

# Africa's Agricultural Transformation Opportunity

Building agricultural ecosystems can boost social cohesion, drive beneficial continental and global trade, and create millions of jobs for Africa.



# The Case for Change

There are, essentially, two truths today about African agriculture: significant progress has been made, and there is potential for much more.

Several figures point out the progress. Agricultural production has increased 160 percent over the past 30 years, far above the global average of 100 percent, although lagging South America (174 percent) and Asia (212 percent). Eighteen Sub-Saharan African countries have reached the Millennium Development Goal's first target of halving the proportion of people who live in poverty. Country-level programs (the Ethiopian Agricultural Transformation Agency is one example), cross-border initiatives (such as the Comprehensive Africa Agriculture Development Programme), and pan-African groups (such as the African Development Bank, the African Union, and the New Partnership for Africa's Development) have all played important roles in these advances.

Africa's room for more growth remains vast, however. The continent remains a net importer of food, even though it has 60 percent of the world's uncultivated arable land, and production has struggled to keep pace with a fast-growing population.

To meet the needs of the 2 billion population expected in Africa in 2050, agriculture is the key. Agricultural transformation will build social cohesion, drive beneficial continental trade, provide a platform for sustainable exports to the rest of the world, and, most importantly, help create millions of jobs while pulling subsistence farmers out of poverty.

## What Has Hampered Africa's Development?

Many factors have hampered Africa from reaching its full potential. As its population has doubled overall and tripled in urban areas in the past 30 years, agricultural production and food security have had to keep pace. Africa is the only continent where the absolute number of undernourished people has increased over the past 30 years.

There are many reasons for the challenges, but three in particular stand out.

**A multitude of (somewhat uncoordinated) initiatives.** There are many great initiatives, with local and foreign funding, that aim to enhance the state of agriculture in Africa. However in

### **A.T. Kearney and Grow Africa**

**A.T. Kearney's association with World Economic Forum has, in the past three years, led to extensive engagement with Grow Africa. The Grow Africa Partnership was jointly founded by the African Union, NEPAD, and WEF in 2011. Grow Africa works to increase private-sector investment in agriculture, and accelerate the execution and impact of investment commit-**

**ments. In its first four years, \$10 billion in private-sector investment has been pledged, and more than \$1.8 billion implemented, benefiting 8.6 million smallholders and creating more than 58,000 jobs.**

**Since 2013, A.T. Kearney has supported Grow Africa on a pro-bono basis. Our involvement in Grow Africa has included,**

**among other actions: co-developing the Gap Analysis Tool for Agriculture; supporting program management of in-country, commodity-related supply chain assessments, such as maize in Kenya; assisting Grow Africa with transition planning in its move from WEF to NEPAD; and developing a digital strategy for Grow Africa's online platform.**

many cases these programs are fairly uncoordinated, often have overlapping mandates, and, to a certain extent, compete against one another for funding and private investments. Pan-African coordination and focus is critical to the future.

**Good ideas but not enough implementation.** Forests have been harvested to produce the paper to document all of the strategies that have been developed. Through the years, countless commitments have been made and plans have been developed. Although progress has been made, now is the time for this to be all translated into concerted action.

**Insufficiently developed ecosystems.** The ecosystems required to develop a solid agricultural market in Africa are often underdeveloped in terms of political commitment, the quality of government, infrastructure availability, and regulatory frameworks, among other factors. There is a need for a true commitment among governments and stakeholders to put the basics in place to make these ecosystems happen.

## Africa's Agricultural Transformation at Three Levels

The value chain from farmer to market is central to any potential transformation of Africa's agriculture. Transformation at three levels can bring broad benefits to this farmer-to-market value chain:

**Farmers.** Smallholders contribute up to 80 percent of Sub-Saharan Africa's food supply, according to the UN's Food and Agriculture Organization, and Africa has an estimated 33 million smallholder farms, according to the International Finance Corporation. Increasing farmer capabilities would increase Africa's output and, as a consequence, help solve Africa's poverty and malnutrition crisis.

Farmer-level transformation should seek to increase yields, reduce post-harvest losses, improve market access, and increase product margins. Transformation requires granular-level interventions that form the basis for sustained economic and societal success. Enablement in areas such as education, infrastructure, water management, and regulations is crucial as well. Public-private initiatives can ensure capability-building support and the development of structures in areas like financing.

These initiatives are, by nature, very local. However, they can be facilitated from a pan-African perspective in three ways:

- **Best practice sharing.** Providing a best-practice clearinghouse for farmer associations and governments.
- **Support of governments.** Aiding governments in skills development and coordinating cross-country initiatives.
- **Public-private partnership initiatives.** Creating a first "port of call" for large corporate and institutional investors to ensure investments' effectiveness and coordination.

**Markets.** Farmers need access to markets to earn their fair share of the profits. Good markets, in turn, provide food security for the population and facilitate Africa's agricultural self-sufficiency. They are at the center of an agricultural ecosystem that forms the basis of sector development.

Making markets work is a supply chain infrastructure and information issue. Governments and private investors need to ensure that sufficient roads, warehouses, processing facilities, and other

infrastructure are in place to get products to increasingly urbanizing markets. Farmers need access to information to deliver products to the markets that offer the best price advantages.

At the regional and country levels, government and market actors need to create the markets that allow the trade of homegrown products. These initiatives in general cut across the wide spectrum of crops and products produced.

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## Market development in Africa must focus on **building agricultural ecosystems.**

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Markets are often developed at country level, but a pan-African strategy would include the best practice sharing and public-private partnership support we highlighted for the farmer level. Additionally for markets, enhancing inter-African cross-border trade would help facilitate the enablers that remove trade barriers and inefficiencies between countries and free up the traffic of agricultural produce across Africa (see sidebar: Cross-Border Trade).

**Clusters (macro).** With agricultural ecosystems in place in this final, macro level of transformation, Africa can become a major agricultural player globally, facilitating the export of its products outside of Africa. Cluster-specific initiatives are typically based on product availability and production competence. Better supply, from farmers who have learned about and invested in improving their yields and product quality, helps build a stronger market.

Dairy exports from New Zealand are one successful example of the development of a world-class ecosystem. Years ago, the New Zealand Dairy Board created a platform for best-practice sharing among its members to improve productivity and product quality and actively created export markets for excess products. Some of the Dairy Board's activities became part of a new cooperative called Fonterra—now one of the leading global milk processors and dairy exporters, with roughly 22 billion liters of milk produced annually. Fonterra also produces more than 2 million tons of dairy ingredients, specialty ingredients, and consumer products annually—95 percent of which are exported. This allows New Zealand to punch above its weight in the global dairy market.

Cluster-specific export initiatives like Fonterra should be a government goal in Africa. From a pan-African perspective, identifying sectors and coordinating initiatives across countries are essential steps to a transformation strategy.

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### Cross-Border Trade

In 2011, intraregional trade in Africa totaled \$133 billion—just 11.8 percent of the level of trade outside its own borders. By comparison, 60 percent of European trade is intra-continental.

The first reason for this is poor transport infrastructure. Most

rail networks in Africa are more than 100 years old and have not been significantly upgraded since their original construction. Road networks are also poor.

The second reason is the multitude of non-harmonized trade agreements and regulatory frameworks. Africa has 14 different trading

blocs, with most members belonging to two or three. Steps to address this include the Tripartite Free Trade Area (TFTA), which aims to consolidate three existing blocs (SADC, EAC, and COMESA) into a single new zone comprising 26 countries and more than half of the continent's GDP.



# Building Pan-African Ecosystems: Financing, Sustainability, and Government Enablement

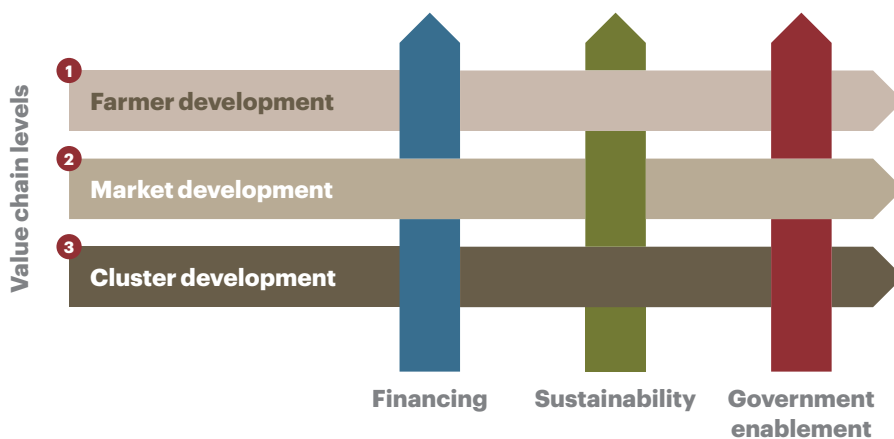
African smallholders do not yet benefit from best-in-class global farming practices. They are often trapped in a vicious cycle that prevents them from improving their productivity and income.

These farmers are, however, the fabric of African rural societies. Their future success is crucial as Africa's population grows and urbanizes.

Strategies are only as effective as the change they bring about. Truly transforming African agriculture at the farmer, market, and cluster levels depends on three key levers: financing, government enablement, and sustainability (see figure 1).

Figure 1

## Africa's agricultural transformation depends on three key levers



Source: A.T. Kearney analysis

**Financing** will fund the improvements in the value chain on both the micro (farmer) and macro (export) levels. **Government enablement** means putting in place the regulations and structures that foster a strong business environment—for example, giving farmers title to the land they use, enabling them to use that land as collateral for loans for investments that can build. The development will become **sustainably effective** through the close interaction of public and private enterprises. Good governance is a prerequisite to ensure funds are applied in an effective and efficient manner.

Farmer development leads to getting better products to the market. If markets are developed and allow for transparent pricing, the farmer gets a fair price and can become self-sufficient. As more farmers gain access to markets, it creates an ecosystem with enough resources to invest back into improved agricultural processes, which in turn improves yields and lowers losses. This will then facilitate clusters of best-in-class agricultural practices by crop and region that can succeed in the export market. All in all, it's a self-propelling cycle that leads to advances and

supports development of aggregation constructs (such as cooperatives), which help farmers jointly invest in productivity improvements and facilitate access to market (see figure 2).

Eight specific actions will optimize and grow the entire value chain. These are:

- Bring innovation to existing farm dynamics
- Improve access to markets
- Apply technology to increase market transparency
- Enhance farmer financing models
- Use targeted government enablement
- Empower women
- Empower youth
- Encourage sustainable agriculture practices

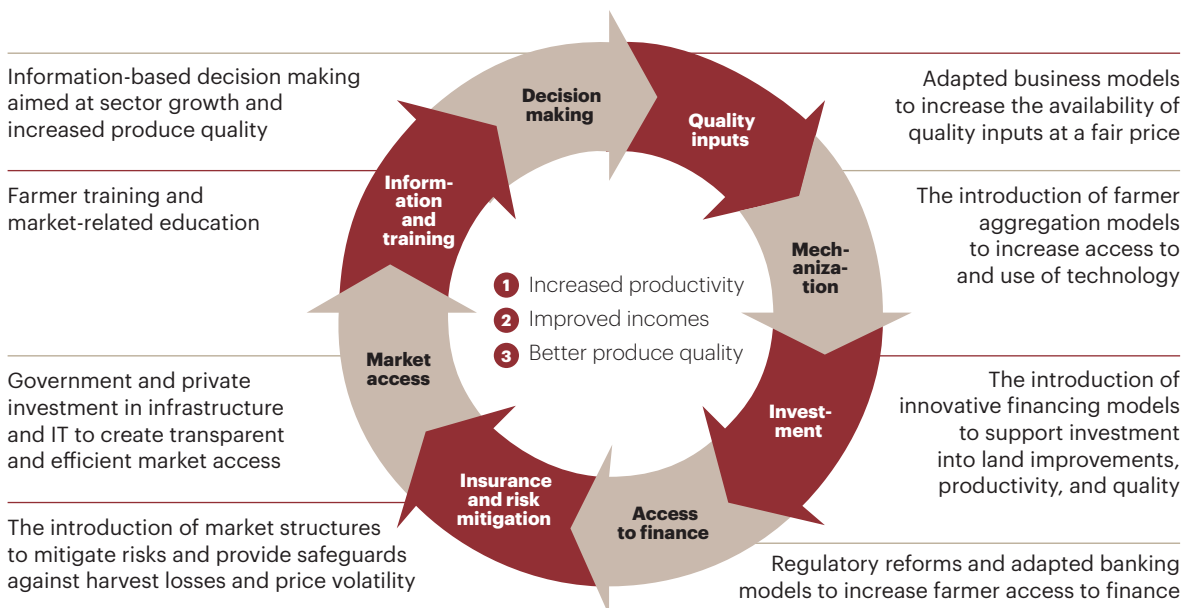
The following sections provide a brief overview of how Africa can move forward with these eight actions.

### Bring innovation to existing farm dynamics

Smallholders have to understand a complex set of capabilities to bring the highest returns. These include mechanization (equipment for soil preparation, planting, cultivating, harvesting, and processing), irrigation, inputs (seeds, fertilizer, and the like), crop protection, product quality management, post-harvest protection (early processing, storage facilities, siloes, and warehouses), transportation, and direct access to market.

Figure 2

### African smallholders have the opportunity to increase productivity, income, and produce quality



Source: Grow Africa

The Gap Analysis Tool for Agriculture (GATA), developed jointly by Grow Africa and A.T. Kearney, provides farmer associations with a best-practice framework for smallholders, allowing for country- and crop-specific assessments of how they can improve productivity. The underlying objective of the GATA is to identify opportunities to increase farmer profitability and productivity by:

- Conducting a detailed analysis of value chains by region or country and by crop
- Enabling farmers, farmer groups, agricultural departments, and agencies to compare their practices against global and regional benchmarks
- Identifying agricultural value chain gaps and the investments required to close gaps
- Calculating the viability of smallholders closing these gaps
- Determining and providing visibility to decision makers and investors on which strategic interventions assure the highest benefits

### Improve access to markets

One often-overlooked success factor is the structure of market incentives across the value chain from production to market (see figure 3). Unequal distribution of market power and insufficient access to the profit pool at various stages can have huge implications for farmers in low-income countries. Improving market access and transparency can balance market power, especially for smallholders.

Modern agricultural value chains have stringent requirements regarding volume, quality, and timely delivery. Combined with a lack of information on prices and selling opportunities and an abundance of “roadside traders” seeking high margins for low value added, smallholders generally find themselves with limited negotiating power and little incentive to grow beyond their current circumstances and to obtain their fair share of the profit in the value chain. Improving farmers’ information bases and introducing value-added market intermediaries are a prerequisite for farmer success.

Figure 3  
**The typical agricultural value chain**



Source: A.T. Kearney analysis

Many smallholders also lack physical and economic access to lucrative markets for their crops because they are physically isolated by distance, poor roads, and lack of access to adequate transport, and constrained by small crop quantities available for sale, inconsistent levels of quality, a need for immediate payment, and limited storage capacity. This highlights the need for public-private initiatives to build a physical supply chain (with storage, processing, and transport capabilities) that allows for quality products to be supplied to the markets in use.

With unreliable information on production trends and prices and a lacking infrastructure, few smallholders engage in demand-driven or market-informed production, leading to inadequate production planning and cycles of production surpluses and deficits, which in turn lead to fuel price volatility.

One solution to these problems comes from targeted government enablement, which gives smallholders greater market access and information (see sidebar: Ethiopia's Commodity Exchange).

### **Apply technology to increase market transparency**

Ironically Africa has all the opportunity to jump the development curve and become a leader in applying technology to smallholder farming. The continent has high cell phone penetration and even in rural areas connectivity is good. Advanced cell phone applications (like banking,

### **Ethiopia's Commodity Exchange**

**Through government enablement, the Ethiopian Commodity Exchange (ECX) has assisted smallholders with market access and information. It is also a good example of public-private partnerships benefiting the country.**

**Before ECX, agricultural markets had high costs and high transaction risks, they were constrained by buyers and sellers afraid of being cheated, and trade was isolated from global markets, with only one-third of output reaching the market. Commodity buyers and sellers traded only with those they knew. Trade was done on the basis of visual inspection as there was no assurance of product quality or quantity. Smallholders came to market with little information and were at the mercy of merchants in the nearest markets, largely unable to negotiate better prices or reduce their market risks.**

**ECX was able to achieve the following:**

- **More buyers and sellers came together to trade and were assured of quality, delivery, and payment.**
- **Market integrity was improved by guaranteeing product grade and quantity and by operating a system of daily clearing and contract settlement.**
- **Market efficiency improved through a trading system in which buyers and sellers could coordinate on the basis of standardized contracts.**
- **The market was more transparent because market information was available in real time to all market players.**
- **Risks were better managed by ordering contracts for future delivery, providing sellers and buyers a way to hedge against price risk.**

- **Farmers' profits increased 60 percent.**

**To date, ECX has reached out to more than 2.6 million smallholder farmers, with average daily sales between \$3.5 million and \$14 million. Eleven partner banks conduct clearing, and its warehousing infrastructure includes 19 delivery sites with 300,000 tons of storage capacity, where 5.7 million bags per year are graded, handled, stored, and delivered. Market information is disseminated quickly and accurately to 90 rural ticker boards, a website, and mobile messaging.**

**The broader information access gives smallholders information that helps them to decide which inputs to purchase and from whom, how to plan for weather changes, and how to distinguish between disease and pests and respond appropriately.**



weather information, and market data) can help smallholders tremendously in their decision making and in improving their productivity.

There are many examples of innovative uses of state-of-the-art technology that needs to be scaled across Africa (for example, small soil-testing devices that send data to a lab in Europe, which in turn provides soil-specific fertilizer advice by text message to the farmer).

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## **State-of-the-art technology enablement** can help farmers jumpstart productivity improvement.

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The interests for non-traditional private investors and African smallholder farmers go hand-in-hand. Africa provides a massive opportunity to test and commercialize data technology innovations and farmers are longing for the data that provides them with productivity and market opportunities. In specific, non-traditional agricultural sector players such as banks and telcos could step into this field and open new markets for themselves.

### **Enhance farmer financing models**

Affordable access to financing remains one of the most significant barriers to investment in agriculture. Access to financial services is critical for smallholders to invest in productivity, improve post-harvest practices, smooth household cash flow, enable better access to markets, and promote better risk management.

In addition to formal financial institutions, input suppliers and product buyers often act as alternative financing channels for commercial and semi-commercial smallholders and cooperatives. Formal financing institutions are often hesitant to lend to commercial smallholders for a variety of reasons, primarily related to the scale of risks they face, including the heterogeneous nature of smallholder farmers, irregular cash flows caused by seasonality risks, systemic risk of flood, drought, and plant disease, and the lack of viable risk mitigation tools such as guarantees, asset collateral, and insurance.

Financing institutions also struggle with loan processing and disbursement, customizing products for individual circumstances, and providing non-financial services, such as financial education, that will improve farmer success rates but are not core to the business.

Farmers' risks can vary widely. They are generally lower when farmers have stronger relationships with buyers, as this can bring techniques such as shared credit screening, monitoring, and collection, and the use of alternative collateral (such as sales contracts). When farmer-buyer relationships are weak, predatory lending becomes a bigger risk, and smallholders tend to be more focused on subsistence farming.

Expanding lending to smallholders depends on several factors:

- Gaining detailed client knowledge at the smallholder level
- Offering flexible loan terms that are adaptable to the diverse profiles of smallholders

- Employing diversified risk management tactics, such as cooperatives and asset pooling
- Training risk officers to better identify and manage smallholders' risks (see sidebar: Banco ADOPEM)
- Re-engineering and adapting processes to ease applications and improve disbursement speed

### Use targeted government enablement

In addition to addressing smallholder needs directly, government can take steps to maximize returns on investment by creating an enabling environment for farmers in the following areas: land access, availability, and security; infrastructure; water management; education; labor; health and housing; security; investor environment; market structure; and public-private partnerships (see sidebar: ALLE: The Ethiopian Cash and Carry on page 10).

The right enablers can have an outsized impact on agricultural outputs. This is exemplified by sustainable and equitable access to water.

- Promoting techniques such as on-farm water management, rainwater harvesting, and conservation can potentially triple crop yields.
- Improving rural water infrastructure can improve productivity, especially for women who spend hours a week collecting water for domestic and agricultural use.
- Water capture and storage solutions can mitigate the impact of rainfall uncertainty.
- Well-negotiated and managed private-sector presence in commercial agriculture can ensure fair access to water for smallholders.

### Empower women

Many studies suggest that female empowerment can speed up development, as women reinvest their incomes in their families. For example, in Brazil, when income is a mother's responsibility, a child's survival probability increases by 20 percent; when the same happens in Kenya, a child is about 17 percent taller.

### Banco ADOPEM

**The Dominican Republic's Banco ADOPEM is a case study in how more financing can be extended through better training of risk officers and alternative risk management techniques.**

**ADOPEM finances farmers with a minimum of two years of general farming experience and a minimum of one year of experience cultivating the crop to be financed. The bank assesses farmers' payment**

**history through a credit bureau, but also checks social and business references of the credit applicant in the community. Credit officers spend 90 percent of their time in the field visiting and observing clients to ensure that crops are planted on time using correct techniques. Credit officers also ensure that they make regular visits to farmers depending on crop type and cycle to promote both visibility**

**and support among the smallholders.**

**The concept works for farmers and the bank for one key reason: the bank is willing to adapt its traditional business model to become an active participant, at the grassroots level, in the community and in the agricultural value chain.**

If women worldwide had the same access as men to productive resources, yields could increase by 20 to 30 percent. The FAO estimates that gains in agricultural production alone could lift as many as 150 million people out of hunger.

Most people today recognize the opportunity to close the gender equality gap; however, words of support only go so far. Recent work by the World Bank and the ONE campaign point to several barriers that women currently face in agriculture, including struggles finding adequate labor on their farms, unequal access to inputs, fair access to quality farmland, access to knowledge and training in farming methods, and a long-standing gender gap in education.

### ALLE: The Ethiopian Cash and Carry

**Government can do more than merely improve basic infrastructure, as the ALLE cash and carry project from the Government of Ethiopia shows.**

**Ethiopia, population 85 million and growing, was facing food price inflation of more than 30 percent per year. It had an underdeveloped consumer goods sector combined with a complex base of small retailers (including some 20,000 in Addis Ababa alone). Collusive traders controlled market prices and product supply to maximize their own profits. And under-capacity and inefficient logistics**

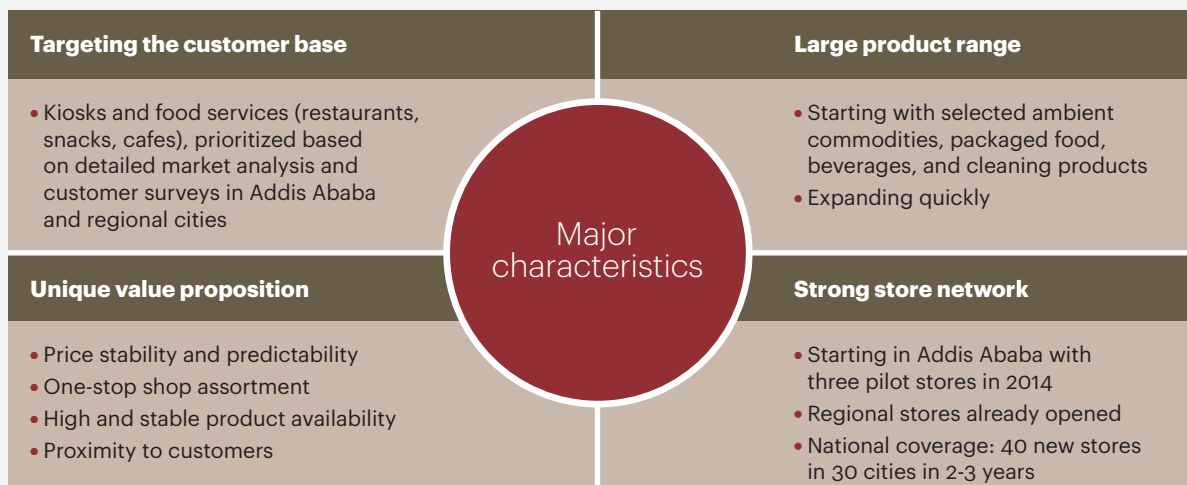
**increased prices and created high product losses.**

**A.T. Kearney supported Ethiopia's government in establishing ALLE, the nation's first modern wholesale cash and carry chain. The comprehensive strategy covered all population centers, featuring more than 35 stores in 27 cities within two years. The project also included the design of a strong supply chain, with more than 500 SKUs negotiated and listed from approximately 100 domestic and foreign suppliers.**

**ALLE offers suppliers strong support for investing into**

**Ethiopia's FMCG manufacturing base, payments reliability, unprecedented cross-country reach, and greater efficiency and limited internal margins to optimize value-for-money. Customers attain attractive wholesale prices with low price fluctuations, a broad, flexible product range, stores in close proximity, and a supply chain that can reliably offer products across seasons (see figure). The benefit for farmers is that they gain access to a more stable and modern market for their produce, with demand and price stability and predictability.**

Figure  
**ALLE: A snapshot**

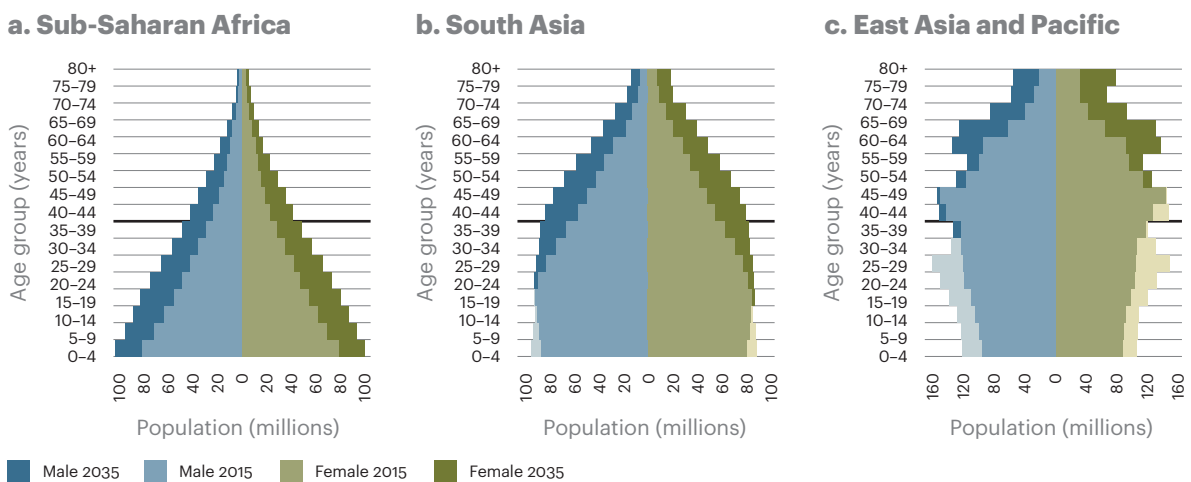


Source: A.T. Kearney analysis

## Empower youth

Sub-Saharan Africa's population dynamics offer a unique opportunity, if managed well. Half of the population is younger than 25; every year between 2015 and 2035 there will be a half-million more 15-year-olds than the year before (see figure 4). This demographic dividend could radically accelerate Africa's transformation if properly harnessed.

Figure 4  
**Africa's population is young and growing fast**



Source: African Development Forum

Over the next decade, however, as few as one in four Sub-Saharan African youth will find a wage job, and only a fraction of those jobs will be “formal” jobs in modern enterprises. Thus, agriculture will be central to providing meaningful and rewarding work. More than two-thirds of the young people who work in rural areas already work in agriculture, and most will remain there, even if the non-farm sector develops rapidly.

## Transforming African agriculture is key for managing Africa's demographic surplus.

As such, it will be important to help youth see farming not as an occupation of last resort, but rather one of opportunity and skill. Broadly speaking, agriculture offers three potential pathways for rural youth: full-time work on family farms; part-time farm work, combined with running a household enterprise (which can include the sale of farm services or inputs); and wage work.

Several common constraints affect youth in agriculture: credit and financial services, land policies, infrastructure, and skills. Of these, only skills needs to specifically address youth at this point, as the others affect the wide pool of smallholders, regardless of age.

In some countries, agricultural vocational institutes have traditionally provided these skills, but these institutes have mixed records of accomplishment; there is often a disconnect between academic teaching methods and the need for on-the-ground practical training. Well-thought-out extension programs and farmer-field schools have a bigger impact, especially if these are combined with support programs to entice youth to seek a living in farming (see sidebar: South Africa's GrowthShoot).

### Encourage sustainable agriculture practices

There are two simultaneous objectives here: improving the lives of Africans while minimizing environmental impact and ensuring that natural capital is not depleted. These objectives can be at odds with one another—in truth, agriculture is both a contributor to and victim of climate change—yet they can also be complementary.

Sustainable farming, when done well, adds immediate value to the farmers as it increases the longevity of their operations and increases the value of their product (see sidebar: Cassia Co-op: The Sustainable Cinnamon Producer on page 13).

## Cluster Development: Ensuring Viable Exports

With ecosystems in place, agriculture and agribusiness are huge economic opportunities for Africa, particularly if they can become revenue generators through an export model and enhance the continent's balance of trade through value-adding operations. According to the World Bank, agriculture and agri-business will by 2030 be a \$1 trillion industry in Sub-Saharan Africa, up from \$313 billion in 2010.

Agribusiness can help jump-start economic transformation through the development of agro-based industries that bring much-needed jobs and incomes. Successful agribusiness investments in turn stimulate agricultural growth through new export markets. These markets

### South Africa's GrowthShoot

**Two years ago, two South African women started an agricultural incubator called GrowthShoot, which encourages collaboration between unemployed youth with interests in agriculture and smallholder farmers. The goal is to increase food security, youth employment, and local economic development by bringing agricultural opportunities to under-resourced communities. They started with the development of a mobile and e-learning program that aims at teaching the young aspirant farmers about the commodity they will farm from a practical and theoretical perspective**

**together with entrepreneurship skills.**

**GrowthShoot partners with existing organizations to set up incubators that improve agribusiness business management skills, foster smallholder farmer development, support agricultural R&D, and create a local market for farm products. Down the road, the organization hopes to make agreements with national and export markets and serve as an intermediary between the market and producers.**

**South Africa's youth unemployment rate is more than 35 percent,**

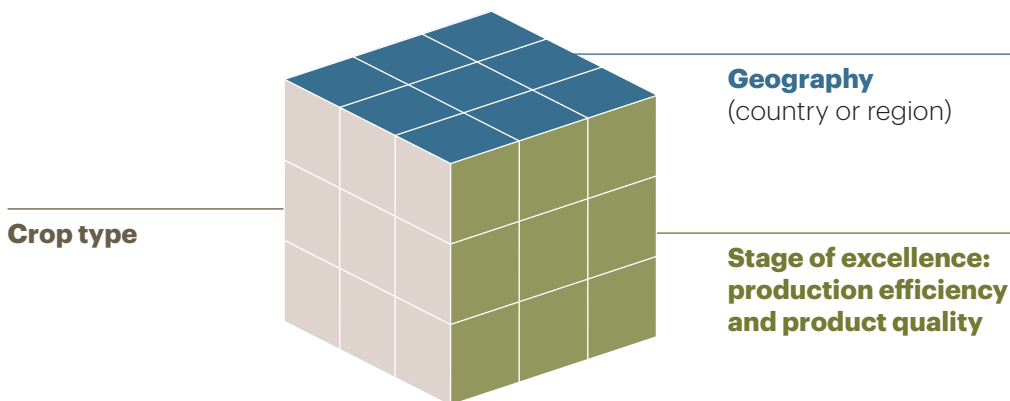
**and food insecurity is a problem in rural areas. In one district of more than 736,000 people, GrowthShoot's programs are inspiring and training youth for the agricultural sector, with the multi-pronged aim of eventually replacing the aging farmer population, boosting agriculture's standing as a viable job option and economic growth source in rural areas, and increasing the ability for smallholder farmers to create income opportunities by means of improving market access and skills development.**



play either at the high-volume, low-value end of the market, or, ideally, they retain most of the value in Africa by incorporating value-added steps and local beneficiation in the value chain (see sidebar: Ready-to-Eat Pineapples from Ghana on page 14).

Conducting a cluster review can help countries identify more value-retention opportunities. The challenge is identifying what crop types will be suited to export, where those crops are currently cultivated, and the current stage of excellence by crop (see figure 5).

Figure 5  
**A cluster review looks at three crucial areas**



Source: A.T. Kearney analysis

### Cassia Co-op: The Sustainable Cinnamon Producer

About 85 percent of the world’s cinnamon originates from Indonesia, and most of it comes from one unique area on the island of Sumatra, called Kerinci (Jambi province). This cassia plantation, the largest in the world, is known for its high-quality raw material. Traditionally farmers sell their produce, the dried bark of a cassia tree, to traders at the roadside.

Cassia Co-op, the first cinnamon processing and exporting company, was set up in Kerinci, at the heart of the cinnamon plantations, and built with sustainability at its core.

It is exporting cinnamon products from Indonesia while removing middlemen from the supply chain. As a result, it is

linking farmers with end users and vice versa, helping to create transparency and interdependency. Cassia Co-op creates a fair and efficient supply chain while having a sustainable positive impact in Sumatra.

Cassia Co-op’s value proposition is fourfold: It introduces sustainable farming in rural areas; provides farmers with increased income from their products; supplies the market with organic produce; and provides its shareholders with responsible returns.

Key achievements and strategies include:

- Providing the world’s first Rainforest Alliance Certified cinnamon

- Achieving organic certification for its end product
- Building farmers’ capacity by better understanding the end product that comes from their produce, and teaching them the virtues of quality control, intercropping, and planned harvesting
- Paying farmers a bonus for sustainable products, in the form of profit-sharing certificates
- Aiming to use 100 percent of the cassia tree (not just the bark), for example through oil extraction and handicraft

Africa has traditionally struggled to compete as an agricultural exporter, starting with the challenges we outlined earlier in this paper. Erratic legislation impacting levies on seeds, fertilizers, and agriculture processing equipment, and duties on exporting agricultural output, can hamper exports.

These key constraints vary by country and value chain. As such, it is instructive to look at select African countries and how their export value chains differ, and how the right solution can bring export success to Africa.

**Rice in Senegal.** Rice has in recent years become Africa's largest and fastest-growing import, valued at \$3.5 billion, or nearly half of total consumption, in 2009. Urban consumers are seeking more storable and easily prepared foods, and higher-income consumers are showing a distinct preference for higher-priced imported rice with aromatic qualities. Given the size of domestic markets and good rice-growing conditions in Western Africa, several governments have begun raising import duties on rice to boost local agriculture and production. The improved policy incentives, coupled with higher world prices, have brought sharply higher local production in some countries, with private partnerships taking control of elements in the value chain.

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## Cluster reviews help countries identify value retention opportunities.

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To determine global competitiveness, Senegal benchmarked value chain costs against the world's leading rice exporter, Thailand, for both white rice and aromatic rice. In Senegal, rice from the Senegal River Valley is produced under irrigation and partial mechanization delivers the crops at costs only slightly above those in Thailand. With relatively efficient milling and transportation, local rice can be quite competitive, even more so if aromatic rice varieties can be produced commercially at the correct scale and quality.

Senegal has made major progress increasing yields to 3.6 tons per hectare nationally (and more in irrigated areas). Competitiveness has been held back, however, by the difficulty of accessing

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### Ready-to-Eat Pineapples from Ghana

Pineapples are traditionally grown in tropical areas, harvested at the correct ripeness, and transported to the final country for processing, distribution, and sales. Globally, the pineapple agriculture market is dominated by Costa Rica, the Philippines, and Brazil and in these geographies little value is added post-harvest apart from canning operations.

In Ghana, the market for pineapples and other fresh fruits is developed, but much smaller than

global hubs such as Costa Rica. According to the Ghana Living Standards Survey (2009), 170,000 households (2 percent of all) grow pineapples, but not all of them on a commercial basis.

Through a public-private partnership, pineapples harvested today in Ghana are cleaned, sliced into portions, packaged in final retail packaging, and transported the same evening by plane from Ghana to London to be on

supermarket shelves the next morning. This is all at a great premium compared to the price of the traditional pineapple trade.

Farmers receive good wages for their crop, and local women are employed for food processing, alleviating poverty while giving them strong skills. Local logistics providers also benefit from the frequent trips to the airport. In this example, small pineapple exporters are given premium positions in the value chain.

secured, tradable land rights. This discourages significant private investments in irrigation systems, which is key to increasing production to boost exports.

Nigeria is following a similar path in limiting rice imports, developing policies to incentivize local cultivation and allowing for exports to neighboring regions. It is clear that the potential and willpower are there in West Africa for a more effective rice value chain that ultimately can be a solid base of exports.

**Maize in Zambia.** Maize is a crucial food staple in Eastern and Central Africa, with per capita consumption in some countries exceeding 100 kilograms, and feed consumption growing 6 percent annually. Most years, Zambia (133 kilograms per capita consumption) is self-sufficient, but there is substantial room for growth. With more than five million hectares of uncultivated land suited to maize production (nearly 10 times the current area), Zambia could become a breadbasket for its region.

High yield and price risks and a lack of suitable financing and agri-insurance options have constrained further expansion thus far. For now, a handful of large- and medium-sized farms produces more than half of the country's maize; at the other extreme is a huge pool of poor smallholders who do not produce maize at all and struggle to meet their daily needs. Helping these farmers meet their potential is key to bringing Zambia to its full potential.

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## The right clusters are driven by **interactive, iterative, evidence-based analysis.**

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There are a few key steps to make this happen. Transport costs are high, so affordable access to a well-run port is vital for trading any surplus maize. Higher fertilizer costs and limited mechanization result in higher labor costs, so improving mechanical harvesting will have an exponential effect on efficiency.

### **Identifying more clusters in Africa**

Those examples highlight the varied opportunities for Africa to becoming an agriculture-trading powerhouse. The challenge lies in how to increase the portfolio of crops that can be exported at world-class productivity levels.

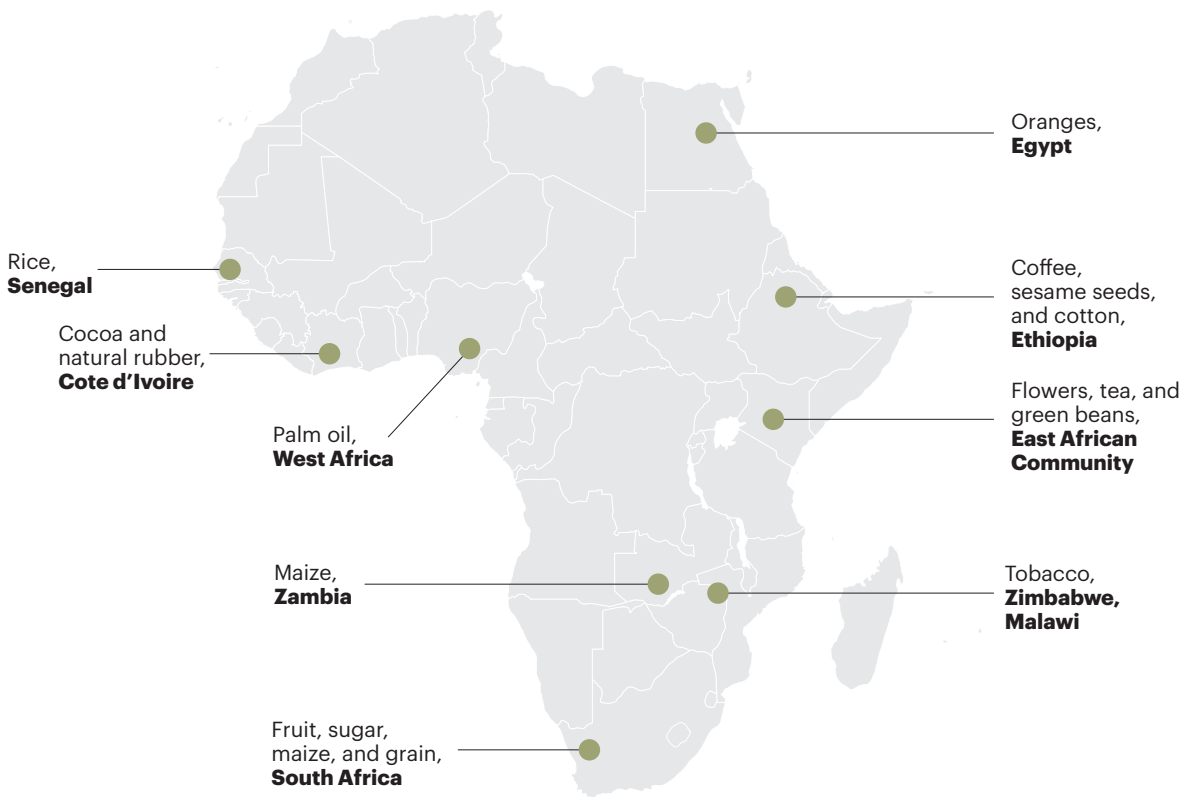
At first, the focus should be on clusters with established comparative advantages and strong market prospects. With resources few and challenges large at first, a strong focus on a few strong locations or value chains offers the opportunity to pilot cross-country collaboration and difficult reforms, demonstrate success, and learn from scaling efforts. It also channels scarce resources most effectively to tackle a critical mass of issues, whereas scattered reforms and public investments may find little success, given the long list of constraints affecting agribusiness. A tight focus on a particular area or value chain may also increase the chances of achieving sensitive and complicated cross-cutting reforms (such as piloting fertilizer and land reforms) and dealing with vested interests between governments and private institutions or investors. Figure 6 on page 16 offers an overview of some of Africa's cluster opportunities.

The right clusters are driven by interactive, iterative, evidence-based analysis in which the main opportunities and constraints are identified through a combination of desk research, expert

Figure 6

**Cluster opportunities across Africa**

**Non-exhaustive**



Source: A.T. Kearney analysis

interviews, and workshops. In general, clusters with competitive advantage and already-proven investor demand are preferable over attempts to initiate new industries in new areas. Key policy reforms need to come before committing to large public investments.

Priorities and action plans will need to be flexible enough to meet unanticipated cluster opportunities, yet also allow for constraints that will inevitably emerge. Finally, and crucially, strong governance and monitoring systems should be put in place to correct or terminate failures but most importantly replicate and scale up successes. It is time for Africa to grow!

## Let's Get Going

A few key numbers highlight the opportunity—and the challenge. To meet growing global food demand, production must increase by an estimated 50 percent by 2030. Sub-Saharan Africa's 33 million smallholder farms—a number that will increase rapidly as the population continues to increase—contribute up to 80 percent of the region's food supply. Improving the odds of prosperity for these farmers lies at the heart of prosperity for African agriculture.

Success at the farmer, market, and cluster levels requires assistance from many sources.

**Governments** need to focus on significantly improving the enabling environment for local agriculture, particularly as it comes to land rights, infrastructure, market access, and elevating women's roles in society.

**Pan-African institutions** such as the African Union can help develop cluster opportunities across the continent and promote intra-Africa trade and best practice sharing.

**The private sector** can help invest with funds and knowhow, understanding that Africa's potential for growth and its untapped arable land offer huge opportunities in spite of the risks. Public-private partnerships can unlock value, as long as both sides share the onus of success.

No longer must Africa go hat-in-hand to feed its vibrant and resourceful population. It can help its own people feed themselves, their villages, towns, and countries. As scale and quality develop, export markets from the continent can flourish, leading increasingly to not just poverty alleviation but wealth creation. As more inhabitants see the promise of a better future in agriculture, many more clusters will be developed, truly making Africa the breadbasket that the world so desperately hungers for.

It can be done. Now is the time to put our shoulders to the wheel.

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