BREAKING BARRIERS

November 2020

Quarterly Report

In this edition of Breaking Barriers, we explore opportunities for digital and ICT work that are accessible to unemployed youth, and what barriers must be removed for this to be a viable solution at scale. Investing in growth sectors has never been a higher priority, especially given the 3 million job losses this year as a result of the coronavirus pandemic. If job losses persist on this same trend, South Africa will have lost a decade's worth of job growth in a mere six months.[1]

We must find a way to provide meaningful solutions for young people in South Africa, whose labour force participation rate dropped significantly this year,[2] according to Statistics South Africa's Quarterly Labour Force Survey (QLFS).[3] Like Harambee, so many organisations are more motivated than ever to make a difference to the livelihoods of young people in

South Africa. This collaborative research aims to understand where the demand for entry-level talent exists and how we can bring young people into a growing digital world. Access to the full report can be found here.

Organisations in South Africa, and around the world, face the challenges of developing multi skilled workforces that meet the criteria of digital workplace demands, virtualised teams and the rapidly evolving world of work. Demand for these skills far outstrips supply in the digital economy. We see that traditional pathways are not addressing the market demand.

Enthusiasm about the contribution of the ICT sector in providing high-quality jobs for youth is well-founded. There is much demand for skills – globally and locally – as digital transformation continues apace. Many organisations invest in their own training… but, what really works? What is really needed?

The Harambee Mapping of Digital and ICT Roles and Demand for South Africa Survey takes a deep dive into the critical roles to support growth in the digital economy, as well as the size and nature of offshoring of digital demand outside of South Africa. The research identifies what roles, functions and competencies are in demand with granular detail, as well as which certifications are most needed by businesses and employers.

The fieldwork for this survey was conducted at a time of sudden, unexpected and extraordinary change brought on by the global COVID-19 pandemic. As a result, all 102 small, medium and large South African enterprises that participated in the survey, agreed unanimously that they are facing workplace challenges that have never been seen before. As the world transitions in to this 'new normal', businesses are changing how they work which has resulted in greater skills, talent and hiring challenges.

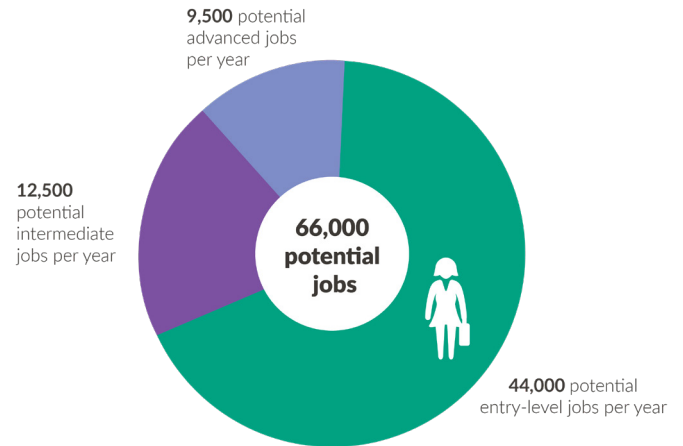Read more for key insights and access the full report here.

KEY INSIGHTS FOR THIS QUARTER

Digitised services have the potential to unlock entry-level jobs for youth

The South Africa in the Digital Age (SADA) initiative recently issued a roadmap for how the country's current 50,000 jobs, serving a global export market, can be scaled ten times to 500,000 new jobs by 2030. This is based on the exploding trade of 'digitised services' requiring skilled human capital. The roadmap establishes South Africa's global competitiveness in exporting services, including contact centre services, coding, finance, accounting and legal support. Twice as many South Africans work in these jobs now than in the country's automotive industry. And these jobs can be done without a tertiary or university degree.

Similarly, our recent research forecasts demand for 66,000 potential jobs in digital and ICT roles in the next year – two-thirds of which are entry-level roles. South Africa must prepare its skilling pathways and training programmes to meet this demand, and ensure that we are bringing young people who need those jobs the most, into the digital economy.

Figure 1: Forecasted demand for in demand ICT and Digital Roles in South Africa over the next year

9,500 potential advanced jobs per year

12,500 potential intermediate jobs per year

66,000 potential jobs

44,000 potential entry-level jobs per year

Source: Harambee Mapping of Digital and ICT Roles and Demand for South Africa Survey, 2020

Insight 2: Ready skills pipelines can bring jobs back to South Africa from offshore markets

The research shows that a staggering 69% of firms surveyed say that they outsource digital work and expertise to other countries. This equated to them paying just under R150 million per annum to service providers in other countries to facilitate this business. This translates to an estimated lost export revenue of about R8,5 billion per annum[4]. While cost is a compelling factor for domestic businesses to send work to other countries, other influenceing factors include the quality of skills and talent.

Reshoring and bringing this digital work that is being sent to markets such as China, India and Eastern Europe back to South Africa, presents significant high-earning job opportunities for unemployed youth in South Africa.

Encouragingly, the research shows that South Africa is already uniquely qualified on some of the factors that matter the most to firms – in fact, more than half (55%) of survey respondents indicated that they have the capability to service international markets from South Africa. This includes cross-border trade and exports of goods and services and the provision of nearshore or far-shore global business services for countries such as Australia, Canada, France, Germany, the United Kingdom, the United States and other African countries.

To continue to service these markets effectively, businesses realise the need to train workers with the right type of digital skills and cognitive abilities to provide technology-enabled support, assistance and process fulfillment.

If these services and expertise provided to global markets by South Africa were scaled, and backed by the right skills and talent pipelines, they have the potential to generate jobs, along with much-needed tax revenue and foreign direct investment (FDI).[4] This type of quantifiable data on digital demand can inform the efforts of government and industry stakeholders to improve credentialing, develop pipelines for critical skills, and create incentives to bring offshore work back to South Africa.

Figure 2: Many jobs are lost as South African employers outsource digital work and expertise to other countries
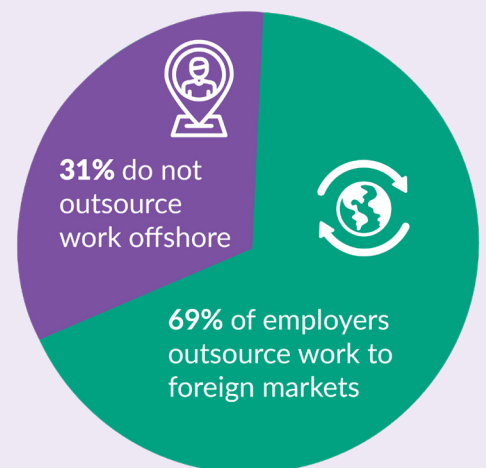
31% do not outsource work offshore

69% of employers outsource work to foreign markets

Source: Harambee Mapping of Digital and ICT Roles and Demand for South Africa Survey, 2020

Insight 3: A granular understanding of job roles can unlock growth

Digitial skills training can often be too generic, and not specific enough to train a young person for an actual job that is in demand in the market. This research aims to do something different by identifying at a granular level what the most in-demand roles are to inform the country's training investments. These roles include desktop support technicians, junior software developers, and data analysts. The research also identifies that over the next five years, machine learning and data management skills will grow in importance, with data analysts viewed as the most in demand.
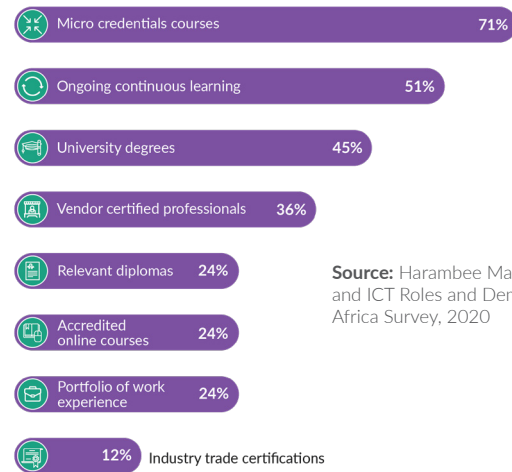
To generate skills for these jobs, pathways into digital roles need to be cheaper, quicker and more inclusive. Traditional training curriculums have required many years of formal training, degrees, and/or extensive work experience (e.g., a three-year degree in computer science costs R150,000).

This has excluded many young people who can do the work. To address this shortage, businesses are showing that they are more open to accepting "micro-credentials," which offer subject-specific certifications for those who cannot access a full-length university degree. This aligns favourably with global trends for short courses and real-time training that enable employees to consistently reskill and retool.

Vendor-specific certifications are one form of micro-credentialing that is readily available to young people. The research found that the most in demand vendor-specific certifications included Microsoft Azure Data Scientist and Developer, Google Cloud Developer and Amazon Web Services Cloud Practitioner.
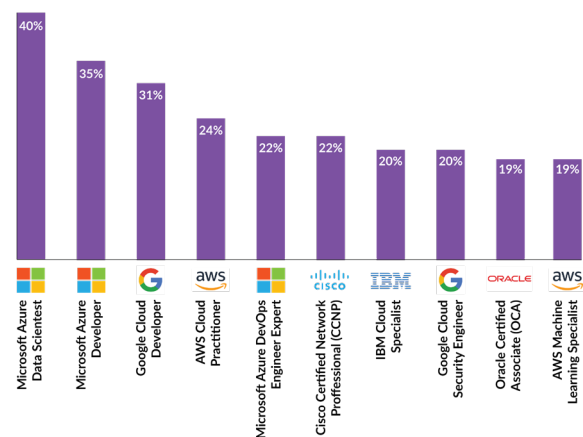
By making these pathways more accessible, real jobs are available on the other side of the training.

Figure 3: Most important qualifications for entry level candidates in digital roles in the next five years

- Micro credentials courses — 71%
- Ongoing continuous learning — 51%
- University degrees — 45%
- Vendor certified professionals — 36%
- Relevant diplomas — 24%
- Accredited online courses — 24%
- Portfolio of work experience — 24%
- Industry trade certifications — 12%

Source: Harambee Mapping of Digital and ICT Roles and Demand for South Africa Survey, 2020

Figure 4: Most in-demand vendor-specific certifications in digitial skills training

- Microsoft Azure Data Scientest — 40%
- Microsoft Azure Developer — 35%
- Google Cloud Developer — 31%
- AWS Cloud Practitioner — 24%
- Microsoft Azure DevOps Engineer Expert — 22%
- Cisco Certified Network Proffesional (CCNP) — 22%
- IBM Cloud Specialist — 20%
- Google Cloud Security Engineer — 20%
- Oracle Certified Associate (OCA) — 19%
- AWS Machine Learning Specialist — 19%

Source: Harambee Mapping of Digital and ICT Roles and Demand for South Africa Survey, 2020

Insight 4: Inclusive hiring practices can reduce unemployment and inequality

For these jobs to be accessible to young people, it is essential that businesses adopt inclusive hiring practices that do not unnecessarily exclude applicants based on educational qualifications alone. There are two proven methods to improve inclusive hiring for digital and ICT roles.

First, ensure that assessment and interview processes used are inclusive. For example, there is an assumption in hiring for digital and ICT talent that candidates must have a high proficiency in mathematics. However, Harambee has found through its data and research that key indicators of success for coding include problem solving and critical thinking. These can be even better indicators of performance than numerical and verbal reasoning alone. One Harambee experiment found that problem solving is five times better at predicting success as a coder than numeracy. This suggests that hiring processes should not be using maths, or maths alone, as a requirement for hiring. Furthermore, bias can exist in aptitude assessments for digital skills. A study found that unvalidated assessments (those created in-house/not tested) can show up to a 30% difference in average results, with men scoring higher than women. Assessments should therefore be tested for bias based on gender, class and race to ensure inclusive hiring.

Second, ensure that young people in their first jobs are given the right onboarding experience to set them up for success in the workplace. Through our work we have found that employers don't have the experience or management capacity to successfully integrate entry-level talent into the workplace. A stepping stone experience may be needed for unemployed youth to become proficient contributing members of the workplace.

Over the last three years we have been working in this sector, partnering with organisations who provide breakthrough solutions to upskilling young people for digital jobs such as WeThinkCode_, CapaCiTi, Tshimologong Digital Skills Academy and Explore Data Science Academy. Outside of South Africa, SamaSource provides a model of taking on entry-level talent to provide them with coaching and mentorship while they deliver real digital services for clients.

Harambee has also launched an incubator called DigiLink to help unemployed young people gain practical experience while bridging the gap for roles such as software engineers, data analysts, and testers while doing real work for clients under the guidance of experienced mentors.

All of these models provide pathways for excluded youth to find a pathway into the digital economy.

Figure 4: In South Africa, less than 5% of plumbers are women

X5 better at predicting success as a coder

Success as a Coder

Problem Solving — Numeracy
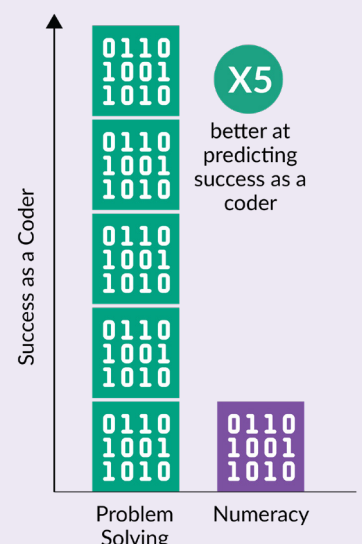
CONCLUSION

It is clear that, despite the current global recession, the digital economy continues to grow and requires digital and ICT skills to fuel its requirements. Young South Africans can be given life-long learning and career opportunities that enable them to contribute significantly to the economic growth and development of South Africa's digital economy. This can be done in cost-effective and inclusive ways; not necessarily relying on traditional methods of hiring and training. Notably, employers need to be realistic and open-minded to hire problem-solvers and creative thinkers along with the qualified tech-heads and logical thinkers. This will require that they place more focus on their attributes, aptitude, cognitive abilities and emotional intelligence as opposed to degrees, diplomas and unrealistic functions or expectations for job roles. In addition, public-private partnerships are required to build digital simulation academies that provide focused experiential learning for high demand roles and address unemployment with sustainable talent/skills pipelines. Using this evidence base, government and other stakeholder partners can realign much-needed digital and ICT skills to be more demand-led across the skills ecosystem. Read the full report here.

[1] Spaull, 2020, https://www.businesslive.co.za/fm/features/cover-story/2020-09-30-sas-surreal-lost-decade/

[2] Labour force participation rate for those aged 15-24 dropped from 27,2% in Q1 2020 to 15,7% in Q2 2020

[3] StatsSA, 2020, http://www.statssa.gov.za/publications/P0211/P02112ndQuarter2020.pdf

[4] BPESA GBS Job Reports | Knowledge Executive Source Data | Genesis Analytics | South Africa in the Digital Age (SADA) 2020

About Harambee Youth Employment Accelerator

Harambee Youth Employment Accelerator builds African solutions to tackle the global challenge of youth unemployment. It partners with governments, businesses, young people and many others who are committed to deliver results that can work at scale.

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