

DIGITAL JOBS IN AFRICA: CATALYZING INCLUSIVE OPPORTUNITIES FOR YOUTH

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The positive economic impact of the Internet is well known. Mobile and Internet platforms have increased access to improved agriculture, education, health, and governance services by otherwise underserved communities. Beyond improving delivery of key social services, Information Communication Technology (ICT) is generating transformative growth – growth that creates sustainable pathways out of poverty.

Digital Jobs Africa (DJA) is a Rockefeller Foundation initiative that aims to impact 1 million lives in six countries in Africa by catalyzing sustainable ICT-enabled employment opportunities and skills training for high potential but disadvantaged African youth, thereby generating social and economic opportunities for those employed, their families and communities.

The initiative is built on the shared recognition that, as Africa's economic growth continues, the digital economy will have a net positive impact on jobs and income generation, particularly for youth. Africa's leading firms, development institutions, and governments are all exploring ways to generate employment opportunities for the millions of disadvantaged youth who are marginalized from the formal workforce each year. DJA focuses on the untapped opportunities that will facilitate the growth of the digital economy in Africa and get these youth into jobs.

As part of this study, Dalberg investigated: (1) where Africa's digital economy will create new employment opportunities; and (2) how like-minded partners can co-invest to maximize the impact of this job creation for disadvantaged youth.

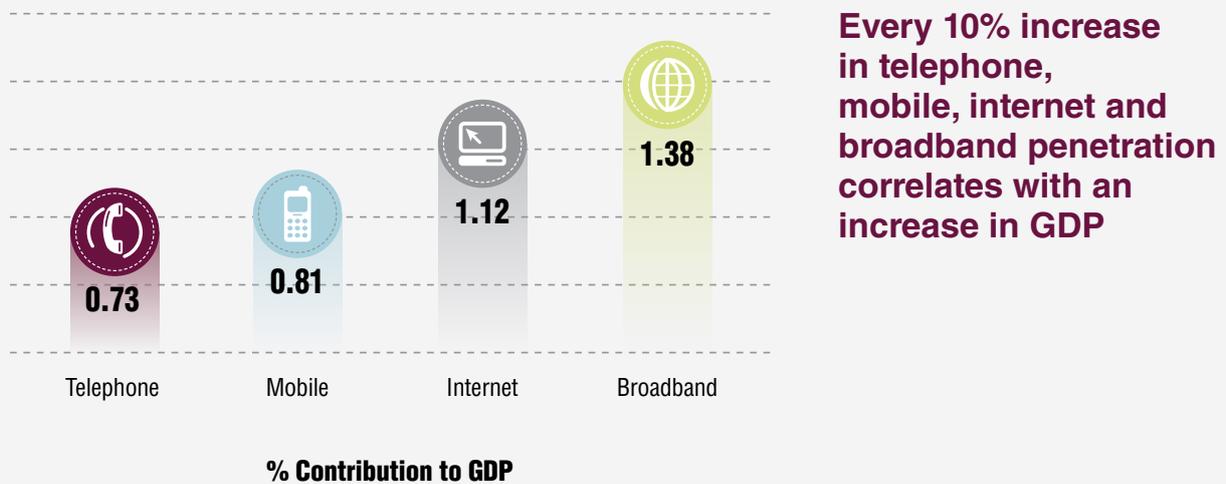
This study provides a sample of the findings and potential opportunities at a regional level. It shines a spotlight on the tremendous potential for digitally-driven job creation in Africa and discusses the opportunities and challenges for investors and stakeholders alike. For further details on country-specific dynamics, please see individual country reports.

AFRICA'S DIGITAL FRONTIER: A DRIVER FOR INCLUSIVE JOBS

ICT – A driver of Africa's next wave of growth

The increased availability of ICT in the developing world has far-reaching economic and social impacts. The World Bank observed that even a 10% increase in telephone, mobile phone, Internet and broadband usage respectively can lead to a 0.73% - 1.38% increase in gross domestic product (GDP), depending on the technology in question.¹ The evidence therefore increasingly points towards a causal link between technology investments and social and economic growth.

Figure 1: Correlation between GDP growth (%) and telephone, mobile, internet and broadband penetration



1 Impact of the Internet - <http://impactoftheinternet.com/smes.html> Economic Growth

In addition to the impact of technology on GDP, technology is transforming national growth in three ways. First, ICT contributes to national growth through the demand for products, services and related skills that did not exist in pre-digital economies. Second, ICT is supporting the creation of the next wave of digital citizens by facilitating access to information and services that was otherwise unattainable. Technology is making it easier to directly and indirectly deliver public services to marginalized groups, provide citizens with access to information, and support government in delivering services more efficiently and effectively. For example, the African Medical and Research Foundation's virtual university in Kenya showed a nine fold increase in the number of nurses trained, and the use of Internet-enabled systems helped Kenya's National Health Insurance program to reduce its operational costs by nearly two-thirds. Finally, Internet-enabled solutions help businesses grow and increase their performance as they become more effective and efficient, increase the scale of their operations, and access markets in ways that they have not been able to before. It is especially small and medium enterprises (SMEs) that have historically been cut off from global and regional markets and information that are able to reap these benefits. A recent study by Dalberg in which 80% of SMEs surveyed believed that the Internet will positively impact both their economic performance and their ability to create jobs confirms the potential benefits of ICT for SMEs. An important characteristic of the type of growth that ICT enables is that it can be transformative and inclusive. This is because ICT enables businesses to engage in a cost-effective manner with those that are socially and economically marginalized, whether as consumers, suppliers, distributors, or employees. Businesses can use ICT to recruit, train, and hire marginalized people; meanwhile, ICT gives such work-seekers much greater job market information, and new levels of access to formal, wage-earning employment.

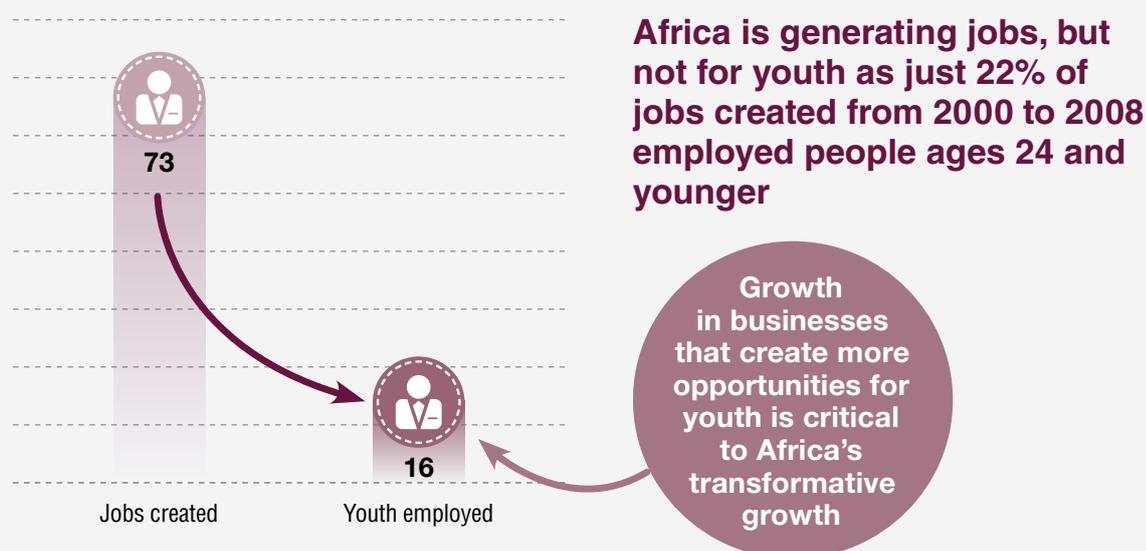
It is clear that the economic and social impact of ICT is far reaching, affecting macro-level growth as well as the functioning of individual SMEs at the micro level. In addition, ICT has an important role to play in the job market in terms of new opportunities that are available and the accessibility of opportunities to those who face employment insecurity.

Africa's critical youth unemployment challenge

Africa is generating jobs, but not enough ... particularly for youth: while 73 million new jobs were created across the continent between 2000 and 2008, just 22% of these went to people 24 years and younger (Figure 2). Today, 60% of Africa's unemployed are youth, and 72% of youth live on less than US\$2 a day. New workforce entrants are more likely to face unemployment or be under-employed. This has serious implications for their longer-term earning potential as work experience and a formal employment history is important in securing future employment. Creating more job opportunities for youth is therefore critical to the transformative growth of Africa.

Historically disadvantaged youth face additional barriers to entry into the workforce due to factors such as poverty, ethnicity, gender, and geography. For example, divisions based on race and ethnicity leads to youth being systemically underserved in gaining access to quality education. Gender is another barrier. Across countries, systemic or cultural mechanisms keep girls out of the classroom and women out of the workforce. Rural areas also have significantly different enrollment rates than national averages. Although the relative importance of each of these socio-economic factors varies significantly by country, these barriers are inhibiting youth from reaching their individual and collective potential.

Figure 2: Number of jobs created versus youth employed (million)



Digital jobs - a pathway out of poverty for high potential disadvantaged youth²

The digital economy holds significant potential for creating formal jobs that are accessible to historically marginalized youth. These ‘digital jobs’ – defined as any short-term or permanent positions that use information technology to deliver a product or service – are in the formal sector and therefore provide higher wages and long-term job stability, which are two key mechanisms that enable people to work their way out of poverty. Studies of formal sector earnings in Zambia confirmed that formal wages were approximately six times higher than earnings in the informal sector. Even within the formal sector digital jobs have shown to provide higher than average wages. For example, youth wages in Ghana’s IT Enabled Services (ITES) Secretariat program are 3.5 times higher than participant-reported baseline wages and 5.5 times higher than the official minimum wages (Figure 3). Formal employment is also less volatile than informal work leading to greater income stability and continuity of employment. And finally, as the digital economy has become a necessity, not a luxury, the skill set that employees acquire will contribute towards their longer-term employability.

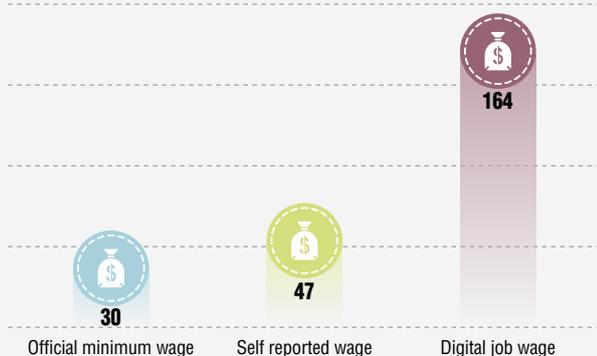
Access to these opportunities is most transformative for disadvantaged youth, for whom accessing formal employment could be pivotal in changing generations of systemic marginalization; however, these youth are least well positioned to compete for these opportunities as their talent and potential is often overlooked. This is especially the case with high potential youth who have the ability to quickly learn entry-level skills required for jobs in ICT. The Dalberg study found that high potential youth are likely to be high school or even university level graduates who lack access to opportunities and/or lack access to the functional and behavioral skills required for the workplace. In order to break the cycle of unemployment, youth require opportunities that are accessible, sustainable and create opportunities for growth.

The opportunities and challenges for generating inclusive digital jobs

Even if the potential of disadvantaged youth were fully recognized, the digital economy faces the same critical gap between supply and demand that defines the broader labor market – there are simply more higher potential youth entering the workforce each year than there are new digital jobs being created. Across the six countries studied, over 2 million high potential youth enter the job market each year, yet only about 41 000 inclusive digital jobs are created (Figure 4). These job opportunities are found in four main areas: customer-facing work, operations, IT support and management, and content and product development.

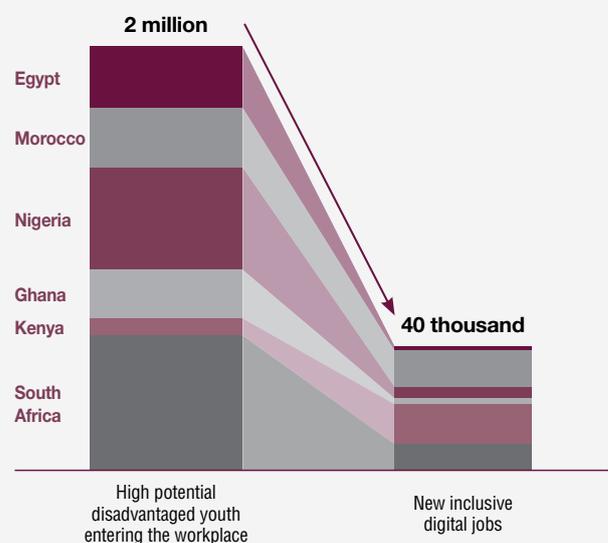
Therefore, partners looking to maximize the digital jobs opportunities for disadvantaged youth must look to not only ensure that youth are well positioned to participate in the digital market place, but they must also focus on investing to grow the digital market in order to create more jobs at scale. The digital economy in Africa is still growing, with significant pockets of untapped growth potential that present exciting investment opportunities and ultimately job creation.

Figure 3: Comparing monthly official wages in Ghana (in USD) with ITES case study wages



- Even in the formal sector digital jobs provide higher than average wages
- Youth wages in ITES were 3.5 times higher than participant-reported baseline wages and 5.5 times higher than the official minimum wage

Figure 4: There are not enough jobs being generated to absorb new workforce entrants



² "High potential" refers to youth who have the cognitive skill set needed to perform entry-level digital jobs. "Disadvantaged" refers to the International Labour Organization (ILO) definition of youth who are marginalized from the formal workforce due to poverty, lack of information, gender, race, ethnicity, geographic location, or poor education. "Youth" is defined as ages 18-35.

II. AFRICA'S BIG DIGITAL OPPORTUNITIES

Knowing that investment is necessary, which areas of investment are like to yield the best results? Where would it be best placed? There are five big trends which present promising opportunities:

Impact Sourcing	Online Work	Local Content Innovation	e-Public Goods	e-Entrepreneurship
Intentionally employing those with limited employment opportunities in the Business Process Outsourcing industry based on the premise that they are capable of effectively filling these jobs, and that the impact of this employment opportunity can be transformational. ³	Working online as a team or independently to complete small tasks that make up a larger piece of work.	Leading the development of innovation in software engineering, apps development, and local content that provide innovative solutions to unique demands of businesses or consumers.	Using mobile or Internet-enabled solutions to enhance service delivery in areas such as health, education, agriculture and financial access.	Developing mobile or Internet solutions, or leveraging the Internet as a platform to more effectively deliver products or services.

Impact sourcing

Impact sourcing has emerged from a concept to a global industry practice which seeks to build Business Process Outsourcing (BPO) businesses that target historically disadvantaged individuals for employment.⁴ The objective is to specifically identify those disadvantaged individuals who are capable of performing ICT-related jobs and in this way help overcome the barriers they face in accessing employment opportunities. Impact sourcing has the potential to transform the lives of young people in Africa by increasing income between 40% and 200%, while also creating formal, stable employment that can often increase family investment in health care and education. Leading companies include Digital Divide Data, Samasource, Daprom and Invincible Sourcing.

For a country to be competitive in outsourcing it is important that the enabling environment is cost-competitive, particularly with regards to operational overheads such as real estate, energy, and ICT. The economic viability of outsourcing varies across countries with Egypt, Morocco and South Africa demonstrating the greatest potential. The governments of Egypt, Morocco, and South Africa have made outsourcing an explicit national priority and established the right enabling environment primarily through direct subsidies. Furthermore, Egypt and South Africa have made employment an explicit priority by subsidizing training costs to firms. Ghana and Nigeria have the raw human resources needed to enter the Anglophone market, but operational costs (real estate in Ghana and power in Nigeria) are still very high with no government intervention. Kenya seeks to create the right environment for supporting ICT-dependent industries, but the potential for outsourcing is yet to be fully realized.

Online work

The Internet has created a platform through which businesses or individuals that are seeking expertise or basic services can connect with and employ individuals who are seeking employment. These transactions can occur informally, but have become an increasingly formalized global market that includes: individual providers who bid for work; aggregators who provide platforms for clients and providers to conduct secure and trustworthy transactions that are based on a contract and provide payment guarantee; service providers offering clients quality assurance; and clients seeking expertise and services. Aggregators and service providers play a critical market clearing and transaction processing role that enable providers and clients to connect effectively and efficiently. Leading aggregators and service providers include companies such as oDesk, ELance, Amazon's Mechanical Turk and Samasource.

Two common examples of online work are microwork and freelancing. Microwork, which involves tasks such as basic data entry, is very accessible to anyone with literacy and numeracy skills and access to a laptop or smartphone. The model can absorb a diverse skill

³ For further detail on impact sourcing visit: <http://www.rockefellerfoundation.org/ourwork/current-work/digital-jobs-africa/impactsourcing>

⁴ *Ibid.*

set and provide opportunities for youth who may be engaged but not able to secure job placements. Freelancing, on the other hand, requires higher levels of technical expertise and longer work times and is therefore more accessible to youth with professional skills.

The online work market is dominated by just a few players and African countries are only just starting to enter this market as both providers and clients. The World Bank estimates the size of this market to be US\$300 million with around one million online workers. A majority of this number comprises of clients coming from Germany and Australia, clients and providers coming from the United States and the United Kingdom, providers coming from Eastern Europe and Asia, and new providers coming from the rest of Europe, Africa, and South America. Meanwhile, Africa's engagement is growing with over 22 000 estimated providers in Kenya. In response to a government and World Bank initiative, Nigeria has also seen around 10 000 providers joining global platforms.

As African providers seek to participate in the online work market, there is an opportunity for social investors to engage in creating a supportive enabling environment. To start, investors can build aggregation or quality assurance platforms that enable providers to advertise and seek employment opportunities while providing clients with transaction security. In addition to investing in new businesses, there is a critical need for investment in providing workers with the hard infrastructure – laptops, electricity, and reliable Internet – needed to be effective. Models for this are similar to incubation or hub models.

Local content innovation

As more Africans come online, the demand for products and solutions aimed at the local market will increase. Although traditionally demanding a higher skill set, local content innovation presents direct and indirect opportunities for specific youth populations.

It is especially the area of software development, and more specifically the development of apps, that has become a booming global market in which Africa is starting to participate. The five Demo Lions of Africa⁵ are to present at the 2013 Demo in San Francisco and amongst them is one example of innovative apps coming out of Africa, namely mPawa, a SMS-based jobs matching platform that enables employers and employees to find each other quickly. The platform is highly accessible as it is both SMS and web-based, allowing blue-collar workers, particularly in the construction industry, to access the platform.

Figure 5: Largest markets in Africa using online work platforms



Investors, multinational tech leaders, and development agencies are excited about Africa's potential in tech innovation. Moreover, Google, IBM, Microsoft, and Nokia are active in supporting local content innovation as part of building their competitive value proposition. For example, Farmer's Friend is a Ugandan mobile app that partners with MTN Uganda and Google to provide information for smallholder farmers. Farmers are also employed to collect data and pictures of animals and plants on local farms.

Beyond apps, local media content development has large market potential in Africa. Egypt and Nigeria are two leading examples of the booming growth in the local films and music market in Sub Saharan Africa and Middle East and North Africa (MENA) regions. Egypt is a regional leader in production of Arabic film and TV for a regional market of 300 million people in the Middle East and North Africa. Nigeria's film industry, Nollywood, generates an estimated US\$590 million in revenue annually from a global consumer base.

In addition, distribution platforms are an important part of the value chain for local content and African players are increasingly active in this space. For example, Living Goods uses the micro-distribution model to support 1 000 entrepreneurs in the delivery of health products to rural areas in Uganda.

e-public goods

African governments, hospitals, schools and other public service agencies are increasingly seeking to use the Internet and mobile platforms to: improve their internal management of processes and data; improve their engagement with clients on administrative processes; or improve client access to information and services. This move to provide public services or goods is referred to here as e-Public Goods.

Mobile technology plays a critical role in e-Public Goods as mobile phones and tablets are quickly outpacing landlines and fixed connections as the most prevalent means of accessing Internet for both service providers and consumers. In terms of the role of digital jobs within e-Public Goods, customer-service jobs such as call center operations are creating larger job opportunities, while back office operations play a critical role in unlocking the ecosystem. This applies across the provision of public or social goods and services such as government, education, health, and agriculture.

One of the greatest impacts of e-Governance is the ease with which citizens can access public documents and systems. However, these efforts have yet to result in the large scale creation of digital jobs. Although pilot projects exist in Ghana and Kenya, digitization created a relatively small number of jobs which were temporary (six to 18 months). Both governments have struggled to launch cohesive digitization efforts at national levels and digitization efforts have therefore been piecemeal. Digitization is dependent on government buy-in which is typically mobilized by a political champion.

Education systems and institutions are empowered by e-Education to improve their reach and the quality of the services they deliver. Customer-facing roles provide end users with support, for example if a school has new ICT equipment that needs to be set up. The potential for e-Education to employ youth in customer-facing roles is high, but these youth require adequate training and support from government. Operational roles offer the opportunity for digitizing existing records in the education system. The potential for e-Education to employ youth at scale in operational roles is low as a small number of staff are able to digitize hundreds of thousands of records.

An important impact of customer-facing e- and m-Health models is that they can provide communities with vital health services and products that they may otherwise not be able to access. e-Health therefore improves the effectiveness of health care delivery systems and significantly impacts health outcomes. The scale of employment in e-Health depends on several factors such as the amount invested into specific initiatives or business models, whether an enabling environment exists for the development of health-related content, and the implementation of models leveraging poor accessibility to create new jobs.

The use of e-Agriculture models can lead to an increase in agricultural productivity for the 70% of the African population generating income from agriculture. New mobile platforms have created agricultural data collection roles in rural areas. But while ICT-enabled agricultural roles are emerging, opportunities are not as large as they could be.

III. COUNTRY-SPECIFIC DYNAMICS FOR DIGITAL JOBS AFRICA

Overview

Looking across the six countries, initial projections suggest that nearly 300 000 jobs which are accessible to disadvantaged youth will come online by 2020. These jobs will mostly be driven by the ICT, BPO and financial services industries which are Africa's fastest growing sectors, but also are the sectors that have the highest demand for entry-level digital skills. Detailed analysis of major companies in these sectors across Egypt, Ghana, Kenya, Morocco, Nigeria and South Africa highlighted four groups of skills that would be in highest demand across sectors and countries: customer service agents, back office support agents, IT support agents, and content developers.

Number of digital jobs created that are accessible to unemployed youth across Egypt, Ghana, Kenya, Morocco, Nigeria and South Africa

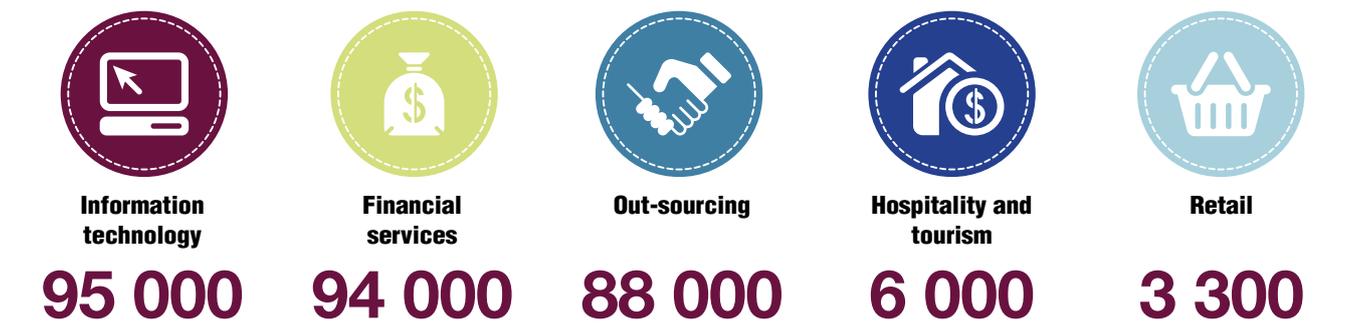
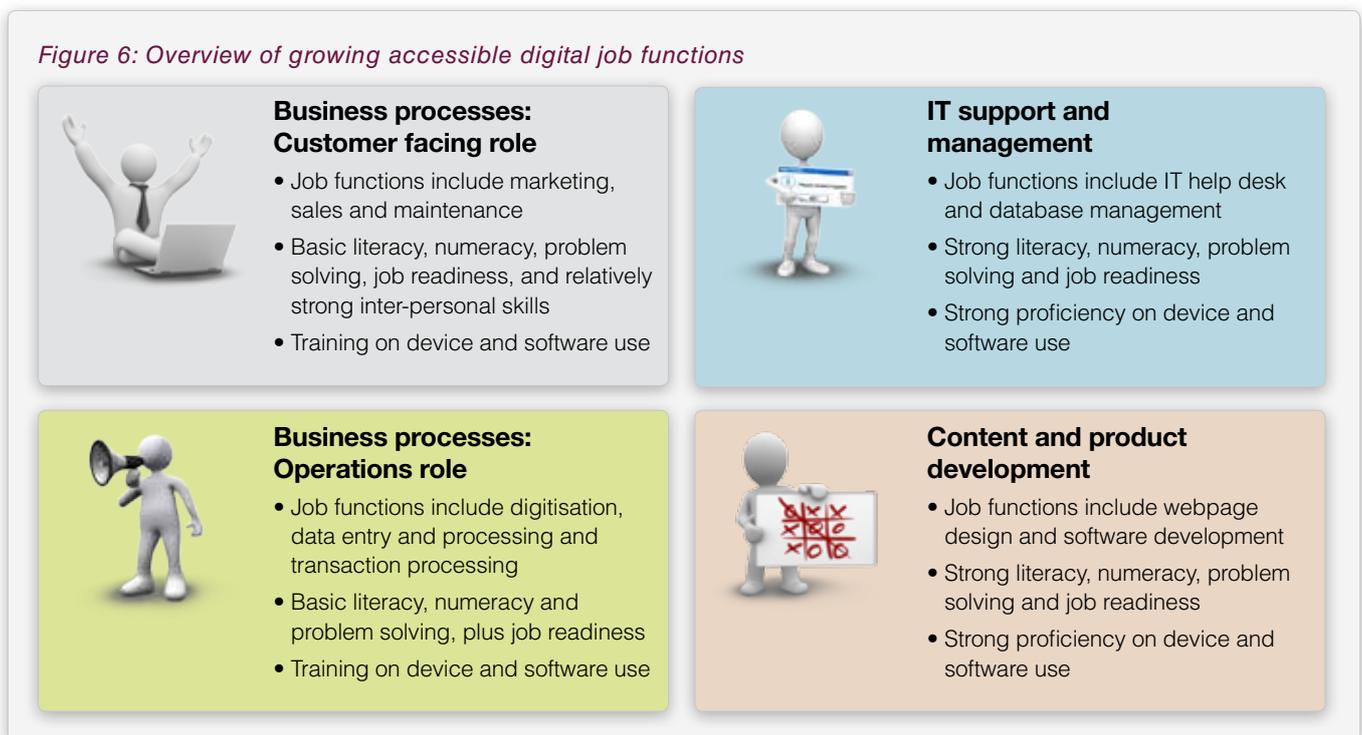


Figure 6: Overview of growing accessible digital job functions



While each of these skill sets represent jobs that high potential disadvantaged youth could fill, these youth are currently overlooked for these roles. The reasons for this are based in part on real skills gaps, but are largely driven by employer misperceptions.

Across each of the six countries, the supply and demand side dynamics looked very different, leading to a mix of recommendations and opportunities for investment. For example, Morocco and South Africa both demonstrate demand side opportunities for impact sourcing based on their existing (and growing) outsourcing markets. However, when addressing this opportunity, South Africa may be more constrained by historical skills and access gaps while Morocco may face demand side constraints.

The figure below provides a snapshot of digital opportunities and sample of market characteristics across each country.

Figure 7: Snapshot of selected market characteristics across three sectors and six countries⁶

Country	Country specific characteristics	IT	Out sourcing	Financial services
Egypt 	<ul style="list-style-type: none"> • There is a strong enabling environment and competitive positioning for digital services but foreign investors and clients (the target audience) may be deterred by political unrest • Other derives of jobs include emerging mobile money platforms, local content development, and tech entrepreneurship 	24 000*	2 000*	1 500*
Ghana 	<ul style="list-style-type: none"> • Ghana's ICT and Financial Services sectors are rapidly growing; however these captive markets are somewhat fragmented and due to enabling environment constraints outsourcing growth is limited • Ghana's tech and ICT-enabled market is nascent and there is strong need and potential for supporting entrepreneurship 	21 000	5 500	25 000
Kenya 	<ul style="list-style-type: none"> • Kenya's outsourcing market is currently small but the government hopes to increase employment in the sector by 15 000 jobs by 2017 • Kenya is a hub for tech entrepreneurship and is strongly positioned to grow strong e-Entrepreneurs 	6 500	2 000	19 000
Morocco 	<ul style="list-style-type: none"> • Outsourcing has shown double digit growth, dominated by customer service but trending towards Information Technology Outsourcing (ITO) driven by demand from Europe, more specifically France 	22 000	37 000	–
Nigeria 	<ul style="list-style-type: none"> • Nigeria's growth in business operations roles may be driven primarily by captive markets in the financial services sector, which is a fragmented market • e-Entrepreneurship in local content and crowd-sourcing are burgeoning opportunities for strengthening the tech enabled ecosystem and generating new employment opportunities 	6 000	1 000	44 000
South Africa 	<ul style="list-style-type: none"> • Outsourcing, specifically call centres, is set to grow rapidly due to South Africa's unique voice value proposition for UK and Australia companies 	16 000	40 000	4 500

NOTE: * Sizing of job opportunities in Egypt were done only for leading companies that demonstrate strong potential for continued growth despite political unrest – these numbers do not reflect the full sector-wide potential for jobs growth

Source: Dalberg analysis and stakeholder interviews, refer to country-specific landscaping analysis for details on sizing

⁶ Sizing of job opportunities in Egypt were done only for leading companies that demonstrate strong potential for continued growth despite political unrest – these numbers do not reflect the full sector-wide potential for jobs growth

COUNTRY SNAPSHOT: EGYPT

Egypt's digital jobs frontier⁷

The civil unrest in Egypt started while this study was still underway. This created substantial uncertainty about the country's economic growth more broadly, and in the digital market in particular. Egypt's ICT-enabled economy is largely made up of export-oriented BPO firms that would be impacted by the decisions of foreign consumers and investors. These decisions are of course influenced by people's perceptions of the impact of the conflict.

Beyond the conflict, Egypt is strongly positioned as one of Africa's leading digital economic frontiers. The country was ranked 4th⁸ globally as a promising BPO market. This is largely due to concerted public sector effort to invest in infrastructure and develop a favourable enabling environment. Egypt is also well positioned to export digital media to the Middle East and North Africa region because it has a relatively strong software engineering client pool, it has an Arabic dialect that is widely understood, and it is cost competitive in relation to Gulf nations. Domestically, Egypt's population size (85.3 million), its high mobile and broad band penetration rates, and its economic diversity are all driving growth, particularly in telecoms and e-Commerce.

While economy-wide projections of digital job creation would not be reliable in light of the conflict and subsequent uncertainty, an analysis of Vodafone's projected jobs growth estimates that 29 000 digital jobs will be created by Vodafone alone by 2020. Should the conflict be resolved and the country return to stability within the next year, the prospects for economy-wide growth in digital jobs could be strong.

Egypt's youth unemployment challenge⁹

Central to Egypt's youth unemployment challenge is a large pool of new workforce entrants who have relatively high levels of educational attainment, but are under-prepared for the workforce. In 2014, 108 000 post-secondary school and 192 000 university graduates will enter the workforce – and face a particularly difficult job market due to recent unrest. The United Nations Development Programme (UNDP) survey of Egyptian employers revealed that 40% of employers considered youth with post-secondary vocational training or university diplomas to be “poor” in applying their knowledge in the workplace. In addition, insufficient labor demand for these new entrants leads to a high unemployment rate amongst university graduates. In fact, of the unemployed population, 32% are university graduates. Non-university educated youth account for 45% of the unemployed and due to the state of the education system, these youth are largely considered unprepared for digital jobs.

The gender differences in unemployment are stark. Young women are twice and sometimes up to four times as likely to be unemployed as their male peers – 45% of female general secondary school graduates are unemployed as compared to just 13% of young men with similar education.

Egypt's opportunities and challenges for inclusive digital jobs

The recent violence and resultant economic uncertainty and civil unrest create doubt about the potential for stimulating digital jobs opportunities in the short-term. Should the country become more stable, there are certainly medium to long-term opportunities for investing in improving labor supply, growing new digital businesses, or facilitating the match between labor demand and supply.

Telecommunications and BPO hold the greatest potential for generating digital jobs at scale. Despite this opportunity, leading companies are skeptical of hiring disadvantaged youth – including public university graduates – because deficiencies in the school system means that these graduates are often regarded to be unprepared for the workforce. With labor supply outpacing demand, the job market is so competitive that employers are able to be highly selective and prioritize hiring private university graduates. Although employers remain skeptical, they do recognize that other graduates may actually be a better fit for the required skills level, which could in fact mean greater retention rates.

Education for Employment (EFE), a not for profit organization based in Egypt, is just one example of a successful model for selecting and preparing disadvantaged youth for the workforce. In the digital market place EFE has worked in the e-Commerce industry sourcing approximately 40% of Souq.com's (a leading e-Commerce firm) personnel; and is at the beginning of piloting the placement of EFE graduates with BPO provider Exceed. Egypt could benefit immensely from the scaling up of such a targeted training program with a proven track record as the mainstream education system is not preparing youth to participate in the emerging digital jobs market. Injaz Egypt is another example of an education organization that is working to bridge the gap between the education system and the private sector by providing training across 26 governorates, in 451 public schools and 21 universities.

Beyond supply side interventions, Egypt requires investment that will enable the economy to absorb the 300 000 new workforce entrants each year. Such investment could be directed at stimulating new businesses and scaling up existing ones. Egypt has several incubation initiatives that are focused on developing digital entrepreneurs, but there is room for significant additional investment, particularly in building out Egypt's potential in emerging industries such as local media content development, e-Commerce or software engineering and mobile application development.

⁷ IMF World Economic Outlook 2012; World Bank Development Indicators - Egypt, 2011; World Bank Little Data Book on ICT, 2012; ITU, EIU e-readiness index; Egypt at a Crossroads; BCG; MICT ICT Indicators in brief, May 2013, Monthly Issue; ** AT Kearney.

⁸ Dalberg analysis, 2013

⁹ World Bank Micro data; Reuters; Figures based on estimates from the Survey of Young People in Egypt, January 2011.

COUNTRY SNAPSHOT: GHANA

Ghana's digital jobs frontier¹⁰

Compared to the rest of the region, Ghana has relatively strong ICT infrastructure and mobile and Internet penetration rates. The country is widely considered to be a strong BPO destination for English-speaking countries because of its relatively positive business enabling environment and strong ICT infrastructure. However, this potential has not been fully realized because operating costs are still high due to the unreliability of the Internet, and high real estate costs.

While Ghana is yet to live up to its BPO potential, there are positive trends that, with further investment, could potentially gain traction and scale. Ghana has one of the strongest e-Governance trends with several agencies launching initiatives, including e-Parliament, e-Services, and e-Immigration. Within the private sector the digital market is driven by the telecoms and BPO industries which are estimated to generate 28 000 entry-level digital jobs by 2020. Of these, 23 000 will be customer-facing service jobs in telecoms or banking.

Ghana's youth unemployment challenge¹¹

Ghana has an average youth unemployment rate of 18%, and the informal economy accounts for 80% of jobs. The country has relatively high rates of academic achievement with 31% of the population entering high school, and 29% of the population completing their certification. As can be expected, unemployment is highest amongst those who enter but do not complete secondary school; while youth who graduate from secondary school make up just 2% of those unemployed. Across the board, the economy is not generating sufficient jobs to absorb the 235 000 youth that will enter the workforce next year.

Prospects are particularly challenging for young people in the North where 80% of Ghana's extremely poor live. Poor and rural children in Ghana can only access public schools, which often do not prepare graduates for the workplace. In addition, Northern youth have limited access to job opportunities outside of agriculture which employs 70% of the rural workforce.

Ghana's opportunities and challenges for inclusive digital jobs

Ghana's BPO and telecoms industries will generate an estimated 2 000 jobs next year, which is less than 1% of estimated new workforce entrants. This highlights a critical need for investment in growing businesses in order to generate additional jobs at scale. Ghana has a vibrant, yet small network of digital entrepreneurs and targeted incubators and hubs. There is an opportunity here for impact investors to invest in scaling up and enhancing these enterprise development services in order to create a platform for potential high-growth enterprises.

In addition to investment in the private sector, Ghana's public sector also has the potential to yield much needed jobs due to the continuation of its e-Governance initiatives. While e-Governance pilots have had mixed success in creating permanent digital jobs at scale, these results were largely due to the lack of a cohesive government strategy for the effective engagement of BPO services and the establishment of long-term solutions for ongoing management of digital systems. This presents an opportunity for impact investors and development agencies to engage with government to develop a sustainable strategy for digitization. The government has demonstrated continued interest in continuing its e-Governance push.

Lastly, Ghana is relatively well positioned to participate in online work due to its generally well educated English speaking population and positive global reputation. Investing in providing youth with an integrated platform of hard infrastructure (office space, devices, Internet and electricity) alongside peer networks and mentorship could serve to get youth into the global market place.

COUNTRY SNAPSHOT: KENYA

Kenya's digital jobs frontier¹²

Kenya has recently been tagged as Africa's 'Silicon Savannah', and with good reason. Over the past decade both public and private sector actors seriously invested in building the right infrastructure, access and space for the digital economy to emerge. In 2012, Kenya added 4.6 million Internet users to a base of 13.5 million. Broadband uptake has also recently accelerated, bringing in half a million new users in the same period.¹³ Between 2008 and 2012, the ICT sector also had the largest foreign direct investment (FDI) of any sector in the country and technology is increasingly penetrating all sectors of the economy. Furthermore, there is an increasing focus by both local and international technology companies on the country.

While this innovation ecosystem is still emerging, numerous investments and pilots are demonstrating results against both social and economic targets. MPESA is probably the most well known, having had a transformative impact on access to financial services. As of 2013, over 23 million Kenyans were using mobile money, and the use of mobile financial services across the country was also tied to the

¹⁰ CIA World Factbook; World Bank Data; African Economic Outlook; Oxford Business Group 2012 Nigeria Report.

¹¹ Ghana Statistical Service Census Analytical Report (2010); Dalberg Ikatu research and analysis.

¹² CIA World Factbook; World Bank Data; African Economic Outlook; Oxford Business Group 2012 Nigeria Report.

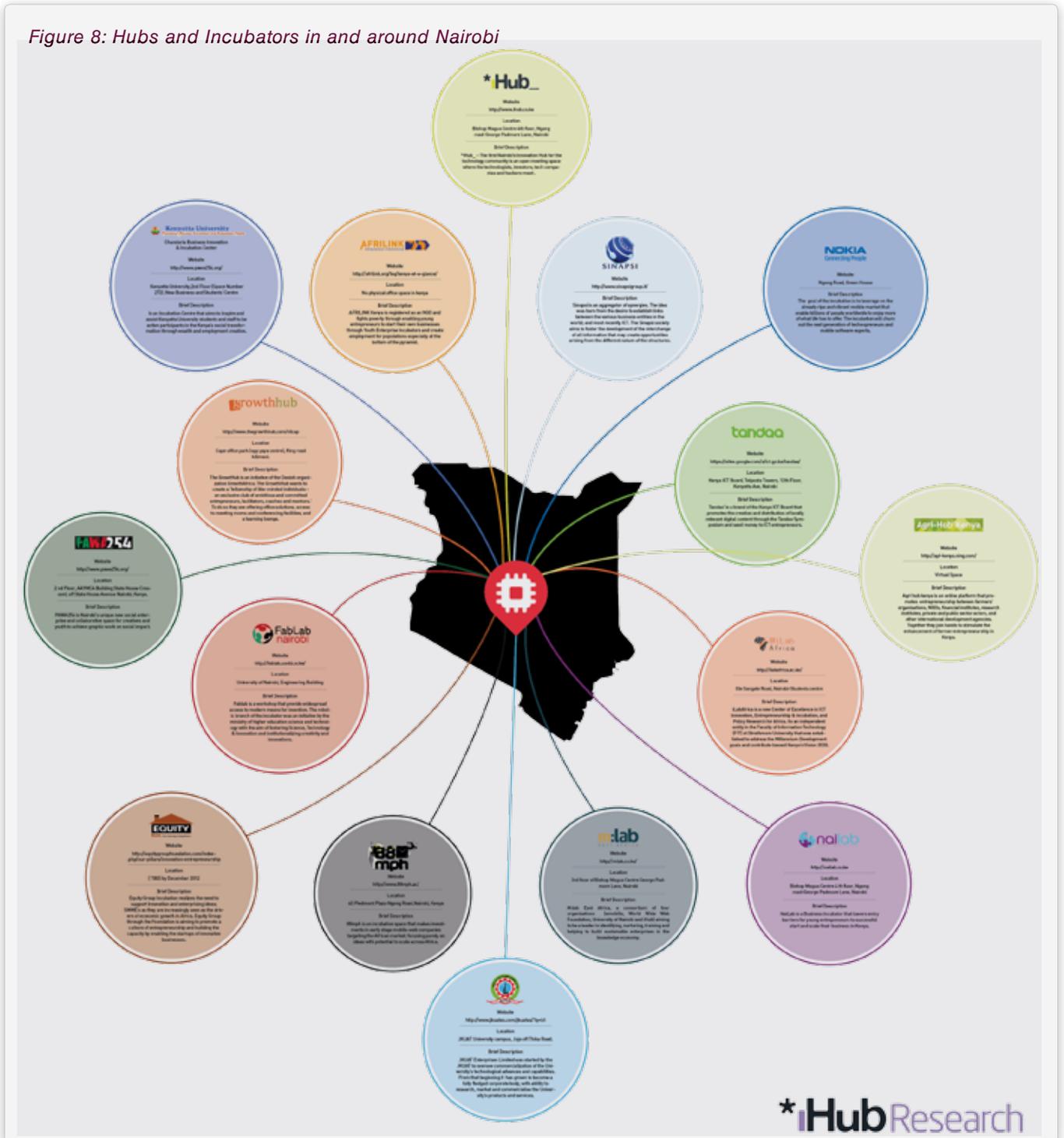
¹³ Communications Commission of Kenya, Quarterly Sector Statistics Report: Fourth Quarter of the Financial Year 2011/12, www.cck.go.ke/resc/downloads/SECTOR_STATISTICS_REPORT_Q3_JUNE_2012.pdf

employment of over 100 000 people.¹⁴ This estimate doesn't fully include the likely thousands of additional jobs created as SMEs were able to access these services to grow and expand their businesses.

Kenya's success is largely attributed to three factors:

- 1. Initiative and leadership by government** to promote ICT as both an enabler and a key driver of economic growth. For example, the inclusion of ICT as a pillar for national growth in the Vision 2030 plan and, more recently, the establishment of the ICT Master Plan 2017 which frames ICT as a vehicle to drive broader industry growth, create jobs and meet citizens' needs.
- 2. Partnership between government and private sector** to align with the national strategy, build infrastructure and drive access.
- 3. Ability to leverage a culture of entrepreneurship and innovation:** Nairobi is home to nearly two dozen hubs and incubators focused on to the role of local content and attracting investors.

Figure 8: Hubs and Incubators in and around Nairobi



14 MMU Kenya Mobile Money Journey Infographic, April 2013.

It is these same factors that have delivered early stage growth of the digital economy that can help Kenya translate its growing role as an ICT epicenter into a facilitator of job creation and economic opportunity for its citizens. First, as government continues to provide leadership through initiatives such as open data, digitization will be critical. This requires a heavy investment in the transcribing, managing and digital organization of data. Second, private sector growth, particularly across financial services and ICT industries requires functions that are ICT driven. And, finally, a continued investment in entrepreneurship and support for local technology companies will facilitate the next wave of digital jobs for the country.

Kenya's youth unemployment challenge¹⁵

In 2008, Kenya's unemployment rate was estimated at nearly 40%. Youth form an overwhelming majority of this segment. Unemployment is highest in Nairobi and the North-eastern province. This challenge is further exacerbated by conditions of geography, poverty and gender. Employment amongst males in Kenya is 110% higher than amongst females. Despite a strong education system, youth unemployment is attributed to lack of appropriate skills, limited information and weak mechanisms for matching job seekers with jobs.

Further exacerbating the employment challenge is the significant gap between employment growth and the working age population growth. Kenya's formal job market is also highly competitive and not growing fast enough to absorb the number of new workforce entrants.

Kenya's opportunities and challenges for inclusive digital jobs

As in most other countries studied, the gap between available jobs and work-seekers is stark, which means that driving skills development is only one piece of the puzzle. Continued private and public sector investments are also required in order to help strengthen the pool of opportunities, facilitate entrepreneurship and establish a strong enabling environment for SME growth, which can in turn generate jobs.

For Kenya, realizing the full potential of digital jobs requires investment across both demand and supply. On the demand side, the growth of BPO, online work and digitization will drive opportunity. On the supply side, institutions such as Nairobits, and KEPSA are providing training and placement but require support for growth, better alignment with demand and investment for scale. Support for entrepreneurs is also required in order to build the next wave of employers and digital entrepreneurs.

As Kenya continues to position itself as a digital economy and government invests in creating a population of digital citizens, the role of big data becomes more central. Initiatives such as open data are a start but, before sophisticated analysis can be delivered, the datasets need to be created. Digitization is central. As evidenced by the work of companies such as Digital Divide Data, youth are well positioned to help government deliver large scale digitization that will create a foundation for big data management and analytics. However, the first step is to generate partnership and leadership from within the public sector to invest in digitization initiatives.

Online work provides a flexible yet formal platform that enables youth to pursue income opportunities that they may otherwise not have had access to. The phenomenon of delivering small scale project work online is growing globally and sparking interest in Kenya with an estimated 22 000 Kenyans already engaged. However, the opportunity is nascent and would require strong investment in supporting facilities such as infrastructure, connectivity and training to effectively allow Kenyans to compete with a global market place. Specifically, funders or partners are needed to: (1) develop sustainable models for providing infrastructure support; (2) to ensure training quality at scale; and (3) to conduct marketing and awareness raising amongst potential online workers and clients.

The role of entrepreneurship will drive growth in digital jobs in two ways. First, as an engine for ICT innovation and idea generation that will yield business and industry growth and ultimately create jobs. And second, as a tool for facilitating the next wave of opportunity through job creation recognizing the severe imbalance between available jobs and work-seekers entering the market. This final wave of digital opportunity for youth must come through entrepreneurship. Kenya's culture of entrepreneurship positions it uniquely well to address the imbalance between capable work-seekers and employment opportunities. Government and investors alike must commit to supporting the creation of new businesses which will in turn drive the next wave of employment. This can be achieved in three ways:

- 1. Build: Expand the innovation incubator footprint.** The recognition that Kenyans may be filled with great ideas but lack business skills and resources has spurred the growth of over 16 incubators in Nairobi alone which provide an array of business tools, services and resources; but beyond this urban hub, opportunities are bleak. There is an opportunity to expand incubation beyond highly urban and often over crowded cities.
- 2. Partner: Support active investors/partners and influence their work towards youth employment.** Investors and funders should also consider ways to co-finance or support prizes, awards, challenge funds, trainings or competitions; or building networks such as iHub by creating mentoring, learnership or training programs focused on disadvantaged youth.

3. Influence: Analyze and define the key challenges for entrepreneurial growth in Africa. While the concept of incubators and accelerators is not new, there continues to be a lack of evidence about what truly drives growth and impact on entrepreneurs in Africa and additional research is needed.

COUNTRY SNAPSHOT: MOROCCO

Morocco's digital jobs frontier

Morocco has highly developed ICT infrastructure with one of the highest broadband speeds in Africa and high mobile broadband penetration. Government and the private sector recognize ICT's economic potential and are increasing investments in building ICT infrastructure and ICT-enabled businesses.

Morocco's robust ICT backbone combined with a multilingual (French and Arabic) population positions the country to be an exporter of business services, particularly customer-facing services. It is estimated that BPO, information technology outsourcing (ITO), and software development will generate approximately 59 000 digital jobs in Morocco by 2020.¹⁶

Of these, just under half are expected to be customer-facing outsourcing jobs that high school graduates with targeted training can perform. Top outsourcing firms, such as Outsourcia, Webhelp, and Caggemini are examples of companies that project growing demand for call-center agents. Beyond entry-level customer service jobs, technology firms such as Medzsourcing, Devoteam, Mobiblanc, IBM, Dell and MMC have increasing demand for advanced technical skills in hardware and software engineering.

Morocco's youth unemployment challenge¹⁷

Morocco has a youth unemployment rate of 22%, and over 60% of workers are employed in the informal sector where they earn low wages and face high job insecurity. Unemployment and underemployment are exacerbated along gender, geography, and income lines. These factors define access to quality education, networks, and ultimately the formal job market. The prospects for education and employment for young women are particularly stark. Just 16% of girls complete secondary school, while 38% of women are unemployed, and over 80% have exited the labor force altogether. Rural and poor youth who cannot afford private schools are also under-served by the public education system and do not have the means to attend private schools.

Not only do disadvantaged youth typically lack access to the tools needed to prepare for the formal workforce, but they are entering a workforce where there are simply not enough jobs. This is particularly pronounced amongst secondary and university graduates who actually have a higher than average unemployment rate. Unemployment amongst secondary school graduates is over 41% while just 30% of university graduates find formal employment. As a result, secondary and university graduates also join the informal sector where there is little opportunity for career advancement despite their relatively high education.

Morocco's opportunities and challenges for inclusive digital jobs

The estimated 59 000 digital jobs that will be created by 2020 are all jobs that could be done by high school or university graduates. However, Morocco faces two key challenges in employing youth in the digital jobs market at scale: (1) a mismatch between skills obtained in school and skills in demand by the private sector; (2) growth in new jobs is outpaced by the number of new workforce entrants.

Youth graduating from mainstream public schools often lack the basic technical and soft skills that are needed to be job ready. Roles in the call center space require basic literacy and numeracy skills, which public high school graduates have, but these jobs also require basic soft skills in problem solving and customer service, which will require additional short-term targeted on-the-job training. Technical roles in ITO or software engineering require a higher skills set that is more accessible to public university graduates with relevant degrees plus targeted training.

Disadvantaged youth who have potential but require some assistance are then competing in a highly competitive market where there are far fewer digital jobs coming on line than there are youth. Over 45 000 youth with tertiary education will enter the workforce next year to compete for just 12 000 digital jobs that they are qualified for.¹⁸ Over 140 000 secondary school students will enter the workforce competing for these same jobs.¹⁹

Fostering digital job opportunities requires investing in growing digital businesses – which both the public and private sectors are committed to doing - and ensuring that new workforce entrants are prepared with relevant skills to engage. Addressing the skills mismatch requires facilitating strong partnerships between the private sector and supplementary training agencies seeking to prepare youth for the workforce. Morocco has both strong national industry associations, as well as strong national youth training programs. Investing in developing relevant curricula in partnership with the private sector and then developing internship and employment linkages upon graduation are important interventions for addressing the current market gaps and insuring that disadvantaged youth are engaged in future market growth.

¹⁶ Dalberg Analysis, 2013.

¹⁷ The World Bank Morocco Household and Youth Survey, 2010; The World Bank Kingdom of Morocco: Promoting Youth Opportunities and Participation, 2012

¹⁸ Dalberg analysis, 2013

¹⁹ Ibid.

COUNTRY SNAPSHOT: NIGERIA

Nigeria's digital jobs frontier²⁰

Nigeria is Africa's most populous country, second largest economy, and is on the verge of building a robust digital economy. Nigeria's ICT sector is the largest in Africa with US\$18 billion in investments, 19% revenue growth in the telecoms industry, and with just 28% Internet penetration has the highest absolute number of Internet users on the continent.

With sheer numbers driving growth, the potential for a robust digital economy is exciting, but there are fundamental challenges that need to be addressed for this potential to be fully realized. Nigeria's lack of reliable and affordable power and ICT infrastructure dampen economic growth. It is estimated that as much of 10% of private sector revenue is lost to unreliable power. Digitally-enabled service centers site expensive and unreliable power and Internet as the primary hindrance to being globally competitive and profitable. Recognizing the potential for economic growth, the government has made ICT development a priority in their Vision 2020 which will be implemented through the recently launched ICT Policy. However, these efforts are still emerging and impact may only be achieved in several years.

In the meantime, however, there are sectors that demonstrate positive trends for generating digital jobs. It is estimated that the banking, telecoms, BPO, and e-Commerce industries will generate 50 000 entry level customer-facing jobs by 2020.²¹

Nigeria's youth unemployment challenge²²

Nigeria has a very large youth population, many of whom are unemployed or under-employed. There are 34 million Nigerians between the ages of 15 and 24 and national unemployment rates are as high as 41.6% - this can be as high as 49.9% in urban areas. The majority of Nigerians work in the informal sector which employs as much as 80% of non-agricultural labor and generates 90% of new jobs. Youth in the informal sector tend to earn low wages, face high job insecurity, work in unsafe conditions, and have limited opportunities for upward mobility.

Nigeria's formal job market is not growing fast enough to absorb the number of new workforce entrants, and for those jobs that are being created, employers are finding it difficult to fill those positions. As a result, the labor market is highly competitive, with many employers demanding secondary or tertiary level education even for entry-level jobs, but also finding it difficult even amongst highly educated youth to find the right skill set. The result is that businesses are highly skeptical of hiring youth with less than a university degree because they are still struggling to find university graduates who are job ready. This dynamic results in a highly selective market that is particularly difficult to navigate for youth from impoverished or rural backgrounds who do not have access to higher levels of education, and if they do, are underserved by poor public schools.

Nigeria's opportunities and challenges for inclusive digital jobs

For the 50 000 customer-facing jobs that will be created in the BPO, financial services and telecoms industries by 2020, significant intervention and investment is needed to ensure that public, secondary and university graduates are receiving targeted training that will enable them to be productive participants in the workforce. Nigeria's landscape of supply-side interventions to prepare youth has several examples of successful models that are operating at a micro level, including the Paradigm initiative and Leap Africa. There is a need for investing in scaling up these models and developing strong private sector partnerships to ensure that there is a developed uptake plan for graduates.

But beyond these 50 000 jobs there is the economy-wide challenge that formal labor demand is simply not large enough to absorb supply. The digital jobs space shows a glaring lack in absorption capacity. In 2014, it is estimated that 4 000 new digital jobs that are accessible to youth will be generated. In that year 500 000 university and secondary school graduates will enter the workforce.

Continued investment is needed to incubate new businesses and grow existing high growth potential SMEs that can in turn generate jobs. Financial institutions, sector-specific incubators, and major technology companies are actively engaged in identifying these investment opportunities with some success. One persistent gap that needs to be filled is in translating Nigeria's emerging tech talent into sound businesses prospects. This translation of raw engineering talent into commercial potential is one where increased investment could have a real and lasting effect.

Beyond preparing youth for formal jobs opportunities, developing online work platforms provides workforce entrants access to a broader demand market, successfully expanding employment opportunities. Given Nigeria's challenges with reliable and affordable power and Internet, one of the critical gaps and opportunities for investment is in providing affordable workspaces.

While Nigeria will have strong growth in digital jobs opportunities that require investment in improving the job-readiness of new workforce entrants, the much larger gap and need for investment is in growing the demand market through investing in entrepreneurs and SMEs or investing in connecting individuals to new demand markets.

²⁰ CIA World Factbook; World Bank Data; African Economic Outlook; Oxford Business Group 2012 Nigeria Report.

²¹ Dalberg analysis, 2013

²² CIA World Factbook; World Bank Data; African Economic Outlook; Oxford Business Group 2012 Nigeria Report.

COUNTRY SNAPSHOT: SOUTH AFRICA

South Africa is one of the strongest economies on the continent and has the 20th largest ICT industry in the world. However, South Africa remains a dual economy with one of the highest inequality rates in the world, perpetuating inequality and exclusion. The top 10% of the population accounts for 58% of the country's income while the bottom decile accounts for less than 1%. The digital economy provides a unique potential to help bridge the economic and social divide – particularly when it comes to job creation - but if these decisions and investments are not made carefully, the digital opportunity could worsen the gap.

In order to fully take advantage of the opportunity, investment is needed in expanding digital jobs opportunities, leveraging and building the existing skills base, and facilitating matching between the two. Initiatives across each of these dimensions exist today but investment is needed to drive both growth and scale. By doing so, South Africa has the opportunity to facilitate impact on the individual, the ICT industry and society as a whole.

South Africa's digital jobs frontier

A study by World Wide Worx suggested that South Africa's Internet economy currently contributes up to 2% (US\$7.1 billion/R59 billion) to South Africa's GDP and continues to grow.²³ This growth is felt in both in the ICT industry (BPO, e-Commerce) as well as across the economy more broadly (e.g. financial services, SMEs, agriculture) and, increasingly, amongst South African citizens (through access to government services, healthcare information, etc).

There is also a strong confluence of factors pointing towards continued investment and growth: the government is committed to further developing the national broadband policy to increase access; corporations such as Google and others are driving innovation to extend infrastructure; and social sector actors such as Rockefeller and others are actively exploring opportunities for job creation and creating spaces for innovation and entrepreneurship to grow (such as JoziHub).

However, this growth is not necessarily permeating all levels of society and in order to fully realize the impact of the Internet and technology – specifically to create opportunities for employment - a deeper understanding of both the supply and demand side challenges is required.

South Africa's youth unemployment challenge²⁴

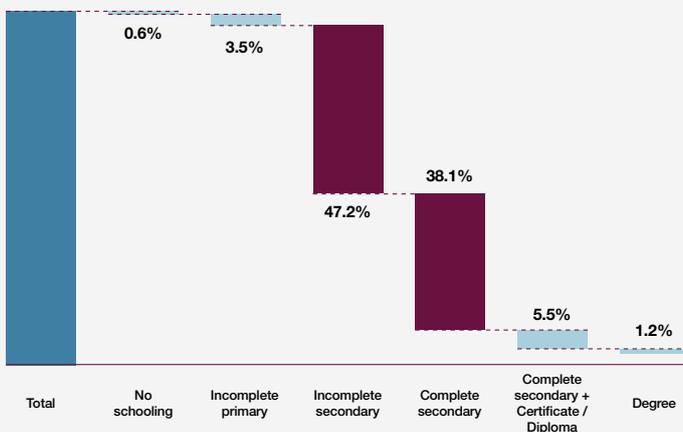
The digital economy holds unique potential to support job creation and, more importantly, the creation of skills and capabilities that will provide a distinct trajectory for youth in the economy. However, leveraging ICT to support and create jobs for youth requires an understanding of the current make up of the labor force and the context within which skills are developed, jobs are sought and employment is attained.

South Africa's labor market faces a number of challenges that link both to a lack of skills and capabilities but also to an inefficient system for identifying and honing talent. This results in a particularly dismal set of employment statistics:

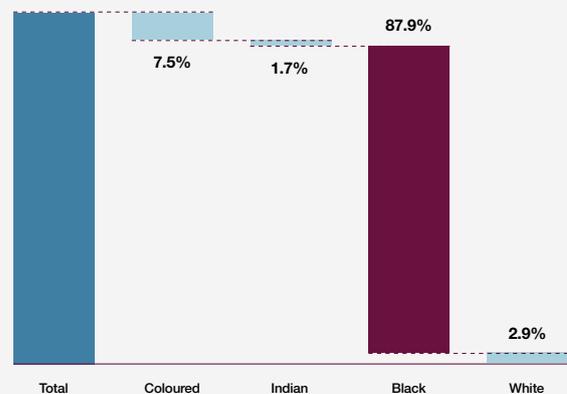
- 2.2 million youth between the ages of 18-29 are unemployed
- an additional 1.2 million are discouraged work-seekers²⁵
- the majority of unemployed youth are previously disadvantaged.

Figure 9: Overview of youth unemployment in South Africa by education level and race

Breakdown of unemployed youth by highest level of education attainment



Breakdown of unemployed youth by race



²³ Worldwide Worx, *Internet Matters*, 2012.

²⁴ The World Bank Morocco Household and Youth Survey, 2010; The World Bank Kingdom of Morocco: *Promoting Youth Opportunities and Participation*, 2012

²⁵ Wits University, *Youth Unemployment in South Africa Since 2000 Revisited*, 2013

These statistics are caused and exacerbated by a myriad of factors including: a lack of social networks to access opportunities; lack of work-seeking skills to land their first job; undetermined functional competence / skills required for available jobs; limited work-readiness to integrate into the workplace; and minimal personal mastery and readiness (psycho-social resilience and attributes for success at work). Courses correcting this situation require interventions that look across both the demand and supply side challenges in the market, and in that sense digital solutions can help.

South Africa’s opportunities and challenges for inclusive digital jobs

The digital jobs opportunity in South Africa is at a point where impact can be significant. Small successes are revealing the untapped potential of South African youth and digital platforms tools and solutions are creating access and opportunity for growth. However, the difference between carrying on at small scale and delivering transformational impact will depend on the ability of public, private and social sector actors to align their investments.

The full impact of these digital jobs will not merely sit with the work-seekers and the employers, the opportunity is much greater. Digital job creation can support South Africa in more effectively identifying, segmenting and matching its (significant) pool of unemployed youth, with the needs of multiple industries. The ability to more effectively allocate human capital across the economy will have ripple effects on both social and economic growth. However, in order to realize this impact, investment will be required from the public and private sectors, and will impact on investors and communities alike.



Description
Harambee is an initiative, driven by employees to facilitate the successful employment retention of young unemployed work seekers, and grow the entry level labour pool

Key focus

Target:	First time work seekers
Aim:	To screen, segment, bridge and place first time work seekers into sustainable jobs within the formal labour market

Results and impact

Users:	Trained and placed over 2 000 youth; >80% placement rate
Users:	200K users since 2011
Level of engagement with users:	High
Target:	10K youth by 2014



Description
Ummeli is an open-source mobile platform and social network that provides young people who are not in education, employment or training, affordable access to knowledge, support and tools needed for career development

Key focus

Target:	Youth not in education, employment or training; ages 15-34
Aim:	To facilitate access to training and opportunities for NEET youth

Results and impact

Users:	200K users since 2011
Level of engagement with users:	low
Opportunities:	300K work profiles submitted
Target:	to reach 30% of NEET users with mobile phones with in 5 years and 1M active users by 2014

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In order for these solutions to achieve scale that is felt both by employers, individuals and society at large, four things are needed:

1. **Greater investment in training, matching and demand generation solutions that are delivering measurable results.**
Despite significant success in identifying, training and matching the talents of disadvantaged youth to sustainable placement opportunities, most interventions remain sub-scale due to a variety of reasons, including risk aversion of clients, insufficient financing and lack of sustainable business models for growth.
2. **Demand led solutions that ensure training and skills development is effectively matched with opportunities on the market.** Employers – even those with increasing entry-level recruitment needs - are averse to employing first time employees, and especially those from poorer, more marginalized communities and schooling environments.
3. **More effective platforms for matching** youth with the right mix of education, training and employment opportunities.
4. **Public, private and social sector investment** to catalyze the growth of new solutions that will both create jobs and match work-seekers with those jobs. Examples include the use of innovative finance such as social or development bonds or pay for performance mechanisms.



Innovative finance solutions



Challenge

Youth account for the majority of work seekers in Africa. A number of factors complicate this situation:

1. There is a mismatch between youth skills & employer needs
2. Insufficient number of jobs
3. Information asymmetry between employers and job seekers



Opportunity for innovative finance

Innovative finance solutions can create greater efficiency in the matching between employment and work seekers by creating incentives that address risk or catalyse financing to support new interventions



Pay for performance

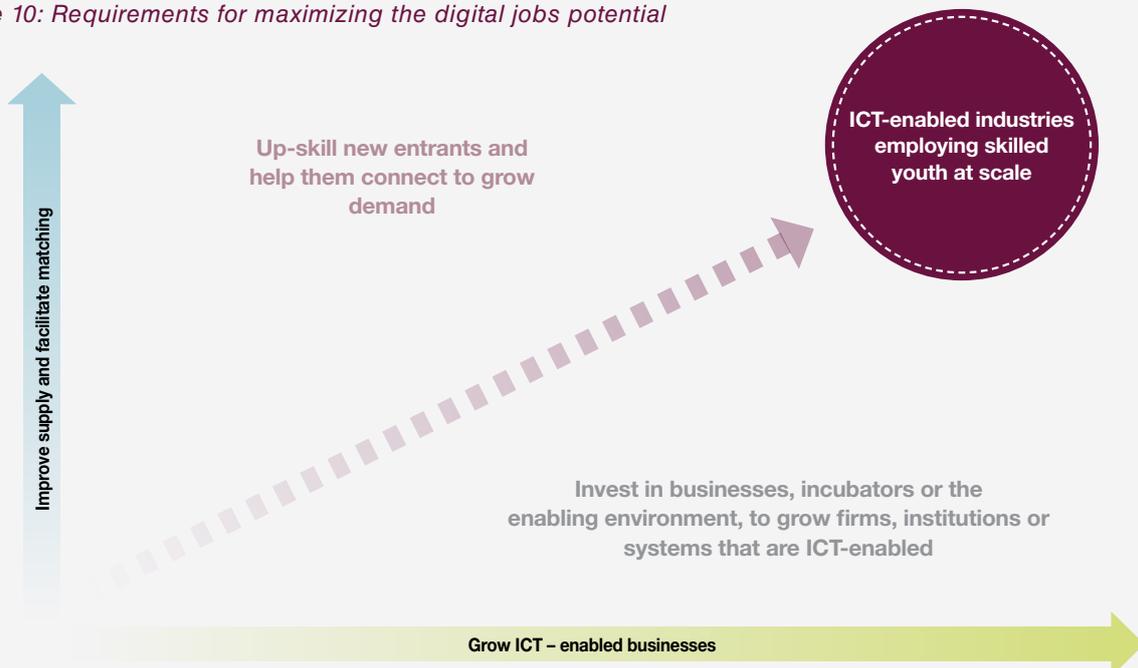
One possible intervention that could address employer risk aversion and catalyse the growth of training programmes is a pay for performance funding mechanism. The objective of a pay for performance funding mechanism is to ensure flexible pooled funding for training providers, an increased incentive for training providers to meet targets, and private sector involvement in funding

Fostering digital job opportunities requires investing in growing digital businesses – which both the public and private sector are committed to doing – and ensuring that new workforce entrants are prepared with relevant skills to engage. Addressing the skills mismatch requires facilitating strong partnerships between the private sector and supplementary training agencies seeking to prepare youth for the workforce. South Africa has strong youth training programs, but these programs need to be scaled up and employers need to further engage. Investing in programs that will continue to prove the potential of youth while expanding the growth of new businesses will help build a vibrant digital economy.

IV. DIGITAL JOBS CALL TO ACTION

In order to create digital jobs at scale it is important that the investment portfolio consists of three integral parts: investment that improves supply, grows demand, and creates the right enabling environment to effectively match supply and demand. Each of these areas of investment is critical to fostering sustainable digital jobs growth within each country or at a regional level.

Figure 10: Requirements for maximizing the digital jobs potential



When deciding on the role they can play within this investment portfolio, stakeholders must consider their unique capabilities and apply these in a way that both has direct impact, but also helps to build a portfolio approach to generating impact.

The figure below illustrates the range of intervention types required to realize the full potential of digital job creation.

Figure 11: Landscape of digital job creation interventions

	Demand	Matching	Supply
Funding implementation	<ul style="list-style-type: none"> • Support incubators • Support business directly • Create financial mechanism to incentivise employing youth 	<ul style="list-style-type: none"> • Support career websites or other relevant matching platforms • Support mechanism that partner businesses with pools of supply 	<ul style="list-style-type: none"> • Support capacity building organisations • Support / Manage best in class training centre
Influence public and private sector policies and practices	<ul style="list-style-type: none"> • Advocate for improvements to business enabling environment • Advocate to change business perceptions and practices 	<ul style="list-style-type: none"> • Support convening of key players in supply and demand in order to broker relationships • Advocate for enabling environment reforms that improve flow of information 	<ul style="list-style-type: none"> • Advocate for improved ICT and job readiness curriculum's at levels of education for all youth
Influence through thought leadership	<ul style="list-style-type: none"> • Conduct market research to inform investors and entrepreneurs of opportunities, challenges, and best practices 	<ul style="list-style-type: none"> • Research and reporting mapping supply and demand mismatches 	<ul style="list-style-type: none"> • Research skills and other factors influencing youth

Considering the range of options and the existing players in each market, we see specific intervention types varying by country. For example, in South Africa, Morocco and Egypt, we see a need for supply side skills development support, in the midst of employer hesitation and risk aversion. The following graphic summarizes different levels of investment and their possible resultant impact in these countries.

Figure 12: Overview of interventions to address supply-side gaps and employer risk aversion

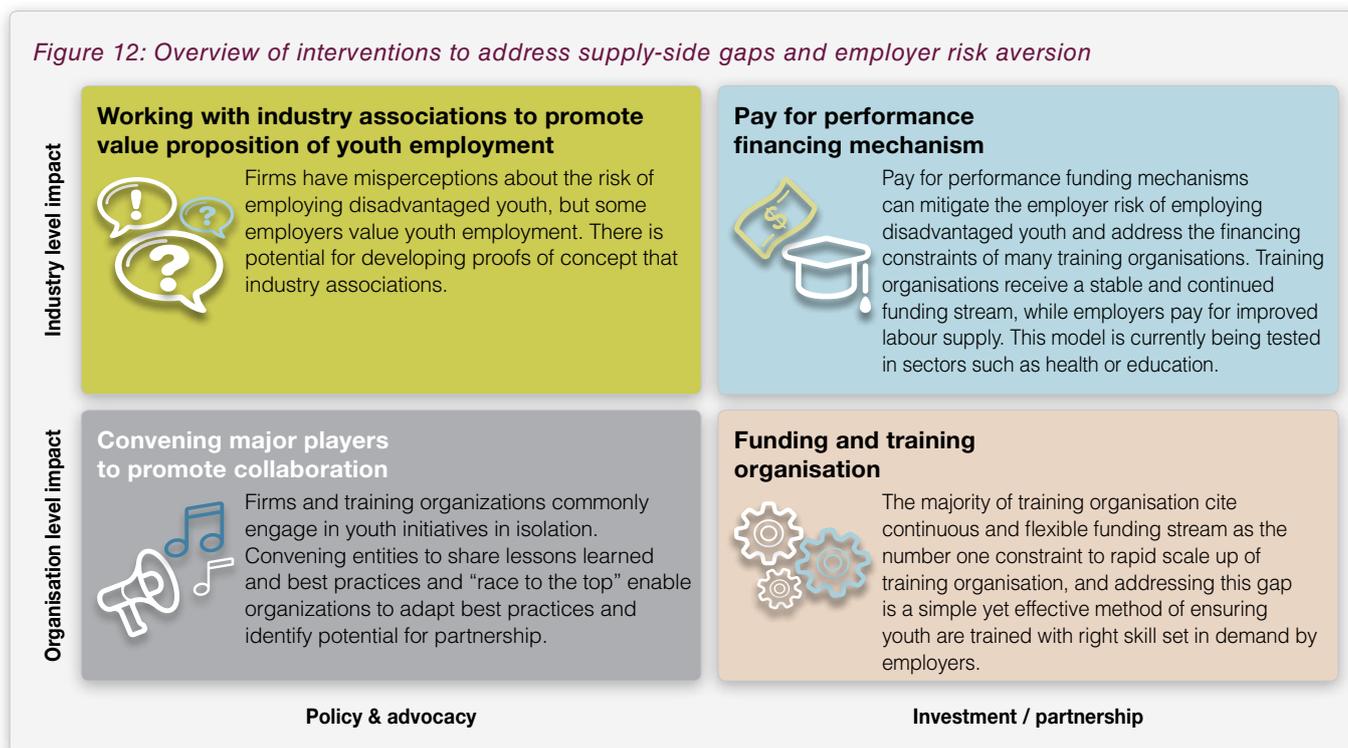
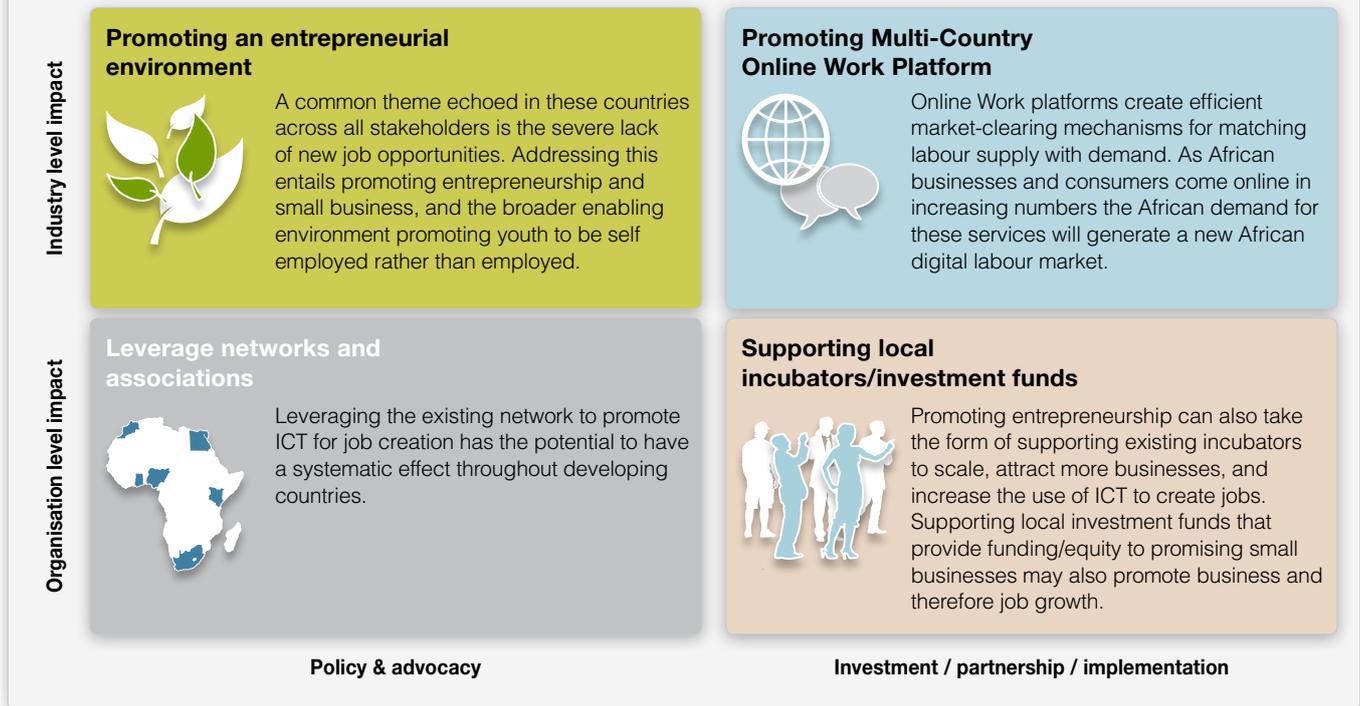


Figure 13: Overview of interventions focused on creating new jobs



The needs of Ghana, Nigeria and Kenya play out slightly differently with a necessary emphasis on ICT-enabled industry growth and support for entrepreneurs, as illustrated below. When determining which interventions will be most appropriate for them, stakeholder groups should consider feasibility and catalytic impact. Feasibility refers to the following aspects:

- The ability to move from concept, to implementation, then results starting within a year
- Level of complexity in institutional relationships or funding required to start implementation
- The relevant existing organizations and their success to date.

While catalytic impact refers to:

- How well the initiative is aligned with supporting the target youth population
- How well the initiative stimulates job creation.

The call for a portfolio of investments

Digital jobs in Africa hold great promise. They have the potential to generate transformative opportunities for hundreds of thousands (and eventually millions) of youth who would otherwise not have access to pathways out of poverty. Current opportunities for investment cater for a wide range of stakeholders who can choose to invest in a way that ensure maximum, sustainable impact. Creating regional impact at scale requires the collective actions of like-minded partners who can work towards increasing demand and supply, and creating a broader enabling environment to match the right people with the right opportunities.



Dalberg

