PAYE) from the mining sector contributed GH¢ 478.1 million in 2015 as against GH¢ 291.73 million in 2014 representing a 63.88% increase. In 2015, a total of GH¢ 485.63 million was paid as mineral royalties. This represents a 3.24% increase over the 2014 value of GH¢ 470.37 million. It is however worthy to know that, cooperate income tax paid by mining companies decreased by 25.28% from GH¢ 429.53 million in 2014 to GH¢ 320.94 million in 2015.

The general slowdown in the industry in 2015 also resulted in medium and micro impacts in terms of loss of employment and other local socio-economic contributions, as operating mines and exploration companies restructured to cut costs in the face of the falling gold price. Together with the recovery of the gold price internationally Ghana's mining sector's overall performance began to stabilise in 2016, and this positive growth is expected to continue through 2017.

Regulatory framework

Ghana's mining sector is overseen by the Ministry of Lands and Natural Resources through two subsidiary bodies. The Geological Survey Department is tasked with providing the latest geological information and acting as a source of Ghana's geo-scientific data. Regulation and management of mineral resources, as well as the coordina-

tion of policies related to industries within the sector, are undertaken by the Minerals Commission. Recent regulations enforced by the Commission include:

- **Minerals and Mining (Amendment) Act, 2015 (Act 900).** Working together with the Ministry, the Attorney-General's Department and the Parliamentary Select Committee on Mines and Energy, the Minerals Commission drafted an amendment to Act 703, which the Hon. Sector Minister submitted to Parliament. The amendment relates to provisions of royalty payments and punishment for illegal mining offences. Its main focus is to ensure that illegal small-scale mining (galamsey) is criminalised and its perpetrators punished severely to deter others from undertaking such activities.
- **Local Procurement Issues**
Under the general Minerals and Mining Regulations of 2012, mine support service providers, holders of mineral rights, and holders of licence to export or deal in minerals, are required to submit a 5 year procurement plan to the Minerals Commission for approval. In the preparation of these procurement plans, companies are required to take into account the requirements of a pre-set local procurement list of goods and services with Ghanaian content, which the Commission shall make available annually to the mining industry.
- **Community Development**
In February 2016 the Minerals Development Fund bill was passed, which provides a clear legal framework of how funds should be dispersed to mining communities in terms of development initiatives. The bill specifically covers environmental and community development issues through its requirement of a Community Development Fund.
- **Local Content**
Local content requirements drive the establishment and development of domestic capacity in this sector, and have been formalised by the Ghana Extractive Industries Transparency Initiative (GHEITI) regulation LI 2173 of 2012. This regulation requires adherence to a threshold of 10% skilled and 5% technical and supervisory expatriate staff at the start of operations, declining to 5% technical and supervisory after two years.

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Some large scale operations have made great efforts to observe this requirement with some surpassing it. For example, in 2016 Golden Star's workforce comprised 99% Ghanaian staff, with 51% of employees coming from local communities directly surrounding their operations.

Agencies in the sector

The minerals extractive industry comprises a number of large scale, mostly foreign-owned, mining companies, such as Golden Star, AngloGold Ashanti, Gold Fields, and Newmont. The small-scale mining industry is reserved for Ghanaians, and there are approximately 300 registered small scale mining operators. Just fewer than 100 support companies service the sector.

In August 2016 the Minerals Commission launched an online portal where investors can find information concerning current concessions as well as new applications. This system is scheduled to be fully operational in 2017, and it is hoped that this will assist in alleviating any conflicts regarding concession boundaries.

Illegal small-scale mining

In 2016 an estimated \$2.3billion worth of gold was exported from Ghana through illicit small-scale mining or 'galamsey' as it's known locally.

Small-scale mining has a long history in Ghana and the number of artisanal miners is believed to currently be in the tens of thousands. Not all small-scale mining in Ghana is illegal, and in fact, the country was the first in sub-Saharan Africa to pass legislation regulating this sub-sector. It is an important source of income generation for rural Ghanaians, especially those who lack opportunities in other sectors. However, the majority of the small-scale operations remain illegal.

This activity has recently intensified, partially due to the influx of large numbers of illegal Chinese miners and the presence of large-scale gold mining operations, which sometimes attract small-scale miners to their concessions. Beyond the country's loss of revenue due to galamsey, the environmental damage caused by these operations, particularly in terms of toxic water pollution, is seriously affecting rural communities.

The trans-boundary nature of water makes environmental law enforcement regarding mining pollution challenging, and the lack of viable alternative career options



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for the rural poor makes it difficult to curb the flow of labour into this illegal activity. However, despite these and other challenges, Government is committed to combatting illegal mining, and has made a number of efforts to do so. The wider mining community has also been invited to offer suggestions on how to resolve this issue.

Sectorial Developments

Regulatory infrastructure

The Ministry of Lands and Natural Resources' fully-fledged computerized mining survey system is aimed at ensuring accountability and compliance in the management of mineral rights, with the aim to boost investment. When completed in 2017, investors will be able to apply for mineral rights online, and conduct cartographic searches in district offices.

Gold

In January 2017 Canada based Golden Star Resources Ltd announced that commercial production had begun at their Wassa Underground Gold Mine in Ghana's Western Region. The mine has proven reserves of 1.5 million oz., and it is estimated that this year's production will amount to 145-160,000 oz. The company's Prestea Mine is scheduled to start production in mid-2017, and will contribute to its estimated 60,000-86,000 oz. growth in total gold production this year. This will account for about 2% of Ghana's forecast production of 3.72moz for 2017, and is significant given how few of mines have come online in recent years.



Minerals

Driven by a desire to reduce carbon emissions and improve efficiencies, and since the emergence of energy efficient consumer electronics, the electric vehicle and energy storage markets, worldwide demand for lithium is growing at an unprecedented rate. Therefore, global mineral exploration company IronRidge Resources Limited's September 2016 announcement of its acquisition of a promising hard rock lithium tenement package in Ghana is considered a key acquisition. The project is based on the southern margin of the Cape Coast Batholith.

Also, the Mining Policy of Ghana mentioned previously is expected to be implemented by the Ministry in 2017. The policy allows for an increase in local content participation, and the diversification of the mineral production base as outlined in three main areas: salt, base metals, such as copper, zinc, nickel, and chrome, as well as other minerals, for example: iron ore, limestone, kaolin, mica, silica sand, and quartz. These minerals have the potential to provide the country with high revenues in the sector. For example, Ghana's neighbouring have a high demand for salt, for both domestic and industrial use, but do not have the right climatic conditions and suitable lands for its production, whereas Ghana has these easily at its disposal.

Investment Opportunities Production

- Refinery facilities to serve the local industry for value-added products.
- Exploit and produce solar salt, and utilisation of this salt to produce caustic soda as a raw material for the soap and detergent industry. Also, the chlorine co-product can be used as a water treatment chemical and also serve as a raw material for the production of various sanitation chemicals.
- Produce clinker, demand for which is estimated at over 1 million tonnes per year.
- Exploit Ghana's extensive deposits of granite to produce high quality floor tiles.
- Companies to produce dimension stones for the building industry.
- Salt for local and regional markets.

Engineering and services

- Service companies, including contract drilling, assay laboratories, contract mining and geological consultancies.
- Companies to set up manufacturing

plants and machinery, setting up downstream production facilities to manufacture key inputs such as drill bits, cyanide and activated carbon.

Investment Incentives

- Ghana's Mineral and Mining laws allow operators to negotiate stability agreements. These grant fixed conditions for taxes and royalties for the lifetime of the agreement, which can be up to 15 years.
- Depreciation 75% of the capital expenditure incurred in the first year of investment and 50% of the declining balance in subsequent years.
- Investment allowance of 5% in year one.
- Losses in each financial year, not exceeding the value of the capital allowance for the year, may be carried forward. Capitalisation of pre-production expenses approved by the authorities when the holder starts development of commercial mining.

The holder of a Mining Lease is also granted the following benefits:

- Exemption for foreign staff, resident outside Ghana, from payments of income tax relating to furnished accommodation at a mine establishment.
- Immigration quota for expatriate personnel free from any tax imposed by government for the transfer of foreign currency out of Ghana.
- Exemption from the selective alien employment tax under the selective alien employment decree.

Ghana's Minerals and Mining Act of 2006, Act 703, has added some significant aspects to the country's commercial law:

- Expenditure on exploration and development may be capitalised in accordance with regulated amortisation provision for tax relief.
- Capital allowances have been designed to shorten the pay-back period and include a 75% write-off of capital in the first year and 50% annually thereafter on a declining balance.
- Retention of a proportion of revenue in a foreign currency account for use in acquiring essential equipment and spare parts required for mining operations which would otherwise not be readily available without the use of such earnings and importation from overseas.
- Exemptions from import duties on imported equipment. ■TG



The economy's backbone

In Ghana, the agricultural sector remains the backbone of the economy. Nearly two decades of productivity growth, beginning in the early 1990s, helped put Ghana back on a path to recovery following more than a decade of economic uncertainty. Analysis of this sector's performance records shows that, although there are various risks that reoccur in different parts of the country, they have relatively low overall impact on results at the national level. However, with the sector's heavy reliance on rain-fed farming, climate change is becoming an ever increasing concern, and its effects on agriculture are already evident, especially in Ghana's Northern Region where both flooding and drought have been pronounced.

Despite this, agriculture continues to have a greater impact on poverty reduction than other sectors. It is also critical for rural development and associated cultural values, social stabilization, environmental sustainability and acts as a buffer during economic shocks. The sector currently employs about 48% of Ghana's total workforce, and utilises approximately 69% of the country's land. Small scale farmers produce 80% of Ghana's agricultural outputs.

The country is classified into three main agriculture zones. The Forest Vegetation Zone consists of parts of Western, Eastern,

Above: An agricultural worker prepares cocoa beans 18 November 2003 in Akati, a small Ivorian village where a profitable black market is fetching 625 FCFA (almost one euro) across the border in Ghana for a bag of cocoa, instead of the 385 FCFA it gets at home.

Ashanti, Brong Ahafo and Volta Regions. The Northern Savannah Vegetation Zone includes the Upper East, Upper West and Northern Region while the Coastal Savannah includes mainly the Central, Greater Accra and parts of Volta Region. The Northern Savannah Zone is the largest agriculture zone in Ghana. Most of the nation's supply of rice, millet, sorghum, yam, tomatoes, cattle, sheep, goat and cotton are grown in this region. In recent times, mangoes, cotton and ostrich commercial farms are also gaining footholds there.

The Coastal Savannah is notable for rice, maize, cassava, vegetables, sugar cane, mangoes and coconut cultivation as well as livestock rearing. Sweet potato and soybean crops are also viable in this agro-ecological zone, under irrigation. The lower part of this zone is drained by the River Volta, as well as other streams and lagoons. These water resources present opportunities for fish farming (aquaculture).

In the Forest Zones, where rainfall is very heavy, cocoa, coffee, oil palm, cashew, rubber, plantain, banana and citrus crops are the primary crops.

The major strengths of the agricultural sector include a diversity of commodities, an efficient drainage basin, a well-established agricultural research system, and its convenient proximity to the European market.

Market Composition and Trends

Cocoa dominates Ghana's agricultural exports, and has historically been a key economic driver and a major source of fiscal earnings. Ghana is the second largest cocoa-growing country in the world after Cote d'Ivoire. The country also commands a laudable share of the African quota of EU market in fruits and vegetables export. Other leading processed agricultural export products are processed tuna, other prepared fish, fresh cut pineapples, and tomato paste.

The agriculture sector is divided into four main subsectors:

- Crops: Cash crops, horticultural crops and tree crops
- Livestock: Ruminants, non-ruminants and poultry
- Fisheries: Marine, inland and aquaculture
- Forestry

Crop Production

Ghana produces approximately 800,000

tonnes of cocoa per year, from roughly the same number of farmers. The majority of cocoa farms are rain-fed small-scale operations utilising manual labour and traditional growing methods. They sell to licenced buying companies who then sell on to the government-controlled Ghana Cocoa Board (COCOBOD) at a fixed price. Ghana is the only cocoa producer that has a controlled marketing system, and exports are managed by the Cocoa Marketing Company.

Food production in Ghana for the past few years has shown an upward trend, thus increasing the country's potential towards complete food self-sufficiency. Maize forms between 50% and 60% of cereal production. Rice and sorghum are the second and third most produced cereals respectively. Despite this, rice production has not kept up with the growing rate of domestic consumption, and over 60% of the country's rice is imported. Also, although wheat consumption has grown rapidly in recent years, there is little to none of this cereal grown in Ghana, and approximately 675,000 tonnes of it was imported in 2015 alone.

The production of roots and tuber crops such as cassava and cocoyam has experienced slight increases in recent years. This is partly due to interventions of the Root and Tuber Improvement and Marketing Project (RTIMP) and the West African Agricultural Productivity Programme (WAAPP) through improved technology generation, dissemination and adoption. The availability of a flourishing domestic market for root and tuber crops, for example with cassava being used as a raw material in the brewery industry, has also stimulated production of these crops.

Livestock Production

Demand for livestock products, including poultry, is increasing in Ghana. Factors such as population growth, increased urbanization, rising incomes and improved attitude toward the intake of protein. Livestock production is thus increasing to meet this growing demand. Meat, and meat products, available for consumption increased by 6.59% between 2012 and 2013. In 2015 the livestock industry saw the highest growth of any of Ghana's agricultural segments.

Commercial poultry and pig farming dominate, with poultry production having increased by 50% since 2010. However, the high cost of feed makes its produce more expensive, and therefore less competitive, than the imported equivalent.

Fish Production

The fisheries sub-sector also contributes to the achievement of the country's food security goals by providing high quality and affordable fish protein in the daily diet of many households. Local production contributes about 74% of the total fish needs of the country. Out of this marine fisheries account for approximately 70%, inland fisheries 21% and aquaculture 9%.

The sub-sector was the second fastest growing agricultural segment in 2015, and estimated to contribute about 60% of the protein requirements of Ghanaians. It may, however, not be possible for the growth to continue as overfishing by local operators, and some illegal international vessels, is placing enormous pressure on fish stocks, particularly small pelagic varieties.

- Inland fish production involves capture, cultured fisheries and aquaculture based fisheries. The main sources include; the Volta Lake, lagoons, reservoirs, irrigation dams and dug outs as well as other inland water bodies. The Volta Lake with a surface area of 8,480km² and a 5,200 km² shoreline forms the mainstay of the total inland captured fish production.
- Aquaculture, the production of cultured fish, has been on the rise since 2008. This was largely as a result of government's strategy of investing in the industry. In line with the government's intervention, the Ministry of Fisheries and Aquaculture Development is developing an out-grower and input support scheme to promote aquaculture. The implementation of the scheme

Below: Agricultural workers unload bags of cocoa 18 November 2003 in Akati, a small Ivorian village where a profitable black market is fetching 625 FCFA (almost one euro) across the border in Ghana for a bag of cocoa, instead of the 385 FCFA it gets at home



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CHANGE IS
BECOMING
AN EVER
INCREASING
CONCERN, AND
ITS EFFECTS ON
AGRICULTURE
ARE ALREADY
EVIDENT

will augment national fish production through aquaculture. Under the scheme, selected potential and existing fish farmers will be trained and provided with inputs.

Forestry

Ghana's forests make up part of the Guineo-Congolean phytoecological region. Forests broadly fall into two vegetation zones, each with different vegetation and forest types: the High Forest Zone, covering 34%, and the Savannah Zone covering 66% of the land area.

Approximately 135,000ha of plantations have been established under the National Forest Plantations Development Program. A forest plantation strategy is under preparation according to which there is about 1 million ha of land available for the establishment of forest plantations.

The timber industry is the fourth largest foreign exchange earner after minerals, cocoa and oil exports. Primary wood and processed products account for 89% and 11% of timber exports, respectively. In addition to timber, forests provide the main source of domestic energy in the form of fuel wood and charcoal.

Export of non-traditional agricultural commodities

Ghana's non-traditional agricultural commodities include Shea nuts and cashew nuts, as well as fruits such as mango, banana, and pineapple. Cashew nuts, mostly in their raw form, dominate this category and generate over \$270 million in exports per annum. Pineapples were one of the country's most sought after non-traditional exports, but, despite increases in government subsidies to pineapple farmers, this crop has seen a decline due to producers' lack of capital and input access.

The Ministry of Trade and Industry is actively trying to stimulate domestic production in non-traditional exports through tax exemptions and regulatory allowances. The Ghana Export promotion Authority is further facilitating this by training producers in how to improve international markets.

Agencies in the Sector

A number of agencies and ministries oversee Ghana's agricultural sector. The Ministry of Food and Agriculture governs livestock and all crops other than those overseen by the COCOBOD, which is responsible for supporting and marketing the

Mitigating risk and discovering opportunities in Ghana's agriculture sector

In their 2015 Agriculture Sector Risk Assessment report The World Bank's Agricultural Risk Management Team showed that although risk is a permanent feature of agriculture in Ghana, its impact on output and growth is relatively low at the national level. Furthermore, certain inherent strengths reduce the sector's overall vulnerability to risk while limiting associated losses.

Based on the risk prioritization, the regional distribution of vulnerability to risks, and consultations with local stakeholders, the team identified and recommended actions in three interconnected risk management solutions areas: 1) water management, 2) pest and disease management, and 3) agricultural extension and innovation systems. These risk management interventions would have substantial impacts on improving stability, reducing vulnerability, and increasing the resilience of agricultural systems. These suggestions provide good indicators of needs that could be fulfilled through investment in a variety of services, products, and infrastructure. They are as follows:

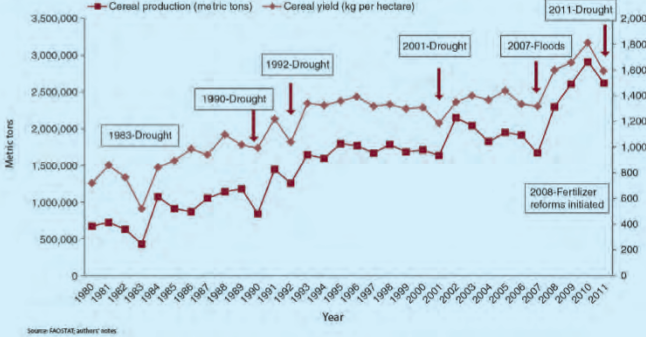
1. Improved water management

Effective water management will be a fundamental building block to address drought and flood risk in Ghana. The Government of Ghana, farmers, and development partners have already undertaken a large number of initiatives, many quite successful, to improve water management.

Despite these initiatives, water resource management remains suboptimal, and losses from drought and floods remain high. To address the deficits in existing water resource management, the following interventions are recommended:

- Scale-up dissemination and implementation of soil and water management practices (e.g. contour bunds, grass stripping, crop residue management, cover cropping, pit composting, planting pits, agro-forestry, alley cropping, enclosures, rainwater harvesting, etc.). These are decentralized, low-cost, and localized interventions that have been

FIGURE 2: Impact of risks on cereal production and yields, 1990–2011



proven to improve yields and reduce losses.

- Introduce flood retention reservoirs on the White Volta River and establish flood warning systems, buffer zones, and dikes. These measures and harmonized data systems for information monitoring and sharing will help reduce losses due to floods.
- Develop small- and micro-scale pump-based irrigation and inland valleys using bunding, leveling, and puddling technology.
- Invest in medium- to large-scale irrigation and drainage schemes, which emphasize water-use efficiency, and rehabilitate existing schemes in strategic locations.
- Improve trans-boundary water resource management and effective implementation of buffer-zone policy to protect, regenerate, and maintain the vegetation surrounding waterways in order to improve water quality.
- Strengthen the current enabling environment and institutional structure of water management in Ghana.

2. Improved pest and disease management

Pest and disease outbreaks are a major production risk, with severe consequences for sector stakeholders. Under climate change, the incidence and severity of pests and diseases is expected to shift, increasing the potential for new and more damaging types of outbreaks.

Ghana needs a functional plant protection system that can forecast and manage the risk of crop pests and diseases. To create a more effective and more responsive system, the following is recommended:

- Strengthen the diagnostic, analytical, and managerial capacity of the Plant Protection and Regulatory Services Directorate, the

THE GOVERNMENT OF GHANA, FARMERS, AND DEVELOPMENT PARTNERS HAVE ALREADY UNDERTAKEN A LARGE NUMBER OF INITIATIVES

principal agency responsible for plant protection in Ghana.

- Implement early warning systems and surveillance, including: calamity pest surveillance (e.g. of variegated grasshoppers and African armyworms). This requires real-time monitoring of key parameters; training local communities in diagnostics, surveillance, and communications; and implementing an early detection and management system.
- Improve farmers' access to knowledge of improved pest and disease management practices through multiple channels (extension, ICT, input dealers, farmer field schools, etc.). Relevant packages of IPM practices and guidelines tailored to specific regions and crops need to be developed and disseminated to farmers through these channels.
- Invest in research on innovative pest and disease management technologies and disease resistant seed varieties to develop holistic plant health management strategies for the major crops. This is especially relevant in the context of climate change, which is expected to alter the incidence and severity of pests and diseases and to facilitate their spread to new territories.

3. Improved agricultural extension and innovation systems

Farmers are at the front lines of risk management; however, they are often constrained by a lack of information about context-specific best practices to manage risks in their fields. An improved agricultural extension and innovation system is at the centre of enabling farmers to manage risks by:

- Providing a package of location- and crop-specific practices for managing risks;
- Helping farmers create and improve public-private partnerships (PPP) in research and extension.

There is an existing mechanism for PPPs, the Research Extension Linkage Committee, which could be improved through regular meetings and additional resources. Thus the encouragement of research, and the encouragement of extension providers to collaborate and share resources with the Ghana Meteorological Agency in setting-up a national network of agro-meteorology and weather forecasting, are recommended.

Source: Choudhary, V; Christienson, G; D'Alessandro, S; & Jossierand, H. 2015. "Ghana: Agricultural Sector Risk Assessment - Risk Prioritization". Washington, D.C.: World Bank Group.

sector's highest earning crops: cocoa, Shea nuts, cashew nuts and coffee. Financing is provided for agri related projects by the Agricultural Development Bank (ADB).

Investment opportunities

Production and processing:

- Production of improved seeds and agro-chemicals.
- Value-added processing of produce.
- Production of cash crops, horticultural crops and livestock for the regional, national and European Union markets.
- Production of veterinary drugs, vaccines and chemicals, feed and feed ingredients for the livestock sector.
- Fish farming.
- Production of wood and non-timber forest products (NTFP).
- Establishment of pulp paper and panel industries.
- Establishment of wood plantations.
- Provision of tree seedlings for plantation species e.g. teak

Technological and Supporting Services

- Provision of tractors with basic implements, planters and harvesters
- Provision of field and laboratory equipment for quality assurance
- Companies to produce and install cold chain equipment
- Supply of machinery to establish hatcheries for day-old chicks
- Processing machine manufacturers to supply agro-processing and packaging equipment / plants

FOOD PRODUCTION IN GHANA HAS SHOWN AN UPWARD TREND, THUS INCREASING THE COUNTRY'S POTENTIAL TOWARDS COMPLETE FOOD SELF-SUFFICIENCY

- Suppliers and financiers of factory building technology
- Manufacturers of fishing nets, ropes, netting materials and outboard motors.
- Development of aquaculture production facility (cage and earthen pond).
- Producers of fish feed
- Technological and consulting services
- Research and agriculture development
- Inspection and grading according to international standards.
- Capacity building on standards, training and certification.

Marketing and Distribution:

- Provision of post-production services (transport, packaging, storage facilities and cold vans)
- Distribution of improved seeds, planting materials and agro-chemicals (fertilizers, pesticides, weedicides).
- Distribution of veterinary drugs, vaccines and chemicals, feed and feed ingredients.
- The marketing of value-added / processed foods in international markets such as the EU, Asia and ECOWAS markets.

Investment Incentives

Incentives to the sector may apply under the following provisions:

- Listed companies enjoy corporate tax of 25%, and newly listed companies enjoy 25% corporate tax for the first three years
- Location Incentives (tax rebate) for manufacturing industries located in the regional capitals ■ **TG**



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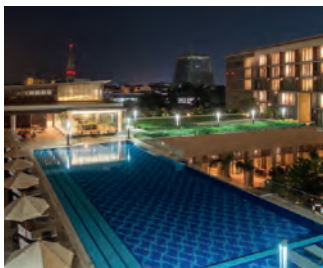
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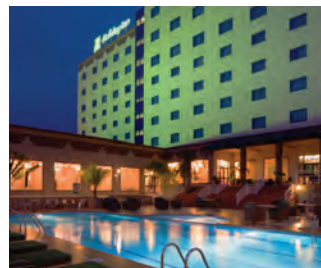
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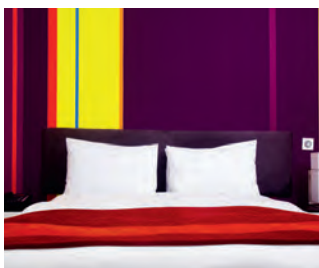
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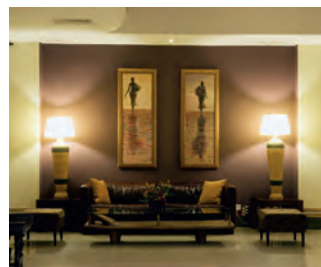
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