LAGOS-KANO-JIBIYA (LAKAJI)
AGRICULTURAL GROWTH
CORRIDOR ASSESSMENT REPORT

NIGERIA EXPANDED TRADE AND TRANSPORT (NEXTT)

MAY 2013

DISCLAIMER

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EXECUTIVE SUMMARY

USAID’s Nigeria Expanded Trade and Transport (NEXTT) program, managed by CARANA Corporation and its implementing partners, aims to promote inclusive economic growth and food security through an integrated approach to trade and transport competitiveness. The program builds upon Government of Nigeria (GON) and prior USAID efforts to stimulate investment in trade-related infrastructure and services, reform trade policies and procedures, and improve the position of Nigerian firms in global and regional markets. Over the 4-year project lifespan (starting October 2012 and ending September 2016) NEXTT is expected to leverage past and current efforts toward the following outcomes:

- $25 million in new investment in projects along the LAKAJI Corridor;
- A 30% reduction in transport costs along the LAKAJI Corridor;
- Dynamic trade policy coordination institutions that integrate public and private sector priorities into a strategic framework for engagement with trading partners;
- Modernization of customs procedures and systems for meeting international standards for agricultural goods; and
- $30 million in additional exports as a result of more strategic positioning of Nigerian exporters by export promotion institutions and industry groups.

To begin its work promoting new investment along the LAKAJI Corridor and the establishment of an Agricultural Growth Corridor Initiative to manage this effort, CARANA Corporation and its implementing partners conducted an assessment with the following objectives: i) assess the agricultural logistics services, infrastructure inefficiencies and investment needs along the corridor; ii) develop an investment blueprint, or profiles of high-priority, investable opportunities that are commercially viable along the corridor with a high potential for development impact and improving the flow of goods along the corridor, and; iii) recommendations on the institutional framework for an Agricultural Growth Corridor Initiative.

The assessment research was conducted by 13 team members who traveled the length of the Lagos – Kano – Jibiya Corridor in February and March of 2013. The team visited the eight major Corridor states of Kaduna, Kano, Katsina, Kwara, Lagos, Niger, Ogun and Oyo, and met with 179 representatives of agribusiness firms, prospective agribusiness investors, representatives from the Nigerian Federal and State governments, donor agencies, non-governmental associations, consulting firms, and banking and finance institutions. Findings of this assessment exercise were consolidated into the attached report.

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1 NEXTT is managed by CARANA Corporation and its implementing partners, including RBS Consulting Ltd., Integra, Development Associates, Global Cold Chain Alliance and Crown Agents.
The report highlights the following logistics services and infrastructure inefficiencies most affecting trade and transport of key agricultural goods along the LAKAJI Corridor. Physical obstacles limiting agricultural competitiveness identified by the assessment team include:

- Poor road conditions
- Unavailable and/or unreliable electricity
- Lack of warehousing/storage facilities (including cold storage)
- Unexploited irrigation potential
- Unexploited rail and inland waterway systems
- Overcrowded port facilities

“Soft” obstacles to agricultural competitiveness in Nigeria identified include the following:

- Lack of clarity concerning land ownership
- Shortage of agriculture financing
- Limited availability of inputs (seeds, planting material and fertilizer)
- Roadblocks, both formal and informal, along the main corridor route
- Missing space for public-private dialogue

The report further identifies an initial total of 33, commercially viable and relevant agribusiness investment opportunities throughout the 8 states visited, separated by state and the following investment categories: Inputs, Production, Processing, Warehousing & Infrastructure, and Information and Communication Technologies (ICT).

These potential agribusiness investments and the findings of this corridor assessment will be discussed and validated at a stakeholder event to be hosted by NEXTT, and attended by public and private potential investors, held in Nigeria in mid to late July, 2013.
ASSESSMENT GOALS AND METHODS

The LAKAJI Agricultural Growth Corridor Assessment set out to identify the most promising opportunities for investment in improved infrastructure and services for agriculture along the corridor. This report offers an investment blueprint of sorts, which identifies illustrative investment opportunities and provides basic parameters for those investments, including the market rationale and supporting initiatives that might justify their prioritization. The goal of the assessment is to inform a conversation between private investors, public agencies and donor-funded programs, focused on how to align resources and efforts in a way that maximizes the potential of the LAKAJI corridor as a conduit for agricultural development.

In line with this vision, the assessment report also offers views from the assessment team on the institutional framework for a “LAKAJI Agricultural Growth Corridor Initiative.” Agricultural growth corridor initiatives in East and Southern Africa have emerged as useful mechanisms for public-private collaboration on corridor-driven agricultural development. The assessment team studied the SAGCOT and Beira Corridor experiences to inform a set of recommendations in the final section of the report that point toward forming such an initiative in Nigeria. These include recommendations for the launch and management of a catalytic fund, a central feature of the existing corridors, and a potential way of organizing investment in the high-priority opportunities identified.

METHODS

Research for this report was conducted in the field from February 18 – March 8. The assessment focuses on the 8 states that the 1,149 km LAKAJI Corridor passes through (Lagos, Ogun, Oyo, Kwara, Niger, Kaduna, Kano and Katsina), linking markets in Lagos to Ibadan, Kaduna, Kano, and then Jibiya on the border with Niger. In the south the corridor begins at the Lagos Port complex. The assessment also examined growing and processing areas that are linked to the corridor via a network of feeder roads in order to determine opportunities that will strengthen upstream supply chain linkages and efficiencies.
Prospective investments in logistics infrastructure and services were assessed from the perspective of their intrinsic qualities, but only those conferring significant crosscutting benefits in relation to USAID and Government of Nigeria priority agricultural value chains were considered. The team reviewed the prior value chain analyses conducted by other USAID projects as input for this assessment. Particular attention was also paid to the location of complementary initiatives that support an underlying investment thesis, including those financed by donors and by State and Federal Ministries of Agriculture, such as the Staple Crop Processing Zones (SCPZs).

In addition to prospective investments in critical logistics infrastructure and services, the team assessed production and processing opportunities that will emerge as and when more efficient corridor linkages between farm, processor and market are in place.

In the course of three weeks, team members held more than 179 interviews with private companies, banks, development institutions, trade associations, parastatal organizations, State Government authorities and Federal Ministries. A full interview list is in Annex i. Interviews sought perspectives on:

1. Demand pull for domestically-produced goods in major markets
2. Investments required in production and processing to meet current and future market demand
3. Location of and gaps in critical supporting infrastructure (roads, power, warehouses, cross-docking stations, etc.)
4. Investment incentives and complementary initiatives sponsored by State and Federal Governments, such as land set-asides or supporting infrastructure development
5. General factors driving the reluctance of investors to launch new projects

ASSESSMENT TEAM

The assessment was a collaborative effort of CARANA Corporation, RBS Consulting Ltd., the Global Cold Chain Alliance and Integra. Dr. Miodrag “Mima” Nedelcovych served as team leader, and team members included the following members: Akinyele Oluwole Aluko, Osita Aniemeka, Ogoegbunam Chukwurah, Nikki Duncan, James Russell Eason, Amanda Grevey, Adremi Osijo, Robert Otto, Adebukola Sotubo, Eric White, Kwasi Yeboah Konadu and Ndaya Yelwa. The full team remained in Nigeria for 2 weeks, while the team leader, supported by Osita Aniemeka and Amanda Grevey, remained a third week for follow on interviews. Following field work, and in addition to writing by team members, Nathan Van Dusen, Amanda Fernández, Ben Coleman and Cynthia Almansi of CARANA Corporation contributed significantly to the writing, organization and editing of the report.

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2 Priority value chains for USAID and the GON include: Cashew, Cocoa, Sesame, Shea, Cassava, Sorghum, Maize, Citrus fruits (pineapples/oranges/mangoes), Shrimping/Trawling, Home Décor/Fashion accessories and Textiles/Apparel.
SNAPSHOT OF THE NIGERIAN AGRICULTURAL MARKET

Nigeria has numerous attributes that make it a unique investment environment in West Africa. The most important from the standpoint of an investor in the agribusiness space is the large size of the domestic market, with a population that will surpass 200 million in the near future, supported by an aggressive Government plan to transform the agricultural sector, known as the Agricultural Transformation Action Plan (ATAP). The push of government incentives combined with the pull of a growing economy (7-8% annual GDP growth) create basic preconditions for investment in developing Nigeria’s primary and most abundant natural resource: arable land.

Nigeria’s agro-ecology features a wide range of climatic zones, with abundant rainfall in most of the country and cultivable and arable land surpassing 84 million hectares. Two major rivers, the Niger and the Benue meet in the center of the country, and many other rivers and surface water sources are available throughout both for irrigation and hydroelectric power. There are hundreds of water retention schemes for irrigation purposes throughout the country and several are located along the LAKAJI Corridor.

At the time of its independence in 1960, Nigeria was a major agricultural producer, not only meeting its domestic needs but also exporting a number of agricultural commodities. According to FAO statistics, Nigeria contributed 42% of the world’s production of groundnut oil, 27% of palm oil and 18% of cocoa. The country was also a major producer of cotton and rubber. Rather than importing food for domestic consumption, Nigeria was self-sufficient. This contrasts with the situation of today, where the country imports nearly $8 billion on imports of wheat, rice, sugar and fish (2011 figures).

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**FIGURE 1**: Nigeria rice consumption, population and tariff rate

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<tr>
<th>Year</th>
<th>Imports</th>
<th>Domestic Production</th>
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<tr>
<td>1960</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>3,000,000</td>
<td>2,000,000</td>
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<tr>
<td>2050 (est.)</td>
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Tariff Rate On Imports of Rice Into Nigeria: **110%**
Nigeria’s changing dietary preferences and booming population highlights both the threat to food security, as well as the tremendous opportunity for agribusiness investment. With the exception of wheat, which cannot be competitively grown in Nigeria (although cassava flour can be a partial blended substitute in wheat flour) all other major domestically consumed and imported products can be competitively produced in Nigeria. Moreover, the economies of scale achievable in the large domestic market for basic staples could be leveraged into competitiveness in the regional market for those same products over time (particularly packaged and processed foods).

Rice has become the major staple of the Nigerian diet, and as the population becomes increasingly urban, the consumption of rice increases even more dramatically. Domestic rice consumption today is surpassing 5 million tons while the domestic milled production is less than half of that. Through protections and incentives, the Federal Government is making a major push for self-sufficiency in rice.

Another major imported food crop that offers a great potential for local production and import substitution is cane sugar, through which Nigeria could supply the already existing 3 million tons of domestic sugar refining capacity. Today less than 250,000 tons of that sugar cane is processed locally. The rest is imported, primarily from Brazil. A more complete list of agricultural products that are in high demand in the growing Kano and Lagos markets in particular, and could potentially be supplied by domestic producers, includes:

1. Processed Foods (varied)
2. Horticulture
3. Rice
4. Maize
5. Cassava
6. Poultry
7. Fish
8. Cattle and dairy

In several export-oriented crops, Nigeria has a uniquely advantageous position. Given the large domestic market that Nigerian companies are supplying, there are ample opportunities to develop regional export markets for processed and packaged foods such as tomato paste, vegetable oil, palm oil, pasta and animal feed. Under an improved policy environment and with properly revamped infrastructure, Nigeria also has the potential to dramatically increase exports of specific products to international markets, including:

1. Cocoa
2. Cashews
3. Sustainable Seafood
4. Sesame Seed
5. Shea & Shea Butter
LAKAJI CORRIDOR FEATURES AND IMPORTANCE

CORRIDOR PROFILE

The LAKAJI Corridor is the main route for moving imported goods to northern Nigeria and exports to southern ports. It also feeds into local and regional markets and is a vital conduit for food supplies to neighboring countries. The Corridor cuts a broad swath of territory commencing at the port of Lagos in the South, and terminating at the Republic of Niger border of Jibiya in the State of Katsina, then continues onward to southern Niger’s largest agricultural market at Maradi. The main physical infrastructure supporting the corridor is Nigeria’s primary North-South interstate road, with the newly rehabilitated Lagos to Kano railroad now offering an alternative mode. As it winds its way up country it crosses eight States – Lagos, Ogun, Oyo, Kwara, Niger, Kaduna, Kano and Katsina. Perhaps most importantly, the corridor links the two largest cities in Nigeria; Lagos with a population of over 20 million inhabitants and Kano with a population of over 10 million people. There are 53.4 million people living along the Corridor as broadly defined, representing 32% of the Nigerian population.

Road conditions range from generally fair to rather poor in certain sections. The Lagos-Ibadan-Ilorin section spans approximately 500 kilometers and is served by a two-lane dual carriage road. This section of the highway is reasonable and a passenger vehicle could travel the section within three and a half to four hours. Between Ilorin and Abuja, the road remains a single carriageway in a very poor state of repair. This segment also lies in the flood plain of the Niger River, which impacts road conditions and maintenance costs. The condition of the dual carriageway between Abuja and Kano is reasonably good for all season operations, though there is room for improvement. Between Kano and Jibiya, the road is a
single carriageway in fair condition due largely to favorable terrain in that part of the country. Lagos is serviced by two principal seaports, Apapa and Tin Can Island, with nine marine terminals serving container, bulk, and break-bulk cargo.

The LAKAJI Corridor is multi-functional, serving as:

1. An “internal” corridor linking the larger producing areas of the northern and middle belt states to more populous southern states;
2. An “export” corridor for shipping goods produced along the corridor to international and regional markets; and
3. An “import” corridor for food and other products destined for the middle and northern states and the Republic of Niger.

The majority of products traveling north along the Corridor are imported consumer staples, intermediate goods such as construction materials, and fuel originating at the Lagos or Cotonou port complexes. Southern shipments consist of mostly unprocessed or semi-processed agricultural commodities that are being processed in the south for both human consumption and, in the case of maize (and soybean as it expands), for the rapidly growing poultry and aquaculture sectors. Key agricultural exports, such as cocoa and sesame, are also flowing south, for the most part in unprocessed form.

The eight states along the LAKAJI Corridor are roughly divided into the Northern States, Southern States and less clearly defined “Middle Belt” States.

CORRIDOR SEGMENTS AND THEIR AGRICULTURAL POTENTIAL

From an agricultural perspective, the LAKAJI Corridor has several attractive features, including: large tracts of arable land, a number of special economic zones designed to promote agribusiness (notably the Staple Crop Processing Zones (SCPZs)), major water retention and irrigation schemes and several large grain storage facilities. Production and processing centers along the corridor also benefit from proximity to dense urban population centers that provide end markets for domestic goods, as well as the human resources for value addition. Among the factors limiting the realization of the corridor’s potential are major infrastructure deficiencies, particularly the poor condition of secondary roads in two of the most fertile states with the most available arable land, Niger and Kwara.

Because of the distinct climatic zones and physical and social environments across the three “belts” of the LAKAJI Corridor, investment opportunities in production and processing are varied and diverse.
SOUTHERN BELT

Because the southern states are more populated and benefit from much better infrastructure and logistics, including power and a denser network of viable roads, they are and will remain Nigeria’s industrial hub. In Lagos and Ogun States, there is a concentration of agricultural processing and other value added manufacturing, often supported by raw material suppliers in the north. The main road, while overcrowded in the section from Lagos through Ibadan, is nonetheless an expressway in good physical condition.

The Lagos metropolitan area generates significant demand pull for poultry, fish, processed foods, fruits and vegetables, offering a growing market for producers and processors in Lagos and Ogun States. In both states, there is scope to expand production and processing of the primary (cassava), intermediate (fish and poultry feed, cassava starch or glucose), and finished (poultry, fish, fresh fruit and vegetables, packaged foods) goods required to satisfy this growing demand. Lagos and Ogun also serve as attractive export processing hubs for cocoa and cashews. Agro-ecological conditions feature humid and sub-humid forest and savannah.
Niger, Kwara and Oyo are often referred to as “Middle Belt” states, although Niger is politically associated with the Northern Governors Association and Oyo has many of the climatic characteristics of the Southern States and its capital, Ibadan, maintains close economic ties to Lagos and Ogun. The portion of the corridor road that stretches from Minna in Niger State to Ilorin in Kwara State, however, is in very poor condition.

The Middle Belt is characterized by a sub-humid savannah agro-ecology, with laterite and alluvial soils. Highlands on the Western edge of the belt are balanced by lowlands along the Niger River Basin in the North and East. The Middle Belt is also characterized by low population density and large tracts of uncultivated land. This presents diverse opportunities for production of a range of tree and field crops. Export crops, including cashews, shea, sesame, cocoa, ginger and honey all find favorable conditions in this zone. Domestic crops, including rice, maize, and cassava, as well as livestock, also fair well. The industrial cities of Ibadan and Ilorin feature a human resource base to support agro-processing, as well as world-class agricultural research capacity, with Ibadan hosting the headquarters of the International Institute of Tropical Agriculture (IITA).
Kaduna, Kano and Katsina feature more temperate climates for food crops, (cocoa and oil palm being the exception) abundantly available arable land, and are better suited for agricultural production. The Corridor roads connecting Minna (Capital of Niger State), Abuja, Kaduna, Kano and Katsina are in good shape and are being reworked and expanded in places that are problematic.

Agro-ecological conditions in the northern states of Katsina, Kaduna and Kano are characterized by semi-arid savannah and sandy soils. Conditions favor export products such as sesame, shea, spices and cotton, and domestic crops such as horticulture, maize, rice and sorghum. Significant demand pull for food crops is generated by the Kano metropolitan market, which also serves as a major transshipment hub for Southern ports, processing centers and consumer markets.
CORRIDOR CLUSTER APPROACH

Nigerian agriculture is heavily dominated by smallholder farmers operating with farm sizes averaging ~1 hectare on the southern tier of the corridor and ~3 hectares on the northern tier. In addition to being small, Nigerian farms are fragmented geographically, making service delivery and infrastructure provision costly. Distribution of inputs and bulking of farm outputs under such conditions remains a challenge to service providers and to agro-industrial processors sourcing raw materials for their mills, factories and packinghouses.

The farm service industry was once dominated by farmers’ cooperatives that engaged in procurement and distribution of inputs for their members. The same organizations bulked member output, provided storage solutions and offered basic financial services. With many of these institutions now defunct, farmers have limited access to services, and processors are perpetually at risk of not being able to run their facilities at optimal capacity, diminishing their competitiveness.

An approach of clustering production and processing centers, with strong infrastructure and service links tying together processors, nucleus farms and smallholder out-growers presents a possible solution for rebuilding the agricultural economy. Clustering allows for cost-effective service delivery to a geographically proximate and dense network of users of logistics services, irrigation infrastructure, bulking facilities, financial services and other amenities that are too costly to provide in a dispersed model. Clusters are ideally anchored by a nucleus farm, processor, or multiples of both with infrastructure and service links to independent farmers surrounding that core.

The concept of corridor development broadens cluster development to a scale that justifies larger investments by both the private and public sectors, such as processing facilities relying on aggregation from multiple production clusters and intervening infrastructure linking clusters to consumer demand poles and ports of exit (for exports). While small farmers (if properly supported and part of a larger scheme) can remain small and specialized, processors must scale in size to achieve competitiveness in either domestic or international markets.

The foregoing investment opportunity profiles are conceived as clusters of mutually reinforcing investments in the services, processing capacity, production and infrastructure required to maximize the agricultural potential of communities along the corridor.

LAKAJI AGRICULTURAL GROWTH CORRIDOR VISION

The principal stakeholders likely to be engaged by the program along the corridor include primary commodity producers, aggregators, processors, packagers, transportation and other logistics providers, financial service providers, specialized warehouse operators, ICT providers, and most importantly national and major international investors and developers that make it all possible.
As more industrial activity takes hold in the targeted cluster areas and corridor, a number of transformations begin to occur. Farmers gain assured markets and are more likely to become increasingly commercial minded rather than strictly self-sufficient. Farming becomes a profitable business rather than a vocation and way of life, and starts to attract more enthusiasm among the youth, both women and men, as a new class of “agropreneurs” starts to emerge. Women are today the largest proportion of the farmers in Nigeria. Creating the conditions for women to become those agropreneurs or move into the more skilled and better paid food industrial jobs will contribute to reducing the massive gender inequalities present in Nigeria. Farm sizes will start to increase, in effect displacing some existing farmers who are more likely now to move into the new value adding processing jobs and/or into starting their own businesses in secondary and over time tertiary sectors. An estimated 4 million youth in Nigeria enter the work force annually, and the agro-business related jobs and business opportunities that will emerge from the cluster developments, be they in specific SPCZs, or opportunities around the growing urban centers in Nigeria, will keep many of those youth off the streets and gainfully employed, and perhaps give them an economic incentive to resist flocking to the overpopulated centers like Lagos.

It is at this delicate “take-off” stage of the development path when it is absolutely essential to create a Public Private Partnership approach so that the benefits of this initiative can be widely and judiciously enjoyed. Government must, either physically or financially, provide the proper incentives to private sector actors to create and maintain the critical infrastructure and services (i.e. electricity, transport, warehousing, irrigation, roads, communication, health and education provision, etc.) that will keep investment and re-investment coming into the targeted areas. It is also the very period when appropriate planning and constructive dialogue must take place to assure environmentally and socially sustainable investments.

Finally, it is in the structured interaction of the producers, processors, service providers and customers, that banks and financial institutions find comfort and risk mitigation to be able to finance otherwise difficult to grasp and perceived risky loans and/or investment capital to agricultural projects. Simply put, for financial institutions it is easier and less risky to lend to the processor (with capital machinery and equipment that can serve as collateral) than to the farmer. In the absence of alternatives, these agribusiness actors, in turn, provide financing to smallholder farmers, which is repaid upon purchase of a commodity produced. Successful farms with reliable purchase and financing agreements will naturally grow. As they grow, they will increasingly mechanize, creating yet other opportunities for provision of agricultural services in the form of providing and maintaining agricultural machines and equipment. Numerous banking and financial institutions exist that are assisting to expand this agri-development “lift off” in Nigeria, including the World Bank, AfDB, and Islamic Development Bank, and impact investors such as Doreo Partners and Grofin, and of course the full gamut of bilateral development agencies, such as USAID, GIZ, JICA, DFID and others.
INVESTMENT PROFILES

The following investment profiles represent the “best bets” for immediate and viable agribusiness investment along the LAKAJI Corridor in Nigeria, as determined by the members of the assessment team. These attached profiles represent an initial cut of describing these investments, and are open to modification, as well as consideration of further analysis and study.

*blue=existing infrastructure and businesses, red=investments being considered by NEXTT
# KATSINA

## 1. Warehousing and Logistics Hub

Insufficient bulking and storage infrastructure for high-volume commodities, such as sesame and cotton, present an opportunity for commercial investment.

### Market opportunity summary

Many of the agricultural products produced in the state by small farmers need to be aggregated and shipped down to larger consumer markets. Major trading houses like Olam and ETG are purchasing cotton and sesame for export markets, as well as maize and rice for distribution to urban centers. The Aba Malting Plant sources sorghum from 1,000 farmers in Katsina. Katsina is an intermediate aggregation point en route to the major markets in Kano, but lacks the infrastructure to serve this function well. A specialized agricultural logistics and warehousing operator could capitalize on the need for efficient evacuation of commodities from the growing regions and bulking in proximity of the corridor for bulk buyers.

### Approximate Investment Need

| $3-5 M |

Government warehouses and loading dock infrastructure in Katsina State are in need of repair. Existing warehouses can be rehabilitated or replaced, and specialized produce handling equipment (specifically for loading and unloading) are needed to improve operational efficiency.

### Location

Located in the northernmost state along the LAKAJI corridor, Katsina State is an important production center and gateway to several regional markets. 5% of the country's producers of staple crops are located here, cultivating 819,000 HA of land, yielding 1.2 tons of crops. Katsina is comprised of 24,000 square kilometers of land, with a population density of 160 persons per square km, of mostly farmers and livestock rears. The road between Kano and Katsina is a single lane in fair condition, providing easy movement of goods and services.

### Supporting Initiatives

- The West African Cotton Company (WACOT) is planning to invest in a soybean crushing plant in Katsina to produce edible, refined oil, and is also doubling capacity of a sesame seed hulling plant to 24,000 MT.
- WACOT is investing in outgrower schemes in Katsina to source this plant.
- The Katsina Grains Silo, recently rehabilitated, presents possible grain storage opportunities for interested partners in this investment, and can facilitate growth in nucleus farm estates. Some farm estates have been revived by the GON to provide extension services in the areas of crop production, livestock rearing, fisheries and bee keeping, amongst others. The GON has four fertilizer blending plants in Katsina, each with an output capacity of 10,000 MT per annum.

### Required Complementary Investments

Financing for bulking and storage infrastructure will be an important complementary activity required to move forward with this investment. The Bank of Agriculture may be able to play a role here, as it is interested in lending for farm inputs and machinery for the agricbusiness sector.

There are several irrigation dams located in the cluster with extensive farmland that could be brought under irrigation. However, the River Basin Authorities that control and manage most of these dams are cash-strapped. Investment in equipment and machines that help maximize the output of these irrigation dams (area of land under irrigation) would support this investment and clustering of small and medium farms in and around dam locations, making such locations hubs for investment. Investments in Modular Compressed Natural Gas (CNG) power plants that target the various industrial and business parks within the cluster are another complementary investment.
### Environmental Considerations

For USAID, an Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment. Risk level will depend on project details, such as the location of construction, type/extent of construction, ancillary features involved, support for the use of pesticides, and will be determined during further screening of this investment and preparation of an ERR.

### Development Impact

There are approximately 1,000 farmers alone supplying the Aba Malting Plant. Improved logistics and warehousing could also reduce post-harvest losses and result in higher farmer incomes.

### Public Sector Role

Provision of a reliable power supply and improving farm to market roads are perhaps the most valuable investments the government could provide in Katsina to boost agricultural investment. One important role governments at the state and federal levels could play is to liberalize the processes of licensing and entry of electric providers into this market. In the meantime, limited power offers opportunities for independent power generation.

To support these investments, Katsina state could finalize its agricultural support policies, and within this, consider playing a more proactive role in the agro input and output markets. The Nigerian agrochemical market is seriously challenged by quality issues and standards enforcement. Improving the regulation of both is critical to ensure the sustainability of agricultural investments in this state, to avoid the situation where credible agrochemicals service providers are forced out of this market. State and local governments could consider addressing this issue now to protect current investors before waiting for relevant Federal regulations. A more competitive market for agrochemicals and inputs will follow.

Either through legislation or other judicial measures, having a legal system that is capable of supporting contract enforcement (in particular for outgrower contracts) and with appropriate delivery of justice for those not respecting market regulations, would represent significant improvements in the enabling environment for agricultural investors and farmers.
2. Cotton Production Management and Logistics

Building on the efforts of Dangote, expand smallholder cotton production on the basis of improved productivity and quality.

Market opportunity summary

The Dangote Ginnery in Katsina state depends mainly on cotton from small farms within about 50km radius from its operational base. It is currently doubling its processing capacity from 2 to 5 tons per hour, working 24hr shifts. To meet the 100+ tons per day demand of the ginnery and improve prices for both lint and raw cotton, an aggregator capable of managing farm-to-factory logistics and a cotton improvement program is needed. The Ginnery is part of a fully integrated cotton textile supply chain operated by Dangote, with a spinning mill in Kano and a fabric mill in Lagos. The market for long-staple cotton and associated yarn and fabric is particularly attractive. Government support of 240,000 tons of improved cotton seed to farmers an attractive supporting initiative. An investor could take advantage of this through an off-take agreement with the ginnery for improved long-staple varieties.

Approximate Investment Need

$2-3 M

A shift to long-staple varieties requires testing of new seed varieties, replanting and a technical package for participating farmers. Investment will also be needed in distribution infrastructure for inputs and a farm-to-factory collection system.

Location

Katsina State is an important production center and gateway to several regional markets. Katsina is comprised of 24,000 square kilometers of land, with a population density of 160 persons per square km. The road between Kano and Katsina is a single lane in fair condition, providing easy movement of goods and services. The ideal location for a cotton logistics hub serving growers and trading companies in Katsina is in Kankara.

Supporting Initiatives

Expanded irrigation is required to support increases in agricultural production. The GON has a strategic objective of increasing irrigation capacity to serve 10,000 – 20,000 HA of land by 2015. Towards this end, the GON is rehabilitating the Jibiya Federal Dam, (supporting 2,000 HA), the Ruwan Sanyi Dam (supporting 30 HA), and the Kusa and Kusada Dams. Some farm estates have been revived by the GON to provide extension services in the areas of crop production, livestock rearing, fisheries and bee keeping, amongst others. The GON has four fertilizer blending plants in Katsina, each with an output capacity of 10,000 MT per annum. Other donor interventions operating in Katsina include the UK Government’s Mai-Karfi project, to make rural markets work for the poor by stimulating private and public investment in the rural economy by more than £100 million.

Required Complementary Investments

Financing for expanding production will be an important complementary activity required to move forward with this investment. The Bank of Agriculture may be able to play a role here, as this bank has a history of working with primary producers and providing microloans for farm inputs. There are several irrigation dams located in the cluster with extensive farmland that could be brought under irrigation. However, the River Basin Authorities that control and manage most of these dams are cash-strapped. Investment in equipment and machines that help maximize the output of these irrigation dams (area of land under irrigation) would support this investment and clustering of small and medium farms in and around dam locations, making such locations hubs for investment. Investments in Modular Compressed Natural Gas (CNG) power plants that target the various industrial and business parks within the cluster are another complementary investment.

Environmental Considerations

An Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment. Risk level will depend on the type of assistance provided (i.e. Support to purchase inputs, pesticide recommendations, fertilizer recommendations, etc.) Support to rehabilitate infrastructure tends to be moderate to high risk, but will be determined during further screening of this investment and preparation of an ERR.

Development Impact

There are an estimated 2,500 farmers and employees supplying or working directly for the Dangote Ginnery. At current global market prices, a fully utilized ginnery producing basic cotton is a $55M+ per year business. Improved varieties and yields would result in higher returns to farmers and support Dangote’s efforts to compete with high-quality imported fabrics in the booming domestic market. This investment could positively impact the growth of the local garment industry, which has the potential to be a large employer (particularly of women) if Nigeria’s domestic textiles supply chain can compete on quality and price.

Public Sector Role

Provision of a reliable power supply and improving farm to market roads are perhaps the most valuable investments the government could provide in Katsina to boost agricultural investment. One important role governments at the state and federal levels could play is to liberalize the processes of licensing and entry of electric providers into this market. In the meantime, limited power offers opportunities for independent power generation.

To support these investments, Katsina state could finalize its agricultural support policies, and within this, consider playing a more proactive role in regulating the agro input and output markets. Either through legislation or other judicial measures, having a legal system that is capable of supporting contract enforcement (in particular for outgrower contracts) and with appropriate delivery of justice for those not respecting market regulations, would represent significant improvements in the enabling environment for agricultural investors and farmers.
### KANO

#### 3. Kano Agricultural Supply Company (KASCO)

A state-owned network of agro-dealers slated for privatization.

| Market opportunity summary | Agro-input and agro-equipment supply markets are becoming increasingly attractive as Government of Nigeria moves out of direct intervention in these markets and encourages private participation through schemes such as the fertilizer voucher program, which subsidizes 25% of the cost of fertilizer to the farmer. Kano was the first state to pilot the scheme back in 2009, with 140,000 participating farmers. This has resulted in an increase in fertilizer utilization and general improved orientation of Kano’s 1,031,290 farmers toward crop intensification. As the Kano State Government also moves out of direct intervention, they are considering options for KASCO. Established as a network of 140 outlets in the early 1980s, recent discussions of what to do with KASCO have included converting its outlets into sewing centers for uniforms and other garments. KASCO’s current infrastructure includes offices, warehouses, silos, fertilizer blending plants, feed mills, tractor and equipment, agro-service outlets, lorries and delivery trucks. |
| Approximate Investment Need | $7-10 M |
| Location | KASCO’s hub is in Kano city, with outlets across the state. Kano is an agricultural hub for inbound and outbound goods, influencing adjacent country markets. Kano state is home to 9 million people, mostly engaged in agricultural activities. 6% of the country’s crop holders are in Kano, producing 1.3 million HA of staple crops in 2010, cultivating 1.6 million tons. Kano city has 3 million inhabitants, making it the 3rd largest city in Nigeria. Kano’s rainy season lasts between 3-5 months, with average rainfall from 1,000 mm per year in the south, to 800mm in the north of the state. Kano has over 18,000 square kilometers of cultivable land and is the most extensively irrigated state in Nigeria. |

**Supporting Initiatives**

- The International Fertilizer Development Corporation (IFDC), through the USAID MARKETS II project, has supported the Government in rolling out the fertilizer voucher program and promoting its utilization by farmers. AGRA, via IFDC, and DFID, via its PrOpCom project, have also contributed to the development of trained agro-dealer professionals that has created a viable human resource base for this business. The Kano State Government has in place a rice-focused agricultural policy which was developed with the support of DFID’s PrOpCom. With the enhancement of the Kano State Government capacity through this DFID’s supported program, it is in a much better position than many other states in the Federation to roll out similar policies which are supported by legislations. DFID’s Mai-Karfi project also supports market system reforms to respond to emerging demands. The market-led focus of this project could be further deepened and complemented in Kano to maximize impact.

**Required Complementary Investments**

- Poor power supply inhibits investment in agribusiness but also presents opportunities for independent power generation for existing business parks. Public investments in Modular Compressed Natural Gas (CNG) power plants that target the various industrial and business parks within the cluster are an attractive complementary investment. Government policies and legislation should support the privatization of such plants after their creation.

**Environmental Considerations**

- Privatization is considered very low risk from an environmental standpoint. If support is limited to technical assistance in privatization, there would be no direct environmental effects, and therefore an ERR would not be required.

**Development Impact**

- The market for agricultural inputs could be revolutionized in Kano if this privatization is made reality. Increased agricultural production and productivity on any scale will not be viable without complementary investments in inputs. USAID’s MARKETS II project demonstrates that improving farmer productivity results in increased utilization and demand for fertilizer and improved seeds.

**Public Sector Role**

- Kano State Government would need to issue a tender for KASCO on a fully-privatized or PPP basis, as well as strongly consider investments in CNG power plants.

Investments required would include acquisition and rehabilitation of KASCOs physical assets, as well as training of staff and rebranding.
4. Specialized Oil Processing
Specialized processing of vegetable oils to meet the growing market demand for processed and packaged food ingredients.

Market opportunity summary
The growing market for packaged and processed foods in Nigeria has stimulated rapid growth of food companies seeking specialized oils and oleoresins as critical inputs. This presents an opportunity for investment in more sophisticated processing of oils locally to supply both current players (Dansa Foods, Dantata Foods, Nestle) and new entrants (Olam) in the packaged food market. Recent research by Euromonitor International predicts dynamic growth in this segment in the coming 5 years.

Approximate Investment Need
$10-15 M
Investments required would include equipment and facilities for refinement of crude vegetable oil output by the Dantata oil mill and/or other crude oil sources. Since Dantata could be both a major supplier and buyer for refined oils and oleoresins, there may be a joint venture opportunity for investors with knowledge of and access to specialized oleoresin markets.

Location
Co-location with Dantata’s oil mill in Kano is one possible approach. Kano is an agricultural hub for inbound and outbound goods, influencing adjacent country markets. Kano state is home to 9 million people, mostly engaged in agricultural activities. Kano city alone has 3 million inhabitants, making it the 3rd largest city (and urban market) in Nigeria.

Supporting Initiatives
The Government—at both the federal and state levels—has provided support to agriculture through a number of subsidized services and facilities. In the past, State and Federal governments have focused largely on the supply end of the chain. With the shift in focus to value chain’s demand, government support is now focused on stimulating demand. In support of this, Special Crops Processing Zone Parks are being created in the state by the Federal Government, while the State Government is rehabilitating its numerous business parks across the state while ensuring that issues within its investment climate and business environments are addressed in a way that does not distort markets.

Required Complementary Investments
Revival of Dantata Foods & Allied Products vegetable oil mill in Kano (an estimated capacity of 300,000 tons per year of sunflower, groundnut, cottonseed and soybean oils) could be an important stimulus and pre-requisite to more sophisticated production of oleoresins.

Environmental Considerations
An Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment. Risk level will depend on the location, extent of construction and ancillary features needed, all to be determined during final screening and preparation of an ERR.

Development Impact
To increase production in specialized foods, oil mills would need to add an estimated 1,000 jobs in the processing facility, of which an estimated 50% would be women. Small farmers of peanuts, sunflower, cotton seed and soybean, providing raw materials to the oil processor, would also benefit from expansion in processing, and incomes among these small farmers would likely increase. With two or three investments of similar nature in this sector, farmers could respond to the demand for oil seeds, and the market for finished or semi-finished industrial products will become more competitive in terms of product quality, services, and cost.

Public Sector Role
Providing an assured and steady supply of electricity is one of the most critical investments the public sector can make in Kano to improve the competitiveness of the state in agribusiness. Governments at the state and federal levels could do more to liberalize the processes of licensing and entry of electric providers into Kano. In the meantime, limited power offers opportunities for independent power generation. Public investments in Modular Compressed Natural Gas (CNG) power plants that target the various industrial and business parks within the cluster are an attractive complementary investment. Government policies and legislation should support the privatization of such plants after their creation.

Kano state should consider playing a more proactive role in regulating the agro input and output markets. The Nigerian agrochemical market is seriously challenged by quality issues and standards enforcement. Improving the regulation of both is critical to ensure the sustainability of agricultural investments in this state, to avoid the situation where credible agrochemicals service providers are forced out of this market. State and local governments could consider addressing this issue now to protect current investors before waiting for relevant Federal regulations. A more competitive market for agrochemicals and inputs will follow.
5. Tomato Production

A new $15.5 million investment in a tomato processing facility requires a complementary $19 million investment in production.

<table>
<thead>
<tr>
<th>Market opportunity summary</th>
<th>Approximate Investment Need</th>
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<tr>
<td>The Dansa Foods (Dangote Group) tomato paste factory and greenhouse complex are under construction. When completed next year, the factory will process 1,200 metric tons of tomato daily. The market for imported tomato paste and other processed tomato products in Nigeria is estimated at 11.7 billion Naira (~$75 million) per year. The Dansa facility is expected to supply approximately 1/3 of the domestic market. The Dansa project represents a stable market for commercial tomato production.</td>
<td>$15 – 25 Million</td>
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The Dansa Foods investment is linked to 24 surrounding farming cooperatives, but to be viable should also include a nucleus commercial farm and facilities for aggregation, sorting and packing prior to transfer to the factory. Seedlings will be supplied by the Dansa Foods greenhouse complex, so investors need to focus only on production, aggregation, post-harvest logistics. The investor could also work with supporting initiatives to offer training, inputs and credit to smallholder farmers in allied cooperatives.

Location

The Dansa Foods facility is in the Kadawa area of Kano State, which is ideally suited to tomato growing. The commercial farm and aggregation infrastructure should be located in close proximity to the factory and allied cooperatives. Kano is an agricultural hub for inbound and outbound goods, influencing adjacent country markets. Kano state is home to 9 million people, mostly engaged in agricultural activities. Kano city alone has 3 million inhabitants, making it the 3rd largest city (and urban market) in Nigeria. Kano’s rainy season lasts between 3-5 months, with average rainfall from 1,000 mm per year in the south, to 800mm in the north of the state. Kano has over 18,000 square kilometers of cultivable land and is the most extensively irrigated state in Nigeria.

Supporting Initiatives

Dizengoff Nigeria, a subsidiary of the United Kingdom Balton Group, has unveiled a new farmer’s kit in Nigeria to boost tomato production. The idea behind this kit is to liberate the small scale subsistence farmers by providing a proven approach to become an agropreneur, with a middle class income on a permanent sustainable basis, as well as to bring fresh fruit and vegetables to the surrounding communities at affordable prices. Other local investors are also planning investments in tomato farming and tomato paste processing (Tropical General Investments for example) in Nigeria. NIRSAL financing and government subsidies for fertilizer support could assist farmer associations and other commercial farms that might want to supply the Dansa factory. In the past, State and Federal governments have focused largely on the supply end of the chain. With the shift in focus to value chain’s demand, government support is now focused on stimulating demand. In support of this, Special Crops Processing Zone Parks are being created in the state by the Federal Government, while the State Government is rehabilitation its numerous business parks across the state while ensuring that issues within its investment climate and business environments are addressed in a way that does not distort markets.

Required Complementary Investments

Dansa Foods’ investments in the greenhouse complex and processing facility are proceeding and are expected to be completed soon. In order to secure its supply chain, investments in the expansion of existing irrigation schemes could be considered. There are several irrigation dams located in the cluster with extensive farmland that could be brought under irrigation. However, the River Basin Authorities that control and manage most of these dams are cash-strapped. Investment in equipment and machines that help maximize the output of these irrigation dams (area of land under irrigation) would support this investment and clustering of small and medium farms in and around dam locations, making such locations hubs for investment.

Environmental Considerations

An Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment. Risk level will depend on the type of assistance provided (i.e. Support to purchase inputs, pesticide recommendations, fertilizer recommendations, etc.) Support to rehabilitate infrastructure tends to be moderate to high risk, but will be determined during further screening of this investment and preparation of an ERR.

Development Impact

Increased production at the upgraded Dansa tomato processing factory will provide increased employment opportunities for factory workers. Employment opportunities will also arise for workers on commercial tomato farms/plantations, and for the thousands of small farmers working with cooperatives or aggregators to source product for the factory. Use of improved technologies can lead to increased productivity and farmer incomes; Dizengoff’s experience in using improved technologies for tomato farmers in Kenya demonstrates that yields per hectare can be increased 75 fold.

Public Sector Role

Providing an assured and steady supply of electricity is one of the most critical investments the public sector can make in Kano to improve the competitiveness of the state in agribusiness. One important role governments at the state and federal levels could play is to liberalize the processes of licensing and entry of electric providers into Kano. The same applies to land acquisition, which is currently constrained by bureaucratic bottlenecks. Public investments in Modular Compressed Natural Gas (CNG) power plants that target the various industrial and business parks within the cluster are an attractive complementary investment. Government policies and legislation should support the privatization of such plants after their creation. Furthermore, Kano state could play a more proactive role in regulating the agro input and output markets. The Nigerian agrochemical market is seriously challenged by quality issues and standards enforcement. Improving the regulation of both is critical to ensure the sustainability of agricultural investments in this state, to avoid the situation where credible agrochemicals service providers are forced out of this market. State and local governments could consider addressing this issue now to protect current investors before waiting for relevant Federal regulations. A more competitive market for agrochemicals and inputs will follow.
**6. Kano Agrochemicals Supply Network**

Joint venture or strategic partnership opportunity with established agrochemicals distributor.

**Market opportunity summary**

The agrochemicals market in Nigeria is undermined by limited enforcement of standards and the resultant presence of prohibited and often toxic or inert products. Recent estimates put growth in demand for crop protection products at 9% per annum, with projections of $150M in annual sales by 2016. C. Zard and Company Limited is one of the oldest and most established distributors of agrochemicals in the country, but is considering withdrawing from the sector due to difficulties in obtaining reputable products. There is an opportunity for a supplier of high-quality agrochemicals to leverage C-Zard’s distribution network and credibility to improve the availability of quality agrochemicals in the Kano market.

**Approximate Investment Need**

$8 - 15 M

Investments required would joint venture capital to support training of staff and marketing of new products, leveraging the physical network and reputation of C-Zard.

**Location**

Kano is an agricultural hub for inbound and outbound goods, influencing adjacent country markets. Kano state is home to 9 million people, mostly engaged in agricultural activities. Kano city alone has 3 million inhabitants, making it the 3rd largest city (and urban market) in Nigeria. Six percent of the country’s crop holders are in Kano, producing 1.3 million HA of staple crops in 2010.

**Supporting Initiatives**

The International Fertilizer Development Corporation (IFDC), through the USAID MARKETS II project, has supported the Government in rolling out the fertilizer voucher program and promoting its utilization by farmers. AGRA, via IFDC and DFID’s PrOpCom project, have also contributed to the development of trained agro-dealer professionals that has created a viable human resource base for this business. The Government has essentially pulled out of fertilizer distribution leaving behind a market in need of providers and those that can provide fertilizer blending and distribution. There are several government-owned agro service centers and warehouses that could be taken over by private providers.

**Required Complementary Investments**

Poor power supply inhibits investment in agribusiness but also presents opportunities for independent power generation for existing business parks. Public investments in Modular Compressed Natural Gas (CNG) power plants that target the various industrial and business parks within the cluster are an attractive complementary investment. Government policies and legislation should support the privatization of such plants after their creation.

**Environmental Considerations**

Investment in agro-chemical factories is considered by USAID moderate or high risk in terms of environmental impact. An Environmental Risk Review (ERR) will be required. Other envisioned analyses include an Environmental Assessment (EA) and a Pesticide Evaluation Report and Safe Use Action Plan (PERSUAP).

**Development Impact**

Practically all the pesticides, fungicides and herbicides currently widely circulated in the Nigerian market are either globally prohibited or restricted. The regulatory environment for agrochemicals is in great need of strengthening, so that Nigerians are not consuming non-biodegradable and toxic agrochemicals in their food. Dizengoff’s experience in Nigeria with tomato production is that use of appropriate pesticides, irrigation and the right seed has led to increased crop yields, on a per hectare basis, by up to 75 times in gross weight harvested.

**Public Sector Role**

Kano state could play a more proactive role in regulating the agro input and output markets. The Nigerian agrochemical market is seriously challenged by quality issues and standards enforcement. Improving the regulation of both is critical to ensure the sustainability of agricultural investments in this state, to avoid the situation where credible agrochemicals service providers are forced out of this market. State and local governments could consider addressing this issue now to protect current investors before waiting for relevant Federal regulations. A more competitive market for agrochemicals and inputs will follow.
7. Improved Inputs (Seeds and Fertilizer)

Improvements in seed quality is required for increased agricultural production. Seed quality improvements also require parallel investments in fertilizer supply. By linking the two, investors can increase market share.

**Market opportunity summary**
Seed companies in the state are not operating at full capacity to satisfy market demand, in part due to the inefficiencies within the fertilizer market. Small farmers are less likely to purchase higher quality seeds without the higher quality fertilizer to accompany this input investment. Without a parallel investment in fertilizer supply, operating capacity in seed production will never get close to 100%, and farmers will not increase their use of higher quality seeds. Kaduna seed production companies could consider equity partnerships with interested investors to support improved fertilizer distribution, as well as financing to improve seed quality.

**Approximate Investment Need**
$30m – $130M

An initial investment in this range makes sense given the fact that the fertilizer and other agrochemical market is greatly underserved. The investment would likely require about $30m in equity partnership in two of the nation’s leading seed companies and close to $100m in financing.

**Location**
On the corridor approximately 80 miles north of Abuja, Kaduna is a major road and rail transportation hub for surrounding states’ agricultural production centers. Made up of approximately 48,000 square kilometers, Kaduna is home to several major rivers, some of which have been dammed to provide irrigation facilities. Rainy season lasts for about 5 months, averaging 1,016 mm rainfall.

**Supporting Initiatives**
The Kaduna state government is revising its agricultural policies, and is attempting to convert the state into a cereal grain production, processing and marketing hub for the country. To support this goal, the state government is also working with Niger, Kebbi, Kano and Sokoto states on developing electronic marketing of agricultural produce through the deployment of tradable warehouse receipt systems.

Government of Nigeria’s agricultural seed subsidy scheme is another supporting initiative that can be tapped into to increase seed production.

**Required Complementary Investments**
There are several irrigation dams located in Kaduna that could be brought under irrigation. However the River basin Authorities that control and manage most of these dams are cash strapped. Public investment in equipment and machines to maximize the output of irrigation dams (area of land under irrigation) could support this investment in improving seed quality and agrochemicals but also would support growth and clustering of small and medium farms in and around the dam locations. Investments in Modular Compressed Natural Gas (CNG) power plants targeting various industrial and business parks within the cluster and beyond would be another viable complementary investment.

**Environmental Considerations**
Environmental impact could be very low, moderate or high, depending on the type of investment and involvement in input and supply distribution. An Environmental Risk Review (ERR) would be required. If considered “assistance for the use or procurement”, the investment would be considered moderate or high risk and additional reviews, such as an Environmental Assessment (EA) and a Pesticide Evaluation Report and Safe Use Action Plan (PERSUAP), will be required.

Extensive use of fertilizer contributes to the salinization of farm land. Flushing of saline soil can be achieved through flushing which is expensive and dependent on water PH.

**Development Impact**
There are approximately about 300 direct employees and well over 3500 out growers working in Kaduna’s seed processing industry now. More efficient and effective seed production will support increases in employment and allow seed companies to expand core operations to integrate more workers. An improved fertilizer market will have a large impact on increasing production nationally.

**Public Sector Role**
Reliability of power supply will be a concern to investors, but offers opportunities for independent power generation. In order to support these investments, the state government needs to finalize its agricultural policy and ensure proper attention is provided to the need for input supply. The potential for expanding water retention schemes and irrigation is abundant in Kaduna State. The state can seek public-private partnership opportunities for supporting water schemes as they are doing elsewhere with Diga Dam with World Bank financing.

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KADUNA
## 8. RICE PRODUCTION AND MILLING

**Increased production of Nigerian-produced paddy is a large market opportunity given human consumption patterns and potential, future import bans of rice**

### Market opportunity summary

Nigeria is the largest net importer of rice in Africa and the second largest importer in the world. It imports over 30% of its rice (an estimated 2 million tons) to meet growing demand. Numerous large buyers are investigating locations for rice projects in Kaduna. Local investors are also interested in establishing major, irrigated rice projects. The GON is determined to improve Nigeria’s ability to feed itself and become “food secure”. Import bans of rice are being discussed within government circles, and a 110% import duty on milled rice has been established.

### Approximate Investment Need

Studies have established that $700 is required to manually cultivate one hectare of upland rice in Nigeria. Based on this and allowing an additional $250 for irrigated land development, an initial investment of $15m will be required to cultivate 15,000 HA of Rice (10,000 nucleus rice farm, 5,000 HA of production involving outgrowers). The goal is to get to 60,000 HA of overall production. Commercial viability will come at producing 120,000 tons of rice paddy per year, as husk can be turned into biodiesel and firms can generate their own energy supply, dramatically reducing energy costs. A 20 ton/hour mill installed with capacity to cogenerate 3-4 MW of electricity would cost in the range of $35-40 million.

### Location

On the corridor approximately 80 miles north of Abuja, Kaduna is a major road and rail transportation hub for surrounding states agricultural production centers. Made up of approximately 48,000 square kilometers, there are several major rivers, some of which have been dammed to provide irrigation facilities. Rainy season lasts for about 5 months, averaging 1,016 mm rainfall.

### Supporting Initiatives

The Kaduna State Government is working to revise its agricultural policy. The State Government is also interested in developing the state into a cereal grain production, processing and marketing hub of Nigeria and has constructed a 25,000 ton grain silo. It is currently working with other States such as Niger, Kebbi, Kano and Sokoto on electronic warehouse receipt systems trading of agricultural produce. Government of Nigeria’s agricultural seed subsidy scheme can be tapped into to increase seed production.

### Required Complementary Investments

Industrial rice production is not viable without large irrigation investments, which could be established by government and leased back or financed on a PPP basis.

### Environmental Considerations

Likely to be High Risk and requiring an Environmental Assessment if involving agricultural land leveling, large-scale irrigation, water management structures such as dams and impoundments or new lands development. ERR required.

### Development Impact

Initial investments could involve 10,000 farmers and employees working in new rice processing centers. More efficient and effective rice production will support higher returns to farmers. The market potential for to meet demand in rice could translate into an additional estimated 7,000 jobs, 40% of which are women, (particularly those in parboiling, sorting and retailing) and 3,000 linked farmers.

### Public Sector Role

Reliability of power supply will be a concern to investors, but offers opportunities for independent power generation. In order to support these investments, the state government needs to finalize its agricultural policy and ensure proper attention is provided to the need for input supply. Perhaps the most important role governments at the state and federal levels could play is to liberalize the processes of licensing and entry of electric providers into the market. The GON can also play a more proactive role in regulating the agro input and output markets. The Nigerian agrochemical market is seriously challenged by quality issues and standards enforcement. Governments at the federal and state levels must play a more forceful regulatory role and enforce standards and quality measures to provide incentives to protect future investments. State and local governments could consider addressing this issue now to protect current investors before waiting for relevant Federal regulations. A more competitive market for agrochemicals and inputs will follow.
## 9. MAIZE AND SOYBEAN MILLING

Linking existing aggregators of maize and soybean to local processing facilities can assist in meeting high demand for human consumption and poultry feed.

### Market opportunity summary

Maize and soybean are major crops being produced in Kaduna State, with production levels at 1,006,100 tons for maize and 76,000 tons for soybean in 2010. Large buyers have expressed interest in sourcing maize from Kaduna. Kaduna is ideally situated for shipping production of maize and soybean south to the major consumption centers for human consumption and for poultry feed.

### Approximate Investment Need

$6-8 m

Financing required to build a new mill is estimated at $6-8 million for a mill that can run at 10 tons/per hour capacity.

### Location

Kaduna is a major road and rail transportation hub for surrounding states’ agricultural production centers. Made up of approximately 48,000 square kilometers, there are several major rivers, some of which have been dammed to provide irrigation facilities. Rainy season lasts for about 5 months, averaging 1,016 mm rainfall.

### Supporting Initiatives

The Babban Gona “Great Farm” agricultural development franchise approach is being piloted in Kaduna, with the mission of lifting small farmers out of poverty. Babban Gona is a franchise business, whereby smallholders involved are provided with inputs and extension services in exchange for delivery of an amount of crop equal in value to the cost of services provided to them. An anchor firm (in this case Doreo) offers to buy excess crop from farmers at a fair price. Extension workers maintain daily contacts with farmers throughout the growing season. Doreo Farms is reportedly investing $50 million to expand Babban Gone operations in Kaduna on 20,000 HA of land.

Another complementary initiative is the USAID Nigeria MARKETS II project, which is working with small farmers in maize and soybean.

### Required Complementary Investments

Most of the mills found in Kaduna and other parts of the country are small mills (100 - 200kg per hour). However, these are multipurpose mills capable of handling various grains depending on which commodity is in season. Many of these mills are old and largely driven by diesel engines. Existing mills will not be able to handle the expected increases in productivity and land under cultivation required for consumption. Investments in mills that can produce, grits, flour, pasta, vegetable oil, etc., will drive commercial demand and aggregation for these commodities, as well as the opportunity to shift farming operations in them from subsistence to commercial operations. Increased production may also move current aggregators (such as Doreo) to purchase farm outputs and also provide inputs and embedded services to smallholder farmers.

### Environmental Considerations

Further environmental review will be required. Risk level TBD and depends on location, extent of construction, and ancillary features needed, such as type of processing and potential for pollution of land, water, air.

### Development Impact

There are approximately 896,000 farmers and employees supplying maize and soybean for aggregators now. Improving and expanding milling capacity by an additional 25% means increases in employment by approximately 15% both at the production and aggregation levels. Farmers will receive a higher price for product, as the transactional risk of middleman will be reduced. Just the small farmers working with Babban Gona are estimated to number 16,000.

### Public Sector Role

Reliability of power supply will be a concern to investors, but offers opportunities for independent power generation. In order to support these investments, the state government needs to finalize its agricultural policy and ensure proper attention is provided to the need for input supply. The GON can also play a more proactive role in regulating the agro input and output market by improving quality and standards enforcement.
## Market opportunity summary
Nigeria is the largest net importer of rice in Africa and the second largest importer in the world. It imports over 30% of its rice (an estimated 2 million tons) to meet growing demand. Numerous large buyers are investigating locations for rice projects in the Badeggi Cluster. Local investors are also interested in establishing major, irrigated rice projects. The GON is determined to improve Nigeria’s ability to feed itself and become “food secure”. Import bans of rice are being discussed within government circles, and an import ban on rice in any form is in development within the next 2-3 years.

Studies have established that $700 is required to manually cultivate one hectare of upland Rice in Nigeria. Based on this and assuming an additional $250 for irrigated land development, an initial investment of $15m will be required to cultivate 15,000 HA of Rice (10,000 nucleus rice farm, 5,000 HA of production involving outgrowers). The goal is to get to 60,000 HA in terms of overall production. Commercial viability will come at producing 120,000 tons of paddy per year, as husk can be turned into biodiesel and firms can generate their own energy supply, dramatically reducing energy costs.

## Location
Niger is located in an ideal logistical position for agricultural trade moving both north and south along the Corridor. Plans are underway to encourage use of 13 dams that are underutilized for irrigation. Niger state is the largest state in Nigeria with 7 million hectares of cultivable land, only a third of which is presently being used for agricultural production.

## Supporting Initiatives
The GON has decided on locating a SCPZ in Niger, although no decisions have been made yet as to location. The SCPZ location will play an important role to stimulate large, private investments in this state, as well as the extent to which smallholder farmers can participate in increased production of agricultural commodities.

The GIZ (with support of the Gates Foundation) is embarking on a rice initiative in Nigeria, which could be located around the SCPZ.

The State is formulating a “warehouse receipt program”. The State Agricultural Development Program (now called Niger State Agricultural Mechanization Authority) owns warehouses. A pilot is envisioned now called the Mariga Integrated Commodity market, which will have storage facilities, security, banking facilities associated with a cattle market.

## Required Complementary Investments
The road conditions on the interstate portion as well as the feeder roads to the Corridor are some of the worst along the entire length of the Corridor and limits increased investment in farming in the state. If Nigeria is to maximize use of an existing grain storage facility of 25,000 ton capacity and a new SCPZ, the roads must be in condition to support these other agricultural infrastructure investments.

There are several irrigation dams located in the cluster with extensive farmland that could be brought under irrigation. However, the River basin Authorities that control and manage most of these dams are cash strapped. Investment in equipment and machines that help maximize the output of these irrigation dams (area of land under irrigation) would support this investment and clustering of small and medium farms in and around dam locations thus making such locations hubs for business. Investments in Modular Compressed Natural Gas (CNG) power plants that target the various industrial and business parks within the cluster are other complementary investments.
Environmental Considerations

Estimated Medium to High Risk and potentially requiring an Environmental Assessment if involving agricultural land leveling, large-scale irrigation, water management structures such as dams and impoundments or new lands development.

Development Impact

There are approximately 627,500 farmers and employees supplying maize and soybean for aggregators now. Improving and expanding milling capacity by 25% translates into increases in employment by a minimum of 15% both at the production and aggregation levels. Farmers will receive a higher price for product, as the transactional costs of middleman will be significantly reduced.

Public Sector Role

Investment in new or improved roads is one of the most important infrastructure investments the GON can make to improve Niger State’s agricultural economy and level of food security. Reliability of power supply will be a concern to investors, but offers opportunities for independent power generation. In order to support these investments, the state government needs to finalize its agricultural policy and ensure proper attention is provided to the need for input supply. Perhaps the most important role governments at the state and federal levels could play is to liberalize the processes of licensing and entry of electric providers into the market. The GON can also play a more proactive role in regulating the agro inputs and output market. Farmers currently don’t invest in agro chemical and inputs because of past negative experiences. The Nigerian agrochemical market is seriously challenged with quality and standards enforcement in question. Governments both at the federal and state levels must play a more forceful regulatory role and enforce their standards and quality measures to provide incentives (rather than disincentives) that protect future investments.
11. MAIZE AND SOYBEAN PRODUCTION AND STORAGE

Smaller farms of maize and soybean could benefit from equity investment or joint-venture partnerships to facilitate improved production and storage techniques to assist in meeting high demand for human consumption and inputs for poultry feed.

| Market opportunity summary | Nigeria produces approximately 8 million tons of maize each year. Production levels have been increasing steadily since 2000, but the country is still required to import 100,000 MT of corn each year to meet growing demand, which is increasing given population growth and an increase in poultry consumption. However, grain yields only marginally increased from 1.6 tons per HA in 1981 to 2 tons per HA in 2009. Poor performance in productivity is limited by limited availability of quality seed, fertilizer and other inputs. The country seeks to increase national production output to 20 million tons a year, which is being driven by the nation’s poultry industry concentrated in Southwestern Nigeria’s major urban centers (Lagos and Ibadan). It hopes to achieve increased production by improving farm productivity from 2 tons/HA to 4.2 tons/HA while also minimizing post-harvest losses which accounts for 30% of the loss of its grains output each year due to poor storage facilities. Besides local investors producing corn in Niger state are interested in increasing production levels, and potentially intercropping maize with soy. As the national level, soybean production increased from 160,000 tons in 1995 to 550,000 tons in 2010. Nigeria is the largest producer of soybean in Africa, but 30% annual increase in poultry consumption from 2003 – 2008 has led Nigeria to import soybeans (an estimated 200,000 MT) The GON is determined to follow a path of import substitution and to improve Nigeria’s ability to feed itself, becoming “food secure”. |
| Approximate Investment Need | $15 –$100M | An estimated initial investment of $15M in seed multiplication and another $100M in agrochemical importation and distribution will be required to intensify and expand production of current farms. Another $20M may be required to develop and cultivate new nucleus estate farms of about 10,000 HA supported with another 5,000 HA of outgrowers. Commercial viability becomes attractive at minimum of 200 HA of production. |
| Location | Niger is located in an ideal logistical position for agricultural trade moving both north and south along the Corridor. Niger state is the largest state in Nigeria with 7 million hectares of cultivable land, only a third of which is presently being used for agricultural production. Niger state has a relatively small population (under 4 million) minimizing pressure of displacing people for agricultural production. Annual rainfall is in the range of 1,100 – 1,400mm. |
| Supporting Initiatives | The Federal Government has built a 25,000 ton grain silo in Niger state. There are also plans for three agro-industrial parks for processing and packaging agricultural products. The GON will locate one of the 13 SCPZs to the state, designated to specialize in rice. |
| Required Complementary Investments | Improved roads between Niger state and poultry processing states will reduce costs to facilitate the ability of domestic maize and soy farmers to compete with importers. |
| Environmental Considerations | Environmental risk TBD, depending on the type of investment (i.e. support to purchase inputs, pesticide and fertilizer recommendations, support to rehabilitate infrastructure could be moderate to high risk) |
| Development Impact | Initial investments could involve hundreds of farmers to supply produced maize and soybean in addition to that grown on a nucleus farm. More efficient and effective maize and soybean production will support higher returns to farmers. The market potential for to meet demand in maize and soybean could translate into millions of jobs and linked farmers, including women involved in these value chains. |
| Public Sector Role | Farmers currently don’t invest in agro chemical and inputs because of past negative experiences. The Nigerian agrochemical market is seriously challenged with quality and standards enforcement in question. Governments both at the federal and state levels must play a more forceful regulatory role and enforce their standards and quality measures to provide incentives (rather than disincentives) that protect future investments. Governments at the state and local levels tend to wait for Federal legislation on issues, but this need not be so. Either through legislation or other judicial measures, having a legal system that is capable of supporting contract enforcement (in particular for outgrower contracts), and legislation and policies that protect investors’ interests would represent significant improvements in the enabling environment for agricultural investors and farmers. |
I2. MAIZE AND SOYBEAN PROCESSING MILLS

A greenfield investment or a joint venture is possible to link existing producers and aggregators of maize and soybean to local processing facilities, which would assist in meeting high demand for human consumption and poultry feed.

**Market opportunity summary**

Nigeria produces approximately 8 million tons of maize each year. Production levels have been increasing steadily since 2000, but the country is still required to import 100,000 MT of corn each year to meet growing demand, which is increasing given population growth and an increase in poultry consumption. However, grain yields only marginally increased from 1.6 tons per HA in 1981 to 2 tons per HA in 2009. Poor performance in productivity is limited by limited availability of quality seed, fertilizer and other inputs. The country seeks to increase national production output to 20 million tons a year, which is being driven by the nation’s poultry industry concentrated in Southwestern Nigeria’s major urban centers (Lagos and Ibadan). It hopes to achieve increased production by improving farm productivity from 2tons/HA to 4.2 tons/HA while also minimizing post-harvest losses which accounts for 30% of the loss of its grains output each year due to poor storage facilities.

Besides local investors producing corn in Niger state are interested in increasing production levels, and potentially intercropping maize with soy. As the national level, soybean production increased from 160,000 tons in 1995 to 550,000 tons in 2010. Nigeria is the largest producer of soybean in Africa, but 30% annual increase in poultry consumption from 2003 – 2008 has led Nigeria to import soybeans (an estimated 200,000 MT). The GON is determined to follow a path of import substitution and to improve Nigeria’s ability to feed itself, becoming “food secure”.

**Approximate Investment Need**

$2–$5M

An investment in a modular maize processing mill is estimated at $2 to $5m, depending on capacity and proposed supporting facilities.

**Location**

Niger is located in an ideal logistical position for agricultural trade moving both north and south along the Corridor. Niger state is the largest state in Nigeria with 7 million hectares of cultivable land, only a third of which is presently being use for agricultural production. Niger state has a relatively small population (under 4 million) minimizing pressure of displacing people for agricultural production. The port on the Niger river at Baro is navigable all the way to the ocean as an alternative transport route. Processing facilities could be located in one of the new agro-industrial parks planned for this state.

**Supporting Initiatives**

The Federal Government has built a 25,000 ton grain silo in Niger state. There are also plans for three agro-industrial parks for processing and packaging agricultural products.

**Required Complementary Investments**

Completion of one of the three agro-industrial parks under discussion may be a pre-requisite for this investment. Improved roads will reduce costs to facilitate the ability of domestic maize and soy farmers to compete with importers.

**Environmental Considerations**

Environmental risk TBD, but estimated at moderate or high risk, requiring an Environmental Risk Review (ERR). Risk level will depend on investment details, such as the type/extent of construction, ancillary features involved, support for the use of pesticides) and will be determined during screening and preparation of an ERR.

**Development Impact**

Processing mills for maize employ an estimated 350 people (potentially 60% women), depending on the capacity of the mill. Initial investments could involve hundreds (eventually thousands) of farmers (perhaps a quarter of these women) to supply produced maize for processing. Closer and more efficient processing of maize will reduce transportation and other costs to small farmers and will support higher returns to these farmers.

**Public Sector Role**

Reliability of power supply will be a concern to investors, but offers opportunities for independent power generation. In order to support these investments, the state government needs to finalize its agricultural policy and ensure proper attention is provided to the need for input supply. Governments at the state and local levels tend to wait for Federal legislation on issues, but this need not be so. Either through legislation or other judicial measures, having a legal system that is capable of supporting contract enforcement (in particular for outgrower contracts), and legislation and policies that protect investors’ interests would represent significant improvements in the enabling environment for agricultural investors and farmers.
**13. INDUSTRIAL SCALE SHEA PROCESSING**

Nigeria has potential to move into industrial scale shea processing via a greenfield investment or a joint venture with an existing processor to facilitate aggregation of small producers and meet domestic and growing international demand for shea by the natural cosmetic and confectionary industries.

<table>
<thead>
<tr>
<th>Market opportunity summary</th>
<th>Of the estimated 600,000 tons of shea nuts harvested in West Africa, about 350,000 tons are exported, mostly as raw nuts. The remaining 250,000 tons are processed and consumed locally. The Nigerian shea value chain remains highly artisanal and undeveloped. Exports of shea nuts are estimated to be valued at $3.8 billion. Shea exports have increased dramatically in recent years, from 50,000 tons in 1994 to 150,000 in 2004 and finally to 350,000 in 2008. An estimated 65% of shea nuts are exported raw for processing abroad. Mali, Burkina Faso and Ghana export the largest quantities of shea, with Nigeria trailing closely behind (exporting an estimated 45,000 Tons in 2008). 90% of shea demand comes from the confectionary industry affording chocolate manufacturers an alternative to cocoa butter. Shea also has a high demand in natural cosmetics sectors. Principal buyers are located in Europe and the U.S. Nigerian suppliers can enter this growing market segment by providing the best quality shea butter possible and carefully cultivating potential trade partners.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approximate Investment Need</td>
<td>An investment in a shea nut processing facility is estimated at $3-5 Million considering location in one of the new agro-industrial parks planned for this state. Industrial scale shea producers will also require annual working capital financing for shea nut purchase valued at anywhere from $1-3 Million per season, representing an important, additional financing opportunity for this investment.</td>
</tr>
<tr>
<td>Location</td>
<td>Niger state is one of the largest producers of shea nuts in the country, and is blessed with a large number of shea trees. Niger state is located in an ideal logistical position for agricultural trade moving both north and south along the Corridor. Niger state is the largest state in Nigeria with 7 million hectares of cultivable land, only a third of which is presently being used for agricultural production. Niger state has a relatively small population (under 4 million) minimizing pressure of displacing people for agricultural production. The port on the Niger river at Baro is navigable all the way to the ocean as an alternative transport route, in particular for exports.</td>
</tr>
<tr>
<td>Supporting Initiatives</td>
<td>Plans exist to create three agro-industrial parks for processing and packaging agricultural products. The Director General of the Niger State Commodity and Export Promotion Agency is a great supporter of shea exporting from Nigeria and a member of the Global Shea Alliance (Mohammed Kontagora).</td>
</tr>
<tr>
<td>Required Complementary Investments</td>
<td>Completion of one of the three agro-industrial parks under discussion may be a pre-requisite for this investment. Improved roads will reduce costs to transport processed shea for export.</td>
</tr>
<tr>
<td>Environmental Considerations</td>
<td>Environmental risk TBD, but estimated at moderate or high risk, requiring an Environmental Risk Review (ERR). Risk level will depend on investment details, such as the type/extent of construction, ancillary features involved, extractive chemicals used) and will be determined during screening and preparation of an ERR.</td>
</tr>
<tr>
<td>Development Impact</td>
<td>Depending on scale, an industrial scale shea processing facility can directly employ 300 people, an estimated 90% of these in other West African countries are women), depending on the capacity of the mill. Shea nuts are traditionally cultivated by women. A XXX size processing facility will require XXXX Tons of raw shea nuts each year, translating into involvement by an estimated 3,000 women who supply product to the factory, and increased incomes for these and their families.</td>
</tr>
<tr>
<td>Public Sector Role</td>
<td>Supporting the enabling environment for shea processing and export is the GON role. Improving roads and electrical supply will have a significant, positive impact on the growth of the shea processing industry. Installing an international, accredited laboratory within Nigeria would also go a long way to ensure product quality.</td>
</tr>
</tbody>
</table>
I4. HONEY PRODUCTION AND PROCESSING

By expanding processing facilities, improving linkages with small producers and introducing quality improvements via a greenfield or equity investment, investors can tap into the expanding market for honey production (and its derivatives), both for domestic and export markets.

Market opportunity summary

Niger state is home to various apiaries that currently source honey producers in nearby Abuja, but could easily source producers in Niger state. In addition to honey, beewax is used in cosmetic and pharmaceutical industries. The demand for honey far exceeds the supply. Domestic retailers report frustration with unreliable supply patterns and inconsistent qualities of honey. Intake by supermarkets will increase if quality and consistent supply are increased. Honey production remains highly artisanal and is considered by most producers an income patching activity rather than as a profitable, full-time business.

Approximate Investment Need

$100,000 - $500,000 M

An investment in a commercial honey processing facility is estimated at $100,000 - $500,000. Location could be within one of the new agro-industrial parks planned for this state, or in another site. Industrial scale honey producers will also require annual working capital financing to purchase honey procured locally, depending on production scale, representing an important, additional financing opportunity for this investment. Entry into this business and production requires land, vehicles and equipment. Small farms require bees with queen, brood chamber, honey containers, honey boxes, attire (hat, veil, and overalls), hive tool, scratcher for unsealing the honey, manual or motorized extractor, and freezer for storing honey. Larger operations, with 10-20 employees, can source honey from neighboring farmers, and with correct marketing, can distribute it to schools, restaurants, households, pharmacies and hotels.

Location

Niger state is located in an ideal logistical position for agricultural trade moving both north and south along the Corridor. Niger state is the largest state in Nigeria with 7 million hectares of cultivable land, only a third of which is presently being used for agricultural production. Niger state has a relatively small population (under 4 million) minimizing pressure of displacing people for agricultural production. The port on the Niger river at Baro is navigable all the way to the ocean as an alternative transport route, in particular for exports.

For commercial pollination to work, investors must locate the investment near a nectar source, and determine the appropriate crop to hive ratio.

Supporting Initiatives

Plans exist to create three agro-industrial parks for processing and packaging agricultural products.

Required Complementary Investments

Completion of one of the three agro-industrial parks under discussion would assist in stimulating this investment. Improved roads will reduce costs to transport processed shea for export.

Environmental Considerations

Environmental risk TBD. Risk level will depend on investment details. ERR required at minimum.

Development Impact

Development impact will depend on the scale of the honey processing facility, and the extent to which the investor sources from local honey farmers. Most honey producers in Nigeria employ traditional methods to produce honey and beewax, and treat this activity as an income-generating activity, not as a full-time employment opportunity. Studies demonstrate that small scale beekeepers (the majority of whom are men) in Nigeria can generate net earnings of $573. Small-scale beekeeping is already an important income generation activity, requiring minimal start-up investment, no electricity, and which produces quick returns for its participants. A commercial facility working at full capacity will require honey from hundreds of neighboring farmers.

Public Sector Role

Improving roads and providing a sustained electrical supply will have a significant, positive impact on the growth of agro processing industries.
Kwara

15. MAIZE AND SOYBEAN PRODUCTION
Linking existing producers and aggregators of maize and soybean to local processing facilities can assist in meeting high demand for human consumption and poultry feed.

**Market opportunity summary**
Nigeria produces approximately 8 million tons of maize each year. Production levels have been increasing steadily since 2000, but the country is still required to import 100,000 MT of corn each year to meet growing demand, which is increasing given population growth and an increase in poultry consumption. However, grain yields only marginally increased from 1.6 tons per HA in 1981 to 2 tons per HA in 2009. Poor performance in productivity is limited by limited availability of quality seed, fertilizer, and other inputs. The country seeks to increase national production output to 20 million tons a year, which is being driven by the nation’s poultry industry concentrated in Southwestern Nigeria’s major urban centers (Lagos and Ibadan). It hopes to achieve increased production by improving farm productivity from 2tons/HA to 4.2 tons/HA while also minimizing post-harvest loses which accounts for 30% of the loss of its grains output each year due to poor storage facilities. Besides local investors producing corn in Nger state are interested in increasing production levels, and potentially intercropping maize with soy. At the national level, soybean production increased from 160,000 tons in 1995 to 550,000 tons in 2010. Nigeria is the largest producer of soybean in Africa, but 30% annual increase in poultry consumption from 2003 – 2008 has led Nigeria to import soybeans (an estimated 200,000 MT)

The GON is determined to follow a path of import substitution and to improve Nigeria’s ability to feed itself, becoming “food secure”.

Two new, large-capacity silos for grain storage (one for 25,000 MT, one for 11,000 MT) were created in Kwara that are currently not being utilized. Financing entities or investors can consider partnering with existing maize aggregators to improve quality and production scale to meet domestic demand.

**Approximate Investment Need**

$5 – 10M

An investment in maize aggregators is estimated to cost $5 to $10m, to assist in quality improvement, increased production (including equipment and machines) and productivity.

**Location**
Kwara is ideal for commercial agriculture. Located within the fertile “middle belt” of the country and bordered by the Niger River in the North, it is endowed with vast arable land and a strategic location between north and south. Much of the land is underutilized, with hundreds of thousands of HA available for development. Most promising areas are the swath located south of the river. Kwara state has had a successful experience with large scale commercial farming.

There is sufficient rainfall (600-800 mm per year) during rainy seasons to support field crops as maize and soybean without irrigation.

**Supporting Initiatives**
Kwara state leaders have a dynamic vision for agricultural corridor development. The state put in place the 2012 Agricultural Modernization Master Plan (KAMP), a five-year development plan which maps out the State’s agricultural development strategy and priorities, with the goal of creating a dynamic, productive and sustainable agricultural sector. The plan will establish a modern, integrated farming sector which links farm communities to universities and research institutions, thereby providing employment opportunities for youth and business opportunities for investors. The plan also seeks to catalyze the establishment of the Kwara State Agric-City (KSC) project to be a hub for Nigeria and West Africa.

Kwara envisions a “pilot agribusiness corridor”, along which the state will spur and support public-private partnerships for competitive agribusiness. The pilot corridor will be focused on anchor firms surrounded by smallholder plots, so farmers can sell quality produce to a secure market, with access to the inputs required for quality production.

There are a number of irrigation dams in or close to Kwara State that could support this investment proposal. These are the Daku-Lade, Asa, Duro-Gapkan, Oke-Cyli/Abati, Onire, Erin-Ille, Okuta, Patigi, Jebba, Tada Shonga and Iyi Ekiti irrigation dams. Out of these, three namely Jebba, Tada Shonga and Patigi dams are the most prominent, collectively covering an estimated area of 6,000 HA which could be easily expanded to 10,000 HA by investors with interest in irrigation dam development.

Kwara is the site of two major grain silo complexes, developed by the GON in 2009, one in Illorin (and unused) designed to store maize and sorghum with a 25,000 MT capacity. The other is nearer the Niger River, and has capacity for 11,000 MT of grain.

**Required Complementary Investments**
Physical road infrastructure is a critical, complementary investment for Kwara. The road between the distribution hub of Illorin to fertile land areas along the Niger River (and large cities such as Abuja and Kano) has fallen into disrepair. If Kwara is to maximize use of two (2) existing grain silos of 25,000 MT and 11,000 MT capacity, roads must be improved.

The state government recognizes that the state must shift from rain-fed to irrigated agriculture for higher productivity and increased, commercial agriculture.

Kwara state will seek support from development partners such as USAID and the World Bank to facilitate equity investments or start-up financing to viable agribusinesses along the corridor.

**Environmental Considerations**
Environmental risk TBD, but estimated at moderate or high risk, requiring an Environmental Risk Review (ERR). Risk level will depend on investment details, such as whether construction takes place, the type/extent of construction, ancillary features involved, support for the use of pesticides) and will be determined during screening and preparation of an ERR. Kwara’s soils face chemical, biological and physical constraints, such as low water holding capacity. Soil conservation management will be another important environmental consideration. Increased agricultural production will benefit from soil building practices such as no-tillage, mulch cover cropping and livestock manure application.

**Development Impact**
Initial investments could involve hundreds (eventually thousands) of farmers to supply produced maize and soybean for processing. Closer and more efficient processing of maize will reduce transportation and other costs to small farmers and will support higher returns to these.

**Public Sector Role**
Facilitating the enabling environment, as per the “Required Complementary Investments” should be the primary concern of the GON to support Kwara in its agricultural development.
## 16. RICE PRODUCTION AND MILLING

Increased production of Nigerian-produced paddy is a large market opportunity given human consumption patterns and potential, future import bans of rice.

<table>
<thead>
<tr>
<th>Market opportunity summary</th>
<th>Nigeria is the largest net importer of rice in Africa and the second largest importer in the world. It imports over 30% of its rice (an estimated 2 million tons) to meet growing demand. Local and international investors are interested in establishing major, irrigated rice projects. The GON is determined to improve Nigeria's ability to feed itself and become &quot;food secure&quot;. Import bans of rice are being discussed within government circles, and a 110% import duty on milled rice has been established.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approximate Investment Need</td>
<td>Studies have established that $700 is required to manually cultivate one hectare of upland rice in Nigeria. Based on this and allowing an additional $250 for irrigated land development, an initial investment of $45m will be required to cultivate 15,000 HA of Rice (10,000 nucleus rice farm, 5,000 HA of production involving outgrowers). The goal is to get to 60,000 HA of overall production. Commercial viability will come at producing 120,000 tons of rice paddy per year, as husk can be turned into biodiesel and firms can generate their own energy supply, dramatically reducing energy costs. A 20 ton/hour mill installed with capacity to cogenerate 3-4 MW of electricity would cost in the range of $35-40 million.</td>
</tr>
<tr>
<td>Location</td>
<td>Kwara is ideal for commercial agriculture. Located within the fertile “middle belt” of the country and bordered by the Niger River in the North, it is endowed with vast arable land and a strategic location between north and south. Much of the land is underutilized, with hundreds of thousands of HA available for development. Most promising areas are the swath located south of the river. Kwara state has had a successful experience with large scale commercial farming. There is sufficient rainfall (600-800 mm per year) during rain seasons to support field crops as maize and soybean, without irrigation.</td>
</tr>
<tr>
<td>Supporting Initiatives</td>
<td>Kwara state leaders have a dynamic vision for agricultural corridor development. The state put in place the 2012 Agricultural Modernization Master Plan (KAMP), a five-year development plan which maps out the State’s agricultural development strategy and priorities, with the goal of creating a dynamic, productive and sustainable agricultural sector. The plan will establish a modern, integrated farming sector which links farm communities to universities and research institutions, thereby providing employment opportunities for youth and business opportunities for investors. The plan also seeks to catalyze the establishment of the Kwara State Agric-City (KSAC) project to be a hub for Nigeria and West Africa. Kwara envisions a “pilot agribusiness corridor”, along which the state will spur and support public-private partnerships for competitive agribusiness. The pilot corridor will be focused on anchor firms surrounded by smallholder plots, so farmers can sell quality produce to a secure market, with access to the inputs required for quality production. There are a number of irrigation dams in or close to Kwara State that could support this investment proposal. These are the Daku-Lade, Asa, Duro-Gapkan, Oke-Oyi/Abati, Onire, Erin-Ile, Okuta, Patigi, Jebba, Tada Shonga and Iyun Ekiti irrigation dams. Out of these, three namely Jebba, Tada Shonga and Patigi dams are the most prominent, collectively covering an estimated area of 6,000 HA which could be easily expanded to 10,000 HA by investors with interest in irrigation dam development. Kwara is the site of two major grain silo complexes, developed by the GON in 2009, one in Illorin (and unused) designed to store maize and sorghum with a 25,000 MT capacity. The other is nearer the Niger (and large cities such as Abuja and Kano) has physical road infrastructure is a critical, complementary investment. The government recognizes that the state must shift from rain-fed to irrigated agriculture for higher productivity and increased, commercial agriculture. Increased rice production and commercial rice production requires large-scale irrigation. Kwara state will seek support from development partners such as USAID and the World Bank to facilitate equity investments or start-up financing to viable agribusinesses along the corridor.</td>
</tr>
<tr>
<td>Required Complementary Investments</td>
<td>Physical road infrastructure is a critical, complementary investment for Kwara. The road between the distribution hub of Illorin to fertile land areas along the Niger River (and large cities such as Abuja and Kano) has fallen into disrepair. If Kwara is to maximize use of two (2) existing grain silos of 25,000 MT and 11,000 MT capacity, roads must be improved. The state government recognizes that the state must shift from rain-fed to irrigated agriculture for higher productivity and increased, commercial agriculture. Increased rice production and commercial rice production requires large-scale irrigation.</td>
</tr>
<tr>
<td>Environmental Considerations</td>
<td>Likely to be High Risk and requiring an Environmental Assessment if involving agricultural land leveling, large-scale irrigation, water management structures such as dams and impoundments or new lands development.</td>
</tr>
<tr>
<td>Development Impact</td>
<td>Initial investments could involve 10,000 farmers and employees working in new rice processing centers. More efficient and effective rice production will support higher returns to farmers. The market potential for to meet demand in rice could translate into an additional 7,000 jobs, an estimated 40% of which are women, (particularly those in parboiling, sorting and retailing) and 3,000 linked farmers.</td>
</tr>
<tr>
<td>Public Sector Role</td>
<td>Improving roads is one of the most critical investments the public sector can make to improve the competitiveness of Kwara’s agricultural industry. The Nigerian agrochemical market is seriously challenged by quality issues and standards enforcement. Improving the regulation of both is critical to ensure the sustainability of agricultural investments in this state, to avoid the situation where credible agrochemicals service providers are forced out of this market. State and local governments could consider addressing this issue now to protect current investors before waiting for relevant Federal regulations. A more competitive market for agrochemicals and inputs will follow. Governments at the state and local levels tend to wait for Federal legislation on issues, but this need not be so. Either through legislation or other judicial measures, having a legal system that is capable of supporting contract enforcement (in particular for outgrower contracts), and legislation and policies that protect investors’ interests would represent significant improvements in the enabling environment for agricultural investors and farmers.</td>
</tr>
</tbody>
</table>
### Market opportunity summary

Agricultural food processors are looking to expand their local and U.S. market shares of organic foods and spices by opening processing facilities, possibly in the middle belt of Nigeria, to expand production of products such as chili pepper, garri, palm oil, beans, spice, melon seeds and okazi leaf.

According to the Organic Trade Association’s 2012 industry survey, the U.S. organic and natural food sector grew by 9.5% in 2011. The USDA asserts that organic and natural food markets accounted for over 3.5% of total U.S. food sales in 2012, with consumer demand growing rapidly. The U.S. imports about $1-1.5 billion worth of organic and natural foods, which includes processed foods. The U.S. market, with AGOA preferences for African exporters, provides an attractive export opportunity.

In addition to a growing market in the U.S., local demand for processed food and spices is strong.

### Approximate Investment Need

$10-15 million

Investments required would include equipment and facilities for refinement of crude vegetable oil and other spice and food processing. There may be a joint venture opportunity for investors with knowledge of and access to the U.S. market.

### Location:

This investment could potentially be in Kwara or another middle belt state, depending on transport routes and location of suppliers of raw materials. Kwara is ideal for commercial agriculture. Located within the fertile “middle belt” of the country and bordered by the Niger River in the North, it is endowed with vast arable land and a strategic location between north and south. Much of the land is underutilized, with hundreds of thousands of HA available for development. Most promising areas are the swaths located south of the river. Kwara state has had a successful experience with large scale commercial farming. There is sufficient rainfall (600-800 mm per year) during rain seasons to support field crops as maize and soybean without irrigation.

### Supporting Initiatives

The precursor to NEXTT, the USAID-funded Nigeria Expanded Exports Project (NEEP), has supported various firms that may be interested in a joint venture or equity investment opportunity via this investment. Kwara state leaders have a dynamic vision for agricultural corridor development. The state put in place the 2012 Agricultural Modernization Master Plan (KAMP), a five-year development plan which maps out the State’s agricultural development strategy and priorities, with the goal of creating a dynamic, productive and sustainable agricultural sector. The plan will establish a modern, integrated farming sector which links farm communities to universities and research institutions, thereby providing employment opportunities for youth and business opportunities for investors. The plan also seeks to catalyze the establishment of the Kwara State Agri-City (KSAC) project to be a hub for Nigeria and West Africa.

### Required Complementary Investments

GPS tracking systems for truckers. Some firms report that when there are trucking delays, they are unable to provide estimated delivery times to clients. Investment in a trucking service with GPS could be a useful complementary investment.

Access to finance is an important input for agribusiness firms. Stimulating increased financial services to agribusiness firms would assist agribusiness SMEs access financing via more flexible loan terms, more competitive interest rates and innovative collateral schemes.

### Environmental Considerations

Environmental risk TBD, but estimated at moderate or high risk, requiring an Environmental Risk Review (ERR). Risk level will depend on investment details, such as the type/extent of construction, and ancillary features involving the use of pesticides will be determined during screening and preparation of an ERR.

### Development Impact

A new processing facility could potentially employ 25-50 workers, maybe more, based on the scale of operations.

### Public Sector Role

Physical road infrastructure is a critical, complementary investment for Kwara. The road between the distribution hub of Illorin to fertile land areas along the Niger River (and large cities such as Abuja and Kano) has fallen into disrepair. If Kwara is to maximize use of two (2) existing grain silos of 25,000 MT and 11,000 MT capacity, roads must be improved.
18. CASSAVA PROCESSING AND AGGREGATION

Equity investment or joint venture opportunities exist to increase industrial processing of cassava, as well as to link producers with aggregators of cassava to meet high demand for raw cassava tubers.

Market opportunity summary
The overall national demand for cassava for industrial and export markets is over 2 million tons per annum, or over 12 million fresh cassava roots. Cassava processing plants are currently concentrated in the South due to better conditions for industrial production. The new SCPZ planned for Ogun will provide the power, water and technical support needed to facilitate the establishment of processors in the state. For commercial and small farmers, opportunity exists in meeting demand by the existing processors seeking quality cassava.

Approximate Investment Need
$5m – $25M

Investment required to establish new cassava processing facilities or upgrade existing facilities is estimated at anywhere from $5 million to $25 million, depending on scale. Organizing smallholder farmers to provide quality cassava at a level that can meet demand is an additional investment opportunity. The goal will be to process industrial starches, flours, sweeteners, high quality garri or dried chips for local consumption or for export.

Location
Ogun State, located next to Lagos, is ideally located for cassava processing facilities due to its proximity and easy access to the export port of Lagos. Ogun is located in the heart of the rapidly industrializing areas of Southwest Nigeria where electricity and good transport is becoming more easily accessible. For cassava production, farm production must not be too distant from the processing centers. In the case of Ogun, potential farmland is available in the vicinity of existing processing centers. There is sufficient rainfall (1000-1200 mm per year) during rain seasons to support expanded cassava production without irrigation.

Supporting Initiatives
Ogun State has prioritized transformation and value addition for cassava and is the site of one of the first cassava SCPZs in Ososa. This SCPZ is meant to offer “warp around services” for cassava production and processing, including warehousing, processing equipment, technical assistance and financing support. The state government is also offering innovative programs for farm mechanization thru leasing programs and attractive terms for obtaining farmland. The MARKETS II project could potentially assist with organizing smallholder farmers to source industrial processors already established, or wishing to establish new operations in Ogun. MARKETS II is working closely with EKHA Agro, a cassava based sweetener plant, which is seeking to expand its operations.

Required Complementary Investments
The most important complementary investments in the Ogun Cluster are the extension of the electricity grid for reliable and affordable power to the processing centers and improvement of farm to market roads.

Environmental Considerations
Environmental risk TBD, but estimated at moderate or high risk, requiring an Environmental Risk Review (ERR). Risk level will depend on investment details, such as whether construction takes place, the type/extent of construction, and ancillary features involving the use of pesticides will be determined during screening and preparation of an ERR. Soil conservation management will be another important environmental consideration. Increased agricultural production will benefit from soil building practices such as no-tillage, mulch cover cropping and livestock manure application.

Development Impact
Processing mills for cassava employ an estimated several hundred people (50+% women), depending on the capacity of the mill. Initial investments could involve hundreds (eventually thousands) of farmers to supply raw cassava for processing. Closer and more efficient processing of cassava will reduce transportation and other costs to small farmers and will support higher returns to these. The market potential to meet demand in cassava nationally could translate into over 1 million farm and industrial jobs, of which more than 50% are women.

Public Sector Role
The State and Federal Governments can continue in their role of developing supportive policies to stimulate increased farming operations, as well as making new investments to improve road and electricity networks.
## 19. CASHEW PROCESSING AND AGGREGATION

Linking existing producers of cashew in Oyo, Oshun and Ogun to industrial processing facilities in Ogun state can assist in meeting the demand for raw cashews to be processed for export.

### Market opportunity summary

Global cashew production has surpassed 1.5 million tons. The market for cashews has been growing at a pace of 5% for the past 15 years. Due to its low cholesterol content and high unsaturated fats, global demand is expected to increase for this “health in a nutshell” product. India and Vietnam accounts for the majority of the world market for processed cashew, both in terms of processing and for export. The largest importers of cashew nuts are India, the U.S. and the Netherlands.

With newly planted trees about to come to maturity, Nigeria is poised to double total cashew production from 120,000 to 250,000 tons per year. Given that the U.S. is one of the largest importers of cashew, cashew processing for export to the U.S. represents an excellent AGOA opportunity. While Africa grows more than 40% of the cashew crop, 85% of this is exported in raw kernel form for processing elsewhere. A goal of the African Cashew Alliance is to achieve at least 50% value addition in the producing countries. Nigeria presently already processes 20% of that target. Olam is Nigeria’s major processor accounting for 70% of the Nigerian processed nuts.

### Approximate Investment Need

- **$25m – $30M**

Establishing processing facilities and plants to process, sort and package the cashews for export is the major opportunity for value addition. The cost of developing a 300 ton/day processing facility will be around $25 million. Working capital financing for cashew processors is an additional financing opportunity, as bulk purchase of raw nuts is required in a timely manner during cashew harvest.

### Location

Ogun State is ideally located for cashew processing facilities due to its proximity and easy access to the export port of Lagos and is in the heart of the rapidly industrializing areas of Southwest Nigeria where electricity and good transport is rapidly becoming easily accessible.

The neighboring states of Oyo and Oshun are, in addition to Ogun, major production areas that raw cashew kernel can be bought from and brought to the factory in Ogun. The Ogun State Government has also made it a point to be very business friendly in attracting value adding agro-industries and especially those targeted for export.

### Supporting Initiatives

- **The African Cashew Alliance**, financed by USAID, has a national affiliate in Nigeria, which is committed to improving the competitiveness of the cashew industry. ACA provides its members with world class support in quality improvement via certification, access to finance and market linkages technical assistance.
- The International Institute for Tropical Agriculture (IITA) has been providing research for improved cashew tree varieties.

### Required Complementary Investments

- The most important complementary investments in the Ogun Cluster would be for the extension of the electricity grid line for reliable and affordable power to the processing centers and improvement of farm to market roads by the State government for ease of bringing in the raw cashew kernels.

### Environmental Considerations

Environmental risk TBD and depends on the nature of the investment. ERR required.

### Development Impact

Establishing a 300 ton/day processing facility will result in over 2,000 jobs between the factory and the tree cultivation and harvesting components, primarily benefitting women.

### Public Sector Role

The State and Federal Governments can continue in their role of developing supportive policies to stimulate increased farming operations, as well as making new investments to improve road and electricity networks.
20. COCOA AGGREGATION AND PROCESSING

Linking existing producers of cocoa in Ogun to local industrial processing facility in Ogun and improving their yield and quality can assist in meeting and growing the demand for cocoa to be industrially processed for export and domestic markets.

<table>
<thead>
<tr>
<th>Market opportunity summary</th>
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<tbody>
<tr>
<td>The growing and processing of improved cocoa beans on core plantation, as well as aggregating from surrounding small holders. The primary products to be produced are cocoa powder, cocoa cake, cocoa butter, and cocoa liquor for supplying large customers such as Nestle in Nigeria and for direct export to Europe, as well as for domestic distribution through supermarkets such as Shoprite. Also good opportunities are possible in the Northern States with agreements to be made directly with distributors. There is an opportunity to work closely with USAID-funded MARKETS II, which in predecessor projects has trained up to 2,000 farmers in improved cocoa production using 52 lead farmers to train others, and have a unit within the company dedicated to backward integration and farmer training. Established firm presently processing about 120 MT of cocoa beans is seeking partners to expand their business and get direct access to the US market.</td>
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<table>
<thead>
<tr>
<th>Approximate Investment Need</th>
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<td>$3m – $7M</td>
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<th>Location</th>
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<tr>
<td>Ogun State is ideally located for cocoa processing facilities due to its proximity to cocoa producing areas, easy access to the export port of Lagos and nearby major cocoa processors such as Nestle. Ogun is also in the heart of the rapidly industrializing areas of Southwest Nigeria where electricity and good transport are fast becoming easily accessible. Several neighboring states are, in addition to Ogun, major production areas that raw cocoa beans can be bought from and brought to the factory in Ogun. The Ogun State Government has also made it a point to be very business friendly in attracting value adding agro-industries and especially those targeted for export.</td>
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<tbody>
<tr>
<td>The International Institute for Tropical Agriculture (IITA) has been providing research for improved cocoa tree varieties. The World Cocoa Foundation and TechnoServe have been collaborating closely in supporting such investments as part of the World Cocoa Initiative.</td>
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<thead>
<tr>
<th>Required Complementary Investments</th>
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<tbody>
<tr>
<td>Continued TA and support from IITA and MARKETS II and other donor programs to improve the quality and yield of the small holders, making investments into processing facilities more attractive. Provision of reliable and affordable electricity for the processing plants is paramount to increasing their competitiveness.</td>
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<table>
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<tr>
<th>Environmental Considerations</th>
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<tr>
<td>Environmental risk TBD, but estimated at moderate or high risk, requiring an Environmental Risk Review (ERR). Soil conservation management will be an important environmental consideration as concerns the standing tree stock as well as new ones to be planted.</td>
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<thead>
<tr>
<th>Development Impact</th>
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<tr>
<td>Increasing production to 200 tons/day in the processing facility will result in dozens of semi-skilled and skilled jobs at the factory and hundreds of jobs in the newly rehabilitated cocoa plantations. The factory jobs will be primarily held by women, while the plantation jobs will be split between men and women.</td>
</tr>
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<table>
<thead>
<tr>
<th>Public Sector Role</th>
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<tbody>
<tr>
<td>For the State and Federal Governments continue to have supportive policies for farming operations and continue to improve on the rural roads and electricity networks for the factories.</td>
</tr>
</tbody>
</table>
21. Production and Warehousing of Soybean, Maize, Sorghum and Cassava

Legacy outgrower schemes to supply large agribusiness firms can be expanded upon to meet growing consumer demand.

**Market opportunity summary**

For over forty years the Nigeria Tobacco Company (no longer operational) sourced and secured its tobacco leaf supply chain through an outgrower scheme in Southern Kwara and Kaduna States. The legacy of this program has been maintained and it has expanded to produce key commodities essential for food security. Nestle uses this model to source soybean. Other investors are expressing interest in replicating similar models to source maize.

Agricultural products produced in Oyo need to be aggregated and shipped South to larger industrial and consumer markets. Industrial consumers like Nestle, Cadbury, Nigerian Breweries and CHI have in-house commodity procurement purchasing departments that keep up to 12 months of inventory, contributing to the high costs of doing business. Oyo/isenyi, Shaki and Oshogbo are intermediate aggregation points before the major markets in Lagos, and Ibadan, but lack the infrastructure to support this function. A specialized agricultural logistics and warehousing operator could capitalize on the need for efficient evacuation of commodities from the growing regions and bulking in proximity of the corridor for bulk buyers. Bulking and warehouse receipt systems to support electronic commodities trading can eliminate the need for long-term inventory and can contribute to price stability.

**Approximate Investment Need**

$3m – $5m

The estimated cost to construct or rehabilitate existing warehouses and loading dock infrastructures in Oyo is $3-5 million. Warehouse handling equipment for loading and unloading also need to be put in place to minimize manual operations. Putting in place outgrower schemes is another investment possibility that will have a different value, depending on the scale of land under production.

**Location**

Located in the Southwest of the LAKAJI corridor, Oyo State is the largest state by landmass, covering an approximate area of about 28,000 square kilometers. The state shares boundaries with Ogun State, Kwara State, Osun State, and the Republic of Benin, and its topography makes it well drained with rivers flowing from upland areas. The state’s equatorial climate and relatively high humidity favors the cultivation of crops like Cassava, Yam, Maize, Rice, Plantain, Millet, Cocoa, Oil Palm and Cashew by its crop holders who together constitute about 4% of national figures and cultivated 0.578m Ha of land in 2010 staple crops.

**Supporting Initiatives**

There are several Government Farm Settlements located in Ipalpo, Ilora, Sepeteri, Eruwa, Ogbomosho, Iresaadu, Ijaiye, Akufo and Lalupon which could be the bedrock for out-growers. There are a number of major rivers located within the state on which a number of irrigation dams have been built e.g., the Ogun, Oyan, Otin, Ofikil, Sasa, Oni, Erinle and Osun rivers. Castle ranches exist and are seeking investor partnerships in Saki, Fasola and Ibadan. The National Strategic Grain Reserve Silo in Monatan, Ibadan, was recently rehabilitated and presents possible grain storage opportunities for interested partners, as well as opportunities to establish more nucleus farm estates. A number of government warehouses exist that could be taken over by investors as government contribution as the distribution farm inputs from the public sector ends. Also the State Government is rehabilitating and reviving its farm estates in aid of crop production, livestock rearing, fisheries and bee keeping, amongst others.

**Required Complementary Investments**

In order to support these investments, the state government needs to finalize its agricultural policy and ensure proper attention is provided to the need for input supply. Financing for bulking and storage infrastructure will be an important complementary activity required to move forward with this investment. The Bank of Agriculture may be able to play a role here, as it is interested in lending for farm inputs and machinery for the agribusiness sector. Similarly a number of commercial banks are interested in supporting projects that support large firms to consolidate their supply chains.

Several irrigation dams located in the cluster with extensive farmland could be brought under irrigation. However, the River Basin Authorities that control and manage most of these dams are cash-strapped. Investment in equipment and machines that help maximize the output of these irrigation dams (area of land under irrigation) would support this investment and clustering of small and medium farms in and around dam locations, making such locations hubs for investment. Investments in Modular Compressed Natural Gas (CNG) power plants that target the various industrial and business parks within the cluster are another complementary investment.

**Environmental Considerations**

An Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment. Risk level will depend on project details, such as the location of construction, type/textens of construction, ancillary features involved, support for the use of pesticides, and will be determined during further screening of this investment and preparation of an ERR.
### Development Impact
New warehousing facilities will require new workers, so this investment will increase employment for those working at these facilities. Incomes are expected to increase among farmers producing different commodities depending on the type of commodity produced and the scale, given the security of purchase agreements. Improved logistics and warehousing could reduce post-harvest losses and also result in higher farmer incomes.

### Public Sector Role
Reliability of power supply will be a concern to investors, but offers opportunities for independent power generation.

Perhaps the most important role governments at the state and federal levels could play is to liberalize the processes of licensing and entry of providers into the agrochemical market. The Nigerian agrochemical market is seriously challenged by quality issues and standards enforcement. Governments at the federal and state levels must play a more forceful regulatory role and enforce standards and quality measures to provide incentives to protect future investments. State and local governments could consider addressing this issue now to protect current investors before waiting for relevant Federal regulations. A more competitive market for agrochemicals and inputs will follow. Furthermore Government needs to play its role in regulating the agro inputs and output market.

The GON can develop policies to control the activities nomadic or migrant cattle herders that graze their cattle on cultivated farms of other farmers. This has been a source of conflict between herdsmen and farmers particularly in the middle belt and southern states.

Either through legislation or other judicial measures, having a legal system that is capable of supporting contract enforcement (in particular for outgrower contracts) and with appropriate delivery of justice for those not respecting market regulations, would represent significant improvements in the enabling environment for agricultural investors and farmers.
22. Poultry Feed
Expanding the availability of high quality poultry feed will assist smallholder poultry producers to compete more fairly with larger poultry farms.

Market opportunity summary
Nigerians are shifting their consumption habits from in-house, cooked meals to fast food and convenient meals from restaurants and cafes. A major component of these meals in poultry products. With import bans on poultry products, poultry production to service restaurants and hotels has been dominated by industrial producers. Small poultry farmers have a hard time competing in this market due to the high cost of low quality poultry feed, which is often mislabeled and weighed incorrectly. Extension veterinary services are not easily accessible or available, also increasing their costs of business. Current investors in poultry feed are seeking partnerships or equity investors to make their products and services more accessible and affordable to smaller farmers through extension services and product diversification.

Approximate Investment Need
This investment is required to assist poultry producers to shift from feed blending to concentrate and grains grinding and packaging for on-farm blending, supported by a technical package and veterinary supplies. Investment will also be needed in distribution infrastructure for inputs and a farm-to-factory collection system.

Location
Located in the Southwest of the LAKAJI corridor, Oyo State is the largest states by landmass, covering an approximate area of about 28,000 square kilometers. The state shares boundaries with Ogun State, Kwara State, Osun State, and the Republic of Benin, and its topography makes it well drained with rivers flowing from upland areas. The state’s equatorial climate and relatively high humidity favors the cultivation of crops like Cassava, Yam, Maize, Rice, Plantain, Millet, Cocoa, Oil Palm and Cashew by its crop holders who together constitute about 4% of national figures and cultivated 0.578m Ha of land in 2010 staple crops.

Supporting Initiatives
There are several Government Farm Settlements located in Irapo, Ilora, Sepeteri, Eruwa, Ogbomosho, Iresasdu, Ijaye, Akuro and Lalupon which could be the bed rock for outgrowers. There are a number of major rivers located within the state on which a number of irrigation dams have been built e.g., the Ogun, Oyan, Otin, Ofiki, Sasa, Oni, Erinle and Osun rivers. Cattle ranches exist and are seeking investor partnerships in Saki, Fasola and Ibadan.

The National Strategic Grain Reserve Silo in Monatan, Ibadan, was recently rehabilitated and presents possible grain storage opportunities for interested partners, as well as opportunities to establish more nucleus farm estates. A number of government warehouses exist that could be taken over by investors as government contribution as the distribution farm inputs from the public sector ends. Also the State Government is rehabilitating and reviving its farm estates in aid of crop production, livestock rearing, fisheries and bee keeping, amongst others.

USAID Nigeria’s MARKETS II project is supporting farmers in Oyo to improve quality, yields and post-harvest management in Cocoa production. Other donor supported interventions such as UNDP’s Inclusive Markets Facilities (NFIM), DFID GEM4, etc., could play a role in this state provided there are market opportunities.

Required Complementary Investments
Improved standards for poultry feed provider packaging could be an important, complementary investment. Financing for farmers adopting new feed processing facilities will be an important complementary activity required to move forward with this investment. The Bank of Agriculture may be able to play a role here, as it is interested in lending for farm inputs and machinery for the agribusiness sector. Similarly a number of commercial banks are interested in supporting projects that support large firms to consolidate their supply chains.

Investments in Modular Compressed Natural Gas (CNG) power plants that target the various industrial and business parks within the cluster are another complementary investment.

Environmental Considerations
An Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment.

Development Impact
Better quality feed at a competitive price can assist in reducing costs of poultry production significantly for small producers, as feed accounts for 60% of poultry production costs. Similar investments have attracted over 1,000 farmers and employees working for the poultry feed companies. Improved feed quality and embedded extension services will improve productivity and yield result in higher returns to farmers. This could have positively impact the entire value, which has the potential to be a large employer, in particular for women.

Public Sector Role
Investments in Modular Compressed Natural Gas (CNG) power plants that target the various industrial and business parks within the cluster are appropriate, complementary investments, which can be later privatized.
23. **Agricultural Equipment Manufacturing**

Acquisition of Leyland, a recently-privatized truck and tractor assembly plant, presents an attractive investment opportunity to increase the factory’s productivity and meet the growing demand for tractors and trucks in Nigeria.

### Market opportunity summary

Leyland, a truck and tractor assembly plant, privatized a former state-owned entity. The factory is currently working at 5% capacity, and new investors are sought to increase productivity. Agricultural tractors, trucks and equipment supply markets in general are becoming increasingly attractive as the GON moves out of direct intervention in these markets. Demand for tractors over the next ten years is estimated at 200,000 units in Nigeria and across the West African Region. The Nigerian Federal and State Governments are expected to import 5,000 tractors over the next ten years, which could be locally sourced.

### Approximate Investment Need

$40m – $50m

Investments required would include acquisition and rehabilitation of Leyland’s physical assets, as well as re-training staff, rebranding and working capital provisions.

### Location

Leyland is located in Ibadan, close to major agricultural production centers of Oyo, Kwara and Niger States. Oyo’s farmers constitute about 4% of national figures and cultivated 0.578m HA of staple crops in 2010.

### Supporting Initiatives

DFID’s Mai-Karfi project also supports market system reforms to respond to emerging demands. The market-led focus of this project could be further deepened and complemented in Kano to maximize impact. Mai-Karfi developed a tractor leasing project with First Bank in Oyo State and it may be willing to expand this program in Oyo and other states working through other banks.

### Required Complementary Investments

Poor power supply inhibits investment in agribusiness but also presents opportunities for independent power generation for existing business parks. Investments in Modular Compressed Natural Gas (CNG) power plants that target the various industrial and business parks within the cluster can address the issues of power insufficiency in the state. Government policies can support the privatization of these plants after they are established.

### Environmental Considerations

An Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment. Risk level will depend on the location, extent of construction and ancillary features needed, all to be determined during final screening and preparation of an ERR.

### Development Impact

Increases in the factory’s productivity will lead to the development of additional, prized, skilled and semi-skilled jobs for which women and men can be trained. Growth in employment will vary depending on the size of nature of the investment.

### Public Sector Role

Government at the state and local levels often wait for Federal legislation on issues, but this need not be so. States can develop legislation that promotes and expands the emergence of local agricultural service markets, including agricultural tractors and equipment. States can play a role in protecting investor interests while promoting competitive markets. Improved contract enforcement and legislation protecting investors’ interests would represent significant improvements in the agribusiness enabling environment.
## 24. Cocoa Production and Aggregation

Moving from smallholder cocoa farms to commercial plantations is the logical future of this industry.

### Market opportunity summary

Oyo State is one of the few cocoa producing States of Nigeria. Nigeria is the 4th largest cocoa producer in the world, and this commodity remains the leading non-oil foreign exchange earner. However, approximately 97% of locally produced cocoa is exported as cocoa beans and with little or no value addition. Domestic consumption is also low (estimated at barely 3% of total production). Cocoa is produced in Nigeria predominantly by small scale farmers in production centers scattered around Ekiti, Ondo, Osun, Oyo and Ogun states, which altogether account for about 70% of Nigeria’s annual production. Cocoa beans of Nigerian origin fall short of market quality standards due largely to poor on-farm processing techniques. Tree age is also providing cocoa trees with low yields; many are well over 70 years old and are not commonly replaced. Nigerian cocoa farms yield an average of approximately 358kg/HA, compared to Cote d’Ivoire’s 1,000kg/HA. These challenges invariably translate into opportunities for investments in this value chain. Investments in nucleus plantations of high yielding and early maturing varieties of cocoa with smallholder clusters surrounding them could prove a viable investment option and may be the solution to increased productivity and quality.

### Approximate Investment Need

**$10m – $25m**

Investments in nucleus plantations of new varieties of cocoa that matures in eighteen months are required. This would also include investments in planning, maintenance and postharvest handling equipment and facilities.

### Location

The Oyo South is the traditional Cocoa production belt of the State and as such it is a location of preference for investors. Cocoa is produced in 20 (twenty) local government areas in Oyo State, with Ibarapa North, Central and East, Akinyele and Omoniya accounting for a significant quantity of the state’s total production.

### Supporting Initiatives

Oyo is home to the Nigerian Cocoa Research Institute, which has been responsible for driving innovation within the cocoa industry in Nigeria. Nigeria hopes to increase its national cocoa production from its current 360,000 MT to 500,000 MT by 2015 and 1 million MT by 2018. Through Government funding, the Cocoa Research Institute of Nigeria (CRIN) has developed eight new improved cocoa varieties which yield up to 2000kg/HA over the current 450 kg/HA. The Nigerian Government is also setting up modalities for rapid multiplication of the improved cocoa seedlings. Through the GON’s Growth Enhancement Support (GES) scheme, support will be provided via inputs to existing plantations and rehabilitating old plantations, as well as support to create new plantations. The GON at the Federal level is creating Special Crops Processing Parks in Oyo, and the State Government is focusing on rehabilitating the numerous business parks across the state while supporting the investment and business environments without distorting the market.

USAID’s MARKETS II project is providing support to small farmers to increased productivity and quality.

### Required Complementary Investments

Investments in the multiplication and distribution of the new varieties of cocoa by seed companies is required to boost the development the market for cocoa seedlings. Encouraging the private providers in so doing would ultimately assist in creating a sustainable market for this service. Investments in peri-urban processing centers where cocoa beans can be processed into cocoa powder and butter for the export and domestic markets, as well as investments in confectionery industries, would be an additional complementary investment.

### Environmental Considerations

Environmental risk TBD, but estimated at moderate or high risk, requiring an Environmental Risk Review (ERR). Soil conservation management will be an important environmental consideration as concerns the standing tree stock as well as new ones to be planted.

### Development Impact

By doubling production, increasing processing capacity of factories, establishing and strengthening of small/medium scale enterprises to produce fast moving consumer cocoa products from cocoa and its byproducts, it is estimated that and additional 70,000 jobs would be created in the Oyo cocoa sub-sector 50% of whom are likely to be held by women.

### Public Sector Role

Perhaps the most important role governments at the state and federal levels could play is to liberalize the processes of licensing and entry of providers into this market, and to facilitate land allocation. The GON can also play a more proactive role in regulating the agro inputs and output market. Farmers currently don’t invest in agro chemical and inputs because of past negative experiences. The Nigerian agrochemical market is seriously challenged with quality and standards enforcement in question. Governments both at the federal and state levels must play a more forceful regulatory role and enforce their standards and quality measures to provide incentives (rather than disincentives) that protect future investments. Poor power supply inhibits investment in agribusiness but also presents opportunities for independent power generation for existing business parks. Investments in Modular Compressed Natural Gas (CNG) power plants within the cluster can address the issues of power insufficiency in the state. Government policies can support the privatization of these plants after they are established.
25. Cashew Production

Rehabilitation of old cashew plantations at the Ikere Gorge Dam provides a joint venture opportunity to increase productivity and meet growing demand for cashews.

Market opportunity summary

The Odua Investments Company Limited inherited most of the assets and liabilities of the commercial concerns of the old Western Region Government (now Ekiti, Ondo, Ogun, Osun, Oyo and parts of Lagos), among which is the 200 HA+ Ikere George Dam Cashew Plantation and Odua Cattle Ranch both at Iseyin. Odua Farms is the Agricultural investment arm of the company, with over 70,000 HA of available land, some of which is under cultivated. The company has a history of working in partnership with investors. Odua Farms is seeking a partnership with both local and/or international investors to reactivate its cashew farms and service companies, including the Ikere George Dam Cashew Plantation, to export early maturing varieties of cashews and other associated products.

Approximate Investment Need

$15m – $25m

Location

The Odua Investments Limited Cashew Estate is located in Ikere, Iseyin which is semi Savannah in vegetation. On the estate is located a multipurpose dam, Iseyin about 50km from Ibadan. The state’s equatorial climate and relatively high humidity favors the cultivation of crops like Cassava, Yam, Maize, Rice, Plantain, Cocoa, Oil Palm and Cashew by its crop holders who together constitute about 4% of national figures, cultivating 0.578m. A number of major rivers are located within the state on which a number of irrigation dams have been built (e.g. the Ogun, Oyan, Otin, Ofiki, Sasa, Oni, Erinle and Osun rivers.)

Supporting Initiatives

The USAID-supported African Cashew Alliance (ACA) can be tapped into for improvements of quality and standards, technical assistance, and also for support in accessing financing for potential investors in cashew processing. The ACA has a Nigerian national chapter that is quite active.

Required Complementary Investments

Investments in the multiplication and distribution of the new varieties of cashew by seed companies would help boost the development the market for cashew seedlings. Encouraging the private providers in so doing would ultimately assist in creating a sustainable market for this service.

Environmental Considerations

An Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment. Risk level will depend on the type of assistance provided (i.e. Support to purchase inputs, pesticide recommendations, fertilizer recommendations, use of extractive chemicals, etc.) An Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment.

Development Impact

Re-starting industrial scale production at a cashew plantation with outgrower schemes has the potential to involve thousands of employees, both on a full and part time basis. If a processing facility were to accompany this investment, this would translated into more jobs. For semi-skilled and skilled workers. The processing facility jobs are historically held by women, while the farmer/plantation jobs will be split between men and women.

Public Sector Role

Perhaps the most important role governments at the state and federal levels could play is to liberalize the processes of licensing and entry of providers into this market. The GON can also play a more proactive role in regulating the agro inputs and output market. Farmers currently don’t invest in agro chemical and inputs because of past negative experiences. The Nigerian agrochemical market is seriously challenged with quality and standards enforcement in question. Governments both at the federal and state levels must play a more forceful regulatory role and enforce their standards and quality measures to provide incentives (rather than disincentives) that protect future investments.

Poor power supply inhibits investment in agribusiness but also presents opportunities for independent power generation for existing business parks. Investments in Modular Compressed Natural Gas (CNG) power plants within the cluster can address the issues of power insufficiency in the state. Government policies can support the privatization of these plants after they are established.
Linking existing fish and poultry processors to Lagos and export markets, investors can capitalize on fast-growing markets for processed and packaged foods.

Market opportunity summary

The growing Lagos market for processed foods is constrained by the limited availability and quality of third party logistics (3PL) solutions, particularly cold chain. Some major producers, processors, packagers and distributors of a number of food products are seeking to outsource their logistics in order to focus on core operations. Sample products include poultry, fish, processed frozen foods, fruit juices, dairy beverages, vegetable oil and prawns. Products produced and processed are exported to the U.S. and other global markets.

Third party logistics provider (3PL) investments are sought in a multi-temperature medium-sized cold storage facility with blast freezing or Individual Quick Freeze (IQF) technology, which will allow storage of multiple products such as fish, as well as frozen foods and poultry. Shipping company Maersk advises that refrigerated (reefer) container shipments into the port of Lagos have been on the increase, with 80 containers of frozen fish alone entering the port every week. Maersk would like to offer customers a seamless 3PL service, whereby they are able to offload refrigerated containers and unload product directly into the cold store facility on site, after which it is prepared for distribution to Lagos and other cities.

Approximate Investment Need

$5 – 10M

An initial investment in this range makes sense given sample volumes. The investment would likely require construction of facilities, and the size of investment will depend on the scale of the infrastructure.

Location

Ajala is one ideal staging area for distribution of imported products to the Ibadan metro area, or for transport of product South to a second hub in Lagos.

Supporting Initiatives

The USAID Nigeria MARKETS II project is supporting the aquaculture industry at the inputs, production and processing levels. Project-supported processors could be linked into the project as additional customers for cold storage and distribution solutions.

Required Complementary Investments

Poor power supply inhibits investment in agribusiness but also presents opportunities for independent power generation for existing business parks. Investments in Modular Compressed Natural Gas (CNG) power plants that target the various industrial and business parks within the cluster can address the issues of power insufficiency in the state. Government policies can support the privatization of these plants after they are established.

Environmental Considerations

An Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment. Risk level will depend on the location, extent of construction and ancillary features needed, all to be determined during final screening and preparation of an ERR.

Development Impact

Thousands of skilled and semi-skilled employees currently supply major producers, processors, packagers and distributors of food products. More efficient and effective 3PL will support higher returns to farmers sourcing product to these firms, and will allow firms to reinvest in expanding core operations to integrate more farmers.

Public Sector Role

Reliability of power supply will be the chief concern of 3PL providers investing in cold storage and logistics solutions. In order to support these investments, interested State governments will need to commit to extension of power supplies to this logistics hub.
## 27. Poultry Farming and Processing

The concentration of poultry consumption near Lagos provides an opportunity to locate a poultry and egg producing facility in the outskirts of Lagos to serve this 20 million plus market.

### Market opportunity summary

National sales of poultry flesh per week are estimated at 1,500 tons and more than 35 million crates (30 eggs) of eggs are sold weekly, not including consumption of poultry products at the village level. 40% of that volume is estimated to be consumed in and around Lagos, equaling 400 tons of flesh and 8 million crates of eggs per week. Large investors Obasanjo Farms, CHI Farms and Zartec supply 80% of the urban southwest market, leaving a niche for smaller producers located closest to the consuming public. Establishing a feed mill associated to the poultry farm will add additional profitability to the venture.

### Approximate Investment Need

$3m – $6M

The investment will vary given the size of the farming/production facilities, whether it is a greenfield investment or acquisition/joint venture. As poultry production costs are closely tied to the cost of feed, it is essential to establish competitive sources of maize and soybean for feed to control costs. Investing in processing will require additional capital.

### Location

Lagos State is ideally located for poultry growing and egg laying farms due to the proximity to the major consuming area of greater Lagos and Ogun State. By locating just outside the city, access to the market is easy as is availability of electricity. Moreover being close to the main north-south thoroughfare known as the LAKAJI Corridor, makes it easy to ship in maize and soybean from the north necessary for the production of poultry feed.

### Supporting Initiatives

The Lagos State Government is seen as investor-friendly to value-added processing agriculture industries, in particular those that contribute to food security. Poultry and egg imports are currently banned, providing a cushion to investors.

### Required Complementary Investments

Lagos State continues to invest in improving its infrastructure in the form of the electric grid and improved roads.

### Environmental Considerations

Environmental risk TBD, but estimated at moderate or high risk, requiring an Environmental Risk Review (ERR). Risk level will depend on investment details, such as the type/extent of construction, ancillary features involved, feed or pesticides used, etc. and will be determined during screening and preparation of an ERR.

### Development Impact

The poultry industry employs an estimated 25 million people directly and indirectly and accounts for 25% of the agricultural GDP. Start up of new poultry operations or rehabilitation and expansion of existing farms will create hundreds of jobs at the poultry farm and/or processing center, in addition to creating the demand for maize and soybean for feed, stimulating the growth of those farming operations further north. In both the industrial and farming operations, 50% or more of the employment are estimated to be women. A concentration of poultry farms in the State will also contribute to increases in ancillary services required by the poultry industry.

### Public Sector Role

Providing affordable grid power will be an important, long-term investment to support continued investment by the GON.
### 28. Aquaculture

Changing income and consumption patterns provide an opportunity to invest in fish farming to meet growing demand for fish.

#### Market opportunity summary

Fish constitutes over 40% of the animal protein intake by the average Nigerian. Nationally Nigeria consumes over 2.5 million tons of fish each year, but only produces under 1 million, making Nigeria the largest frozen fish importer in Africa.

Fish farming in the Ketu-Ereyun fish farm estate in Epe is currently being subsidized by the Lagos State Government on 60 hectares (with 482 plots) in a public-private partnership (PPP) to produce hygienically packaged fish (tilapia and catfish) for the local, regional and international markets. Development of these estates also creates opportunities to offer cold chain solutions and investments, as well as provision of inputs (maize and soybean) for fish food.

#### Approximate Investment Need

$2m – $5M

The amount of the investment will vary based on the size of production facilities, ponds managed, and the extent to which the cold chain distribution is integrated into the investment. As fish farming costs are very heavily tied to the cost of feed, it is essential to establish competitive sources of maize and soybean for the feed and to control those costs.

#### Location

Lagos State is ideally located for aquaculture due to the proximity to the major consuming area of greater Lagos. The location just outside the city and the concentration of input and supporting services around the EPE SCPZ, simplifies access to the market, as does availability of electricity.

Location near the main north-south thoroughfare known as the LAKAJI Corridor also facilitates transport of maize and soybean from the north necessary for the production of the pelletized fish food.

#### Supporting Initiatives

The Lagos State Government is seen as investor-friendly to value-added processing agriculture industries, in particular those that contribute to food security.

The GON’s Agricultural Transformation Agenda is designed to create an enabling environment to increase sustainable production to over 1 million tons through aquaculture to meet current production shortfalls, generating an estimated 500,000 jobs in the next five years. Specifically, the Lagos State Government has developed the Ketu-Ereyun fish farm to attract investors around this unique SCPZ created specifically for this purpose. With the heavy infrastructure of pond preparation and provision of electricity to the Epe SCPZ, the Lagos State Government has an attractive value proposition to offer potential investors in aquaculture.

The USAID project MARKETS II is focused on aquaculture in Lagos State and seeks opportunities for tying in independent small fish farm operators in the area to the more robust commercial fish farms with their input and support services.

#### Required Complementary Investments

Investments in cold chain infrastructure and to process maize and corn into fish food are additional, critical investments to solidify the aquaculture value chain’s expansion.

#### Environmental Considerations

Environmental risk TBD, but estimated at moderate to high, requiring at minimum an Environmental Risk Review (ERR) and possibly other assessments.

#### Development Impact

The startup of new fish farm operations at the newly established SCPZ in EPE will create hundreds of jobs at the fish farm and processing center, in addition to stimulating demand for maize and soybean for feed, stimulating growth of those farming operations further north, and incomes of farmers involved. In both the industrial and farming operations, 50% or more of the employment is estimated to be held by women.

#### Public Sector Role

Providing affordable grid power will be an important, long-term investment to support continued investment in aquaculture.
### 29. Vegetable Production

Increasing incomes and changing consumption patterns provide an opportunity for new, small farmers to invest in producing high quality, fresh horticultural products, such as tomatoes, cucumbers, peppers and onions.

#### Market opportunity summary

Currently, thousands of tons of fresh horticultural products are trucked daily through Nigeria to serve the huge urban market of Lagos. A growing middle class and large supply of business travelers are pushing demand higher. Transport, trade and other logistics inefficiencies contribute to perishable loss of fresh produce approaching 50%. Growing produce closer to Lagos using new gardening kits (such as that offered by Dizengoff) will improve quality and reduce costs of getting goods to market by small vegetable producers.

#### Approximate Investment Need

$0.5m – $2M

The amount of the investment will vary based on the size of the farming operations established and the extent of vertical integration (i.e. acquiring delivery vehicles with cold chain requirements).

#### Location

As the highest density city in Nigeria with an estimated 20 million inhabitants, with its growing middle class and large business traffic, Lagos is a major consumer of fresh horticultural products. Locating production of horticultural products in and on the perimeter of the city will minimize transport costs and provide maximum freshness of goods to consumers.

The urban and peri-urban potential location of new farming operations will allow entrants access to excellent input and support services as well as electricity and water, offered by Lagos.

#### Supporting Initiatives

The Lagos State Government is strongly encouraging the formation of “agropreneurs” and has instituted the “Lagos Agricultural Youth Employment Scheme” (LAYES) to train 100 graduates every 6 months in farm management and operations. These graduates will be excellent candidates for starting such urban gardening and peri-urban horticulture farming ventures.

New growing kits for 1 acre sized lots developed by Dizengoff can facilitate entry into tomato production by small farmers, coming equipped with a drip irrigation system that allows year round production for maximum profit.

#### Required Complementary Investments

Establishment/upkeep of roads from vegetable gardens to markets will reduce costs further for small farmers.

#### Environmental Considerations

An Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment. Risk level will depend on the type of assistance provided (i.e. Support to purchase inputs, pesticide recommendations, fertilizer recommendations, whether land clearing is required for new planting, etc.)

#### Development Impact

The startup of new urban and peri-urban gardens/farms is estimated to create an estimated 10 jobs directly and indirectly for every acre of production that is developed. Opportunities for employment will be equal to women and men.

#### Public Sector Role

Providing affordable grid power and access to clean water will be important, long-term investments to support continued investment in horticulture in Lagos State.
### 30. Agricultural Equipment Manufacturing

The opportunity to team with Techo-Quip, manufacturer in mineral and agro-allied equipment, presents an attractive investment opportunity to increase the factory’s productivity and meet the growing demand for agricultural equipment for production plants in the food processing space in Nigeria.

#### Market opportunity summary

Techo-Quip Ltd specializes in design, manufacturing installation and maintenance of machines used in harnessing the nation’s abundant agriculture, solid minerals, agro-allied and industrial resources, and has pioneered research and production of over 40 industrial plants and machinery. Some examples of equipment produced include: automatic garri fryers, fragrance production plants, briquetting plant (sawdust compressor), cabinet dryers, cassava derivatives plants, chipping machines, complete rice production plants, detergent powder plants, palm kernel processing plant, and soya milk plants.

Opportunities for growth are in local technology development in Nigeria and exporting to the regional market which is not serviced optimally yet by equipment fabricators. With strong roots in the large Nigerian market, a joint venture or equity investment in this firm offers excellent potential to ramp up exports throughout the ECOWAS region.

#### Approximate Investment Need

$2m – $6M  

The amount of the investment will vary based on the size and rate of expansion of its facilities. It will also largely depend on the size of the deals it can generate and service.

#### Location

Lagos State is ideally located for a fabrication business requiring easy access to electricity, skilled labor and to raw materials and specialized parts that may need to be imported. The urban location also provides easy access to financial institutions and customers, often having home offices in Lagos. Moreover, being located on the main north south thoroughfare known as the LAKAJI Corridor, facilitates trucking products north to the agricultural markets as well as west through Benin into other ECOWAS countries.

#### Supporting Initiatives

The Lagos State Government has a number of initiatives aimed at training young graduates with industrial skills and offers attractive investment incentives for fabricating industries. The Lagos State Government is seen as investor-friendly to value-added processing agriculture industries, in particular those that contribute to food security.

#### Required Complementary Investments

For the export component, receiving financing from financial sector actors (such as NEXIM and others), as well as assurances of import duty exemptions for product entry into ECOWAS states, are also important.

#### Environmental Considerations

An Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment. Risk level will depend on the location, extent of construction and ancillary features needed, all to be determined during final screening and preparation of an ERR.

#### Development Impact

Expansion of a fabrication plant leads to the development of prized skilled and semi-skilled jobs for which women can be trained as easily as men. With the expansion and growth of this plant, an estimated 25-50 jobs could be added in this first phase.

#### Public Sector Role

Providing affordable grid power and improvements in road infrastructure will be important, long-term investments to support continued growth of the manufacturing sector. Playing a more active role in applying agreed-upon ECOWAS trade facilitation policies across Nigeria will also facilitate increased investment in this sector.
31. Cold Storage Facility

Increased client demands for cool/cold logistics and handling services presents an attractive opportunity to build a new cold storage facility in Lagos at the Inland Container Depot.

Market opportunity summary

There is a lack of supply of cold storage facilities in Nigeria country-wide. With increasing consumer demands for proteins like poultry and fish, temperature-controlled logistics needs far outweigh supply.

MAERSK reports a noticeable shift into break bulk shipping. Moreover, there is a considerable amount of frozen fish coming into Nigeria from China and India, an estimated 80 containers of frozen fish (FFE) arriving the port of Lagos per week. With an increasing amount of frozen and cool product coming into Nigeria, significant demand exists for cold storage facilities at the Port in Lagos. A new cold storage facility near the Inland Depot will respond to client demands for cool/cold logistics and handling services. Greenfield or joint venture opportunities are possible for this investment.

Approximate Investment Need $3m – $7m

The estimated cost of creating a cold logistics and handling services hub.

Location

Lagos port (encompassing Apapa and Tin Can ports) is the largest port in Nigeria relevant to agriculture, importing and exporting most of the country’s agricultural goods. The inland container terminal in Ijora, Lagos near the Apapa Port, has increased cargo throughput from zero to 47,000 TEUs over five years. The proposed facility could be co-located in or near the Inland Container Depot which is on about 12 hectares of land near the Apapa Port.

Supporting Initiatives

The Lagos State Government has a number of initiatives aimed at training young graduates with industrial skills and offers attractive investment incentives. The Lagos State Government is seen as investor-friendly to value-added processing agriculture industries, in particular those that contribute to food security.

Required Complementary Investments

Financing for basic equipment needed for cold storage operations, including: Warehouse Management Systems (ICT); freezers, ammonia or freon refrigeration systems, forklifts, pallets.

Environmental Considerations

An Environmental Risk Review (ERR) would be required to determine the level of environmental risk related to this investment. Risk level will depend on the location, extent of construction and ancillary features needed, all to be determined during final screening and preparation of an ERR.

From an environmental perspective, it is recommended that APMT build a facility using an Ammonia Refrigeration system, however many developing countries use freon systems. Ammonia based systems must ensure appropriate prevention and management of potential leaks. Older Freon R22 systems would not be advised given tendency for negative environmental effects. Newer Freon systems use R404, and are more environmentally friendly.

Development Impact

Opening a cold storage facility at the Inland Container Depot will increase jobs for skilled or semi-skilled workers. Improved cold storage will facilitate imports and exports of frozen products, and will also improve food safety levels and nutritional value of the perishable foods.

Public Sector Role

Providing affordable grid power and improvements in road infrastructure will be important, long-term investments to support continued growth of the logistics sector. The public sector will have to support additional construction with building permits.
### 32. E-Choupal Nigeria Platform

Intelligent location of aggregation kiosks using ICT platforms can significantly streamline sourcing of bulk grains from small farmers.

| Market opportunity summary | Most Nigerian agricultural grain producers are operating in a fragmented fashion on small plots of land spread throughout the country, and are challenged by weak infrastructure and at times, exploitative intermediaries. Achieving scale in aggregation of agricultural products by large buyers is therefore challenging, expensive and inefficient.

India’s e-Choupal is an initiative of ITC Limited, a large agribusiness conglomerate that has implemented a system of rural kiosks throughout India to source products more efficiently with small, rural farmers. Rural kiosks are little more than a computer with an internet connection and market software, often in one farmer’s home connected by V-SAT or another form of Internet connection. Farmers from the surrounding community can visit the kiosk in person to obtain information on up to date prices, good farming practices, and to place orders for agricultural inputs like seeds and fertilizers. Products that ITC purchases in this manner include soybeans, wheat, coffee, and prawns. In India, each kiosk is run by a trained farmer, and serves farmers in the surrounding 10 villages within about a 5km radius. The kiosk manager bears some operating cost of the kiosk, but earns a service fee for transactions done via his computer terminal. Aggregation still takes place in warehouse hubs managed by middle-men and other intermediaries, who disburse credit, cash, provide aggregation and transportation services.

Developing a similar model appropriate for the Nigerian context by a software developer or an agribusiness firm is an interesting opportunity to streamline aggregation and sale of agricultural products throughout the country.

| Approximate Investment Need | The estimated investment to create this ICT platform and business model by an enterprising software developer or agribusiness firm is relatively low, and estimated at anywhere between $100,000 - $200,000. Once the IT platform and business model is developed for one pilot product, the IT platform can be sold and rolled out in collaboration with an innovative agribusiness firm, or a set of these.

| Location | Any firm along the corridor could potentially adapt this platform, once developed for the Nigerian context.

| Supporting Initiatives | NEXTT is already speaking to potential investors in developing this platform, and conducting an investment scoping visit to India to discuss possible collaboration with ICT. India has its own version of USAID, with an office in Abuja. This emerging donor, or India’s EXIM bank might consider either co-financing or investing in this initiative, to bring an Indian concept to scale in Nigeria.

| Required Complementary Investments | Agribusiness firms must buy into the concept in order to replicate the e-Choupal experience in Nigeria. Satellite provision/Internet access for the proposed kiosk locations is a required investment for this initiative to begin.

| Environmental Considerations | If investments are limited to providing Internet access to existing physical structures, environmental risk will be considered minimal. An Environmental Risk Review (ERR) would be required however, to determine the level of environmental risk related to this investment, particularly if construction takes place. Risk level will depend on the location and extent of construction, all to be determined during final screening and preparation of an ERR.

| Development Impact | The e-Choupal system supports increases in product quality, and also contributes to increases in income, as farmers can obtain better prices for higher quality and production levels. In India, a densely populated country, ICT established 6,500 kiosks. Each installation serves an average of 600 farmers.

| Public Sector Role | The GON should consider incentives for agribusiness firms that utilize innovative, ICT solutions to increase involvement of farmers, in particular young farmers, or “agropreneurs”. Along these lines, the Ministry of Agriculture might consider subsidizing, as a public-private partnership, the cost of adapting the e-Choupal model by innovative agribusiness firms. |
### Market opportunity summary
Livestock is the most valuable commodity traded in West Africa. Livestock travels primarily north-south, for slaughtering in southern states. Noting the potential of this market and a future generation of IT-savvy “agropreneurs”, international firm INTEL built a livestock center in a public-private partnership in collaboration with the Gombe State government. This livestock center consists of a series of buildings, fences and access roads, complete with generated power, Internet and ICT equipment, providing “one-stop shop” services to livestock traders. The livestock center includes processing facilities, links to infrastructure (such as Internet), rest areas and pastures to allow herders to stay for several days, as well as a market where herders can sell their herds. ICT platforms facilitated sales transactions, and logistics services, leading to more efficient transactions. The investment was attractive to the Gombe state government to be able to track and tax livestock sales in one central location. Transactions are recorded via computer, making transactions more efficient, transparent and secure. Similar models could be replicated in other locations throughout Nigeria to stimulate tax revenue, internet use and efficient livestock trading.

### Approximate Investment Need
An initial investment of $1-3 million is estimated to be required to create a livestock center, including land clearing, processing facilities and ICT platforms.

### Location
Location of this possible investment can be anywhere along the LAKAJI Corridor, perhaps in Kano or Jigawa States, through which most livestock is transported en route to southern slaughterhouses.

### Supporting Initiatives
Intel Corporation, in partnership with the Gombe State government, constructed a livestock center that includes processing facilities, good links to infrastructure (such as Internet), rest areas and pastures to allow herders to stay for several days, as well as a market where herders can sell their herds. ICT platforms facilitated sales transactions, and logistics services, leading to more efficient transactions. PPP of Kwara state, Universal support provision fund (public) to expand access and use of ICTs.

### Required Complementary Investments
To replicate a similar model, another State government must step forward with a proposal to work in collaboration with Intel or another potential investor, to replicate this successful model.

### Environmental Considerations
TBD, depending on scale and nature of investment. Support to integrate ICT platforms into livestock value chains would have no direct environmental effects, so no environmental risk review (ERR) required. Larger investments involving land clearing, irrigation support, input support, etc.) would require ERRs and possibly Environmental Assessments (EA).

### Development Impact
Job creation for employees of the livestock center, more efficient livestock operations, more secure income for livestock traders, higher quality and healthier livestock, and increased tax revenues are possible development results of this investment.

### Public Sector Role
The GON or state governments can support similar investments by entering into similar public-private partnerships, facilitating construction permits, and providing needed infrastructure (i.e. water, electricity grid provision, Internet or Satellite access, etc.)
The map below provides a different view of the existing infrastructure and investment opportunities identified in this study.
ENABLING ENVIRONMENT CONSIDERATIONS

The agricultural sector is challenged by the absence of service providers in key areas, including logistics, agronomy, inputs and finance, as well as by a lack of basic market information needed to facilitate smooth transactions between buyers and sellers. The infrastructure deficit noted in earlier sections of the assessment report is largely reflective of a lack of public investment in maintaining the dams, roads and bridges that are already part of the country's landscape. Outside of limited private investment in production and processing capacity, these factors are largely responsible for low agricultural output.

### TABLE 1 - Physical Obstacles to Agricultural Competitiveness

| **Poor conditions of interstate and feeder roads** | Adds cost or makes it impossible to move products from farm to market and/or to value-added processing sites. |
| **Unexploited rail and inland waterway systems** | As with the weak road network, lack of investment in barge transport on 2 major navigable river systems and in a robust rail network limits competition and increases cost of transport. |
| **Overcrowded port facilities** | Adds costs and time to imported inputs and limits the competitiveness of export products. |
| **Unavailable and/or unreliable electricity** | Especially in rural farming communities, represents perhaps the single costliest factor of production and transformation. Each player in the agricultural value chain has in effect become an autonomous power producer relying expensive means of generation. |
| **Lack of warehousing/storage facilities (including cold storage)** | Amplifies the post-harvest loss ratio and complicates aggregation. |
| **Unexploited irrigation potential** | Limits most crops to single harvest seasons, while the climate will allow multiple seasons. |

The Nigerian Government is aware of and focused on the need to improve the basic infrastructure in support of its agricultural development agenda. A National Infrastructure Master Plan is nearly complete and will point to all the major interstate highways that are essential. Major investments are being planned in the electricity distribution sector with a “Bulk Electricity Trade” system developing alongside local distribution companies. The rail system from Lagos to Kano has been partially rehabilitated and has launched operations.

Alongside these broader infrastructure upgrades, since 2011, the Federal Government has also made targeted investments in agriculture, beginning with a network of 25,000 and 100,000 ton silos. To support the rice sector, Federal Ministry of Agricultural and Rural Development (FMARD), via Nigeria's Export Import Bank (NEXIM Bank) have also arranged financing for 100 five-ton per hour rice mills that will be made available to all rice growing states.
Overcoming the physical infrastructure shortcomings is clearly costly and begs for creative public-private partnerships at both the federal and state levels. Unlike most other countries in the region, state governments have a level of political and economic autonomy that makes them indispensible partners. Among the states along the corridor there is uneven attention being paid to investing in the sort of physical infrastructure required to improve agricultural competitiveness.

In the donor sphere, the African Development Bank and the World Bank are focused heavily on physical infrastructure improvements, with investments underway in roads, power and dam rehabilitation.

The second set of obstacles is tied to the policy and business environment that firms operate in and many are addressable at minimal cost, albeit implementation may be politically challenging.

<table>
<thead>
<tr>
<th>TABLE 2 - Soft Obstacles to Agricultural Competitiveness</th>
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<tbody>
<tr>
<td><strong>Lack of clarity concerning ownership of agricultural land</strong></td>
</tr>
<tr>
<td><strong>Shortage of financing for agriculture</strong></td>
</tr>
<tr>
<td><strong>Limited availability of quality seeds, planting material and fertilizer</strong></td>
</tr>
<tr>
<td><strong>Roadblocks, formal and informal, along the main corridor route</strong></td>
</tr>
<tr>
<td><strong>Missing space for public-private dialogue</strong></td>
</tr>
</tbody>
</table>

The Federal Government and particularly FMARD is aggressively pursuing an agenda to convert the perception of farming from one of a traditional way of life to farming as a business. The firm belief is that only commercial agriculture will assure food security, encourage investment and growth, and create wealth and jobs in rural communities. For investments to occur, availability and use of land in sufficient quantities is critical, and much discussion has been carried on to date around this politically sensitive issue. While the ultimate decision on the use of land seems to be in the hands of State Governments, there is close cooperation with the Federal Government in assisting investors.
The Federal and State Governments are addressing soft obstacles to agricultural competitiveness through the promotion of Staple Crop Processing Zones (SCPZs), 13 of which have been identified to date. The goal of the SCPZs is to link farmers to processors and encourage aggregation, value addition and industrialization. Four of the SCPZs fall within the LAKAJI Corridor, including Lagos (poultry processing and fish farming), Ogun (cassava flour and starch in Ossosa), Niger (rice in Badeggi) and Kano (rice, sorghum and horticulture). Under this scheme, private investors are to be provided incentives to invest in value addition agro-processing ventures within the zones. The SCPZs are also intended to focus public investments and PPPs in the development of critical infrastructure such as power, irrigation, rail, roads, communications and water.

At the level of production, the Ministry of Agriculture is reforming its fertilizer subsidy, moving to a voucher-based scheme and targeting expansion from 55,000 to 20 million, adding 5 million farmers per year over the next four years. The voucher scheme, which reimburses 50% of the cost of fertilizer sold via private agrodealers, aims to create an efficient market-based system for input distribution in the country.

To address the cost and availability of financing, FMARD and the Central Bank of Nigeria (CBN) have established the Nigerian Incentive-Based Risk Sharing in Agricultural Lending (NIRSAL) initiative, which encourages banks to lend to the agricultural sector. The program buys down the risk of lending to agriculture for participating banks via partial risk guarantees in the range of 30-70% depending on the level of risk. On the borrower side, it entices entrepreneurs and companies to seek financing for growth by “buying down” the cost of money. Normal commercial lending rates that are presently in the 20+% range are reduced to the 8-9% range under the scheme. While banks and investment houses express eagerness to move into the agriculture space, they are struggling with developing a healthy pipeline of projects.

Finally, a number of stakeholders interviewed during the assessment stressed their frustration with the lack of fruitful public-private dialogue around agricultural development and related policy issues. At the National level, the Community of Agricultural Stakeholders of Nigeria (CASON) was recently established for the purpose of representing the interests of the agricultural community in broader public-private dialogue, and that initiative appears to be taking root. Since so many important decisions are made at the state level, however, more focused working groups at the state level are likely necessary.

### SCPZ Investor Incentives

4. Tax breaks for investors on imported agricultural processing equipment
5. Tax holidays for investors doing business within the zones
6. Availability of supporting infrastructure linking the zones to raw material suppliers
7. Removal of restrictions, such as maximum equity ownership, on foreign investors
8. Elimination of controls on currency conversion and repatriation of assets
9. Constitutional guarantees against nationalization or expropriation of investments
10. Duty waivers
RECOMMENDATIONS ON INSTITUTIONAL FRAMEWORK FOR THE INITIATIVE

One of the mandates of the assessment is to consider what institutional form might be appropriate to coordinate and facilitate the sort of investments profiled in this report. Taking a cue from efforts underway in Tanzania and Mozambique, USAID Nigeria asked the assessment team to put forth a vision for a multi-stakeholder LAKAJI Agricultural Growth Corridor initiative. As in the case of the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) and the Beira Agricultural Growth Corridor (BAGC), a LAKAJI Agricultural Growth Corridor would feature a “catalytic fund” as a centerpiece, a concept that is also treated here.

LAKAJI AGRICULTURAL GROWTH CORRIDOR VISION

The corridor construct provides a platform for coordinating and maximizing the impact of investments that are being made by the private sector, federal and state governments, and donor agencies. It also focuses these efforts on 2 key dimensions of the agricultural development challenge in Nigeria:

11. The critical lack of infrastructure tying together points of entry for inputs, production zones, processing zones, consumption centers, and ports of exit for exports.
12. The need for projects of sufficient scale to generate the economies required for Nigerian agriculture to be competitive in both domestic and international markets.

The general view of stakeholders interviewed for the assessment was that an Agricultural Growth Corridor initiative with participation from key actors investing in both public and private projects along the corridor would be a useful way of framing a response to these challenges.

The LAKAJI Agricultural Growth Corridor vision centers on investments in processing, aggregation and related infrastructure in targeted clusters, giving farmers access to assured markets and supporting the transition from a subsistence to a commercial model of production that will increase incomes in rural areas. As farming becomes a more profitable business along the corridor, it will also absorb Nigeria’s booming youth population more readily, easing pressure on urban infrastructure and launching a new class of agricultural entrepreneurs. An estimated 4 million youth in Nigeria enter the work force annually.

The transition to a more entrepreneurial model of farming that is inclusive to men and women, will also favor consolidation of existing small farms, increasing average farm size as entrepreneurs reinvest in their businesses and seek returns to scale. This will displace some existing farmers, so investments in downstream value added logistics and processing also serve as an important job replacement mechanism.
Building long-term partnerships within and between clusters of production, processing and service-oriented agribusinesses will also help to create a sense of scale and viability that facilitates the participation of financial investors and service providers in agricultural development along the corridor. The structured interaction of producers, processors and service providers serves as a risk mitigation tool for banks and financial institutions that are normally inclined to stay out of agricultural projects. Successful farms with reliable purchase agreements with producing suppliers, for example, provide a more attractive to banks than farmers selling into traditional markets. Where the riskier elements of project finance are still prohibitive for commercial lenders and investors, there is also an important role for development finance institution, such as the World Bank, AfDB, and Islamic Development Bank, as well as impact investors such as Doreo Partners and Grofin, working in a coordinated way with commercial investors.

In order for all of these investments and transformations to be viable, state and federal governments must play their role in directly providing or incentivizing private investment in the energy, transport, warehousing, irrigation and communications infrastructure, as well as services such as health and workforce development, on which successful businesses are built. Government and donor partners will also have an important role to play in planning and implementing constructive dialogue around issues of environmental and social sustainability of projects along the corridor.

STRUCTURE OF THE INITIATIVE

The above vision requires a level of public-private coordination with respect to agricultural development that has eluded Nigeria in the past. The corridor construct provides a tangible platform for the collaboration and there is already some precedent for corridor-level collaboration with the LAKAJI Corridor Management Group (CMG). The CMG is already working to address governance issues weighing down corridor efficiency and will be an important player with respect for larger-scale infrastructure planning. It does not, however, have a mandate to focus on agricultural development.

As the centerpiece of a Lakaji Agricultural Growth Corridor initiative, stakeholders should consider the formation of an Agricultural Development Group (ADG) alongside the CMG that would serve as a platform for collaboration between public and private institutions investing in projects along the corridor. The ADG would serve in an advocacy and coordination capacity, improving the investment environment along the corridor and attracting new investments (domestic and international). The “investment blueprint” outlined in this assessment report provides a starting point for investment attraction efforts and points to where public investments are needed.

The ADG should be as broadly representative the key actors implicated in the vision as possible, drawing members from:

- Private companies across the full spectrum of sectors - farming, processing, packaging, trading, import & export, shipping, ICT providers, etc.
- Banks and other financial sector stakeholders
- Each of the concerned State Governors and/or their representative; drawn from the State economic development team, to include reps from State Ministries of Agriculture, Transport, Investment, Export Promotion
- Representatives from the Federal Ministries of Trade & Investment, Agriculture, Transport and Public Works
• Representatives of National Trade Associations such as Nigerian Association of Manufacturers, constituted of private companies as members
• National Para-Statals such as the National Shippers Council

The ADG would also need to liaise closely with the SCPZ initiative of the Ministry of Agriculture in clustering investments and with the “Community of Agricultural Stakeholders of Nigeria” (CASON) headed by Emmanuel Ijeweri.

In terms of the structure of the ADG itself, it is important that it features a smaller, but inclusive executive body, as well as an operating secretariat. The initial membership would constitute the Executive Committee to whom the Secretariat will report as it builds out its broader membership and programs. It should always be remembered that in advocacy groups of this sort, the strength lies in properly managing the strength and influence emanating from as large and powerful a group as possible with a respected executive body. The ultimate power of the group flows from the perceived strength of the general membership.

One of the most difficult aspects of advocacy groups such as this, is assuring sufficient membership satisfaction in what it advocates and delivers. The only way it will be sustainable without donor support is for a sufficient number of private companies to become members and willing to pay dues because they feel that they are getting something out of the initiative, either in the form of advocacy to improve the business environment they operate in, or in physical improvements to the corridor.

Based on the experiences in East and Southern Africa, it may prove useful to envision a “catalytic fund” as part of the overall LAKAJI Agricultural Growth Corridor initiative. In the Nigerian context, a catalytic fund could play a useful role in:

1) Financing of project preparation and structuring on a cost-share basis – this will likely require soft funding from donors or government institutions, which could be targeted at specific value chains or project profiles that meet the particular requirements of their mandates. The goal of project preparation grants will be to move projects from a developmental or blue skies phase to a point where they are investment ready.

2) Consolidation of the myriad financing options available to agricultural entrepreneurs – in addition to a window for project preparation grants, the catalytic fund could serve as a consolidator of investment plans for consideration by multiple financiers, simplifying the process of seeking funds for project promoters and providing access to a vetted pipeline of projects for financiers. This function would also promote syndication of transactions among financiers affiliated with the fund, creating a risk-sharing mechanism that makes projects more viable.

A fundraising effort is probably not necessary in the case of Nigeria. There are sufficient Nigerian and international sources of project finance and agricultural short-term lending for properly studied, prepared and structured deals. By properly “preparing” and “presenting” projects, the catalytic fund should be able to create a pipeline of deals that are attractive to commercial banks, DFI's and impact investors to provide the larger scale project financing required.

Where startup capital may be required is in the area of project preparation. An initial $5 million of matching grant funds would allow the catalytic fund to build a healthy pipeline of initial projects based on the blueprint provided in this report. If grants are limited to a maximum range of $200,000, which would
allow on a cost shared basis covering up to a $400,000 feasibility study, that would cover the upper range of the size projects envisioned in the blueprint. Assuming an average $100,000 per grant and 20% of the Fund set aside for managing it and covering specialized short-term consultancy requirements, an initial project preparation window at $5 million would support up to 40 investments.

Having laid out a vision for the LAKAJI Agricultural Growth Corridor initiative, below are two options for organization and governance structure that stakeholders may consider for tying together the ADG and the CMG:

**Option 1: ADB and CMG under one governing structure**

**PROPOSED GOVERNANCE STRUCTURE**

**Option 2: Two parallel structures for the AGD and CMG**

**PROPOSED INSTITUTIONAL STRUCTURE**
CONCLUSIONS AND NEXT STEPS

Nigeria has all the potential and motivation to become food self-sufficient again, while creating a more inclusive agricultural economy that provides employment opportunities for its growing population. The country faces none of the more complex barriers (limited financial, natural and human resources) suffered by many of its West African neighbors. In short, the time is right for Nigeria to align its sizable investors and motivated government into a constructive dialogue to meet the agribusiness challenges of the decades to come. This “investment blueprint” provides an initial set of existing opportunities to assist in jump-starting this process. To continue this discussion, USAID’s NEXTT project will host a meeting in Nigeria in July 2013, to bring together stakeholders in this process and review the findings of this assessment to develop next steps.
## ANNEXES: SPREADSHEET OF INTERVIEWS HELD

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*Doesn’t ship Ag products