South Africa Digital Economy Assessment

Background paper series

Digital Entrepreneurship Pillar







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About the Assessment

An assessment of South Africa's digital economy has been launched as part of the World Bank Group's Digital Economy for Africa (DE4A) Initiative, which leverages an integrated and foundations-based diagnostic framework to examine the present level of digital economy development across Africa. The assessment will map the current strengths and weaknesses that characterize the national digital economy ecosystem (see figure i.), as well as identify challenges and opportunities for future growth.

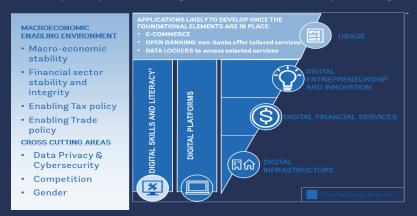


Figure 0-1: Key component of the digital economy ecosystem

While Africa's digital evolution has been impressive, the continent has more to achieve.

Rapid digital transformation is now re-shaping our global economy, permeating virtually every sector and aspect of daily life – changing the way we learn, work, trade,

socialize, access public and private services and information. In 2016, the global digital economy was worth some \$11.5 trillion – equivalent to 15.5 percent of the world's overall GDP. It is expected to reach 25 percent in less than a decade, quickly outpacing the growth of the overall economy. However, countries like South Africa are currently capturing only a fraction of this growth and need to strategically invest in the foundational elements of their digital economy to keep pace.

Universal adoption and effective application of digital technology is expected to characterize economies of the future, shaping their ability to succeed in the global market place and offer a better quality of life for their citizens. Disruptive technologies are already altering traditional business models and pathways to development, yielding significant efficiency and productivity gains, increased convenience, as well as supporting better access to services for consumers. Well-functioning digital economies are thus expected to achieve faster economic growth, offer innovative products and services, as well as create more job opportunities. Assessing where strategic investments and interventions need to be made is a critical first step to enabling digital economy growth.

The overall framework that shapes the assessment undertaken looks at five foundational elements of the digital economy:

- Digital Infrastructure: the availability of affordable and quality internet, which is instrumental to bringing more people online.
- Digital Platforms: the presence and use of digital platforms that can support greater digital exchange, transactions and access to public services online.
- Digital Financial Services: the ability to pay, save, borrow, and invest through digital means, which is key to accessing digital services and increasing the rate of online transactions.
- Digital Entrepreneurship: the presence of an ecosystem that supports firms to generate new products and services that leverages new technologies and business models, which help widen and deepen digital economic transformation.
- Digital Skills: the development of a tech-savvy workforce, with both the basic and advanced digital skills to support increased technology adoption and innovation, by developing and applying digital technologies in ways that creates new opportunities.

This background paper will provide an overview of digital entrepreneurship in South Africa.

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Diagnostic Methodology

In-country fact-finding missions was undertaken in February and March 2019 in preparation of this diagnostic by members of the core research team.

In addition to desk research conducted, this mission allowed for broad stakeholder consultation with government, the private sector, and user representatives, detailed above.

Analysis presented in this paper also draws on regional and global benchmarking, based on standardized indicators that form part of the DE4A diagnostic methodology.



Acronym List

4iR Fourth Industrial Revolution

12J Section 12J of the Income Tax Act which allows for the creation of VCCs

AI Artificial Intelligence

B-BBEE Broad-Based Black Economic Empowerment
CITI Cape Innovation and Technology Initiative
CSIR Center for Scientific and Industrial Research

DE4A Digital Economy for Africa

DST Department of Science and Technology
DSBD Department of Small Business Development

DTI Department of Trade and Industry

DTPS Department of Telecommunications and Postal Services

ECT Act Electronic Communications and Transactions Act

ESD Enterprise and Supplier Development, a subsector of B-BBEE

ExCon Exchange Control **GDP** Gross Domestic Product

ICT Information, Communication and Technology

IDC Industrial Development Corporation

IP Intellectual Property

IPR Act Intellectual Property from Publicly Financed Research and Development Act

M&E Monitoring and Evaluation
NDP National Development Plan

PE Private Equity

POPI Protection of Personal Information Act

R&D Research and Development

SA South Africa

SARB South African Reserve Bank

SAVCA South African Venture Capital and Private Equity Association

SMEs Small & Medium Enterprises

SSA Sub Saharan Africa

STI Science, Technology and Innovation
TIA Technology Innovation Agency

VC United States Dollar
VC Venture Capital

VCC Venture Capital Company as defined by 12J of the Income Tax Act

WBG World Bank Group
WEF World Economic Forum

WOAN Wireless Open Access Network

ZAR South African Rand

1 Executive Summary

Vibrant digital entrepreneurship is a key pillar of a strong digital economy, leading to new products and services, business models, markets, and in the end growth and jobs. South Africa is already a key player in Africa, serving as a "hub" for many initiatives and investments on the continent, and as an essential entry point on the continent for global players. The decision to continue to develop South Africa's digital economy has been taken at the highest level. A host of tech players, investors, and success stories, along with existing national and provincial-level support, has set a strong foundation that is already leading to some notable successes. However, the digital entrepreneurship ecosystem is hampered by key weaknesses that will need to be addressed if the country is to realize its full potential. A rapid examination of the 6 pillars of a successful digital entrepreneurship ecosystem leads to the following diagnostic findings and policy recommendations.

1.1 Key findings

Policy. The digital economy is a clear priority for the government, and ICT is clearly inscribed in the National Development Plan (NDP). A comparatively large number of specific agencies, policies and programs support entrepreneurship, at both the national and provincial level. However, there is often a lack of adequacy of those initiatives to the specific needs of the sector to start and grow a business; implementation and coordination are issues, leading to significant confusion for entrepreneurs and intermediaries; and monitoring and evaluation is limited, leading to a likely sub-optimum allocation of resources. Specific policies to be reviewed include: (i) the R&D tax incentive scheme, not effective for digital SMEs or startups with long cost recovery cycles; (ii) IP legislation, which creates risks and delays for the private sector; (iii) exchange controls, which push innovation companies to register IP and businesses offshore; (iv) VAT & Corporate tax, as high-growth digital startups cannot claim back VAT paid to vendors early on; (v) ICT and communication policies, seen as overly burdensome and a disincentive to ICT infrastructure investment, competition and innovation; and (vi) labor legislation, which has no specific flexibility provision for high growth/high risk digital startups.

Support organizations. South Africa counts 300+ active support organizations for entrepreneurs, including innovation districts, incubators, accelerator programs, innovation hubs, and co-working spaces, event organizers and foundations. However, only around 10%-15% are thought to target digital entrepreneurs. Sector-specific clusters are developing, e.g. around fintech, edtech, or agritech, some attracting substantial foreign investment. Impact remains limited in many cases however, due to 3 key factors: (i) support is concentrated in the early stage space and in the affluent urban areas of Gauteng and the Western Cape; (ii) the quality of services is considered quite low, relevant mentors are lacking and monitoring and evaluation is not meaningful; and (iii) programs are not well tailored to the South African context or for access to foreign markets. Sustainability may also be an issue, as most organizations are highly dependent on a specific government supplier development program.

Financial capital. Availability of early and growth-stage finance for growth-oriented businesses has increased significantly over recent years, in the context of difficult access to credit for SMEs overall. Supply increase has come mostly from a fast increase in the number of Venture Capital Companies (VCC), thanks to a significant tax incentive. But very few VCCs invest in digitally enabled businesses, they can only invest into a South African registered entity, and finance gaps still persist throughout most of the lifecycle of digital startups, including the very early stage where incentivizing angel investors might be more adequate. Most South African VCCs also still lack capacity, inclusiveness, and critical size.

Markets. South Africa is the second largest economy in Africa and a growing digital market, with rapid increase in smartphone penetration, fixed broadband subscriptions, and electronic transactions. Local business models and services have developed, including business-to-business, and the country is now a key entry point for global digital companies on the continent. Policy efforts also support better inclusion of disadvantaged communities, although much remains to be done. The high cost of data does remain a challenge, and key players with significant growth and job potential, like e-commerce and digital private platforms, face high restrictions and costs for processing online payments. Long private and public procurement cycles disadvantage smaller players, while government efforts are sometimes diverted or ineffective. ICT services exports data also show limited global reach, while the local market remains limited compared to richer countries due to infrastructure and persistent inequalities.

Entrepreneurship Culture and Talent. Perception of entrepreneurial culture in South Africa is on the rise, helped by recent high profile exits, strong startup communities that host many events, and the growing importance of previously disadvantaged individuals, both as entrepreneurs and as customers. But jobs rather than growth remain the main motivation for entrepreneurs more broadly, collaboration between organizations across the ecosystem remains limited, and the sector remains overwhelmingly white, male, and middle class. Digital talent is rare at all skill levels and becoming a critical bottleneck for growth of digital startups, but especially for higher-end/global skills.

1.2 Recommendations

The first recommendation is to clarify the policy and regulatory framework for digital entrepreneurship. This may require the establishment of a policy statement and clear institutional leadership, supported by a central repository to better publicize instruments and programs. In turn their impact could be better evaluated and communicated through a structured M&E mechanism, and adjustments made more rapidly through improved public private dialogue. Finally, digital business would be facilitated, and employment boosted through key reforms in exchange control, IP, R&D tax breaks and labor flexibility.

Second, the digital entrepreneurship ecosystem could be further strengthened through targeted actions. This include first improving the quality and quantity of available digital skills at all skill levels, including in the short term through a scale up of successful local initiatives (e.g. Digital Skills Academy or mLabs SA) and the creation of a tech visa. Linkages between the Gauteng and Western Cape entrepreneurship ecosystems could be reinforced through incentives for joint applications, and the rural/urban divide reduced through support for regional extension (e.g. for mLab). Results-based funding could improve service quality, as in the World Bank's Kenya Industry and Entrepreneurship Project. Building out regional and pan-African programs for later stage digital entrepreneurs would bring scale and increase access to international markets and mentors, such as in the XL Africa program.

Third, access to funding should be expanded to bridge key financing gaps. Incentives could be increased for angel investors to invest into early-stage digital businesses (as in the UK) and angel networks boosted (as in Chile through CORFO). Those investments could also be "de-risked", for example through blended finance.

Finally, active support to diversity in the digital entrepreneurship sector should be continued. This notably means boosting tailored support, taking inspiration from successful examples, e.g. *Digital Undivided* and *Project Diane* (US) for previously disadvantaged communities, *She Starts* (Australia) and *We In Social Tech* (UK) for women.

2 Background on Digital Entrepreneurship in South Africa

Digital entrepreneurship is a key pillar of a digital economy and is linked to continued economic growth, wealth creation and higher standards of living¹. Digital entrepreneurship, seen to encompass the launch of new ventures in the digital sector²³, also including digital private sector platforms⁴, brings the digital economy to life. Digital ventures offer new products and services, leverage new technology and business models, and open new markets. They can contribute to net employment growth and help enhance competitiveness and productivity of the economy. Vibrant digital entrepreneurship ecosystems are needed to help digital entrepreneurs flourish and encompass support organizations (such as accelerators, incubators, innovation hubs and co-working spaces) and early stage financing (such as seed, angel, and venture capital and grants). Furthermore, vibrant ecosystems require specific skills (both technical and business ones), access to markets, and an overall conducive business environment that motivates the creation and use of novel digital technologies⁵.

South Africa's underlying digital entrepreneurship dynamics are positive, and the digital entrepreneurship ecosystem is ranked among the highest on the African continent, although other African ecosystems are developing rapidly. There is a strong recent emergence of digital startups and platforms across technology segments. A round of successful tech startups have raised over \$USD100M⁶, and there is an expanding number of medium-sized South African technology companies, a growing number of which are also black-owned. In addition to creating jobs, digital entrepreneurs are also helping to drive social impact in areas such as health (such as HearX), transport, and education (such as GetSmarter). Successful digital entrepreneurs are also reinvesting in the ecosystem, through funds such as Team Africa Ventures, and there is also an expanding venture capital industry (R4.39 billion has been invested in 532 deals to date⁷) with growing ties to international investors. Both Cape Town and Johannesburg are considered attractive destinations for digital entrepreneurs who want to scale their businesses and are regularly cited as top African tech ecosystems. The country is home to multiple African Regional digital corporate hubs, including IBM Research Lab, Google, AirBnb, Amazon Web Services, and Naspers.

However, other ecosystems on the continent are also developing strongly. For example, Botswana recently ranked number 1 in Sub Saharan Africa ahead of SA⁸. Kenya and Nigeria have strong digital entrepreneurship ecosystems, as can be attested by the recent string of high profile exits of digital

 $^{1\ \}mathsf{Global}\ \mathsf{Innovation}\ \mathsf{Index}\ \mathsf{ranking},\ \mathsf{World}\ \mathsf{Intellectual}\ \mathsf{Property}\ \mathsf{Organization}\ \mathsf{(WIPO)},\ \mathsf{2018}$

² The term 'Digital Entrepreneurship' most commonly refers to the process of creating a new—or novel—Internet enabled/delivered business, product or service. The definition used here includes startups that bring new digital product or service to market. Welsum, v. D., World Bank Group, "Enabling Digital Entrepreneurs" 2016.

³These are typically defined as young (under 5 years) firms that are pursuing growth

⁴ Digital Private Platforms can be defined as "multi-sided marketplaces with business models that enable producers and users to create value together by interacting with each other and by facilitating matching, searching, exchanging, transactions, and so on". (World Bank Group, Information and Communications for Development 2018: Data Driven Development, accessible at https://openknowledge.worldbank.org/handle/10986/30437)

 $⁵ World\ Bank\ Group,\ Digital\ Economy\ for\ Africa\ (DE4A)\ Diagnostic\ Tool\ -\ Guidelines\ for\ Task\ Teams,\ 2018\ (internal\ publication)$

⁶ These include: Thawte, Fundamo, Nimbula and GetSmarter (Timm, S. 2017. "Are these the 10 all-time biggest exit deals for SA startups?" VentureBurn https://ventureburn.com/2017/06/biggest-sa-exit-deals-digital-all-stars/) with a few recent large exits e.g. LobsterInk being undisclosed.

⁷ SAVCA, 2018. "SAVCA Venture Capital Industry Survey: Covering the 2017 calendar year"

⁸ Global Entrepreneurship and Development Institute, 2018. "Global Entrepreneurship Index 2018"

startups, and relative African newcomers to this space are improving in Global Entrepreneurship Index (GEI) rankings continuously in recent years, such as Ghana, Tunisia, and Tanzania.

Yet several pressing gaps in key inputs and regulations are holding the country's digital entrepreneurs back. These include: (i) insufficient access and availability of digital skills at all skill levels (see the DE4A chapter on digital skills); (ii) elevated infrastructure costs and small breadth of coverage (see the DE4A chapter on digital infrastructure); (iii) limited access to early stage finance; (iv) some specific legislation detrimental to business operations (on IP, exchange controls, etc.); (v) insufficient coordination and monitoring of public entrepreneurship support programs and initiatives, including spatially (these are currently highly geographically concentrated in Johannesburg and Cape Town); (vi) limitations on quality of support provided by entrepreneur support organizations; and (vii) insufficient diversity and inclusivity in the sector.

This DE4A background paper focuses on a diagnostic of the South African digital entrepreneurship ecosystem. The DE4A diagnostics are designed to be non-exhaustive and rapid diagnostics, presenting initial recommendations and findings on the digital economy in the broad sense. This background paper on digital entrepreneurship takes a mixed-method approach and is based on three forms of data collection and analysis undertaken from March 2019: (i) secondary research (list included in bibliography); (ii) a series of 50 in-person and group qualitative interviews; and (iii) internationally available benchmarked data on South Africa (included in tables throughout). More specifically, the background paper looks into six factors that constitute a digital entrepreneurship ecosystem⁹ and that influence the creation and success of digital ventures, namely: policy, finance, support organizations, culture & human capital, and markets, treating each of these aspects. Other chapters included in the overall digital economy diagnostic provide in-depth analysis of (i) digital skills; (ii) digital infrastructure; (iii) digital financial services (fintech), and (iv) digital government platforms. These topics are thus touched upon lightly in this background paper.

The following sections elaborate on the key findings from the diagnostic. These include strengths, weaknesses and recommendations that the South African public sector, in partnership with the private sector, can undertake to further facilitate the development of digital entrepreneurship, which can in turn help create opportunities, find solutions to development problems, and generate much needed jobs.

⁹ The report's methodology and analytical process rely on the DE4A diagnostic toolkit, which is based on the Babson Entrepreneurship Ecosystem model. This model captures the most widely held understanding of entrepreneurial ecosystems, including the factors that constitute them and how they work.

3 Diagnostic findings: Current State of Digital Entrepreneurship Ecosystem

3.1 Government Policy Framework and Business Environment for digital entrepreneurship

The government is playing a strong role in the development of digital entrepreneurship in South Africa and broader digital economy development is a key focus area. Although South Africa's Doing Business could be improved overall (82nd out of 190)¹⁰, South Africa's government stands out in terms of the number of programs that target digital entrepreneurship and its overall pro-active support to SME development, including the crowding in of the private sector. There is a strong acknowledgement that the country needs to prepare for the Fourth Industrial Revolution (4iR), with the setting up a presidential commission ¹¹ of experts to advise the government and develop a comprehensive action plan. The commission will identify and recommend policies, strategies and plans related to the 4IR¹², and an affiliate Center for the 4iR is being set up on technology governance ¹³. SMEs are also recognized by the government as key for economic growth and job creation, and that investment in companies, skills and capacity is needed. ICT has been prioritized in the current National Development Plan (NDP)¹⁴.

National and provincial governments have put in place various support mechanisms and programs which have the potential to benefit digitally enabled startups. Support mechanisms include grants and matching funds e.g. Technology & Human Resource in Industry Programme (THRIP) and Support Programme for Industrial Innovation (SPII), administered by the Industrial Development Corporation (IDC), R&D Tax Incentives for companies to deduct related costs from their tax liabilities, and the establishment of the Technology Innovation Agency which invests and runs a range of investment programmes. The SA SME Fund¹⁵, launched by the President in March 2019 as a partnership between the national government and corporate South Africa, foresees that R1,4 billion will be invested into SMEs and startups through pre-selected fund managers with an established track record to kick start economic growth. At the provincial level, local governments as well as trade, investment and promotion agencies (e.g. WESGRO) have also invested in initiatives to drive the digital economy, including the rolling out of WiFi hotspots and free WiFi, fund skills development programs, some support to coworking spaces and incubators (e.g. CITI and the Innovation Hub have received funding from Western Cape and Gauteng governments respectively), and facilities aimed at attracting international investors and companies to set up offices in SA (e.g. AirBnb's African office in the Western Cape).

However, policies are not yet reactive or reflecting the changing global operating landscape for digital entrepreneurship. While the 4iR has been put forward as a priority by most government departments, no concrete programs, policies or budgets have been put into effect as of yet, although many policy

¹⁰ http://www.doingbusiness.org/content/dam/doingBusiness/country/s/south-africa/ZAF.pdf. President Ramaphosa has indicated he wants SA in the top 50 countries in 3 years time in his second State of the Nation Address (https://www.gov.za/speeches/president-cyril-ramaphosa-2019-state-nation-address-7-feb-2019-0000)

¹¹ Department of Telecommunications & Postal Services, 2018. "Invitation to nominate candidates for the Presidential Commission on the Fourth Industrial Revolution"

¹² Department of Telecommunications & Postal Services, 2019. "Terms of Reference for the Presidential Commission on the Fourth Industrial Revolution and initial appointees" Ellipsis website

¹³ Department of Science and Technology, Consultation background paper on cooperation with the WEF to launch an affiliate centre for the fourth industrial revolution in South Africa, April 2019

¹⁴ The National Planning Commission, 2012. "National Development Plan: 2030 : Our future - make it work." page 190

measures are likely to be of high relevance to digital entrepreneurship. Moreover, policies in other sectors have been developed to date with little consideration for practical and commercial impacts on the sector. As a recent example, the proposed amendments to the Copyright Bill ¹⁶ have been widely criticized (copyright is important for software developers as rights arise automatically on creation), with experts stating that these would result in revenue losses from copyright owners and disincentivize many players within the knowledge and creative economies¹⁷. In other policy areas relating to the ICT industry and digital entrepreneurship, the government has been slow to respond to some industry requests for new policies aimed at removing obstacles to innovation. For instance, the authorities have taken almost 10 years to develop a draft policy on spectrum allocation (necessary for delivering low cost internet in remote areas).

Policy action suffers from a lack of coordination as well as insufficient monitoring and evaluation. Up until now, the government does not have a specific agency or department leading or coordinating the various efforts to foster digital entrepreneurship. In this respect, the ecosystem interviews on government action pointed to some significant overlap between different initiatives and programs both at the national and provincial level, potentially leading to a sub-optimum allocation of resources and a source of significant confusion for entrepreneurs and intermediaries. The recently released DST White Paper on STI¹⁴ does call for better coordination and management of various funding and support initiatives. Moreover, in the absence of monitoring mechanisms, the efficiency of some programs was questioned, despite significant public and private resources spent on them, as there is sparse data on what works and doesn't.

Furthermore, some of the existing policies turn out to be either difficult to implement in practice and would need to be adapted, or have an adverse effect on the operations of digitally enabled startups and SMEs. The following paragraphs will examine in turn: (i) R&D tax incentives; (ii) IP legislation and requirements; (iii) exchange controls; (iv) VAT & Corporate tax issues; (v) ICT and related sector policies; and (vi) labor legislation.

The R&D tax incentive scheme has a cost recovery model that does not benefit SMEs or startups which do not pay taxes until they are profitable, resulting in none of the initial development costs being tax exempt in practice. The SA government provides tax relief for companies engaging in R&D, allowing them to claim up to 150% of qualifying costs against their income tax and accelerated depreciation. This incentive was designed to encourage private-sector investment in scientific and technological research and development activities and to help the country achieve a target for R&D expenditure of 1% of GDP, but is not designed for high value and research intensive technology startups, which typically do not break even in their first years of operations; it could thus be usefully adapted. The recently released DST White Paper on Science Technology and Innovation (STI) 18 does call for better incentives related to R&D expenditure for SMEs and startups, which is a positive development.

The Intellectual Property from Publicly Funded Research Act (IPR Act)¹⁹ provides protection to inventors and universities, but additional regulatory approval and non-exclusive IP assignment into spin-outs has resulted in little private sector investment into university developed innovation or government funded startups²⁰. The IPR Act applies to any IP (including know-how but excluding copyright in copyrighted works) created with public funds through government grants or in a university, or in a science council environment. The IPR Act ensures that the inventor or creator of the IP and the institution have rights to

¹⁶ Department of Trade & Industry, 2017. Copyright Amendment Bill

¹⁷ PricewaterhouseCoopers, 2017. "The expected impact of the 'fair use' provisions and exceptions for education in the Copyright Amendment Bill on the South African publishing industry" Publishers Association of South African website

¹⁸ Department of Science and Technology, 2018. "Draft Paper on Science Technology and Innovation (STI), 2018

¹⁹Department of Science and Technology, 2008. "Intellectual Property Rights from Publicly Financed Research and Development Act (51/2008)" University of KwaZulu Natal website.

²⁰ Technology Innovation Agency, 2018. "Technology Innovation Agency Annual Report 2017" Technology Innovation Agency website.

the IP, but also requires the National IP Management Office (NIPMO) to approve any transaction; thus, exclusive or complete assignment of the IP to an entity is difficult. As spin-outs do not own the IP outright or because of lengthy approval processes by NIMPO, investor risks regarding IP are increased (as well as costs related to deal structuring and legal fees). Owing to scarce successful commercialisation of university based IP, the private sector is hesitant to fund commercialisation or market expansion of any company or IP subject to the Act. The DST White Paper on Science Technology and Innovation (STI)¹⁴ also calls for a review of the IPR Act, which is likely to be welcomed in the industry.

As exchange control approval is required to move, license or assign IP offshore, digital entrepreneurs tend to directly register their companies offshore as soon as they start their businesses. Any startup or digitally enabled businesses who wants to trade, operate or raise funding internationally needs reserve bank approval and is subject to the Exchange Control (ExCon) Act²¹, which impacts the way in which it manages and exploits its IP. This is significant as IP provides the legal framework through which companies and research institutions can create, protect and commercialize their research, innovations, software and technologies. The Act restricts South African residents from (among other things) selling, assigning or licensing intellectual property (IP) to foreign residents, and paying royalties to foreign residents, without prior approval from the South African Reserve Bank (SARB). As a result, digital entrepreneurs who are building scalable, international companies, need to compete globally, and enter into global partnerships, register all IP and the main company offshore as soon as they start their business. As a result, tax payable on income or exit does not accrue to the country. Amendments to the ExCon Act state that an authorised dealer can approve arm's length transactions or the creation of an offshore company to raise foreign funds for operations (subject to conditions) for unlisted SA "technology, media, telecommunications, exploration and other R&D companies". These amendments represent an improvement but implementation costs rest with authorised dealers within banks.

Digital startups are unable to claim the VAT they pay when starting their businesses, and corporate tax rates are not necessarily adapted to startups. As VAT registration is only required for companies with a turnover of R1 million per annum, many SMEs are unable to claim this early on, thus the operating costs on which VAT is paid to vendors are often covered by funding which has been secured in exchange for equity. The corporate tax rate for companies ranges from 0% (below R79 000 income p.a.) to 28% (from R550 000 income p.a. upwards) regardless of size. Smaller businesses (less than R1 million per annum) do have the option of paying turnover tax of between 1 - 3% which can be much simpler. For high growth digital startups however, there is little tax relief for them when they are formed or when they are generating profits, at which point they will be taxed in the same bracket as corporates.

Box 1: Startup Acts and other policy tools to encourage (digital) entrepreneurship

Startup acts are a new policy tool that some countries, including India, Argentina, Tunisia and Italy, have introduced, and others are currently developing²². They incorporate an overarching legislative framework that enables a series of supports targeting 'startups' specifically who are legally defined, with these supports generally not available to all small young firms. Supports can include (i) startup regulatory framework (customs streamlining, simplified business registration/annual reporting/closure arrangements, foreign currency controls easing, exemptions from various regulation); (ii) startup infrastructure support and sponsorship (through incubators, accelerators, etc.); (iii) startup finance (startup specific tax incentives for investors, direct financial support (grants, wage reimbursements, etc.)).

²¹South Africa Reserve Bank, 2019. " Currency and Exchange Manual for Authorised Dealers, 2019-04-18"

²² Based on an unpublished 2019 World Bank Group Note for the governments of Jordan and Senegal. In addition to countries cited developing Startup Acts, there are around ten countries that are currently exploring Acts or legislative tools for startups.

Startups are usually defined as technology/innovation based and must go through an assessment process in order to obtain the benefits. Other countries are signaling their commitment to startups through national Policy Statements (such as that developed by Ireland²³) which seek to integrate all relevant areas of policy into a comprehensive 'whole of government' suite of activities.

ICT and related policies governing digital entrepreneurship are seen as overly burdensome²⁴ and do not currently provide sufficient economic incentives for innovation. Startups and ICT enabled SMEs (including eCommerce), have to be compliant with a range of regulations and policies, which have been reviewed by DTPS in a National Integrated ICT Policy White Paper²⁵ in 2016. This report set out to clarify issues related to ICT convergence, protection of the open Internet, digital transformation of the society, mechanisms to promote growth in the ICT and postal industries, and the institutional frameworks necessary to facilitate policy implementation. The Electronic Communication & Transaction (ECT) Act²⁶ proposed amendment bill has received widespread industry criticism²⁷ and may negatively impact ICT infrastructure investment, competition and innovation, as well as SA's ability to participate in the 4iR. The Act, first published in 2002 and amended a number of times since, relates to any electronic communication or transaction and also is intended to guide the ICT strategy for SA, universal access, egovernment services, copyright and internet security, and electronic transactions (eCommerce). The regulation of the industry proposed in the amendments Bill may further exacerbate the digital divide and leave SA lagging behind other SSA countries with more liberal ICT policies (e.g. Kenya). Insomuch as the Protection of Personal Information Act²⁸ (POPI) most online businesses which have reached such a scale as to deal with sensitive information have implemented processes and data storage systems to be POPI compliant.

Labour Relations Act is applicable to all companies operating in SA regardless of size, and startups are reluctant to take on the administrative (taxes etc.) and financial burden of hiring staff too soon. As a result many staff at startups are part-time, on short term contracts or consult to the business so that they are not seen as formal employees. Thus, startups that have the potential to create further jobs may be hesitant or take longer to do so.

The national government e-Government strategy has not yet significantly reduced the administrative burden of digital startups. The e-government strategy, which is detailed in the digital government chapter of the DE4A report, proposes to make use of ICT to ensure that government becomes more effective and efficient. Some government departments have introduced elements of e-government, including the National Treasury's e-Tender Publication Portal, a Central Supplier Database, e-HomeAffairs and the South Africa Revenue Services' eFiling system. This is a positive move for startups as it makes business administration easier, however much remains to be done on this front, particularly at the subnational level.

3.2 Support organizations

 $23 Irish\ Department\ of\ Business,\ Entrepreneurship\ and\ Innovation,\ 2014.\ \ "National\ Policy\ Statement\ on\ Entrepreneurship"$

24 Van Staden, M. 2018. "The government's ICT policy is holding SA Back", Business Live

25Department of Telecommunications and Postal Services, 2016. "National Integrated ICT Policy White Paper, 2016"

26Department of Telecommunications and Postal Services, 2002. "Electronic Communications & Transactions (ECT) Act, 2002"

27Ellipsis website, 2019. Electronic Communications Amendment Bill

28Information Regulator South Africa, 2013. "Protection of Personal Information Act Guidelines, 2013". Department of Justice website

South Africa has a large number of organizations and programs active in supporting entrepreneurs.

These include clusters of activities such as the V&A innovation district which includes Workshop 17 (WS17) and the Woodstock Exchange in Cape Town, Tshimologong Digital Innovation Precinct in Johannesburg; incubators, such as those run by SEDA²⁹; accelerator programs; innovation hubs such as the iHub in Pretoria; and co-working spaces. The latest ecosystem reports from VC4A³⁰ and Google mention 300+ support organizations active in the country, including also event organizers, foundations and service providers, and several of the reports include useful ecosystem maps. This growing number of organizations have contributed to increasing the support available and provided to digital entrepreneurs, including by providing physical infrastructure (office space and internet access), business development services, coaching and mentorship. Despite the high number of support organizations, many of these are 'generalist', with a smaller number of support organizations focused on digital entrepreneurs; around 10%-15% of existing support organizations and programs are thought to target digital entrepreneurs specifically.

Clusters of innovation in specific sectors are developing (fintech, edtech, agritech) with dedicated accelerators and co-working spaces, corporate investment and sector specific funds. In the fintech space, AlphaCode and ABSA Work In Progress are two dedicated fintech support organizations. 10,2% of VC in 2017 was invested into fintech and financial services startups³¹, with banks and insurance companies investing in a wide range of programs e.g. Startup BootCamp Africa. Fintech businesses like Yoco (see case study), Jumo and others are attracting substantial foreign investment. Compared to other startups, Fintech businesses have, however, to comply with additional regulatory hurdles and requirements inasmuch as they may need approval from the Financial Services Board or a Banking License. Other countries in SSA like Mauritius have started issuing sandbox licenses to startups which minimize regulatory requirements until a business case is proven, which is something South Africa could consider adopting. There is also increased focus, capacity building, investment and support for SA businesses that use 4iR technologies like artificial intelligence (AI), data analytics and blockchain. For example, Aerobotics (one of XL Africa program startups, see case study) uses AI and drones to help tree farmers manage their crops in the agricultural space, and have raised significant funding that allows the firm to operate globally. Fintech-related issues and opportunities are further developed in the Digital Financial Services Pillar chapter.

While support organizations seem to be providing value in terms of fundraising ²⁷ for their entrepreneurs, a lack of impact evaluation and KPIs makes it difficult to assess their overall contribution to the development of the sector. It is currently not possible to know which organizations and support programs provide the maximum impact or relevant support, and thus encourage scale up, as most of them are not rigorously evaluated for impact and/or have limited internal M&E processes. For example, most Enterprise Supplier Development (ESD) programs' KPIs focus only on inputs and outputs (such as the numbers of entrepreneurs served and the breadth of services provided), rather than outcomes (such as the creation of sustainable businesses, or return on investment), may be leading to suboptimal results: many interviewees talked of a "box ticking" exercise for corporates engaged in ESD, rather than a truly catalytic boost to entrepreneurship in South Africa, although there are some notable exceptions.

There is a very high geographic concentration of most of the support provided to digital entrepreneurs in the affluent urban areas of Gauteng and the Western Cape, compounding inequality of access. The vast majority of these numerous support organizations are located in either Gauteng or the Western Cape and more specifically in their most affluent urban areas, which certainly makes sense in terms of geographic and economic clustering, but compounds inequality of access for potential digital

²⁹ SEDA (the small enterprise development agency) was established in 2004 under the DTI; further to business support services it also provides tech transfer and product testing and a technology program to improve business efficiency and processes. Importantly, centers are dispersed over SA (mobile units, 50+ branches, access points, etc.)

³⁰ VC4A, 2018. "Venture Finance in Africa: South Africa Report"

entrepreneurs in other regions and in townships, more particularly in areas where basic infrastructure coverage for internet are also low. Challenges to scaling out some support programs in the rest of the country include a limited capacity to operate hubs and the need to respond to a more comprehensive set of capacity needs, building from critical thinking and basic professional skills. mLab Southern Africa, based at the Innovation Hub in Pretoria (jointly funded by international agencies including the World Bank Group, national and local government) is one of the few organizations that is expanding its footprint beyond these two main hubs, to run initiatives for underserved communities with high numbers of unemployed youth in the Northern Cape, Mpumalanga and Limpopo. President Ramaphosa also announced in his State of the Nation Address in 2019 that several digital township hubs will be set up over the next three years. The initial four hubs being planned are the Eastern Cape, Free State, Limpopo, and the North West provinces. Challenges to scaling out to less economically favored areas are also being tackled by certain organizations (YES Community Hubs, RLabs, Bandwidth Barn in Khayelitsha, Tshimologong innovation precinct - see below), but these are drops in the ocean, and much still remains to be done on this front to bridge the access and equity gap.

Box 2: Tshimologong Digital Innovation Precinct

Tshimologong is a digital innovation hub that is located in the heart of Braamfontein, a central suburb of Johannesburg, undergoing urban renewal. The idea of a digital hub was seeded in 2013, by the director of the University of the Witwatersrand (WITS) Johannesburg Centre of Software Engineering), and officially opened in 2016. It has since grown into a zone that links hardware, software and digital content innovation to new business creation. Local and national government, as well as relevant private sector players, partnered with the University: IBM research has one of its two African labs located there. It comprises a digital content incubator which is currently working in partnership with the French Development Agency and others to expand audio-visual content creation (video games, animation, virtual and augmented reality) in collaboration with creative industries in France³².

Much of the organizations' support provided is concentrated in the early to very early-stage stage, with less robust later stage support and gaps in between. Most of the support organizations operating in South Africa are clustered in the ideation and early seed stages of company development, where later stage and relevant support is much more sparse, meaning that entrepreneurs who do succeed in growing to a certain level through programs and support organizations, rapidly find themselves with limited support, particularly at the critical stage where they are expanding their market access and raising funds, and building a more sustainable business that can also create jobs.

The quality of services overall provided by many support organizations is considered quite low. Specifically, in a recent survey of over one thousand entrepreneurs³³ the main challenges that these face, namely networking, guidance, finding customers, raising follow-on funding, are typically those that should be provided by support organizations. These point to a potential lack of quality and relevant services by many of these support organizations to entrepreneurs, and a lack of entrepreneurial experience of staff members. Benchmarking efforts or incentivization of support organizations is something that is currently being undertaken to improve the quality standards for support organizations in some countries. The

World Bank Group entrepreneurship project in Kenya (box below) is finalizing a tool that helps incubators and accelerators to identify strengths and weaknesses.

Digital acceleration programs could usefully be strengthened and tailored to facilitate access of South African digital entrepreneurs to markets beyond South Africa. It was noted by interviewees that many of the acceleration programs specifically were not sufficiently tailored to the local South African context in particular, it was deemed unrealistic that a digital startup could raise funds after a 3 month acceleration program in South Africa - startups need at the very minimum 6 months (or more), because of the idiosyncrasies of the early stage funding landscape in South Africa. A WBG study on venture acceleration found that while acceleration and mentorship by experienced founders likely do play a role in connecting early-stage technology companies to funding, programs such as incubators and mentorship by people who have not been founders may not have an effect³⁴. To bridge these gaps, a pan-African acceleration program, XL Africa, successfully involved investors and corporate partners throughout implementation, and benefited from South Africa's more robust entrepreneurial infrastructure. XL Africa, positioned as a pan-African investment readiness program, demonstrated the value of this approach, with the twenty finalist startups going on to raise over \$20MN USD in private financing. Most of the participating startups came from Nigeria, Kenya, and South Africa, and post-program some (such as Aerobotics) are scaling internationally. Initial implementation lessons from the first regional iteration of the XL acceleration program, l'Afrique Excelle, reveals the importance of regionally-focused acceleration programs to also facilitate access of digital entrepreneurs to regional markets and further economies of scale.

The lack of availability of relevant mentors to help entrepreneurs navigate the South African, pan-African, or global landscapes, is a notable sore point. Further to general business development support services, the lack of availability of quality of mentorship specifically continues to be a key pain point at all stages of firm development in South Africa, with insufficient serial entrepreneurs able to give back to the ecosystem as mentors, and thus many programs calling on professionals, such as lawyers, accountants, or business coaches, to act as business mentors. Globally, mentoring has been proven to have a demonstrative impact on entrepreneurs' success and studies have found that entrepreneurs who have mentors experience higher revenue, employee growth, and profits. The quality of the mentor is crucial, as "startups that have helpful mentors, track performance metrics effectively, and learn from startup thought leaders raise 7x more money and have 3.5x better user growth"³⁵.

Box 3: Taking the 'Silicon Savannah' to the next level

In Kenya, the quantity of startups or of its ecosystem support infrastructure, such as hubs, is not an issue, but the quality of those startups and the quality of services offered by that infrastructure, can be. In order to address this, the government of Kenya did a comprehensive analysis of the ecosystem and identified a program of actions to help the ecosystem address existing failures. The Kenya Industry and Entrepreneurship Project (KIEP), expected to be launched mid-2019, is designed to address some of the main ecosystem gaps by 1) supporting hubs to achieve a more sustainable business model and improve the services they offer to startups, which should in turn help improve the quality of the startups that benefit from those services; 2) supporting providers of rapid technology skills expand the reach of their services, so as to increase the pipeline of local talent that can feed into startups; 3) establish a program to link local traditional industries with startups, to open up the local market for startups, and increase the capacity of local industries to absorb innovation and technology, bringing them into the digital economy;

³⁴ Qian K., Mulas V., Lerner M. 2018. "Supporting Entrepreneurs at the Local Level: The Effect of Accelerators and Mentors on Early-Stage Firms.". Finance, Competition and Innovation in Focus. World Bank. https://openknowledge.worldbank.org/handle/10986/30384

³⁵Marmer, M., Hermann, B.J., Dogrultan, E., and Berman, R., 2012. "Startup Genome Report Extra on Premature Scaling: A deep dive into why most high growth startups fail." Startup Genome

4) establish a program to link local industries with students, to have an alternative rapid way of coming up with and testing new market approaches and products, help the industry scout local talent, and help students better understand the private sector and their opportunities there, including as entrepreneurs. The project has a strong gender focus, with built-in mechanisms to increase the number of women beneficiaries. In addition, it also incorporates a program to connect to international networks of mentors and funding.

Although currently well-funded, long-term sustainability and funding of the various support organizations and programs may be an issue. The South African government has skillfully mobilized private funding, through the Enterprise and Supplier Development (ESD) program, which creates incentives for established corporates to invest in the training and development of their smaller supply chain participants, either directly or indirectly via ESD providers. Large companies must spend 2% of net profit after tax on suppliers included in the program and 1% of net profit after tax on qualifying new enterprises. This program is the largest driver of funding for the country's large number of innovation hubs and incubators, unlocking ZAR 12 billion (USD 900 million) in capital³⁶, and has clearly led to a large increase in the number of support organizations providing services to entrepreneurs more broadly, a subset of which are digital. Some ESD programs have been very successful (Property Point: Growth Point's ESD program)³⁷. Many of the support programs are highly dependent on this source of revenue, and thus the long-term financial sustainability of these programs is a question, particularly if these programs are unable or not encouraged sufficiently to provide impacts and returns on this significant investment of funds.



Product/Service

Yoco (www.yoco.co.za, launched in 2015, hopes to become "the leading open commerce ecosystem for small business across Africa and beyond". Yoco provides small and medium enterprises (SMEs) with payment solutions and access to finance in the form of an affordable mobile card reader, point of sale software and access to capital enabling customers to grow their businesses. In South Africa over 75% of the adult population have debit and credit cards, but only 6% of businesses accept card payments. Yoco believes that SMEs are an important part of the economy in terms of contribution to GDP and employment but are currently underserved by banks.

Number of staff 100+ full-time & 10-15 part-time

Location Head Office - Cape Town, South Africa

Company registration & IP - Mauritius

Funding sources & amount raised

Total raised: \$23 million USD - Self-funded initially and then raised institutional capital from Quona Capital; Velocity Capital; Partech Ventures; Orange Digital Ventures; Greyhound Capital and FMO (Entrepreneurial Development Bank).

³⁶ Google, OC&C Strategy, 2019 "Tech entrepreneurship ecosystem in South Africa - 2018" 37 Property Point, 2018 "Key Impact Indicator Performance 2008 - 2018"

Growth angle

Yoco states that 90% of businesses in Africa are SMEs, driving 50% of GDP and employment, on average across the continent. They believe that SMEs need help to accept payments, formalise, grown and get access to capital and that traditional business models, tools and distribution channels don't reach or meet the needs of SMEs, which is what they have solved.

Socio-economic impact

- Yoco has signed up over 34 000 SMBs onto their platform (end 2018)
- 75% of customers new to accepting card payments
- Total Processing Volume (TPV) R3,27 billion (\$230 million) (end 2018)
- Generating revenue and growing steadily

Current and target customer market

Yoco describes their core customer as "a self-directed entrepreneur running a small business in South Africa, previously ignored and underserved by traditional financial institutions. These are daily and weekly traders operating in segments such as restaurants/cafes, retail, beauty and services with monthly turnover from R10 000 (\$700) to R 200 000 (\$14 000"). These SMEs want to expand their customer base by accepting payments via multiple channels, save time and access services which could potentially grow the business.

Key value proposition

value Yoco's allows customers to purchase their solution online or through a retailer, has a faster application process compared to banks with a 95% approval rate, and the cost of the device is less than \$100 once off.

Competitive advantage

Yoco states that their solution has been "specifically designed to create a frictionless customer journey for SMEs, has strong product market fit, and great customer support.

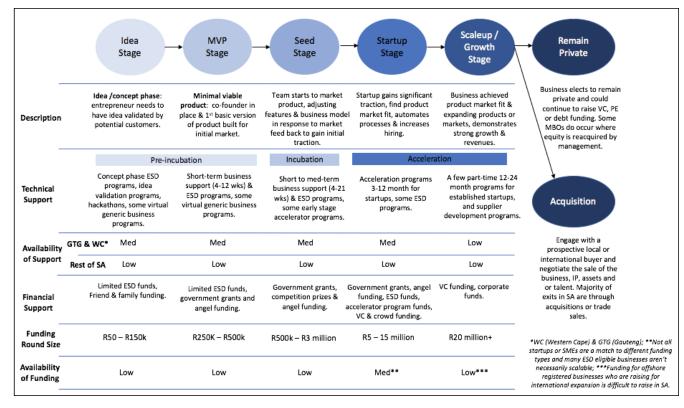
Yoco has the following stated competitive advantages:

- No monthly fees and no contract for the point of sale device
- 2,95% fee per transaction vs. 3-5% fee per transaction
- User-driven on-boarding, set-up and activation
- Fast application & approval process
- Value added services".

3.3 Financial Capital

Digital ventures in South Africa face financing gaps throughout most of their lifecycle. When considering the various stages of a digital entrepreneur's growth cycle, with each stage corresponding to specific financing needs in terms of amount as much as structuring, the availability of finance for digital entrepreneurs in South Africa is generally low (Figure 1). South Africa's Getting Credit ranking of 73/190 is also significantly lower than Kenya (8) and Nigeria (12).

Figure 1: Summary of South African financial capital landscape for digital entrepreneurs at various stages



Source: authors

The South African government has various financing and incentive programs for early stage entrepreneurs, but most of these are not suitable for digital entrepreneurs. The South African government has a variety of funding instruments and programs for small businesses. A forthcoming WBG report³⁸ identified 52 national programs targeting SMEs through the Industrial Development Corporation (IDC), the Department of Trade and Industry (DTI), the Department of Science and Technology (DST), and the Department of Small Business Development (DSBD). In total, these programs have an estimated annual budget of about R18 Bn in the 2018 financial year, out of which debt finance constitutes 48 percent, grants 35 percent, and a combination of financial products – equity, grants and debt constitute 17% of the total budget. Most of these programs target very early stage businesses, with few targeting later stage startups and only 4 percent of the government financing programs target technology SMEs (roughly a third of the programs are not sector specific). Grants and loans are available from as low as R50k, and equity finance starts from R250k, but is only offered in combination with debt. Programs require a minimum of 1 to 2 years of trading, although some grants can be provided to companies that have been trading for more than 6 months. Most of the grants include a cost-sharing clause, and for loan and equity financing a collateral or a guarantor is required, a particularly difficult criteria for digital startups. Some programs have geographical focus, and many also use black ownership as an eligibility criterion. There is little data on blended finance (co-investment and fund-of-funds instruments), which are being used to mobile private sector finance in many parts of the world.

Angel investors would be most suited to help fill the early stage funding gap, if they are correctly incentivized and organized. Angel investors typically contribute more than just financial capital to a startup: by being actively involved, mentoring the founding team, providing strategic or expert advice and introductions to customers, in contrast to VC of VCC investors whom are typically less "hands-on" with their portfolio of investments. However, contrary to later stage funds, there are few incentives for angels to invest in startups in South Africa, although they take a higher risk on their investments (as the company

is at an earlier pre-revenue stage). Angel investors in South Africa would benefit from forming organized sectorally-specific groups, which would help to develop more sophisticated angel investors and introduce necessary processes and tools for helping invest in early-stage startups.

Box 4: Investment Incentives for Angel Investors in the UK

The UK government has successfully introduced a range of income tax deductions for UK registered taxpayers who invest in early stage businesses in order to stimulate the sector and provide risk capital to startups. These initiatives include the Enterprise Investment Scheme (EIS), launched in 1993/4 and Seed Enterprise Investment Scheme (SEIS) launched in 2012³⁹. SEIS, allows for 50% income tax relief on an investment (into a private company with less than £200 000 of assets at the time of investment, less than 25 full-time employees, not owned by another company and trading for less than 2 years) of up to £100 000 per tax year, exemption of capital gains tax on disposal of SEIS shares are 3 years and allowing losses on the disposal of SEIS shares to be set off against other income or capital gains. Startups can raise a max of £150,000 in SEIS and can't do so if they have raised funds through EIS or Venture Capital Trust (VCT) tax incentive schemes. EIS, allows for 30% income tax relief on an investment (into a private company with less than £15 million of assets at the time of investment, less than 250 full-time employees, not owned by another company and trading for less than 7 years) of up to £1 million per tax year, exemption of capital gains tax on disposal of EIS shares are 3 years and allowing losses on the disposal of EIS shares to be set off against other income or capital gains. Since the Enterprise Investment Scheme (EIS) was launched in 1993-94, 27,905 companies have received investment of over £18 billion. In terms of SEIS, in 2016-17, 2,260 companies received investment totaling £175 million, of this £148 million was raised by 1,700 new companies and 39% of all SEIS investment (£68 million) went to ICT startups⁴⁰.

There has been robust recent growth of later-stage Venture Capital funds in South Africa. According to the Southern African Venture Capital and Private Equity Association (SAVCA), there has been a significant growth both in terms of the number and value of angel and VC financing in recent years, reaching 159 deals with a total value of R1,16bn in 2017, which equals 0.024% of GDP⁴¹. Section 12J of the Income Tax act (details below) and recent announcements of several large VC funds targeting both South African and African startups (box 4) are expected to further close the finance gap at the later stage. However, it is yet to be seen how these efforts can lower the access to finance barrier for black owned companies, who often lack the necessary networks and expertise to raise equity finance (also with over 90% of VC transactions target Gauteng and the Western Cape provinces, according to SAVCA). Corporate finance is also emerging, through either industry specific strategic investments to startups by (e.g. Investec Emerging Companies) or more comprehensive corporate initiatives (e.g. AlphaCode by Rand Merchant Investment Holdings). As the focus of corporate finance is often M&A transactions, this is more relevant to post-revenue, growth stage and more established digital business.

The expansion of VCC funding in South Africa has been driven by one key piece of legislation, however relatively few of these new funds are being invested into digitally enabled businesses. The amendment to Section 12J of the Income Tax act has resulted in 165⁴² new Venture Capital Companies (VCCs) being registered with over R3.4 billion committed by February 2018, with informal estimates that this will reach

R5 billion in 2019⁴³. Individuals or companies contributing to a VCC can deduct the full contribution from their taxable income provided that they keep the funds in a VCC for 5 years and the VCC complies with the rules of the scheme. This has resulted in much more capital in the market and these new funds might not have the fund management or investment experience to invest into startups. A VCC can only invest into a South African registered entity, so startups who have an entity and IP registered offshore, to expand globally cannot raise funding from this group of new investors. In addition, interviewees raised a hope that existing loopholes in Section 12J of the Income Tax would be fixed, so that unintended behavior of some private investors be curbed. Finally, VCCs cannot, per regulation, invest in the growing number of fintech and other businesses requiring a Financial Services Board (FSB) or Financial Sector Contact Authority (FSCA) license.

Over 30% of the number and 18% of the volume of active deals at the end of 2017 were directed to companies categorized as software or ICT related activities⁴⁴ (see Chart 1). In addition, it was reported that many investments categorized as Consumer or Business Products and Services also involve software or similar ICT related activities.

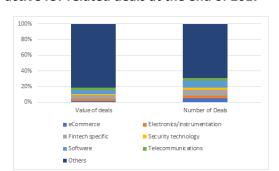


Chart 1: Sector allocation of active ICT related deals at the end of 2017

The small size and staff capacity of local VC funds are key constraints to further growth. There are an insufficient number of experienced fund managers in South Africa, particularly those who have the knowledge to help grow globally successful digital business (series B to D funding rounds), and few female or black fund managers. To address this gap, SAVCA has launched a fund manager development program, with a specific focus on diversity. Existing VC funds are also small; funds thus struggle with sustainability. According to experienced fund managers, to make the business model work, the minimum size for a VC fund is an estimated R350 million, which would provide necessary revenues from standard management fees and to ensure the staff has enough time to provide the necessary advisory services to portfolio entrepreneurs. The small size of the VC funds in SA⁴⁵ make it also harder for local VC funds to compete against foreign VC, as they are not able to provide meaningful follow-up finance, which is a common expectation. To address this gap, there is a need to increase the participation of institutional investors in local VC funds, as currently the funds are relying on a limited number of high net-worth individuals. However, many institutional investors are risk averse, and further awareness building efforts would help to demystify the risks and help to unlock institutional funding.

⁴³ van Zyl, K. 2018 "SARS Section 12J Venture Capital Companies — Hype Versus Substance" \sim

⁴⁴ SAVCA, 2018. "SAVCA Venture Capital Industry Survey: Covering the 2017 calendar year", pg 16,17

⁴⁵ The 2018 SAVCA VC report notes that the "average deal value of all active deals as at end of 2017 amounted to R8.34 million, compared to R7.59 million at the same point in 2016" and that over 70% of the funds surveyed had made less that R50 million in investments with only four funds with investment portfolios of over R400 million. This could change as more VCC funds start to invest the funds raised.

Box 5: Recent Larger Venture Funds targeting South African digital entrepreneurs

A number of reports have highlighted the recent increase in venture finance in Africa, but as methodologies vary and some countries lack data, there is no comprehensive and reliable analysis of African venture finance at the moment. However, the trend is clear, and between 2018 and 2019 several new venture funds have been announced. Notable ones include the SA SME Fund (R1,4bn), Naspers Foundry (R1,4bn), the anticipated LionPride Agility VCC (R500) and the venture funds by the South African Development Bank (R250m) - all aiming to boost South African technology startups. In addition, efforts are in place to raise ambitious funds targeting the African or Sub-Saharan African technology startups, including Cathay Africinvest Innovation Fund (\$168m), Partech Africa VC fund (\$143m) and Seedstars Africa Ventures (\$100m).

3.4 Markets

South Africa is a growing digital market, providing market opportunities for existing and new digital businesses. While the availability of high-speed internet and digital technologies has improved, increasing usage⁴⁶, affordability of communications services still remain a challenge for most South Africans⁴⁷ and the affordability of internet use and especially mobile broadband data has been discussed extensively in recent years (Data Must Fall campaign is one of the most public examples), which is treated in more depth in the digital infrastructure pillar.

E-commerce and digital private platforms are an expanding segment of the digital entrepreneurship landscape, and their development can be particularly important to unlock further market access for SMEs and facilitate their growth. It is estimated that private platforms currently have some 1,297,000 workers in South Africa⁴⁸ and revenue in the eCommerce market is estimated at US\$3,308m in 2019, with annual growth rates projected of around 10% per annum, with the usage of digital channels for transactions growing accordingly⁴⁹. South Africa rates better in UNCTAD's E-commerce Index compared to Kenya, Nigeria and Senegal (Table 2). This has attracted investments into new business models and services including digital platforms such as SweepSouth, Takealot, and Parcel Ninja (see case studies). Also, some of the largest global digital platforms are using South Africa as an entry point to the continent, including Uber which launched operations in 2013, Netflix in 2016, Spotify in 2018, and Airbnb. Studies by insight2impact and Research ICT Africa have identified over 300 unique multi-sided digital platforms in eight African countries⁵⁰, with the largest emphasis on e-commerce, freelancing and e-hailing, all together with 4.8 million platform workers⁵¹.

⁴⁶ According to ICASA, between 2016 and 2018, the smartphone penetration grew from 43.5% to 81.7% and total fixed broadband subscriptions grew from 1,890,832 to 7,471,829

⁴⁷ Alison G., Onkokame M. and Broc R. 2018. Policy Paper no. 5, Series 5: After Acces. State of ICT in South Africa. researchICTafrica.net

⁴⁸ insight2impact Africa's digital platforms database (May 10, 2019)

⁴⁹ For example, according to Global Findex, between 2014 and 2017, the % adults who used the Internet to pay bills or to buy something online in the past year grew from 7.62% to 14.13%. https://globalfindex.worldbank.org/

⁵⁰ https://i2ifacility.org/insights/blog/the-rise-of-african-digital-platforms?entity=blog. Countries include Ghana, Kenya, Nigeria, Rwanda, South Africa, Tanzania, Uganda and Zambia.

⁵¹ https://researchictafrica.net/wp/wp-content/uploads/2018/12/Dinfo_V11.pdf

Table 2: Platforms and ecommerce

	South Africa	Kenya	Nigeria	Senegal
Platform workers	1,297,000	286,000	2,916,000	-
Number of unique multi-sided digital platforms (of African origin)	91 (54)	(54) 71 (39)		-
Value B2C E-Commerce Index (0-100), 2016	54	45	46	30
% variation with 2015	7.36	18.73	51.32	-10.18

Sources: Research ICT Africa After Access Survey (2017), insight2impact Africa's digital platforms database (May 10, 2019), UNCTAD B2C E-commerce Index

While there is clear evidence of the strong growth of digital private platforms, limited information exists as of yet analyzing their role and impact. Indeed, despite the growth trends in South Africa and the rest of the continent (over half of the platforms tracked by insight2impact were launched after 2015), research of their economic relevance or prevailing market failures that limit the adoption and growth are sparse. Also, even though e-commerce specific challenges were highlighted during interviews (see below), topics such as growing dominance of popular digital platforms, consumer protection, or data privacy were hardly raised⁵². South Africa was the only African country covered by Accenture's 2018 study that benchmarked G20 countries for a Platform Readiness Index. According to the study⁵³, the specific challenges South Africa faces are the relatively small digital customer base, modest R&D spending, limited technology preparedness and STEM skills shortages, as well as the gaps in the policy environment, in particular with areas such as data privacy and cybersecurity, which can increase trust and collaboration. Ensuring digital platforms are taken into account when designing new regulations or data standards was one of the key recommendations of the report. The study also highlighted areas South African companies should consider, including the importance of partnerships and shifting mindsets. Both are areas where governments can play a facilitating role. For example, as a part of the Growth Engine program, Business Finland is supporting the creation and development of platform companies that aim to grow the ecosystem in specific verticals, such as real estate and construction sectors.

Deeper analysis would help to identify specific digital platform issues that could be addressed by the government. For example, e-commerce businesses require a bank to issue a merchant account which is required to accept online payments, yet many banks require at least 6 months of trading history before issuing an account. In addition, the cost of processing online payments (3-4% of a transaction), coupled with logistics costs, import restrictions and competing with large players (who are loss making but offer very competitive prices) makes it very difficult for small e-commerce enabled businesses to be sustainable and scale. For consumers, the high cost of data makes visits to brick and mortar shops still more affordable and there is a perceived lack of trust in digital payments in the broader population. On the other hand, crime and foreign currency transactions both introduce high risks to digital platform businesses, and logistics have several issues to be solved, including unreliable service by South African Post Office, lack of

⁵² A separate background paper on Digital Financial Services provides an analysis of this specific sub-group of digital platforms.

⁵³ R. Moore, Y. Seedat, Dr. Jeff Yu-Jen Chen. Accenture, Gordon Institute of Business Science. 2018. "South Africa, winning with digital platforms. https://www.accenture.com/_acnmedia/PDF-80/Accenture-Winning-Digital-Platforms.pdf"

addresses in townships limiting the distribution from platforms to higher income neighborhoods, and the inefficiency of cross-border ground transportation.

Steady digitization of industries and the high level of sophistication in sectors such as banking and financial services are encouraging digital entrepreneurs to innovate and focus on business customers, but long contracting cycles are preventing a faster pace of innovation and technology adoption. Compared to Kenya, Nigeria and Senegal, firm-level technology adoption is higher in South Africa (table 3), but the long procurement process experienced by entrepreneurs when negotiating and confirming contracts with corporate clients (which can take up to 18 months) is a major challenge for growth. This also limits the chances to attract early-stage and growth finance as long sales deal-cycles also prolong startups' ability to access the often-large customer base of an established business, which in turn can be used to boost growth and demonstrate customer traction (often required by equity investors).

Policy efforts from the government have increased market opportunities for digital entrepreneurs from previously disadvantaged communities. In particular, B-BBEE Enterprise and Supplier Development (ESD) initiatives had opened business opportunities through supply-chain linkages and support to these entrepreneurs. However, there are concerns about the legislation, as when compliance is the driving force for large enterprises, rather than having a mutually-valuable business case, the value for digital startups and SMEs can be negligible. Also, smaller businesses have been asked to negotiate informal arrangements, such as reporting altered contract amounts, or even becoming intermediaries for corrupt practices to win new contracts.

Government efforts to adopt digital technologies are currently not seen as an attractive opportunity by small business. The main challenges were seen to be limited awareness of the potential of digital technologies in public service delivery, and lack of capacity and innovation culture in government. Even in municipalities that have established innovation departments and facilitated innovation challenges, including Tshwane and Cape Town, the results have hardly grown further than small pilots. In some cases entrepreneurs have been able to access further finance from government initiatives to continue product development, but the feedback from both government officials and entrepreneurs concluded that the overall government procurement framework limits the potential large scale impact of co-innovation efforts with local innovators, as small businesses find it almost impossible to win government contracts. In addition, some of the angels and VC fund managers commented that digital startups that target government as their main customer segment are not seen as attractive to invest, as there are too many risks involved, including the ability to receive payments on time and the potential political influence in the procurement process.

Box 6 - Government procurement as a tool to foster innovation and support digital entrepreneurs

Public procurement has the power to create new markets for innovation⁵⁴ and in many countries the government is the biggest procurer of goods and services, which makes them an attractive client for SMEs, including digital entrepreneurs. However, public procurement is often an ignored and untapped source to promote SME development, and several constraints inhibit SMEs' participation in public contracts, including complex legal and regulatory frameworks or payment delays. One of the most well-known examples is the Defense Advanced Research Projects Agency (DARPA), which has played an important role for years in the U.S., building the foundations for new industries, while cities like Philadelphia have piloted programs like FastFWD that integrate modern acceleration methods, as they are trying to find the best

problem-based procurement that engage SMEs and digital startups⁵⁵. Public procurement itself can also be a source of innovation: Citymart⁵⁶ for example is helping re-invent public procurement. Policy-makers could consider the 2017 public procurement for innovation framework from OECD⁵⁷ or lessons from the 2017 review of the Small Business Research Initiative (SBRI) in the UK ⁵⁸ that usefully outline the importance of public procurement, and how to improve the public sector's role to support innovation and develop better services. SBRI was established in 2000 to encourage the allocation of R&D expenditures to small firms and to support them securing an important first customer reference even at the precommercial stage (i.e. goods and services which require further R&D), and by 2018 SBRI had awarded over £0.5 billion in Research and Development contracts⁵⁹. Other country examples of public procurement successfully targeting SMEs includes Chile (Chile Compra's eProcurement), Prompye in Peru.

Table 3: Market-related indicators

	South Africa	Kenya	Nigeria	Senegal
Firm-level technology absorption (1=not at all; 7 = to a great extent)	5.43	4.84	4.34	5.04
Trade openness (share of exports and imports with respect to GDP)	58	39	-	69.7
ICT service exports (% of exports BOP)	16.9	13.19	5.21	36.73

Large global markets are still seen as more attractive than Southern Africa or Africa for South African digital entrepreneurs. Even though South Africa is one of the largest economies on the continent, with an annual GDP of \$349B (2017⁶⁰) the economy is still smaller than Norway, providing a limited market opportunity for scalable digital business models that monetize data or rely on advertisement revenue. South Africa ranks below Senegal when looking at the trade openness and ICT service exports data, but well over Nigeria and even Kenya (table 3). On the other hand, scaling in the continent is seen as cumbersome, as the fragmentation of markets requires different market strategies for each country and the ability to navigate different regulatory frameworks and political uncertainty - making large foreign markets more attractive. Although Jumia, with Nigerian origins, is seen as one of the most successful digital startups operating in Africa (listed on the New York Stock Exchange in April, 2019), although not without controversy⁶¹, there have been several success stories from South Africa, including Thawte, GetSmarter, Fundamo, Lobster Ink and Nimbula, all reaching exit deals above \$100m. Unfortunately, South African entrepreneurship ecosystem adds several challenges to build a highly scalable and global digital business. Interviewed stakeholders reported highly-regulated cross-border transactions such as making the ability to pay staff in other countries, raising finance from foreign investors and transferring IP as examples that make it very difficult to compete (see policy and financial capital sections). In addition, the scarcity of expertise with exposure to international digital markets and operating environments limits international aspirations and the ability to succeed.

⁵⁶ https://www.citymart.com/

⁵⁷ http://www.oecd.org/gov/public-procurement-for-innovation-978

⁵⁸ https://www.gov.uk/government/publications/leveraging-public-procurement-to-grow-the-innovation-economy-an-independent-review-of-the-small-business-research-initiative-sbring and the state of the small-business and the state of the state of the small-business and the state of the small-business and the state of the state

⁵⁹ https://innovateuk.blog.gov.uk/2018/03/13/sbri-more-than-1-billion-pounds-in-value-to-uk-economy/

⁶⁰ World Bank Group, 2019. South African Country Data, 2017

⁶¹ Chleuh, I., 2019. "Pourquoi Jumia s'est arrogé illégitimement le label "Made in Africa" Jeune Afrique



Product/Service

ParcelNinja (www.parcleninja.com) was founded in 2014, with the intention of assisting e-commerce companies scale and manage their logistics processes. Over the last few years, ParcelNinja saw that the majority of challenges facing e-commerce businesses (payments, marketing, platforms) have been solved through SAAS offerings but that up until now there has not been a strong focus on SAAS fulfilment offerings. Parcelninja.com comprises of a 3800sqm facility, allowing clients to warehouse their respective items, issue orders, pick, pack and least-cost route orders to customers, making customer's eCommerce businesses more cost-effective and efficient.

Number of staff

75+ full-time

Location

Cape Town and Johannesburg, South Africa

Funding sources, amount

Self funded by the Want It All group (comprises 3 businesses, including ParcelNinja) which has raised funding from angel investors and one institutional investor.

Growth angle

ParcelNinja believes that the logistics component of e-commerce is complex and requires a deep understanding of supply chain, and e-commerce fulfilment. Consumer demand for e-commerce has led to companies focusing on growth and customer acquisition, but increasingly, the challenges they face is not being able to scale their supply chain. Companies understand marketing, cloud-based platforms, and payment systems, but do not have a competency around logistics. ParcelNinja solves this problem by providing "e-commerce companies with a fast, affordable, predictably (priced), industry leading, off-site managed solution which can scale as their business grows."

Socio-economic impact

- ParcelNinja has signed up a range of e-commerce providers onto their platform including major corporates for example FNB card delivery and Makro (Walmart company).
- Enables 80+ small e-commerce businesses in the SA market.
- Fulfil between 25 000 and 60 000 orders per month (depending on the time of year).
- Fulfilment is cheaper and approximately between 6 11% of a basket.
- Generating revenue and growing steadily.

Current and target customer market

ParcelNinja's clients include both large and small e-commerce companies in South Africa. They have integrated with a number of e-commerce platforms and marketplaces including Shopify, BidorBuy, PriceCheck, Makro, Magento and Stock2Shop. This integration allows them to service a wide variety of clients and can scale their services as their clients grow or demand peaks.

Key proposition

value

ParcelNinja's solution provides both large and small e-commerce companies in South Africa with a completely outsourced and remote logistics and fulfilment system which provides them with an efficient, affordable solution.

Competitive advantage

ParcelNinja has investigated various warehouse systems globally and has developed a "customized cloud based warehouse system, allowing for clients to remotely view stock, issue orders and ensure accurate picking." This IP is wholly owned by ParcelNinja, gives them a competitive advantage in the market and allows them to deliver "best-of-breed systems and processes to ensure their clients receive scalable, world-class fulfilment, with a business model mimicking that of traditional cloud based SAAS offerings."

3.5 Entrepreneurship Culture and Talent

Perception of entrepreneurial culture in South Africa is quite positive overall⁶². In particular, in line with the growing number of recent and high profile exits by a number of South African digital entrepreneurs, the number and visibility of local role models has significantly improved. Tolerance of risk and failure and an overall positive image of entrepreneurship are also on the uptick compared to previous years, and this was reflected in interviews undertaken. However, and overall, the sentiment was that broader entrepreneurial interest is still driven mainly by necessity, out of a need for jobs, rather than commercial opportunity, and thus to the possible detriment of growth, especially for young entrepreneurs, while businesses geared for growth tend to be led by older entrepreneurs.

South Africa has strong digital startup communities that host an abundance of networking events, talks and workshops, many free to attend. These are useful for the promotion of an entrepreneurial culture, to inspire new entrepreneurs, share best practice and learnings as well as critical skills and commercial opportunities. Silicon Cape events have resulted in startups meeting investors, new clients (local and international), strategic partners, co-founders and employees. The density of both the Gauteng and Western Cape ecosystems is also sufficient to increase the number of chance interactions and strengthen networks⁶³.

Collaboration between different organizations across the ecosystem remains however suboptimal, particularly between the two largest entrepreneurial hubs in the Western Cape and Gauteng. Many stakeholders pointed to a culture of competition between support organizations and others in different parts of the ecosystem, leading to a lack of collaboration and collaborative efforts. Although some healthy competition is good, lack of collaboration in a still developing ecosystem inhibits expertise and knowledge flows. The promotion of collaboration (either in-kind or financial) between different ecosystem partners can be encouraged through funding of (joint) programs and can have positive benefits for the ecosystem's development as a whole. This is particularly the case for the Gauteng and Western Cape ecosystems, which share very different and complementary characteristics⁶⁴; increasing collaboration would thus be beneficial for the further expansion of the South African digital entrepreneurship ecosystem as a whole.

⁶³ Mulas, V., Minges, M.; Applebaum, H., 2015. "Boosting Tech Innovation Ecosystems in Cities - World Bank Discussion Paper"

The digital entrepreneurship sector remains overwhelmingly white, male, and middle class⁶⁵. There is a growing cadre of previously disadvantaged individuals, leading visibly successful digital startups (see Yoco, SweepSouth case studies), as well as VC funds (Mergence). A growing number of entrepreneurs are also targeting disadvantaged communities and creating positive social impact (see SweepSouth case study). Although this is encouraging, much still remains to be done on this front to further expand the inclusivity and diversity of digital entrepreneurship in South Africa, building on B-BBEE. The career path in corporate South Africa for talented previously disadvantaged individuals is very strong, with jobs with greater stability and much higher short-term financial benefits - thus likely compounding the lack of diversity in digital entrepreneurship specifically. In addition, these individuals often have a much broader financial obligation to support multiple family members, making the transition from the corporate to entrepreneurial sector even harder, and thus need tailored support. Gender representation in digital entrepreneurship in South Africa is also low, and compounded for women from previously disadvantaged communities. Although there is growing recognition that gender diversity is also important, and there is increasing recognition for it as a strong business case, further to an equity one⁶⁶, it remains that female representation in digital entrepreneurship worldwide is very low, and South Africa is not an exception to this rule. In recognition of this, there are some dedicated women led angel investment networks e.g. Dazzle angels, which is 100% women owned, with a focus on investing in women owned or co-owned businesses, and a range of programs and networks that focus only on women, including Future Females, and Dazzle angels has just received R2m in match-funding from TIA. However, significantly more needs to be done on the gender front, by tailoring support programs for example, to reverse current trends.

Box 7: Broad-Based Black Economic Empowerment (B-BBEE) Act

The Broad-Based Black Economic Empowerment Act 53 of 2003⁶⁷ (B-BBEE Act) provides the legislative framework for B-BBEE in South Africa and associated codes which can either be generic (generally applicable) or sector specific. The most recent generic codes were published in 2014 and came into effect on 1 May 2015⁶⁸. The primary purpose of the B-BBEE Act and codes is to address the legacy of apartheid and promote the economic participation of Black (broadly defined) People in the economy. While the B-BBEE Act and codes are not a legal obligation for firms to comply with, a company's status is an important factor in winning both private and public tenders, obtaining licenses and being considered a good corporate citizen of South Africa. The codes provide a methodology for a company to measure it's B-BBEE score (these differ for exempt micro enterprises (EMEs) (revenue less than R10 million p.a.); qualifying small enterprises (QSEs) (revenue between R10 - 50 million p.a.) and large enterprises (LEs) (revenue of R50 million+ p.a.). The B-BBEE score of an entity, in terms of the latest codes, is based on ownership, management control, skills development (6% of total salary bill per annum to be spent on black people), new enterprise and supplier development (calculated at 2% on net profit after tax for supplier development and 1% of net profit after tax on enterprise development) which includes procurement) and socio-economic development. ESD spend now counts for the largest proportion of the points (37%) and has resulted in significant funds being spent on ESD programs for qualifying SMEs (at least 51% black ownership).

⁶⁵ OfferZen, 2019. "Tech Inclusion in South Africa, 2019"

Paucity of talent is a significant and acute issue for digital entrepreneurship in South Africa, at all skill levels. SA has the lowest quality of math and science education globally, which is already impacting on the ability and availability of digital skills for entrepreneurship - and is a growing and acute bottleneck. SA is ranked 139 out of 139 economies in terms of quality of math and science education, and the overall education system ranks 137 out of 139 economies according to the World Bank⁶⁹. The dire state of the education system means that even if there are digital jobs available, South Africans may not have the skills to fill them and that the shortage and cost of scarce skills will only grow. Although there are a large amount of skills levies collected, these are not benefiting entrepreneurs and most programs are falling short on building the necessary entrepreneurship or technical skills the market demands. As a recent trend, rapid skills programs with promising results have emerged to address this particular gap, including the Digital Academy and WeThinkCode, but many programs have difficulties to access MICT Seta funding, due to the existing accreditation requirements.

The competition for higher end talent is fierce, and there is a growing skills shortage and cost issue for digital entrepreneurs, which current visa requirements are also not helping solve. Top talent in the digital sector is being drained to corporates and abroad which is further inflating the local salary bill. To compound this, foreign governments are making it increasingly easy for skilled digital talent to migrate to developed countries, through initiatives such as the French Tech Visa, which may only exacerbate the problem in emerging economies already struggling to find talent. South African visa requirements and uncertainties, and costs associated, make it to the reverse very difficult for foreigners to settle in SA, start a business or invest in startups. There are a number of rules and steps a company needs to go through to employ a foreigner, even if they are eligible for a critical skills visa. Further to filling the widening skills gaps, particularly at the top end, foreign talent could also bring much needed experience of overseas markets and mentorship experience that could further boost the South African digital ecosystem.



Product/Service

SweepSouth (www.sweepsouth.com), founded in 2014, aims to "modernise home services and to bring technology to the industry in Africa". With over eleven thousand cleaners, and thousands of monthly customers, they are addressing a growing market in South Africa. SweepSouth's mission is to "create happy homes by providing dignified, flexible work at decent pay" to their cleaners which they call SweepStars. The founding team came up with the concept for SweepSouth in December 2013, after experiencing the inefficiencies that exist in the domestic services industry in South Africa. Through conversations with domestic workers, they additionally realized that in many ways, this sector had remained unchanged in practice and attitude, despite the societal progress that South Africa has made since 1994.

Number of staff 40+ full-time

Location Cape Town, South Africa

Company registration & IP, South Africa

Funding sources, amount

Total raised: R20 million (approximately \$1,4 million USD) - Self-funded initially and then raised institutional capital from Newtown Partners; 500 startups; FNB Vumela Fund; Identity Partners; Smollen; Draper Dark Flow; and various Angels

Growth angle

SweepSouth believes that there is a move away from employing domestic workers on a full-time basis by young professionals, working families and urban, middle income households, but these customers all still require assistance in keeping their homes and offices clean. These customer groups are familiar with booking and paying for products online, the sharing economy and want more on- demand services. At the same time, most South Africans now have access to mobile phones and mobile internet, allowing them to use these tools to access information and job opportunities. The company receives over 46 000 bookings per month, and generating revenue and growing steadily.

Socio-economic impact

- SweepSouth has signed up over 11 000 cleaners (SweepStars), onto their platform (2019) who were previously unemployed (71%) or underemployed (29%). Most of the SweepStars are both primary caregivers and breadwinners in their households.
- SweepSouth has found that their SweepStars can earn 200% more per day then the average domestic workers in South Africa and their hourly rates are double the basic minimum wage: R3400 p.m. average income per SweepStar with R8000 9000 p.m. for top earners, (67% of private domestic workers in urban areas earn less than R3500 p.m.).
- In addition, SweepStars earn tips, receive free life and disability benefits, and have access to free online learning courses.

Current and target customer market

SweepSouth's target customers are "young professionals, middle income and urban households, and working families who don't need a domestic cleaner everyday of the week but value a well priced, professional, on demand service". SweepSouth operates in suburbs in Cape Town, Durban, Johannesburg, Pretoria, Nelspruit and Delmas in South Africa. SweepSouth has also recently expanded into office and bed and breakfast (targeting the growing local AirBnb market) cleaning in the areas in which they operate.

Key value proposition

value SweepSouth's value proposition to customers is that they provide "dignified, well paid work to thousands of women in South Africa, assisting them to provide for their families, receive benefits and additional education and economic opportunities."

Competitive advantage

SweepSouth states that the competitive advantage for customers is: convenience as they can book a cleaner for their home or office online and on demand; reliability with the guarantee of a clean home; flexibility so that customers can book as and when they need a cleaning service; payment ease, as payments are managed online; and social impact, providing well paid work to their sweepstars

4 Recommendations and Next Steps

South Africa is well positioned to continue strengthening its role as a leading hub for digital entrepreneurs in the Africa Region. The country is already a key entry point for leading international digital companies to set up shop on the continent. The ambition to continue to develop South Africa's digital economy has been taken at the highest level with the creation of the 4iR presidential commission, although the details of actions and implementation are yet to be clarified. South Africa is also host to a robust enabling environment of tech players, funders, and success stories, which, along with existing national and provincial-level support, has set a strong foundation that is leading to some notable successes of South African digital entrepreneurs. The following are key recommendations to government to further develop this role, which are also summarized, with relevant international examples where applicable, in table format below.

4.1 Clarifying the policy and regulatory framework and making it easier for digital entrepreneurs to do business

Clarifying the set of policies and policy mix for digital entrepreneurship with clear department leadership: Digital entrepreneurship ecosystems are fast changing and require flexible and reactive policy support. When asked about actualizing the vision of developing digital entrepreneurship, the observation shared by all stakeholders was around difficulties linked to fragmentation of the mandate for digital entrepreneurship and ensuing overlapping policies or policy gaps. Building on the national 4iR priority, it would be useful to review existing instruments and policies around this topic (through for example a public expenditure review, which could also look into impact of different existing policy instruments) and clarify the comprehensive set of policies, through the likes of a policy statement (see Box 1) for digital entrepreneurship, ideally under the leadership of one department with ownership of the topic, with the collaboration of other departments as relevant. Also, disseminating existing information on policies and relevant programs to digital entrepreneurs, by creating a central repository would increase knowledge and use of the full gamut of existing instruments and programs.

Strengthening M&E and agility of policies and programs for digital entrepreneurs: South Africa already has quite strong associations and industry organizations that are vocal in communicating broader entrepreneurship industry needs (Simodisa, etc), and the government regularly consults on different new policies with key associations and industry, although the process could be improved. However, despite this mechanism of collaboration, little is currently known on the impact of government programs and policies. It would be useful to strengthen M&E mechanisms to be able to better inform both public and private sector on the impact and utility of different instruments, and scale-up successful initiatives more rapidly.

Reforming the business environment to make it more digital entrepreneur friendly: Several specific national level policy reforms would facilitate the growth of digital businesses: Amending ExCon approval and processes relating to IP as well as foreign investment into and the sale of SA companies would help keep growing digital companies anchored in South Africa. Enabling start-ups to defer R&D tax breaks, such as that done in Australia, against taxable income up to 3 years would mean they could fully benefit from engaging further in R&D; facilitating hiring and firing of employees for young digital companies could drive

employment growth further in the sector, and finally reforming IP assignment to allow IP to be fully assigned to spin out companies could increase private sector investment into university developed innovation or government funded startups.

4.2 Further strengthening the digital entrepreneurship ecosystem

Increasing the quality and quantity of available digital skills, at all skill levels, including through a tech visa: Digital skills are a key and acute constraint to the growth of digital entrepreneurship in South Africa and more broadly the digital economy. As a long-term investment, increasing the general and specialized digital skills of South Africans is a necessity for the implementation of 4iR, as highlighted in more detail in the digital skills background paper. In the shorter run, scaling out existing successful programs that help bridge this gap, such as the Digital Skills Academy or mLabs Southern Africa could go part of the way to addressing some of this gap. Further to these investments, facilitating foreign highly skilled digital entrepreneurs or professionals to come to South Africa, through a tech visa for example such as the French tech visa, would also be highly beneficial in the shorter-term, as not only these nationals could help create new companies and jobs in South Africa, but could also help mentor South African entrepreneurs.

Strengthening the linkages between Gauteng and Western Cape entrepreneurship ecosystems and continuing to address the rural/urban divide: This could be usefully done through incentives such as encouraging joint application to programs that span both ecosystems, encouraging networks and exchanges and supporting increased linkages between the two ecosystems. Incentivizing skills development, and support organizations to also expand their support regionally, as is being started by organizations such as the mLab, would also help bridge the current geographic divide between these two leading hubs and the rest of the country.

Increasing the quality of support provided to entrepreneurs through capacity building and results-based funding: A large amount of corporate funding is being spent on entrepreneurship support organizations, with much of the quality of support questioned by stakeholders. Tying funding to stronger outcome and impact metrics, could be one way to do this, as is being done through different results-based funding mechanisms under World Bank programs such as the Kenya Industry and Entrepreneurship Project, or the Government of India's scale-up support to existing incubators which helps them improve the quality of their support services.

Building out regional and pan-African programs for later stage digital entrepreneurs to increase access to international markets and mentors: There exists good potential to leverage the strengths of the South African Digital Entrepreneurship ecosystem to increase regional market access and improve regional ecosystems by leveraging existing South African resources and networks, boosting and scaling up models, and mobilizing private funding for the benefit of South African digital entrepreneurs and Southern African ecosystems. This could be piloted initially through a Southern African Regional digital acceleration program, similar to the pan-African XL Africa, or the West African l'Afrique Excelle (Annex 3).

4.3 Expanding access to funding to fill key gaps for South African digital entrepreneurs

Addressing accessibility of capital for early stage enterprises and opening up alternate funding channels can help address the existing funding gaps in the market.

Increasing incentives for angel investors and supporting structuring and capacity of angel networks to drive investment into early-stage digital businesses: in line with what was implemented for VC funds through section 12J, increase incentives to encourage earlier stage investments in digital entrepreneurs. An effective scheme can unlock additional, early stage high risk capital for entrepreneurs. Angel investors typically provide additional support in terms of mentorship, experience, networks beyond the capital invested. This could usefully draw on similar schemes implemented elsewhere such as the UK Enterprise Investment Scheme(EIS) and Seed Enterprise Investment Scheme (SEIS). Also, supporting the setup and structuring of angel networks, such as done by Corfo in Chile can increase the number and quality of angel investors in South Africa.

De-risking investments into early-stage digital entrepreneurs: Setting up de-risking instruments, including through blended finance (by governments and intergovernmental agencies), targeted to digital entrepreneurs could also encourage an increase in the availability of early stage funds for digital entrepreneurs, such as those through the CORFO program in Chile.

4.4 Continuing active support to diversity in the digital entrepreneurship sector

Further boosting tailored support to women and previously disadvantaged communities in digital entrepreneurship: Significant strides have been made in encouraging previously disadvantaged communities to break into and succeed in digital entrepreneurship, notably through the B-BBEE legislation, which has given both a financial incentive and access to markets for these communities. There are also increasingly targeted programs and investors for women. However, gender representation in digital entrepreneurship in South Africa is low and compounded for women from previously disadvantaged communities. Much remains to be done to increase diversity in digital entrepreneurship specifically - although there exist several skills training and upgrading programs, it would be useful to further incentivize support organizations to increase tailored support provided to women and black-led digital businesses. A tailored acceleration program specifically for this (XL women; see Annex 4) could also have a strong demonstration effect. Examples of programs here could include DigitalUndivided and Project Diane, in the US for diversity and She Starts, Australia; We In Social Tech, UK; for women.

4.5 Summary Recommendations with International Examples

Action Item	Description	Ease	Impact	Examples		
GOVERNMENT POLICY FRAMEWORK AND BUSINESS ENVIRONMENT FOR DIGITAL ENTREPRENEURS						
Amend ExCon approval and processes relating to IP as well as foreign investment into and the sale of SA digital companies	Further relax ExCon IP requirements as well as for foreign investment into SA digital companies and international sales. Provide clear guidelines, templates and training for both startups, lawyers and authorized dealers to increase approvals and decrease costs. Incentivize authorized dealers to approve transactions and startups to retain IP in and remain registered as SA companies.	Med	High	Mauritius		
Review the R&D Tax Incentive program to make it applicable to digital entrepreneurs	Enable start-ups to defer R&D tax breaks, against taxable income up to 3 years after the qualifying expense is incurred.	Med	Med	Australian R&D Tax Incentive Program		
Positively incentivize the creation and commercialization of new IP and copyright	Policies need to incentivize and protect IP rights on a commercial basis, inline with international standards to increase knowledge products.	Low	High	The Netherlands, UK, Belgium, Denmark		
Amend IP assignment and ownership process for any IP subject to the IPR Act	Allow IP to be fully assigned to spin out companies for commercial gain, simplify the approval process and legal structuring, provide case studies for how IP can be optimally commercialized to decrease perceived risk from private investors.	Med	Med			

Increase flexibility in labor policies for digital entrepreneurs.	Amend the labour relations act to provide more flexibility for young digital ventures when hiring and firing employees.	Low	High	Tunisia Startup Act
Increase provision of E-government services to reduce red-tape and costs, while increasing compliance.	Provide more online e-government related services for businesses specifically relating to the department of Home Affairs (visas, work permits etc), Labour, and SARS to decrease red tape, time and costs enabling compliance with legislation.	Low	Med	Estonia ⁷⁰ ; e-Transform project, Ghana; Demark; Australia; UK.
SUPPORT ORGANIZATIONS				
Increasing the quality of early stage digital startup support services for ideation and seed stages	Professionalization of existing organizations providing support to early stage entrepreneurs: increasing quality and quantity of their business development and support services through integrating monitoring and evaluation improvements and better tracking of targets as a mandatory element to grant programs or even replacing the traditional grants altogether with a competitive and results-based process.	Med	High	Kenya Digital entrepreneurship Program; WADEP [results-based financing]; Callaghan Innovation (New Zealand); Innova (Sweden); India's "Scale-up Support to Established Incubation Centres"
South(ern) African Digital Entrepreneurship acceleration program for later stage businesses	Set up regular regional and pan-African acceleration events, to attract best regional talent, open up new markets for South African digital entrepreneurs, and tap into experienced mentors	High	Med	XL Africa Program (see Annex)
Improve staff capacity of support organizations	Facilitate skills development programs for managers and professional staff, with a special emphasis on those organizations located outside of growth centers.	High	Med	Kenya Innovation and Entrepreneurship Project

⁷⁰ United Nations, 2018. "e-Government Survey/2018: Gearing e-Government to support transformation towards sustainable and resilient societies" https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2018-Survey/E-Government%20Survey/&202018_FINAL%20for%20web.pdf

FINANCIAL CAPITAL				
Increase the volume of angel-investing by stimulating angel networks	Support setup and operational costs can increase the number and quality of angel investors in South Africa.	Med	High	CORFO's support in Chile has helped to create new angel-investor networks and mobilize several private investments to early-stage companies. ⁷¹
Provide targeted incentives to angel investors.	Incentives for individuals who directly invest into SMEs or invest as part of an angel group could be provided (similar to section 12J for VCs).	Med	High	UK Enterprise Investment Scheme (EIS) and Seed Enterprise Investment Scheme (SEIS) ⁷²
De-risk investments into early stage digital entrepreneurs	Various instruments, including co-investing, fund-of- funds, providing first loss capital or low interest, unsecured loans, would encourage private investors (angels, VCs, support programs) to fund commercially relevant projects and digital technology businesses.	Med	Med	Public Private Partnership VC Funds, CORFO, Chile
Encourage institutional investors to invest into VC or growth stage funds	Build capacity of institutional investors in the VC asset class and ensuring favorable regulation to encourage large institutional investors investing in VC. This could increase the volume of later stage or growth stage funding available locally, for digital businesses expanding rapidly and currently need to raise this funding outside of SA	Low	Med	Invest Europe ⁷³

MARKETS

⁷¹ OECD Development Center, 2013. "Start-up Latin America. Promoting Innovation in the Region", Chapter 6.

⁷² UK Business Angel Association website, 2019. <u>https://www.ukbaa.org.uk/services-for-investors/resources/tax-relief/</u>

⁷³ https://www.investeurope.eu/news-opinion/newsroom/press-releases/pension-funds-guide/

Adjust public procurement framework to better facilitate innovation with digital startups.	Public procurement framework should encourage government to adopt digital technologies for better service delivery and co-innovate with digital startups, while making it possible for early stage entrepreneurs to win public contracts (compared to only participating as subcontractors), especially for low risk projects.	Low	Med	https://challenge.gov/a/buzz/challenge
Training programs to SMEs on digital platforms.	Set up large scale awareness/skills programs to businesses (targeting specific key sectors) on digital platforms	High	Med	
ENTREPRENEURSHIP CULTURE AND TALE	ENT			
Increase quality tailored programs focusing on boosting diversity and inclusion in digital entrepreneurship	Provide incentives to further tailored support organizations and programs to previously disadvantaged groups, increasing both geographic dispersion, and quality of initiatives supporting these groups, further to ongoing efforts through B-BBEE.	Med	High	DigitalUndivided and Project Diane, in the US; BackStage Capital & Accelerator Programs, Global.
Boost female participation in digital entrepreneurship	Specific programs designed with the objective of supporting women developing advanced digital skills and launching digital startups; increasing incentives for existing fund managers and angel investors to invest in female digital entrepreneurs and increase the number of female fund managers.	Med	Med	She Starts, Australia; We In Social Tech, UK; African Women's Leader Fund; Women in Online Work (WoW), Kosovo;
Reform the visa application process for foreign nationals with scarce skills and requirements, time and cost for both companies who want to employ foreign nationals and individuals who want to work in SA. This will enable skills transfer, reduce the cost of scarce skills in the market and drive economic growth and the digital economy.		Low	High	French Tech Visa, Italian Startup Act, Startup Chile, Saudi Arabia

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5.2 Annex 2: Existing diagnostics and indices overview

Overview of existing digital entrepreneurship diagnostics from South Africa:

Diagnostic Tool	Year Published	Key Points / Recommendations
Global Entrepreneurship Monitor: South Africa	2017	 GEM stats for 2016 confirm South Africa's persistently low levels of entrepreneurial activity relative to other countries participating in the survey. 2016, saw a substantial drop in both opportunity and capability perceptions, relative to 2015. Given that unemployment and underemployment in SA is at chronically high levels, the persistent trend of low entrepreneurial intention is of concern. Entrepreneurial intentions in South Africa have dropped by more than a third (from 15.4% to 10.1%)in 2016, when compared to 2013 and almost halved when compared to 2010. A more positive finding is that almost three-quarters of South African entrepreneurs were opportunity-driven, which is higher than the average for efficiency-driven economies, as well as substantially higher than the average for the Africa region. While Total Entrepreneurial Activity (TEA) has decreased, over the past three years there has been a consistent increase in entrepreneurial participation among 45 – 54 year olds. In 2016, this age group is the most entrepreneurially

		active, accounting for more than a quarter (28%) of all early- stage entrepreneurial activity.
Global Entrepreneurship & Development Index	2018	 GEDI methodology collects data on the entrepreneurial attitudes, abilities and aspirations of the local population and then weights these against the prevailing social and economic infrastructure. South Africa has a Global Entrepreneurship Index (GEI) of 33% and is ranked 57 overall (out of 137 countries). SA is ranked second place in sub-saharan Africa behind Botswana. Strongest area is in Product Innovation, followed by level of competition. Weakest area is in startup skills, followed by access to risk capital.
World Bank Doing Business Report	2019	 Tracks government policy changes and how they positively impact both corporates and SMMEs. SA ranks 82 out of 190 countries, with a rating of 66.03 and has improved it's rating by 1.37 over the past year. The top country in SSA is Mauritius, ranked 20 with a rating of 79.85. In 2018, SA made it easier to start a business with simplified pre-registration and registration formalities (publication, notarization, inspection, and other requirements). In addition, in 2018 SA improved the monitoring and regulation of power outages by beginning to record data for the annual system average interruption duration index (SAIDI) and system average interruption frequency index (SAIFI).
ANDE Map: South Africa's Entrepreneurial Ecosystem	2017	 142 capacity development provides in SA (82% of them local) and 340 that provide support in the entrepreneurial ecosystem. Ecosystem Improvements: Rise in corporate support and measurement of impact Ecosystem Weaknesses: Lack of early stage funding and lack of coordination between different initiatives.
Evaluation & Network Analysis of the Cape Town Stellenbosch Tech Sector (Endeavor)	2018	 Report looks at how software and technology entrepreneurs reach scale individually at their companies, how entrepreneurs reach scale collectively in local networks and ecosystems and what policymakers, investors, support organizations, and other stakeholders can do to enable entrepreneurs to scale. Greater Cape Town has a community of more than 450 entrepreneurial software companies with a relatively high focus on e-commerce and software as a service. Cape Town has produced multiple firms that have stood out for their innovative breakthroughs and who have a strong global presence as a result.

		 There is a very high prevalence of VC funding in Cape Town. Approximately one third of the companies in this study received some form of angel investment or venture funding. This number is higher on average than the rates in comparable cities like Lagos, Nairobi, and Johannesburg. Local companies that reach significant scale are responsible for a disproportionate amount of the productivity (wealth and job creation) in Cape Town's entrepreneur community. These firms make Cape Town's tech sector more productive than other hubs across Africa including Lagos, Nairobi and Johannesburg.
Tech Entrepreneurship Ecosystem in South Africa (OC&C and Google)	2018	 Report uses a framework to assess both inputs and outputs within a country's tech entrepreneurship ecosystem including financial capital, skilled talent, networks, market potential, culture, regulations, and ICT infrastructure. Outputs in SA include the number of tech startups, the number of exits above USD 100 million, entrepreneur's global aspirations and the total contributions to the knowledge sectors of the economy (which while behind international best practice are ahead of peers). Inputs in SA include strong government support and the high number of programmes that target tech entrepreneurship. The incentive from government for corporates to invest in suppliers through ESD (Enterprise and Supplier Development, a subsector of the B-BBEE codes of good practice) programs has also been positive. SA's weak education system is unable to support the development of a tech sector. Support services are not monitored or measured and their impact has not been maximized. In addition, most programs focus on very early-stage businesses and don't support entrepreneurs throughout their journey.
Venture Finance in Africa Research Report: South Africa (VC4A)	2018	 South Africa has arguably the most mature startup ecosystem on the African continent, with an emerging local venture capital industry. This growth has been driven by: i) a strong effort from the private sector to organize through associations, ii) investment from corporate South Africa in accelerators, incubators and innovation programs, iii) funds available for skill development, enterprise development and supplier development of SMEs (specifically >51% South African are black-owned) and v) investment from government (local and international) in innovation funding vi) and a vibrant community of successful investors, entrepreneurs, and growing track record of exits. Report looked 686 ventures registered in SA, which showed a clear relationship between venture performance and the support these ventures receive from the local startup ecosystem.

- Recommendations for empowering support organizations include: i) people working at local incubators and accelerators should be empowered with knowledge, skills and experience via dedicated programs; ii) need to develop a national network and pool of experienced mentors, coaches and advisors for startup entrepreneur; iii) place more emphasis on, and develop dedicated programming, to increase diversity; iv) need for more sectors pecific incubators/accelerators that should be backed by corporates; and v) more tracking and reporting on the results of startup entrepreneurship programs can help identify best practices.
- Recommendations for investment and access to capital include: i) a need for early stage investment capital (USD \$50K - \$500K range) including angels and seed funds, and ii) the need for government to provide matching or first loose capital to funds.
- Recommendations for government support and public sector engagement include: i) empowerment of government representatives (e.g. regulators and policy makers) with
 - a better understanding of the startup ecosystem; ii) adjust the government tendering process to make it easier for startups and SMEs to win government contract; and iii) review policies negatively affecting start-ups.
- Recommendations for capacity development and education include: i) more in-depth entrepreneurship training; ii) more capacity development for Support Organizations; and iii) provide training for new angels and early-stage investors.

5.3 Annex 3. XL Africa and l'Afrique Excelle programs

The World Bank Group's (WBG) XL Africa (https://www.xl-africa.com) program piloted a pan-African startup acceleration approach that provided critical support to 20 high-growth companies seeking to raise Series A financing defined as \$250,000 to \$1.5 M, considered the "Valley of Death" for African startups. Despite the proliferation of acceleration programs in Sub-Saharan Africa (SSA), a World Bank Group (WBG) study on venture acceleration found that many of these programs under-delivered on two critical offerings that differentiate these programs from incubation activities: mentorship and access to early-stage financing.

The World Bank Group's IFC Ventures Group invests in startups raising a minimum of \$5 M, but to reach this scale young startups must receive critical business advisory support and growth capital. These can be provided by acceleration programs, but the overhead costs necessary to operate programs such as XL Africa are prohibitive for business enablers and investors.

To bridge these gaps, XL Africa sought the involvement of investors and corporate partners throughout program implementation, especially during the outreach and selection process. This was critical for entrepreneurs because the program did not take equity in these companies but offered early exposure and tailored programming to increase the likelihood of crowding-in investments into these innovative technology startups. For investors, XL Africa lowered the transaction costs of operating an investment readiness program for promising startups. Following a highly competitive selection process juried by major investor groups, including IFC Ventures, 20 African companies – *from a pool over 900 applicants (a 2.2% acceptance rate)* – were selected to participate in this bespoke acceleration program that included: Virtual and in-person mentorship from a global *and* local mentor; Access to the XL Academy, an online investment readiness curriculum designed specifically for African entrepreneurs; A two-week residency in Cape Town, South Africa, that included learning tours, peer-to-peer learning sessions, and pitching at three prominent industry events – AfricArena (French Tech conference), Africa Com (the largest tech, media, and telecom conference in SSA), and the African Early-Stage Investor Summit, to source additional partners and investors; and affiliation with the WBG's brand.

XL Africa Entrepreneurs

XL Africa generated strong interest across the continent. The team observed signals of a nascent pipeline that requires further support beyond the traditional hotspots of Nigeria, Kenya, and South Africa. The 20 XL Africa companies represented 8 Sub-Saharan Africa (SSA) countries, have created over 500 highly-skilled jobs, and have over 700,000 users. In Silicon Valley, four percent of startups have a female cofounder. By comparison, three XLA companies have a female co-founder (15%) and six companies (30%) nominated a woman from their management team to participate in the Cape Town Residency.

While the program selection criteria and scoring focused on scalability, many XL Africa companies could also be categorized as for-profit social enterprises. The cohort comprised of companies in the transportation & logistics, education, agriculture, HR, data analytics, energy, SME services, and health sectors.

Results

In the year and a half since the program concluded, half of the XL Africa cohort has raised a cumulative USD\$20 M in Series A financing. Specifically, Sendy, a Kenyan logistics and transport startup, raised \$2M in funding; Rensource, a Nigerian startup providing low-cost energy solutions to SMEs and households, raised \$3.5M; Lynk (Kenya), Jamii (Tanzania), and Prepclass (Nigeria) were accepted into GSMA's

Ecosystem Accelerator and received up to \$315,000 in grants; Prepclass, a Nigerian online tutoring marketplace, raised an investment round from Rise Capital (amount is undisclosed); Lynk, an online platform for informal Kenyan workers, was accepted into the 2018 MIT Solver cohort; Asoko Insight, an African corporate data platform, raised \$3.6M; CoinAfrique, the leading mobile classified ads platform in French-speaking Africa, raised approximately \$3M and Paris-based media group, Trace, acquired an undisclosed stake, and Aerobotics, an SA company, has raised multiple rounds of funding⁷⁴.

Next Steps

Following on the solid results demonstrated by the pilot, the WBG launched L'Afrique Excelle, a Francophone spin-off of XL Africa, in November 2018 at Emerging Valley, a leading event for key ecosystem players active in Francophone Africa. L'Afrique Excelle will include a deeper emphasis on sourcing high-growth startups, particularly those that are women-led companies, operating in fragile countries. The objective of L'Afrique Excelle is to strengthen the pipeline of companies sourced from non-Anglophone countries, it also aligns with the French Development Agency's Digital Africa initiative.

Further to this regional edition, the WBG is currently planning a second-round pan-African XL program as well as follow-on regional programs, specifically in Southern Africa, to strengthen the regional ecosystem and boost the pipeline.

⁷⁴ https://techcentral.co.za/cape-towns-aerobotics-expands-funding-round-to-r57-million/87902/

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