Institute of Innovation Research

"Can You Teach a Lion to Roar?"
Selected African Skills Development and Capacity
Building Perspectives:
Breaking Down Old Paradigms and Creating New
Opportunities

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Research Paper

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Selected African Skills Development and Capacity Building Perspectives

Breaking Down Old Paradigms and Creating New Opportunities

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Abstract

This research paper explores selected sub-Saharan African skills development and capacity building priorities needed for the sub-continent to achieve its growth targets and development objectives. There are multiple and diverse African skills challenges across this region. There is a growing urgency for the provision of practical skills and capacity solutions across different sectors. If sub-Saharan African governments, public institutions, and the region's international counterparts, are to achieve their desired development objectives, Africans from all walks of life must be empowered with new sets of skills and mind-sets. The best start is with the provision of skills required to plan ahead in line with the AU's Vision 2063, while managing current development efforts strategically to lay solid foundations for future success across the continent. The demographic dividend of a large pool of African youth is a powerful long-term advantage that few regions around the world can boast of. This critical advantage comes loaded with its own clear skills development challenges and potential risks. It requires targeted and courageous skills investments to yield the anticipated results from the dividend. The paper addresses the question of how strategic partnerships such as those among African DFIs (such as the AfDB, DBSA, and IDC), with international partners such as Japan's JICA, especially the ABE programme, together with African multi-lateral institutions such as the African Union and Nepad, and all interested and well-meaning African partners, can leverage on the current positive macro-economic trends to finally achieve sustainable African development. The paper concludes by inviting and urging local stakeholders and partners to collaborate in skills development initiatives in order to take advantage of the current growth momentum. IMPORTANT: The reader will note that this paper provides more of a 'practitioner-perspective' and is not philosophical, or theory-based, research paper.

Key Terms:

Sub-Saharan Africa; skills development; capacity building; African youth; leadership; institutional strengthening; economic growth; strategic partnerships; mind-sets.

ACRONYMS

ΑU African Union

New Economic Programme for Africa's Development NEPAD

DBSA Development Bank of Southern Africa

IDC Industrial Development Corporation

EU European Union

WEF World Economic Forum

SADC Southern African Development Community

TVET Technical and Vocational Education and Training

Development Finance Institution DFI

PACBP Pan African Capacity Building Programme

ILO International Labour Organisation

UNESCO United Nations Economic, Social and Cultural Organisation

BRICS Brazil, Russia, India, China South Africa

AfDB African Development Bank

GDP **Gross Domestic Product**

USD Unites States Dollar

ACBF African Capacity Building Foundation

PIDA Programme for Infrastructure Development in Africa

ΙP Intellectual Property

WIL Work Integrated Learning

ICT Information and Communications Technologies

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"/	Africa's greatest wealth is not the continent's minerals and natural resources. It is the African	
	people themselves, especially Africa's youth" (Magadlela, 2016: in this paper).	

Disclaimer

The views expressed in this Research Paper are not the views and opinions of any of the institutions or organisations that the author works with, represents, or is associated with. All views and opinions (and mistakes) are the responsibility of the author. The reader will note that small sections of this paper have been drawn from some of the author's earlier work as published in several public platforms, including online publications, such as: http://africabusiness.com/2015/10/21/dumisani-magadlela/.

1. Introduction

This research paper is an exploration of African skills development and capacity building contexts, challenges, efforts, and solutions. The paper offers both a critical perspective on existing skills development initiatives, and a practical stance with suggested solutions for the future. It also offers recommendations on what is most likely to succeed in the context of the current African skills development landscape and economic growth trajectory. The paper draws from the work and operations of some of the leading African development finance institutions (DFIs), such as the African Development Bank (AfDB). There is reference also to the work of the DFI-funded Pan African Capacity Building Programme (PACBP) which is managed through the Development Bank of Southern Africa (DBSA), in partnership with the Industrial Development Corporation (IDC).

The first part of the paper, on background, rationale and context, presents selected factors in the context and background of Africa's skills challenges. This is a selective background, and the section does not cover centuries' old or decades of skills gaps in Africa's past. Instead, it tackles challenges as viewed from the perspective of recent and 'independent' African history, and does not review African Governments' old policies and efforts to develop skills. Instead, the paper's focus is on current high-level skills initiatives to address some of sub-Saharan Africa's priority challenges, such as infrastructure development with its massive financing backlog which requires over US\$90billion annually to address. The infrastructure skills development challenges require active complementary support from other 'development value-chain' sectors such as finance, leadership, project management, risk management, and environmental analyses to become sustainable. Hence the need for integrated, as opposed to fragmented, multi-sector, holistic, and comprehensive skills development programmes across the continent.

This section is followed by shorter and brief overviews of the background, rationale and context for this skills development and capacity building analysis. After the background, the paper positions the African Union's Agenda 2063 as the main development target for most African nations and their respective institutions, including all (joint or various other) skills development and capacity building initiatives. This section is followed by two sections that present the constantly shifting landscape for skills and capacity building, and the institutional set-up that desperately requires strong collaboration and strategic partnerships to align efforts for skills development.

The final sections address issues that include the need to take advantage of Africa's demographic dividend and economic growth momentum, and encourages African stakeholders to choose carefully which skills to prioritise, and which stakeholders or partners to collaborate with. The paper ends with a call for action before the current growth trajectory shifts.

2. Background, Rationale and Context

The first and most important point to make in positioning this paper is that Africa is not one amorphous and homogenous mass of indistinguishable nation-states. Africa is made up of 54 diverse countries within which are even more areas of difference and diversity. While the diversity poses its own challenges such as tough mobilisation and limited consensus on regional development priorities, it also offers Africa's beauty, untapped economic power, and unparalleled demographic strength.

Reference to Africa in this paper is mainly to sub-Saharan Africa (see Figure 1 below). The author recognises the inherent linkages that exist institutionally, religiously, demographically and geographically across African nations. Thus, in this paper reference to African skills and capacity building challenges is within the loose general identification of the geographic boundaries of the continent, while respecting and acknowledging that the 54 sovereign nation-states have their own regional and internal skills development and capacity challenges. The African Union perspective is used here in the same manner that the paper addresses Africa's work towards achieving the AU's Agenda 2063: as a collective group if nations that have agreed to come together for their collective good, and for a common purpose to develop the continent.

Africa Africa Sub-Saharan Africa ATLANTIC OCEAN africaguide.com

Figure 1: Map of Africa

Source: www.Africaguide.com

This exploratory research paper does not go deeper into the rather complex subject of describing which skills are technical and which ones are not. Drawing from a paper by Kingombe and Wegner (2008), the paper refers to definitions of skills development often used by UNESCO and the International Labour Organisation (ILO), who describe a technical and vocational skill as:

"...a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life." UNESCO (2002: http://unesdoc.unesco.org). See also http://en.unesco.org/themes/skills-work-and-life.

This paper recognises the extensive work of UNESCO and ILO over decades across sub-Saharan Africa, and builds on some of their recommendations such as the need to focus on gender and youth, and to enhance skills in the informal sector and in agriculture, which are the two most common economic sectors for the majority of the African population.

A crucial part of skills development that this paper does not venture into is that of sector-based professional bodies and their impact on skills development and capacity building. The paper not only acknowledges and recognises the value and contributions that national, regional and international professional bodies such as those in engineering, finance, auditing, governance, and recently coaching, play in sector-specific skills development, but commends the quality assurance and related work of these entities. This is a topic for another research paper altogether.

2.1 The shifting African skills and capacity building landscape

Skills and capacity tend to go well together. A skill can be described as a competence in something of value or interest. Capacity comprises the skills, incentives, resources, organisational systems and structures, as well as the broader enabling environment that enable individuals and organisations to plan, implement, and monitor their development. Capacity building efforts can be at individual, organisational, regional and international levels.

Since capacity development is systemic in nature, there is a high probability that when one level has sufficient capacity, the benefits of that capacity will be felt in other levels of human organisation too. This is why educating women and youth has been proven to have far greater impact in advancing and transforming societies and nations over time. The UN has repeatedly called for greater skills for women in agricultural production, and international efforts such as through the Millennium Development Goals (MDGs) showed that empowering women yields positive systemic improvements (UN, 2014).

Within businesses, individual capacity is developed and used most effectively and tangibly in pursuit of specific organisational objectives to deliver services which in turn benefit the business and in some cases broader society. Part of building African capacity centres around improving the investment climate for private firms and local entrepreneurs, and empowering local authorities and communities to take part in public decision-making, in promoting good governance and

accountability, resolving conflict amicably, promoting peace and security, rebuilding and strengthening fragile states, and creating space for people to choose their leaders by promoting democratic discourse. Capacity has many flavours, and it is mainly contextual, and it is also influential. Skills are broader and have multiple meanings, yet remain globally relevant and transferable across individuals, organisations, nationals and regions.

Most of Africa's recent economic growth opportunities have been driven by the growing global demand for the continent's natural resources. Africa will do well to take advantage of this resource demand opportunity or 'commodity boom', and build-up her strength through skills and capacity. Africa must then proceed to build institutional and human capacity and skills (including leadership and so-called soft skills, which are in great demand and among the toughest to develop) and ensure that there is sufficient capacity both to sustain the current growth trajectory, and to diversify the skills base, in order to better-manage the growth benefits and become more resilient in future than before. The economic growth example and case of the Asian Tigers is instructive in this regard, especially their continued economic growth with limited, if any, natural resources to utilize (see Anne Ο. Krueger, 2009 "Asia and the Global Financial Crisis". Source: http://www.frbsf.org/economic-research/files/Krueger.pdf).

2.2 The African Statistical Minefield: Availability, Reliability and Skills Challenges

In locating this paper in context, it is important to indicate that one of the most persistent and stubborn challenges constantly afflicting African governments, multi-lateral institutions and international bodies operating across the African continent is the three-pronged challenge of availability, quality and reliability of information or data. There have been lingering challenges in identifying credible sources of information and African governments are strengthening this important aspect of any planning process.

There are perception challenges with the availability, credibility and reliability of statistics and data from the continent. The blossoming business of foreign-based (financed) information sources on Africa all claiming to be the best sources of information on/about anything and everything African has not really helped either. In all this, the best information is still from 'the ground' and is mostly experiential. Where skills and capacity are concerned, the same challenges arise, and skills development interventions focus on sectoral or partnership-based engagements to minimise the challenges and improve chances of success.

Increasingly skilled professionals are generating valuable information, knowledge, and intelligence to inform proper planning and make accurate business and government projections. The very subject of how many skills development and capacity building initiatives or projects has Africa hosted over the years, is contested. This paper does not even attempt to engage in that fruitless discussion. The paper also does not review the massive amounts of efforts and funding that has previously been poured into developing African skills and capacity over the years. Nor does it dwell

on the availability and reliability of current statistics to inform planning and make accurate projections. There are other institutions and stakeholders focused on that.

African censuses and other periodic data gathering sources require strengthening to narrow the margins of error and to increasingly make accurate business analyses, especially where investments are concerned. Information in this paper has been gathered from different and often conflicting sources. This is one of a series of efforts by African organisations, especially DFIs, to unpack the need for skills and capacity, and to carefully track and manage skills and capacity-related developments across the African continent.

There are strong and growing African universities building skills in statistical analyses and research methods, in spite of the glaring capacity challenges, such as illustrated in the work of Akilagpa Sawyerr (2014). Several international partners are increasingly gathering data in areas supporting infrastructure development and economic development, such as Bloomberg and the international consulting firms (e.g. EY, Deloitte, McKinsey, Bain & Co. among others). There are limits here where these international businesses/corporations mainly focus on indicators that point towards narrow financial benefits for their shareholders and subscribers, and not provide a whole picture for general continent-wide up-liftment. Their mandate and thrust is different, and that is understandable. It is the nature of business as it is done globally.

The point being made in this paper is that the onus is on African governments and their research institutions to develop the skills and build the requisite capacity to generate the knowledge that Africa needs to make the necessary advancement towards reaching its development objectives such as Agenda 2063. The following statement from one African scholar is pertinent:

"What remains clear through all this is the crucial role that Africa's systems and institutions for knowledge generation, synthesis, adaptation, and application have to play in insuring the advancement of the national interest on all fronts, economic, social, cultural, and political." (Akilagpa Sawyerr, 2014: p. 215).

Sawyerr (2014) calls for a stronger pan-African and Africa-centred research capacity and skills development drive within and through African universities and research institutions. He contends that "research by African researchers working primarily at African institutions, turning out first-rate knowledge on locally relevant issues" (Akilagpa Sawyerr, 2014: p. 215) will create Africa-wide spinoffs that will develop a culture of research and knowledge generation across the continent.

These are some of the African solutions that can be grown and nurtured locally and organically with the support of strategic partners such as JICA's ABE initiative and several others that are Afro-centric and friendly to African interests in their approach.

2.3 Skills to Take Advantage of the Positive Economic Growth Trajectory

Since the 1990s, Africa has made significant and continuous progress in economic growth as evidenced by the average annual growth rate of 5.8 % before the occurrence of the current financial and economic crisis in 2008 (Africa Progress Report 2015; JICA, 2013). Africa's growth has been attributed to various reforms undertaken by African governments to stabilize and liberalize their economies as well as stimulate local and regional economic growth. The critical role of capacity building and skills enhancement in Africa's development has never been more evident. Despite significant interventions by development partners and individual country efforts, skills shortages and institutional capacity limitations have remained a central, and binding, constraint to Africa's long-term development.

One of the more comprehensive analyses of Africa's immediate past and the current development context, and of future economic projections, is provided by a JICA report from 2013. This JICA document "lays out a broad Africa 2050 scenario in which Africa catches up (or converges) with the rest of the world to narrow the gap in terms of living standards and productivity" (JICA, 2013: p. 6). The document presents well-researched analyses on Africa's macroeconomics, covering the now well-documented demographics (with the popular and expectancy-laded demographic dividend), the continuing poverty and inequality conditions, the sprawling, rampant urbanization, and the utilization of Africa's rich natural resources.

There are missing critical factors missing among the major themes of the JICA report referred to above, and these can be found within the cross-cutting sub-themes, which include the following critical areas: skills development and capacity building, youth and gender issues, leadership development, coaching and mentoring, and developing new mind-sets and attitudes for Africa's next chapter. The other issues to include are raising Africans' awareness of the long-term value of collective ownership of natural resources, and the development of modern infrastructure to drive African economies towards their desired goals.

So far, the ABE initiative is one of the best-case examples for supporting African skills development in recent years, and must be given all the support and developed. Ideally, the ABE initiative should partner with the Pan African capacity Building Programme and expand locally with a shorter stint in Japan, accompanied by extended periods within Japanese enterprises across Africa and based in African partner universities. The PACBP is already in partnership with at least four leading African universities and runs a two-year Masters in Public Infrastructure Management (MPIM). This partnership will strengthen the already good relationships between Japan and African countries.

The political and economic liberalisation and stronger attention to good governance have characterised most African countries since the 1980s with the emergence of new public management approaches which centred on managerialism and marketisation of service delivery. The private sector is expected to step up and take a leading role in service delivery. While the overall economic policy environment has become more conducive to private sector development, job creation and effective public sector delivery have remained a challenge in most African countries, and the skills challenge is at the centre of the impasse.

Often local councils, or municipalities, which are tasked with charged with providing the basic services desperately needed by poor communities they seek to serve, do not have the requisite personnel with skills and capacity to deliver the required services. In most cases, the officials in charge of projects are not even qualified to do the very jobs that they are appointed in. These are among the skills development and capacity challenges that DFIs and other African partners must tackle head-on if they wish to have any tangible impact on Africa's development journey (DBSA, 2010; Sebola, 2014).

The progress in the ability of African institutions and societies to perform their mandatory functions, resolve conflict, attend to urgent developmental challenges internally across the continent, set and achieve objectives, has remained low due to problems related to skills and capacity. The continent has been plagued by many other challenges, including skills flight. Hundreds of well-educated Africans with requisite skills are leaving the continent every year in search of jobs, better career prospects, and improved quality of life elsewhere, and this has left the continent in urgent need for scaling efforts on skills development and capacity building. In summary, Table 1 below presents some of the figures that paint a clear picture of what the next phase of Africa's development looks like.

Table 1: New African Opportunities

No.	Areas of Interest/Sectors	Indicators/Measures	
1	Africa's economic growth	Average GDP = 5% (above global average)	
	momentum		
2	Mounting global interest in	Increasing capital flows - fivefold increase(2010/12) surpassed	
	Africa	target of USD 17 billion	
3	Minerals and natural resource	About 87% of African countries are richly endowed with natural	
	wealth	resources that they can tap into to grow. Must benefit local	
		population.	
4	Governance and accountability	Democracy is gaining ground across Africa	
5	New technologies to leap-frog	Today 1 in 5 Africans use the Internet; Renewable energy	
	stages of industrialization	potential is taking root to avoid the damaging industrialization	
		root for development	
6	The powerful demographic	Africa's population explosion will see it hit 2.4 billion by 2050;	
	dividend	This will create a youthful workforce of one billion people by	
		2050. This will represent more than 50% of the world's youth	
		population. Incredible advantage.	
7	Growing middle-class	The African population has tripled over the last 30 years and is	
		now projected to reach 1.1 billion (42%) in 2060. Youngest	

		continent with 62% of the population in Africa under 25 year	
		a guaranteed consumer base for years to come- consum	
		spending to reach 2.2 trillion USD by 2030	
Rapid urbanization 50% of Africa will be urbanized by 20		50% of Africa will be urbanized by 2050 (planning and delivery	
		of services and utilities for large urbanized youthful population)	

Source: African Development Bank (AfDB) Youth Employment Initiative for Africa (2016)

The stage is set for Africa and Africa's key stakeholders to collaborate smartly in building skills for the long-term Africa-wide development, and not for short-term sectoral benefits. The above background in Table 1, illustrates the context, and rationale for all partners to step up their efforts to grab these opportunities while they are still viable. Partners such as the impressive ABE initiative, led by JICA, and drawing on African professionals as trainees or students from across the African continent, can make these opportunities count for more than statistical figures in how the candidates are trained and re-deployed.

In the case of the ABE initiative, the test for the programmes is in the lasting solutions and impact delivered by the trained students, participants, or delegates long after they have returned home from their training in Japan. Can they stay focused on the bigger objectives when they operate within the context of the onslaught of poverty and inequality? A similar question, on human capital and change (or shifts), is posed by the African Development Bank as follows:

"These profound shifts come with significant repercussions for building human capital amidst downside risks of persistent poverty and increasing inequalities. Africa lives a paradox of rapid economic growth with poverty and inequalities having striking effects on youth and women" (AfDB, 2014: p. iv.).

The challenges for most Africans with skills, with jobs, or with entrepreneurial opportunities, is to balance the pressure of up-lifting or supporting family and social network members without such opportunities, while growing the opportunity to do even more with it. These cultural and anthropological factors are real, and cannot be taken for granted by those not exposed to them. However, they lend themselves to another paper beyond this one. Suffice it to say that there seem to be endless multiple layers in the African skills and capacity building landscape.

In order for Africa to take full advantage of the vast opportunity that this transitional period presents, Africans from all walks of life need to step up to the plate. This is summed up beautifully in the following statement from the AfDB's 2013-2022 Strategy:

"Overcoming such formidable challenges will require a new mind-set where Africa's leaders and people fully assume ownership for their development—much in the way China, India, the Republic of Korea and Singapore have done" (AfDB, 2013: p.6).

There is no one to delegate the conceptualisation, thinking-through, planning and implementation of Africa's development path to except for Africans to do it themselves. The African Union's Agenda 2063 is the blue-print that everyone must rally around and see through to its achievement.

3. A Highly Mobile Skills Challenge: The African Demographic Dividend

As of June 2015, up to 50 percent of the African population was said to be under 20 years of age. A 2014 UNICEF report indicates that 4 out of 10 people in the world will be African by the end of this century. The same report suggests that currently 40 percent of Africa's population lives in urban areas, and this is set to rise dramatically within the next 10 years (UNICEF, 2014). Africa's famous demographic dividend is up for grabs by the continent's emerging economies, and there is little time to waste, nor is there much room for mistakes. The one billion people in Africa will be replaced by up to 2.3 billion people by 2050 (AfDB, 2014; UNICEF, 2014). Most of these people will be young, or below 35 years. The opportunity to grow the value of this demographic dividend is not tomorrow or next year; it is right here and right this very moment. Now.

Can Africa's young lions (youth) be taught to roar? Is the roaring instinct (drive to improve the African condition) alive and ready within them, and already set, and waiting to be coached and mentored, nurtured and encouraged, to grow into its natural greatness with carefully-developed and timely leadership and entrepreneurial skills interventions? This remains one of the greatest challenges for Africa and its leaders: how to harvest this incredible resource of burgeoning African human capital. The paper's stance on this is that the first challenge must be to gain an intimate understanding of the resource's diverse and disparate nature. The AfDB (2014) suggests that: "...by 2040, Africa will have the world's largest workforce, surpassing China and India" (AfDB, 2014, p.1). The report rightly contends that this large 'youth bulge' is a massive opportunity, yet it can also become a risk if it is not carefully managed and/or utilized. The opportunity far outweighs the risk, as stated below:

"If the talents of this rising youth cohort are harnessed and channeled towards the productive sectors of the economy, the opportunities for economic and social development are endless" (AfDB, 2014, p.1).

Development finance institutions (DFIs) have a great opportunity to support governments in delivering on this absolutely critical area. Capacity building is everyone's business. The onus is on every African leader, manager, or professional in every position, to ensure that all required skills are developed both through tertiary education and through short intervention courses aimed at enhancing existing skills to facilitate Africa's infrastructure and economic development.

Africa's promising demographic dividend will be harnessed if Africans themselves identify mechanisms to grow the human assets that the continent current carries. The fact that Africa has 6 or 7 of the fastest-growing economies in the world in 2015 should be enough motivation to ensure that this is accompanied by the development of all the necessary skills to build economic resilience to sustain the levels of growth beyond the short term period. One of the crippling, and growing, challenges Africa faces as the continent seeks to grow is inequality or lack of inclusiveness. Others call it elitism in patterns of growth. While Africa has 6 out of the 10 fastest-growing economies in the world, it has the unwanted record of also having 6 of the most unequal countries in the world (AfDB Strategy: 2013-2022). The solution is in developing people's skills to cope, survive, and thrive under current promising conditions.

"Failure to invest in human capital development could stall growth, exacerbate poverty and threaten political stability. Spending on human development is not welfare. It is smart economics" (AfDB, 2015: presentation by AfDB HR Department at the DBSA).

The silent African challenge and opportunity is in the continent's exploding population growth, summed up below:

"Africa is the second-largest and second most populous continent on earth with an estimated population in 2013 of 1.033 billion people. Africa is home to 54 recognized sovereign states and countries. The UN Population Fund stated in 2009 that the population of Africa had hit the one billion mark and had therefore doubled in size over the course of 27 years". (World Population Review, 2016: Online report, downloaded on 6 march 2016 from http://worldpopulationreview.com/continents/africa-population/).

There are additional reports that indicate that Africa has experienced a marked increase in its population only in the last few decades (UN Population Fund, 2009). Some reports suggest that Africa's current population is five times what it was in 1950 (UNICEF 2014). What is clear is that the continent's rapid population expansion is set to continue, and possibly accelerate. Chances are that Africa's inhabitants will double from 1.2 billion to 2.4 billion between 2015 and 2050. The African population will eventually hit 4.2 billion by 2100 (UNICEF, August 2014: p. 7).

While this exponential growth takes place, it is important to note that the African population is not spread uniformly across the continent. There are a handful of countries with the largest share of its people, and these are given in Table 2 below. This group of countries will face even greater challenges to manage their economies and respond to the ever-growing demands for jobs, services and other amenities from their mainly young people.

NO. **COUNTRY POPULATION SIZE UN ESTIMATE** 1 187,084,274 Nigeria 173,611,131 2 95,045,679 100,695,497 Ethiopia 3 82,196,587 85,675,572 4 Democratic Republic of the Congo 67,363,365 72,583,772 South Africa 5 52,914,243 54,978,907 **Total African Population** 1.166 billion (January 2016 estimates)

Table 2: Most populous African countries

Sources: 2016 World Population Review (http://worldpopulationreview.com/continents/africapopulation/); Worldometers, 2016: http://www.worldometers.info/world-population/population-bycountry/

A notable difference in Table 2 above is that UN estimates generally tend to be higher than other estimates as shown on the table. The pace and rates of global population trends indicate that Africa will be breaking all records with its accelerated population explosion which is already underway.

"More than half of global population growth between now and 2050 is expected to occur in Africa. Africa has the highest rate of population growth among major areas, growing at a pace of 2.55 per cent annually in 2010-2015 (figure 3). Consequently, of the additional 2.4 billion people projected to be added to the global population between 2015 and 2050, 1.3 billion will be added in Africa. Asia is projected to be the second largest contributor to future global population growth, adding 0.9 billion people between 2015 and 2050..." (United Nations, 2015, World Population Prospects: the 2015 Revision: Summary and key findings:

http://esa.un.org/unpd/wpp/publications/files/key findings wpp 2015.pdf).

There are approximately 7.3 billion people in the world today, although figures vary (UN, 2015). Africa has approximately sixteen percent (16%) of that total, which is roughly 1.2 billion people. As of June 2015, up to 50 percent of the African population was said to be under 20 years of age (UNPF, 2015; UNICEF, 2014). The future of humanity is increasingly African. More than half the projected 2.2 billion rise in the world population in 2015-2050 is expected to take place in Africa, even though the continent's population growth rate will slow down a bit. Back in 1950, only 9 among 100 of the world's number of inhabitants were African. On current trends, within the next 35 years, 1 in every 4 people (globally) will be African; rising to 4 in 10 people by the end of this century (UNICEF, 2014: p.7). This figures have been referred to as 'frightening' by some commentators.

In 1950, only 11 million African babies were born. This number has increased to more than 40 million in 2015 and will continue to expand within the next 35 years. By mid-century, 41 per cent of the world's births will take place in Africa, and almost 2 billion births will take place on this continent alone over the next 35 years (UNICEF, 2014: p.8). Planning for ensuring a good education, skills, business opportunities or jobs, for all African youth is one thing. Developing mindsets for the millions of youth to create opportunities for themselves and not just 'look for a job' after school of college, will be another crucial challenge needing to be addressed at the level of early schooling for all African youth. There are enough unemployed African youth across all of Africa today, with figures estimated to exceed 15 million as of 2013 (AfDB estimates: 2016).

This is one of the most powerful resources any region in the world can have to support its development. Africa has it in one of the largest numbers seen globally to date. The relatively limited skills development and technical, tertiary or vocational training across the continent needs to be revamped, up-scaled and accelerated right across the continent to equip these assets fully and get the continent ready to reap rich rewards from this demographic dividend. The intake in all training institutions would need to increase dramatically, and their offerings tailored to the skills needed by the African growing economies. The African Development Bank sums this up well in this statement from its Human Capital Strategy (2014-2018):

"To benefit from the demographic dividend and build a highly skilled labour force, Africa's cohort of high school and technical and vocational education and training (TVET) graduates needs to increase significantly" (AfDB Human Capital Strategy 2014-2018).

The median age across the world currently shows Africa as having the youngest population of all continents. The World Population Counter (clock) as of March 2016, showed the world continental average ages as follows:

Table 3: World Median Age

No.	Continent	Average Population Age	Comment
1	Africa	19 years	Youngest Population
2	Asia	30 years	
3	Europe	42 years	Oldest Population
4	Latin America & Caribbean	29 years	
5	North America	38 years	
6	Oceania	33 years	

Source: http://www.worldometers.info/world-population/#region

From Table 3 above, Africa is the only teenager among the six major continental regions of the world, and has one of the fastest-growing populations globally. It is also urbanizing at breakneck speed not seen anywhere else before. All these new records and new figures suggest that Africa needs to think outside the norm and seek solutions beyond the margins of current innovations that brought solutions to other parts of the world. This alone requires new ways of analysing current African scenarios and challenges, and their solutions. An innovative mind-set is a skill in itself, and Africa needs this more than any other region to tackle its unique challenges.

In the above context, this youthful African population, faced with so-far unseen sets of challenges, must not only innovate, but challenge and change most of the unhelpful existing paradigms about what is it means to be African. Leaders must initiate new ways of being African that are framed in Africa and Africa-defined. The youth who will lead Africa tomorrow must create new images and references of Africa that must eventually be accepted and owned by every African, and subsequently by the rest of the world. The skill to change the African negative narrative into a positive one starts with and within every African and genuine friend of Africa outside the continent. This work has already commenced and the negative (noise) narrative about Africa will gradually be reduced, and eventually silenced.

The work of the United Nations in pursuit of the achievement of the Millennium Development Goals (MDGs) was commendable. It pushed African countries to raise their development game. This helped lay foundations for developments that must follow the MDGs. There are questions that arise for Africa and African development activists when the United Nations says that the SDGs are here to complete what the Millennium Development Goals started (see UN – 2016: Sustainable Development Goals (SDGs). "What are the Sustainable Development Goals?" Source: http://www.undp.org/content/undp/en/home/sdgoverview/post-2015-developmentagenda.html). There are gaps identified by MDGs in Africa's capacity or prioritisation of some of the development targets. The urgent needs of developing countries include poverty, hunger, educational development and unemployment, are not the same as those of developed nations.

The two major questions with the current 17 SDGs relate to the how part of engaging on, and addressing (meeting) these goals. The point being made here is that in all the 17 SDGs, Africa will need to develop some of the skills on her own, and with little prior experience in these areas. One such example is in SDG No. 7 on "Affordable and Renewable Energy". The achievement of this goal in Africa can assist the continent to 'leap-frog' industrialised nations in technological advancement within this sector (see section on renewable energy below).

The MDGs called for greater collaboration among regional partners to achieve the goals. Now the achievement of the new SDGs requires African governments to be visionary and pioneering beyond previous levels and examples, and to channel substantial resources towards building the skills and institutional capacity needed to ramp-up efforts to achieve development targets. To this effect, the location of initiatives such as the Square Kilometre Array (SKA) radio frequency project in South Africa and Australia (See here: http://www.ska.ac.za/) suggests that more highly technical skills will be expected from African youth to lead such projects in the near future. Current leaders in government and in business need to have the wherewithal to see where the skills investments and capacity are most urgently, and strategically, required to guarantee future success.

4. The African Union's Agenda 2063: A Clear Vision for Africa's Future

The African Union's Vision, as stated in the AU Agenda 2063 main document, is for the continent to finally realise and achieve: "An integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in the global arena" (AU Agenda 2063). In order to achieve this vision, it is vital that African governments, institutions, multi-lateral agencies, local councils, civil society organisations, non-governmental organisations, community-based organisations, and all levels of society, work together. All of Africa needs to buy-in, share in the vision, and own it as their own, if we will lift the whole continent out of its unwanted conditions of poverty, low economic growth, crippling conflict, and uncoordinated utilization of the vast wealth in natural resources.

Skills provision and the development of institutional capacity across the continent, are at the centre of efforts to achieve the AU's Agenda 2063 vision. Africa's solutions lie within Africa itself, and will not be imported from elsewhere. For Africa to rise and to roar again, that voice needs to emerge from within the very depths of this rich continent. The good news is that this has already commenced and the more than five percent average annual growth of African economies is just a small indicator of the positive direction and promising economic trajectory that African is on. The AU Agenda 2063 has seven key 'aspirations' that all Africans are expected to work towards. These are listed in Table 3 below:

Table 3: Our Aspirations for the Africa we are Building

No.	Aspirations		
1	A prosperous Africa based on inclusive growth and sustainable development		
2	An integrated continent, politically united and based on the ideals of Pan-Africanism and the		
	vision of Africa's Renaissance		
3	An Africa of good governance, democracy, respect for human rights, justice and the rule of law		
4	A peaceful and secure Africa		
5	An Africa with a strong cultural identity, common heritage, values and ethics		
6	An Africa where development is people-driven, unleashing the potential of its women and youth		
7	Africa as a strong, united and influential global player and partner.		

Source: AU Agenda 2063 (August 2014, p.2)

These seven aspirations are regarded as essential ingredients to fire up the engines that will drive the advancement of the continent towards reaching the desired state in 2063. What African aspire towards encompasses all aspects of life that more developed societies already enjoy. A large part of this, and an area that often goes unnoticed in well-developed nations, is the ability to selfdetermine and to chart your own course of development going forward.

In a side meeting of a meeting of the African Union in Addis Ababa on 26 March 2015, the African Capacity Building Foundation (ACBF), which is one of the leading African capacity building institutions, conducted a discussion chaired by the AU Commission Chair, Mrs Nkosazana Dlamini-Zuma on capacity-readiness. This meeting's main objective was to highlight the capacity building imperatives of the AU Agenda 2063. Proceedings and follow-up discussions from this session and other similar meetings clearly indicate that African governments are increasingly placing the issues of developing internal African skills and capacity at the centre of every strategic and key development across the continent, and rightfully so. For African plans to succeed and be sustainable in the long term, the critical internal skills and capacity requirements cannot be imported as has been happening in sectors such as mega-infrastructure construction projects.

African institutions need to develop the skills locally and ensure that these resources (skills) are retained long-term (PIDA, 2014). A cost-effective way is to build the technical expertise for delivering the required technical training, and ensuring that large numbers of African professionals receive this high level and global best-practice training. Governments must invest in bringing some of the globally recognised experts to deliver the training. Many governments cannot afford to send large numbers of African professionals to recognised technical training institutions abroad to receive training, and they risk losing them to rich nations after the training anyway (for more on brain drain, see here: http://www.aljazeera.com/news/2016/03/einstein-forum-aims-stem-africabrain-drain-160310095834426.html).

To achieve the aspirations of the AU's Agenda 2063, Africa needs all its people focused on, and working towards, the common vision of a vibrant and successful continent. There should be ways to balance the benefits of emigration with the returns either from remittances or returning skilled professionals.

"The emigration of African professionals to the West is one of the greatest obstacles to Africa's development" (United Nations Economic Commission for Africa – ECA).

The African development context of massive infrastructure backlogs and skills shortages has been brought into sharp focus in the wake of recent plans and activities led by the launch of the New BRICS Bank, the African Union's Agenda 2063, the Programme for Infrastructure Development in Africa (PIDA), the New Economic Programme for Africa's Development (NEPAD), and other regional initiatives. These developments have heightened and sharpened the growing need to pay attention to the limited technical and leadership skills necessary and critical for accelerating the continent's development on all fronts.

There are growing calls for concerted and focused efforts by capacity building agencies on the continent to step up and take advantage of the positive and upward development trajectory currently being experienced by most African economies. In positioning the continent for the achievement of Agenda 2063, Africa needs her people well-equipped and with full capacity to vigorously pursue the continent's development targets.

The global brain-drain from emerging countries to rich nations who are able to pay higher salaries to highly qualified professionals, presents sub-Saharan Africa with one of its most formidable challenges. The commendable efforts such as those under PACBP to address capacity development are therefore timely and need to be commended. Further, assessing how effective this initiative has been to guide better decision making became critical.

The call must be for all Africans of all shades and cultures to raise their skills-game. This will enable Africa as a region to fully leverage on, and take full advantage of, the current high economic growth opportunities. This is especially relevant in the context of the African Union Commission's Agenda 2063, in the wake of the launch of the New BRICS Bank, and in the scenarios espoused by WEF Africa and other local and regional partners.

The picture painted by the AU's Agenda 2063 is the Africa that many Africans dream of, aspire to live in, and that they want their children and future generations to thrive in. The AU Agenda 2063 summary document paints a promising positive picture on the educational front for Africa in 2063:

"In the Africa of 2063, at least 70% of all high school graduates will go on to have tertiary education with 70% of them graduating in the sciences, technology and innovation programmes, thus laying the basis for competitive economies built upon human capital to complement its rich endowments in natural resources" (African Union, 2014).

The value of laying a solid educational foundation is supported by the call for developing African skills across all sectors. In a World Economic Forum on Africa meeting in June 2015, the Co-Chair of the WEF on Africa, Michael Rake, said:

"The key is education and skills, so that the workforce is available to fulfil the needs when the investment comes in, which deals with the problem of youth unemployment" (Michael Rake, WEF of Africa, 2015: p.25).

Rake goes on to add that technology will play a significantly large part in the future of African education and skills development. The exploding numbers in African youth's uptake and use of mobile technologies is already testimony to this. Estimates are that Africa's mobile data technology usage will grow by 2000 percent by 2019 (Nduta, 2014). These are viable domestic resources and opportunities that Africa must take full advantage of, and there is more. The 2015 Annual Report of the African Capacity Building Foundation, entitled the Africa Capacity Report (ACR) 2015, strongly recommends reliance on local resources:

"...successful implementation of Africa's development agenda will rely ... on mobilizing 2015: http://www.acbfdomestic resources" (ACBF Annual Report, pact.org/media/news/good-governance-inclusiveness-and-conducive-businessenvironment-crucial-drm).

The ACBF (2015) report emphasises that Africa will need to build capacity and skills to mobilise domestic capacity in what it calls Domestic Resource Mobilisation (DRM). This recognises the important fact that most answers to Africa's current challenges cannot be found anywhere else except within Africa itself. These solutions are not lying underground waiting to be extracted through exploitative mining deals that largely do not benefit the local population. Africa's solutions and her future lie squarely within each and every African young and old, and it starts with raising awareness.

The time to tap into that endless human resource is now. There are enough examples around the world of nations without Africa's natural resource wealth that have achieved tremendous economic growth and become powerful economies over time (e.g. the South East Asian 'Tigers'). Africa can excel and exceed these achievements if it carefully harnesses this unparalleled demographic dividend strategically and to its full potential.

The world will not teach the African lion to roar. The *knowhow to roar* is already within each African. Strategic partners that assist Africa to lift itself up are the much-needed forms of support for Africa. African states and African institutions can start this among themselves and model the desires institutional relationships in the best interest of the continent, without waiting for external approval.

5. African Institutional Set-Up for Skills Development and Capacity Building

The African Union University, the AU Nepad Agency's capacity building strategy, and the work of the African Capacity Building Foundation (ACBF) are among the leading institutions driving African skills development and capacity building. This is being done alongside the critical of other African partners such as various government agencies, the Pan African Capacity Building Programme (PACBP), and just about every other African, Pan African and Afrocentric University across the continent.

There are few integrated, aligned or synchronized African skills development and capacity building interventions across the continent. If anything, it is this lack of alignment and integration that has led to increasing calls for African capacity building and skills development work to be examined closely. The work of the Association of African Universities tends to dwell mainly on academic issues, while the work of the African Capacity Building Foundation (ACBF), while admirable and among the best on the continent, is less known and less visible, than it can be, and there is very limited access to it for most Africans on the ground.

Almost every multi-lateral institution in Africa has a capacity building and skills development interest in one form or another, and seeks to improve on existing skills to accelerate Africa's development. This is testimony to the fact that African stakeholders and partners across sectors and levels of operation, regardless of their divergent mandates and objectives, are doing more to ensure that there are enough technically skilled and competent Africans to drive Africa's development agenda. These capacity building institutional role-players have recognised that Africa is in a great position to capitalize on the continent's development opportunities, now more than ever before.

UNESCO has developed a strategy for technical and vocational education and training (TVET) (2010-2015) that identifies three main areas of work for its operations, and these are (i) policy advice and capacity development, (ii) setting international standards and monitoring, and (iii) knowledge sharing (UNESCO, 2016: http://en.unesco.org/themes/skills-work-and-life). These are all areas that resonate with the thrust of this paper. However, the paper does not deal with detailed issues relating to technical and vocational education and training (TVET) on its own. This is for another research project. Our focus here are generic skills broadly.

Similarly, the paper recognizes the work of several multi-national projects across Africa, such as the BEAR Project (Better Education for Africa's Rise), which is a five-year initiative supported by the Republic of Korea. This project directly supports the development of technical and vocational education and training (TVET) – which aligns with the skills development that this paper advocates. The BEAR project's work can be found in Botswana, the Democratic Republic of the Congo, Malawi, Namibia and Zambia, and across the Southern Africa Development Community (SADC) region (UNESCO 2016, http://en.unesco.org/themes/skills-work-and-life).

One of the leading agencies for African capacity development is the AU-Nepad Agency. It its Capacity Building Strategic Framework, the agency placed African capacity at the centre of the continent's development. Early in 2016, the agency and the DBSA drew up a Memorandum of Understanding (MoU) outlining their intention to collaborate in, among others, the following areas:

"...regional skills mapping initiatives to provide critical evidence to inform and design responsive national and regional human resource planning and training interventions to enable essential skills revolution" (Draft MOU, February 2016).

This promises to be the start of greater things ahead for the region. Most multi-lateral international agencies assisting African countries to develop the skills necessary for the continent's development agree that the focus must be mainly on women and youth. However, this must not neglect males that are the dominant workforce across Africa.

The issue of which skills categories will require more attention to develop is up for debate. What is clear is that women and youth occupy lower positions with limited skills, and they provide the biggest advantage for Africa's development with the numbers, especially of young people, completing school or enrolling for tertiary education every single year. Agriculture is still a dominant economic activity for many Africans, and new knowledge and skills here will help households avert starvation while providing much-needed food and income for education if done well.

5.1 Accelerating Leadership Skills Benefits from the ABE Initiative

There are many well-intentioned interventions seeking to help Africa develop, and many achieve great results towards this. The best of these interventions are those that support Africa and Africans to stand on their own feet in their own terms. The JICA-driven ABE initiative is one such programme whose concept builds young African professionals' skills for deployment in Japanese companies operating in African countries, with the result of building business and leadership skills to utilise beyond the contact with Japanese enterprises. The success of Japanese companies world-wide speaks for itself, and any experiential learning from such examples can only help to enrich the African experience.

There is a gap in the ABE Initiative when it comes to preparing African candidates to become leaders back home. There is need for targeted development of transformational leadership skills for all ABE initiative candidates to become exceptional leaders in their own right when they go back to their countries after the two-year masters. Self-leadership, self-mastery, coaching and mentoring skills are increasingly in great demand for any organisational manager and/or leader across sectors anywhere in the world.

African professionals receiving training outside Africa would be better equipped if they receive this leadership-related training before they go back home. The main reason for this is that there is increasing pressure for them to lead differently, and they must have these skills to manage themselves and their new situations. This will enhance the already substantial and credible benefits

from the ABE initiative, and empower the candidates to excel in their old or new roles when they get back. The ABE initiative can partner with the Pan African Capacity Building Programme (PACBP) to offer this as a one-day or two-day Module for all ABE students during their two years of studying and internship.

This call to strengthen the leadership training of ABE candidates is supported by the recent study from researchers at Columbia University (Centre for Creative Leadership – CCL) who carried out a study among current leaders in different organisations and across different levels. Their findings were that there was one common trait among the most successful leaders, and they called it learning agility:

"Learning agility is the mind-set and practice that allows leaders to continually develop, grow, and utilize new strategies that will equip them for the increasingly complex problems they face in organizations'. Simply put, learning agility is how quickly you can learn new skills that will help you solve complex problems". (Tim Casasola. Source: https://medium.com/the-ready/the-mostimportant-trait-leaders-need-for-the-21st-century-734380c22275#.jumtslyxx; Downloaded: 31 January 2016).

All ABE initiative candidates will be seeking to solve multiple complex and intertwined or interconnected challenges across the continent. They will need all the support they can get to remain agile, ready to unlearn, relearn and do things differently even in the face of clear and often hostile opposition. They will need to be leaders that transcend the obvious and do not seek to be popular or to please, but to be effective and make significant tangible differences to leave positive legacies in their wake.

In the World Economic Forum on Africa summit in Cape Town in June 2015, the Co-Chair of the Summit, Michael Rake, emphasized a point shared by many that in order for Africa do continue to grow economically, and to take its place at the global economic table, and thus to achieve its development targets. As African economies establish new markets and seek to attract global businesses with the promise of rich investment returns, the continent will need a large pool of knowledgeable, committed and highly skilled Africans to drive the continent's growth towards new levels of development that benefit the majority of the people is required.

It is useful here to indicate that there are multiple partners from around the world who are keenly interested in assisting Africa with the development of business and just about every other sets of skills needed to ensure that African economies function normally. As indicated elsewhere in this paper, within Africa, Universities, colleges, training institutes, and development finance institutions are regarded as among the leading skills developing bodies.

The selected partners listed below have been noted as having conducted or still conducting some kind of skills development or capacity building initiative across different parts of Africa. This is a very limited list, and there are far more stakeholders involved in many different types of training in just about every sector of African economies.

Table 4: Selected African Skills Development and Capacity Building Partners/Stakeholders

No.	Name of Institution	Current Location	Funding Sources
1	African Leadership Academy (ALA)	South Africa (African intake)	Africa / international
2	JICA ABE Initiative	Multiple (Africa-wide)	Japan
3	African Capacity Building Foundation	Zimbabwe HQ (Africa-wide)	Africa / international
	(ACBF)		
4	NEPAD	Multiple (Africa-wide)	Africa / international
5	AU	Ethiopia HQ (Africa-wide)	Africa / international
6	Brazil, Russia, India, China, South Africa	South Africa (branch)	BRICS partners
	(BRICS)		
7	PACBP	Multiple (Africa-wide)	RSA (originally with France)
8	International Labour Organisation (ILO)	Multiple (Africa-wide)	ILO HQ - Brussels
9	UNESCO	Multiple (Africa-wide)	UNESCO HQ
10	UNIVERSITIES	Multiple (global)	African / international
11	CHINA Exchange Programme	Multiple (Africa-wide)	China
12	WORLD BANK (institute)	Multiple (Africa-wide)	USA / Other
13	Young African Leaders Initiative (YALI)	Multiple (Africa-wide)	USA
15	Colleges (artisanal, etc.)	In loco (national)	African
16	Sector-based training institutions	In loco (national)	African / International
17	Workplace HR Programmes	Multiple (Africa-wide)	African / international
18	Government skills programmes	Multiple (national)	African / international
19	PIDA	Multiple (Africa-wide)	African / international
20	SADC Development Finance Resource	Botswana	African / international
	Centre (DFRC)		
21	Association of African Development	Ivory Coast	African / international
	Finance Institutions (AADFI)		
22	Donor Agencies (grants, etc.)*	Multiple (Africa-wide)	International
23	Colleges (artisanal, etc.)	In loco (national)	African

Source: From research for this paper (2016) NOTE: awaiting responses from a list of other partners contacted.

BRICS partners (Brazil, Russia, India, China and South Africa) have committed themselves to, among other things, work together to "develop efficient cooperation in training, upgrading professional skills and motivating personnel" (BRICS, 2011: p 1).

NOTE: there are hundreds and possibly thousands of organisations, both private and public, and multinational bodies, involved in one form or the other of skills development and capacity building. This paper focuses mainly on the skills additional to initial tertiary or post-school vocational training. The paper refers to skills that are in demand across the continent and have global significance whereby those who acquire them find themselves in demand beyond the continent.

^{*} The list of donors doing some kind of skills development and training was too long to include here.

Across sub-Saharan Africa and the SADC, two of the leading capacity development agencies are the Association of African Development Finance Institutions (AADFI), which is based in Abidjan, Ivory Coast, and the SADC Development Finance Resource Centre. These two bodies between them provide consistent, targeted, and customized skill development and capacity building interventions that have seen African professionals gain some of the latest and global best-practice ongoing learning and skills refresher courses. Most of their courses range from three to five days, and most of them use practical illustrations from real-life, and often ongoing African projects. For training or skills development details on these two regional bodies, please see here: http://www.sadcdfrc.org/training-and-development-programmes-201516 and http://www.adfi-ci.org/trainings/.

6. Skewed Priorities? Which Skills Does Africa Need the Most and Why?

Africa needs to build a large pool of business leaders that represent their businesses, and their national and regional development objectives. This calls for a shared understanding of the priority skills that Africa needs to focus on. These skills will help Africa sustain the current levels of economic growth that have seen Africa become, once again, attractive as an investment destination. The same skills will also ensure that there are capable Africans that are able to drive, manage, re-focus, and sustain high levels of economic development required to address infrastructure backlogs, and other gaps/lags that the continent experiences. Not only does investing in Africa promise rich returns, it also carries with it great potential for growth into so-far uncharted markets and business territories.

The whole of Africa is in a crucial transition towards broader regional development. While a focus on technical and business skills is vital, these cannot be the only focus for skills development and capacity development. The often hidden challenge is that of developing the relevant leadership skills, relationship-management skills, people-management skills, coaching, mentoring, and emotional intelligence, and other soft skills that are critically needed to effectively manage organisations especially during this transitional period across Africa. Every professional across sectors must be exposed to and trained in skills that ensure that the new African workplace by 2063 is among the most attractive in the world. Africa's children in the Diaspora will finally have a place and opportunity to make a meaningful contribution to Africa's inevitable development. As Nelson Mandela once said: "It is in our hands to make the world a better place".

Africa urgently needs critical skills to prevent or address the debilitating effects of climate change now looming across the continent. The Africa Progress Report 2015 increased the decibels in the screams for the world to respond in concrete terms to this global challenge. Where Africa is concerned, the equation for causing climate trouble and suffering the effect is a typical one:

"No region has done less to contribute to the climate crisis, but no region will pay a higher price for failure to tackle it" (Africa Progress Report 2015: p. 11).

This is one definitive area where Africa's development can 'leap-frog' the conventional forms of development that are fossil-fuelled and dependent on extraction or exploitation of natural resources for industrialisation, and champion alternatives ways that do not result in, or that do not worsen, the current state of our climate. The questions then come in quick succession: What are these critical skills that Africa needs to chart this way forward and do the 'leap-frogging'? Who will provide them? Are there clear career paths in this? How sustainable is it? Who is best-positioned across the continent to produce this range of expertise? Who will finance this training? How long should it be? Should this only be at graduate level, or should some programmes start at undergraduate level?

While these discussions and concurrent planning processes take place, Africa needs hands on deck to tackle already happening climate challenges on the ground. This means that practical solutionsfocused programmes such as the DBSA/IDC-funded Pan African Capacity Building Programme (PACBP), the AU-Nepad Capacity Building strategic framework, the work of the African Capacity Building Foundation (ACBF), and universities and their business schools across the continent, must design and offer practical short-term skills-enhancing courses for professionals in these related areas.

Ideally, every area of business that has primary or secondary impact on the environment or on climate must have their professionals either re-trained or empowered with additional skills to be able to manage current and emerging climate-related challenges. To do this effectively (upskilling of professionals), and in order to access relevant material and up-to-date data/information, strategic partnerships across all relevant stakeholders across the continent, and beyond, will be absolutely vital.

6.1 Sector-Specific Skills Development and Capacity Issues

Sector-specific skills challenges have been at the heart of most skills development interventions in Africa. It is critical for African partners interested in skills development and capacity building to identify which specific sectors justifiably deserve skills investments and at what scale.

On Information and Communications Technologies (ICT)

One of the fastest-growing sectors in Sub-Saharan Africa (SSA) is the ICT sector, especially the mobile communications sub-sector. Reports indicate that "mobile phone subscriptions are now almost eight times higher in Africa than in 2000, reaching about 700 million" (Adeyemi Adepetun, 2016). The same report by Adepetun (2016) quotes the International Telecommunication Union (ITU) as saying that "mobile technology has played a crucial role in promoting financial inclusion in Sub-Saharan Africa, where less than 20 per cent of households have access to formal financial services" (Adeyemi Adepetun, 2016: Source: http://allafrica.com/stories/201602170661.html). The accelerating access to information services opens up other development opportunities for African people, households and communities.

Across sub-Saharan Africa, it is reported that there are currently ten times more mobile phones than land-line connections. This is a practical illustration of the opportunity for Africa's development to leap-frog other types of developments and reach new and levels hither-to not seen ((Adeyemi Adepetun, 2016: Source: http://allafrica.com/stories/201602170661.html). The notes below on ICT sector-specific skills issues were shared by leading experts in the ICT sector in South Africa. This is a small sample to illustrate the challenges encountered in sector-specific changes and related skills development:

NOTE: The following text boxes illustrate the challenges (and solutions) often cited in one of the fastest-growing skills-demanding sectors in Africa. The case illustrations are drawn from South Africa, and may not be necessarily generalizable across other African settings.

Text Box 1: The Case of ICT Skills in South Africa

By George Finger (DBSA ICT Senior Specialist); Date: 18 February 2016, (via email: shortened)

"ICT is an evolving industry and cuts across all sectors of the economy. Lack of skills is ... a global challenge as countries protect their Intellectual Property (IP). Because of this protection, the question arises as to whether or not South Africa is unique in respect of the ICT skills deficit? Well, in many ways it is. South Africa's history of apartheid and the attendant siege economy has left it with a legacy of scars on the one hand, and with some advantages on the other. SA used to be isolated from global competitive forces. During democratisation, the ICT industry liberalised, deregulated and globalised fast. Its workforce was (and still is) demographically unbalanced, its industry was protected and technologies were skewed towards National Defense (e.g. electronic warfare, frequency hopping radios and cryptology were of specific importance). Television came late to SA and then it came through the air. SA did not have cable Television and hence no cable and broadband to the curb or to the home at the time. But today we are there.

Although not an intended consequence, rapid liberalisation and globalisation practically destroyed the ICT industrial manufacturing component as the suppliers' market was opened for MNCs (Multinational Corporations). The fortunate heritage of this demise was an industrial core of experienced ICT people. Hesitant deregulation caused delays. Wireless applications such as satellite TV and Mobile telephony bloomed. Even the current wireless broadband boom, late as it is, can be traced back to that legacy. It is clear that the correction of South Africa's ICT imbalances and the development of its international ICT competitiveness is a problem to be repaired in decades, not in years. In philosophical terms it can be said that South Africa remained in the industrial economy and entered into the information economy somewhat later than its main trading partners. It is clear that the solution to South Africa's skills deficit problem cannot be imported. It has to be home grown. The following gaps or shortcomings in the current skills development program can be generalised as follows:

Our skills development program delivers an inadequate number of skilled workers. The skills development pipeline is long. Often supply follows long after demand was signaled. Our skills development system is not agile enough to intercept the evolving demand.

Structural changes in business in general, and in the ICT industry in particular, caused the deficit at the higher end of the spectrum to increase continuously above the relative oversupply at the lower end. Our skills development programmes deliver candidate workers of whose skills profiles do not adequately match the requirements of the industry. The most important deficit is not so much the deficit of qualification, but the deficit of experience. Describing the ICT skills deficit in global terms can obscure the granular nature of the problem. Some niches experience a surfeit, others a scarcity. South African developed technology is often exported due to the lack of an industrial home. In this way, foreign economies can become the beneficiaries of SA investment. South African technology development programmes should focus more on application and integration than on discovery. Due to the large gap between supply and demand, the HR market mechanism fails in two important respects: brain drain and job-hopping. There is a general lack of awareness and understanding of the significance of the ICT skills development challenges in South Africa. The current ICT skills development initiatives are comprehensive. In fact, there doesn't seem to be much that can be done to improve the intent and extent of current initiatives. Perhaps the following additional four areas of intervention should be considered:

- A public affairs program to further raise the level of awareness and understanding.
- A more forceful balancing of technology and skills development. ii.
- iii. Interventions to trigger a virtuous cycle of entrepreneurial growth.
- iv. Transparent and coherent planning, control and navigation of current initiatives.

Text Box No.2: Telkom from Lerato Mahasa (Date: 18 February 2016, via email)

(Telkom, South Africa's main telecommunications company)

"My contribution will only be limited to SA's developments as I do not have much knowledge of the status in the African continent. I have four key points to make on the ICT sector:

- i. The bulk of the equipment used on the continent and within SA in particular, is imported. That translates to the lack of ICT equipment design, development and deployment on the continent.
- By the very nature of ICT developments, fixed line technology has more people with skills that are no longer relevant since the world has moved on to mobile technologies (need for retraining / re-skilling).
- iii. Unless the ICT sector's developed countries or exporters of technologies are willing to create modern training facilities on the African continent, Africa will perpetually be dependent on them for those rare skills (how many countries on the continent can afford to send their people abroad for ICT training? Very few).
- iv. Business leaders, regional bodies and international NGOs need to realize that as the world is becoming smaller and people's mobility is increasing they can no longer avoid investing in the African continent's bulk ICT infrastructure where the bulk of mining, coffee production, agriculture, forestry and human resources are second to none.

If in 2011 the top 10 largest telecoms companies had a client base of just under 400 million, it is quite possible that in 2016 Africa might have reached that 700 million mark".

Text Box No.2: More Notes on ICT Skills from South Africa

Comments below were received via email from Boni Gantile: Human Resources Executive for Organisational Capacity Development at Telkom Centre for Learning. Telephone No: +27 11 238 4051; Cell No: +27 81 361 5037. Olifantsfontein Campus, 1039 Old Kempton Park Pretoria Road; Clayville East, Olifantsfontein 1665. South Africa.

- 1. ICT skills currently in short supply in Africa are: Network Infrastructure; Applications Development; Big Data; Information Security; Cloud Computing, and Programming.
- Which skills will be in short supply in future of the ICT sector (projections and trends ahead for Africa specifically)? These include all the ones listed above: Network Infrastructure; Applications Development; Big Data; Information Security; Cloud Computing, and Programming.
- 3. How can business leaders, DFIs, or regional bodies across Africa, such as Nepad, BRICS, the AU, or international NGOs play a part in the ICT skills landscape? I have these five areas to add to the discussion:
 - i. Business leaders need to support the Universities of Technology and/or Technical Training and Vocational Education and Training (TVET) Colleges with placement opportunities in support of Work Integrated Learning (WIL) to ensure relevance and work readiness of students upon graduation
 - ii. Business to implement Internships for unemployed graduates to top their skills and relevance as well as improve their employability.
 - iii. Business Invest in continuous professional development of current employees to ensure employee relevance in the fast changing environment.
 - iv. Regional bodies, BRICS, AU or International NGOs initiate and implement Centres of Excellence concept that can offer development opportunities in identified areas of critical shortage, create opportunities for exchange programmes or international internships.
 - "We should rather overinvest in right skills and export skills rather than underinvest and have a shortage of critical skills".

This is especially true as true as we seek to grow our African economies.

Many African countries have monopolies owning and driving telecommunications. South Africa until recently had one major telecommunications organisation owned by the state (Telkom). This lends itself to the call for opening such important businesses to market forces to enable competition and improvement of services offered. A critical part of competitiveness is ensuring the availability of high-level skills to be able to compete at the highest level. Text Box 4 below addresses some of the challenges as identified within Telkom and in South Africa.

On Renewable Energy

One of the leading sectors promising to pioneer Africa's industrial leap-frogging of currently developed nations is the renewable energy sector. Text Box No.4 below illustrates the significance of this fact, alongside some of the factors that makes this a critical issues to address for African nations:

Text Box 4: Africa's Renewable Energy Advantage

The energy sector, especially renewable energy, is fast becoming one of the most advanced technologically-based African scientific advancements. This is where most scientists in the field, and analysts observing the trends, agree that Africa stands a great chance to leap-from industrialised nations with its massive opportunity to development technologies that will boost the generation and provision of large amounts of energy all from renewables and with little, if any, negative environmental impact.

The argument that emerging economies must 'not industrialise the same way' that already industrialised nations did has its critics. Emerging economies feel that this poses a major dilemma for them especially with the bulging middle-class hungry for locally produced cheaper consumer products and the need to maintain a steady rate of economic growth. How can they accelerate economic development when they are being asked to cut down on carbon emissions, and in the process the rich nations that are the biggest culprits are not keen to do so? African economies are caught up in this and theirs is a more pressing matter of life and death:

"It is indefensible that Africa's poorest people are paying among the world's highest prices for energy: a woman living in a village in northern Nigeria spends around 60 to 80 times per unit more for her energy than a resident of New York City or London. Changing this is a huge investment opportunity. Millions of energy-poor, disconnected Africans, who earn less than US\$2.50 a day, already constitute a US\$10-billion yearly energy market" (Africa Progress Report 2015: 12).

At the January 2016 WEF Annual meeting in Davos, Switzerland, Kofi Annan said that "Africa has the possibility of being the first continent to become a green continent" (Africa Progress Panel, 2016). Annan was reflecting on the AfDB's 'New deal on Energy in Africa', in which this leading DFI undertook to provide up to tackle the continent's energy deficit by proving US\$12 billion in funding over five years towards Africa's energy sector (Jeff Kapembwa, 2016).

After COP-21 in Paris, France, in January 2016, there are discussions on massive funding to be made available for Africa's energy sector beyond the AfDB's commitment. These funds are "...supposed to assist industrialising countries in 'decarbonising' their future growth" (Peter Guest: Blog Post, 26 January 2016). It is critical for African nations to fast-track the development of local skills to take charge of the advancement in renewable energy technology. Importing these new technologies will again recreate the old paradigm of skills and technological dependency on external partners. However generous and understanding on shared options these partners are, the long-term bestcase for Africa is to develop African skills and capacity to manage this and related developments. The long-term economic success and sustainability of newly developed technologies will have far lasting positive effect when initiated and developed locally. The capacity and skills to do this are already available across the continent and need to be carefully and strategically harnessed.

7. Stakeholder Partnerships and the Strategic Role of African DFIs

Development finance institutions (DFIs) are often established by governments or other state organs to support the work of either sovereign states or identified sectoral needs of several partners or the international community. The World Bank is one of the largest DFIs worldwide. Most DFIs fulfil a counter-cyclical funding role and step up to provide funding when the market is struggling.

African DFIs, such as the African development Bank, the DBSA and the IDC are well-positioned to assist governments in delivering on skills development and capacity building. Capacity building is everyone's business. The onus is on every African leader, manager, or professional in every position, to ensure that all required skills are developed both through tertiary education and through short intervention courses aimed at enhancing existing skills to facilitate Africa's infrastructure and economic development.

Africa's promising demographic dividend will be harnessed if Africans themselves identify mechanisms to grow the human assets that the continent current carries. The fact that Africa has 6 or 7 of the fastest-growing economies in the world in 2015 should be enough motivation to ensure that this is accompanied by the accompanying development of all the necessary skills to build economic resilience to sustain the levels of growth beyond the short term period.

The African Development bank is the largest and one of the most dynamic and fa-reaching of all African development finance institutions (DFIs). Not only is it among the older ones (since 1966, 50years), it also covers the whole continent in its operations, with membership of all 54 Africa states. The AfDB's current strategic document, titled "At the Centre of Africa's Transformation -Strategy for 2013–2022", has five strategic thrusts that are at the centre of addressing Africa's leading challenges, and these are:

- i. Infrastructure development (AfDB seeks to help Africa improve on its current 4 percent of GDP invested in infrastructure to match China's 14 percent GDP investment in infrastructure annually)
- ii. Regional economic integration (ideally, African economies need to do more intra-Africa trade, and build larger markets with more linkages to the global network).
- iii. Private sector development (growing entrepreneurial network will assist Africa's development).
- iv. Governance and accountability (ensuring that the African environment is conducive to business).
- v. Skills and technology (The AfDB seeks to "equip young people with the right skills for both the formal and informal sectors" (AfDB, Strategy for 2013-2022).

The stance and human capital development work of the African Development Bank (AfDB) is one of the shining examples of how African DFIs can step up their efforts to contribute more directly towards building this critical resources to take advantage of this African growth opportunity.

"The vision of the Bank's Human Capital Strategy (HCS) 2014–2018, is to harness the potential of one billion Africans by building skills and promoting technologies for better jobs, equal opportunities and workforce competitiveness. Several opportunities hold the promise of accelerating Africa's growth and economic prosperity. The widely recognized economic momentum along with mounting global interest dominated by new powers from the South portrays Africa's fast-evolving landscape and optimism for its future" (AfDB, 2014: p. iv).

African DFIs have an opportunity to leverage on, and take advantage of, the BRICS partners' agreement to have their DFIs focus special attention on skills development. Building on from their Memorandum of Cooperation signed on 15th April 2010, the BRICS partners of Brazil, Russia, India, China and South Africa instructed their respective DFIs to make special efforts to develop efficient cooperation in training and upgrading of professional skills through development for their respective personnel in order to improve their collaborative engagements as partners (signed BRICS Memorandum Agreement, 2011).

7.1 The Pan African Capacity Building Programme (PACBP)

The Pan African Capacity Building Programme (PACBP) started with a feasibility study on African capacity building and skills development in 2009. The first phase (Phase One) ran from 2010 to 2015. The DBSA remains the implementing agent of the PACBP in Phase Two. The second feasibility study and programme partners have identified professional skills gaps to be addressed by the programme in Phase two. These are skills gaps in the current African educational and professional training landscape that continue to prevent efforts to fully address major infrastructural development objectives.

The objectives of the PACBP are:

- To promote the development of infrastructure development skills across Sub-Saharan Africa; and
- To actively capacitate public sector institutions in the delivery of infrastructure by training public sector professionals across sub-Saharan Africa, or as recommended by strategic partners.

During its first five years of operation (Phase One: 2011 – 2015), the PACBP achieved most of its targets and exceeded them. The programme is in partnership with regional universities in West Africa (UCAD, Dakar, Senegal), in East Africa (Makerere University, Kampala, Uganda), and Southern Africa 9Pretoria University, South Africa). The three institutions signed memoranda of understanding to deliver the Masters programme in partnership with the PACBP. This has worked out well with over 150 graduates from the two-year Masters in Public Infrastructure Management (MPIM). Recently, 2015, Umar Bongo University came into the programme to represent central Africa. Each institution is the catchment area for the regional institution's students.

Up to 30 African countries have been impacted by the PACBP programme. Programme evaluation results showed that the majority of beneficiaries from the PACBP programme were from Senegal, Uganda and South Africa. This was mainly because these countries are the regional centers for administering the Masters programme. There are efforts to increase the scope of benefits and deepen the programme's impact in more countries that clearly need more skills development. There are increasing calls for the programme to grow its offerings and the PACBP is looking to partner with agencies such as JICA to enable it to achieve more and have a greater Africa-wide impact going forward.

8. Conclusion: Taking Advantage of Current Opportunities

The above scenarios clearly indicate a continent at the cusp of exciting growth with some of the most promising, incredibly powerful and unparalleled opportunities for economic growth, poverty eradication, and inclusive growth that has not been seen anywhere around the world. What Africa needs to pay very close and special attention to is that it builds the skills and capacity required to carefully manage the massively fluid and volatile transitional situation. The skills and capacity required for Africa are not just the technical and vocational skills alone, but those often marginalized relationship management and people development skills are increasingly more needed now especially among managers and leaders in Africa's public and private sectors.

Every African professional and leader in every organisation and institution needs to wake up to where the continent is right now, and where it needs to go, in order to take full advantage of the current positive economic growth thrust and development trajectory. Burying our heads in our organisations' balance scorecards and annual targets is great for annual indicators, but not enough for a broader and more meaningful impact. Every business leader across Africa must lift their head up from their business' main trenches to check for and see the bigger opportunities (and challenges) looming ahead. A winning skills development combination requires a suit of multiple skills that help to grow a well-rounded African professional. It is time to think outside the skills box, or to think as if there is no box.

A broader perspective and strategic partnerships and collaboration carries better hopes for achieving much-needed Africa-wide development success. This starts with strong African partnerships and stakeholder collaboration in developing critical awareness skills. It is relatively easier to provide technical skills such as training artisans, finance professionals, project managers, and other skills needed to build infrastructure and run operations. It is vital for African businesses and governments to ensure that the thrust to build high-levels skills does not focus only on technical areas, but also addresses management, leadership, and human interrelationship skills. The next

generational African leaders beyond the millennials will have to be smarter than limiting themselves to the narrow perspectives defined by sectors. They will have to be innovative in their approaches and realise that the 'borders' are superficial limits to Africa's greatness, and are not always necessary. Africa's potentially lucrative demographic dividend will only be realised and richly harvested when there are adequate requisite skills and capacity in Africa's public and private sector institutions to manage all of Africa's businesses and harness Africa's other resources towards the achievement of Agenda 2063 and beyond. As the old man said, "It is in our hands..." (Mandela).

Finally, it is critical to note how Africa regards itself in this transitional space, and how Africans regard and see themselves in it too. The AfDB sums this up perfectly here: "Africa sees itself becoming a prosperous continent with high-quality growth that creates more employment opportunities for all, especially women and youth" (AfDB, 2013-2022 Strategy). It is about time.

The lion is roaring again.

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ENDNOTES:

ⁱ Please note that the title is intended to provoke discussion. Humans may not be able to teach lions to roar. The capacity to roar is in the lion's DNA. In the same vein, thinking that Africa and Africans can be taught from outside Africa about what is right or suitable for them is the very reason why so many imported 'solutions' have not worked, alongside the limited impact of the often muchneeded external aid (see Dambisa Moyo's work on 'Dead Aid') . This paper suggests promoting local solutions that are jointly conceptualised with strategic external partners (like JICA's ABE initiative) and internally driven, starting with skills development and capacity building interventions.

 \sim end \sim