**BRIEFING NOTE:**

**THE STATE OF DIGITAL “TECH” HUBS IN SOUTH AFRICA**

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**WITS UNIVERSITY’S TSHIMOLOGONG DIGITAL INNOVATION PRECINCT**

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**INTRODUCTION: DIGITAL INNOVATION “TECH” HUBS**

The digitisation of data and the availability of mobile and Internet communications has created digital technology advancements in all sectors and industries. Digital innovation centres and technology hubs (tech hubs) evolved as a way of making broadband access available to innovator-entrepreneurs, fostering creativity and providing supporting environments to technology startup companies (startups). Digital innovation hubs are ecosystems or communities of researchers and software developers, digital makers, startups, SME’s, as well as corporate clients and investors in innovation, with the “common goal to create the best conditions for long-term business success for all involved” (Zwegers & Sassen, 2015[[1]](#footnote-1)). Digital innovation hubs are, generally, collaborative working spaces and, may include incubator and accelerator facilities. The tech hubs focus on the ICT production and service sectors, as well as on digital technologies as enablers in all industries and sectors, for example, the design of ICT applications for the aviation sector, the education, energy, health and other sectors.

The common features across these digital tech hubs is that they are collaborative working spaces and competence building centres, using digital technology to create business startups, or to improve and grow existing businesses. While broadband Internet access is relatively low on the continent, the rapid growth in Wi-Fi hotspots, smart phones and laptop devices has advanced Internet penetration and access, creating demand for digital applications (apps). Tech hubs have become spaces where many young aspiring entrepreneurs can access resources such as Wi-Fi, office and meeting space; receive training, coaching and mentorship; engage in networking and build partnerships; get assistance with startup and venture capital funding; and other inputs to apps development and technology advancement. Most tech hubs in South Africa and on the African continent provide an arena for learning and practicing software development and related skills, as well as business and management skills required for a particular country to participate in the global game of digital innovation. In some tech hubs, the emphasis may be on local investment in other fields of technology advancement, but digital innovation is generally present in the technology and entrepreneurial mix. Among the benefits of tech hubs and incubators, is the process of value creation for profit and not-for-profit enterprises; advancing the competitiveness of enterprises in the markets in which they operate.

The information below, from a presentation at the Coworking Africa 2015 conference[[2]](#footnote-2) reflects the emerging state of tech hubs on the African continent:

According to the World Bank, 200 tech hubs are operating in Africa.

Co-working spaces and tech hubs are the two faces of the same “society digitization” model made out of digitally enabled professionals, on the one hand, [and] new starting business on the other hand.

South Africa leads the way by far! With about one third of the coworking and tech hubs in operation on the continent!

More than half of South Africa’s coworking spaces are based in Cape Town!

Entrepreneurship level in South Africa is at the OECD average.

Demography rising, infrastructure lacking, digital entrepreneurship increasing…: many drivers are pushing coworking up in Africa.

This background study, conducted in November 2016, identified 43 tech hubs and, collaborative innovation and working spaces, across four out of nine provinces in South Africa. The short overview below presents a synoptic view of the individual tech hubs, business incubators and co-working spaces.

**OVERVIEW OF SELECTED TECH HUBS, TECH LABS AND CO-WORKING SPACES IN SOUTH AFRICA**

**NATIONAL FOOTPRINT**

1. **MLAB SOUTHERN AFRICA**

mLab Southern Africa officially launched in 2012 and currently has four sites, three housed in incubators in Gauteng and one in the Western Cape: mLab Tshwane and CodeTribe Tshwane, both located at the Innovation Hub; one located in the Soweto Empowerment Zone and mLab Cape Town located in Workshop 7 at the V&A Waterfront. mLab Southern Africa was launched as a mobile technology accelerator focused on unlocking the “app economy” and has grown to support skills development. The mobile laboratories offer work spaces, events, workshops and training for startups and small businesses. The mLabs have support from the Department of Science and Technology, World Bank InfoDev, The Innovation Hub, The V&A Waterfront and the Ministry of Foreign Affairs of Finland. Startups operating from the mLabs include pinkdrive App, Appchemy, Aftarobot, hearScreen, visceral Podcast, and Afroes, amongst others. For more information go to [www.mlab.co.za](http://www.mlab.co.za).

**GAUTENG INNOVATION HUBS/CENTRES**

We identified 15 tech hub sites or software coding activities in Gauteng, including Awethu Project [www.awethuproject.co.za](http://www.awethuproject.co.za); Bizspark [www.bizspark.co.za](http://www.bizspark.co.za); Black Girls CODE Johannesburg Chapter <https://www.meetup.com/BlackGirlsCodeJHB/>; CodedinBraam [www.codedinbraam.wordpress.com](http://www.codedinbraam.wordpress.com); House4Hack [www.house4hack.co.za](http://www.house4hack.co.za); Raizcorp [www.raizcorp.com](http://www.raizcorp.com); Riversands Incubation Hub [www.riversand.co.za](http://www.riversand.co.za); Softstart Technology [www.softstartbti.co.za](http://www.softstartbti.co.za); Standard Bank Incubator <https://www.youtube.com/watch?v=T23tbkb7pMA> and SW7 (start with 7) [www.sw7.co.za](http://www.sw7.co.za)

Thumbnail sketches of five Gauteng-based tech hubs are presented below.

1. **ALPHACODE CLUB**

Referred to as “the home of next generation financial services”, AlphaCode Club, located in Sandton, Johannesburg, focuses on the financial services sector. It was established by Rand Merchant Investment Holdings as a way of transitioning into the “market” in disruptive technologies. This tech hub offers co-working office space, facilitated networking opportunities, informal mentorship and, hosts VIP events. It covers the full spectrum of financial services including financial education, insurance, tax, investments, other services, with startups such as Bitsure (blockchain), Bright on Capital (lending), Isazi Consulting (B2B solutions), Maxicash (remittances), My Treasury (investments), SASA Solutions (data analytics), SnapScan (payments), and many more. AlphaCode has the backing of the big names in the financial services industry such as Rand Merchant Investment Holdings, Discovery, First Rand, MMI Holdings and Outsurance, amongst others. For more information go to [www.alphacode.co.za](http://www.alphacode.co.za)

1. **JOZIHUB**

The Jozihub, located in Milpark, Johannesburg, provides “space to share ideas, collaborate and explore the opportunities. It also provides members “with access to a network of innovators and inspirational events and activities” (Jozihub, no date). The hub caters for “early stage entrepreneurs and small businesses” and hosts 43 startups, more than 258 events, has more than 32 mentors and, more than 10 partners. It offers workspace, private boardroom with presentation equipment, event space, high speed Internet and printing facilities. Some of the startups operating from Jozihub are Big City Urbanists, Spaza Shop Media, Tshepo the Jeanmaker, Yosal Technologies and Zartner Technology. For more information go to [www.jozihub.co.za](http://www.jozihub.co.za)

1. **THE INNOVATION HUB**

The Innovation Hub, located in Pretoria in the Tshwane Metropolitan Municipality, is the main science and technology park in South Africa, supporting “innovation and enterprise development” in the “ICT sector, advanced manufacturing, green economy and biosciences” (The Innovation Hub, no date). It is wholly owned by the Gauteng Provincial Government. The hub hosts in the region of 27 companies, including Innocentrix, National Space Agency, T-Systems. For more information go to [www.theinnovationhub.com](http://www.theinnovationhub.com)

1. **THOUGHTWORKS**

Thoughtworks has 40 offices in 14 countries and its South Africa office is located in Braamfontein, Johannesburg. This group of IT consultants and technologists is working to establish a continent-wide programme to advance the IT industry. The Johannesburg office has participation from over 10 African nationalities. Thoughtworks operates in collaboration with other ‘meetups’ like CodedinBraam and assists groups like Black Girls CODE (Johannesburg Chapter) with IT training. It offers space and, hosts and sponsors hackathons, networking events, recruitment boot camps and other activities. For more information go to <https://.thoughtworks.com/johannesburg-office.html>; [www.codedinbraam.wordpress.com](http://www.codedinbraam.wordpress.com) and <https://www.meetup.com/BlackGirlsCodeJHB/>

1. **TSHIMOLOGONG DIGITAL INNOVATION PRECINCT**

Officially launched in September 2016, Tshimologong is a digital innovation hub located in Braamfontein, Johannesburg, based on a set of partnerships including University of Witwatersrand (Wits), industry, government, as well as tech entrepreneurs and tech startups. Funding is in the form of sponsorship opportunities, resource-based partnerships through financial and non-financial means, and membership fees charged to tech entrepreneurs. Through the JCSE and LINK Centre, the hub offers a space for a wide variety of certificated short courses from NQF level 6 to 8, and for degree programmes from NQF level 8 to 10. The tech hub hosts a research laboratory [IBM Research Lab]; houses startups; provides platforms and mentoring for tech developers; offers software architecture training and agile development fora, to the education (schools programme) and financial sectors (banking software skills academy), amongst other services and sectors. It provides formal and informal working spaces and broadband connectivity. For more information go to <http://tshimologong.joburg/>; <http://fakugesi.co.za/> and <http://tshimologong.joburg/tag/ibm-research-lab/>

**WESTERN CAPE INNOVATION HUBS/CENTRES**

We identified 24 tech hub sites in the Western Cape (mainly Cape Town-based), including Angelhub [www.angelventures.com](http://www.angelventures.com); Codebridge [www.codebridge.org.za](http://www.codebridge.org.za); Code X [www.projectcodex.co.za](http://www.projectcodex.co.za); Daddy O [www.daddyo.co.za](http://www.daddyo.co.za); Entrepreneur Incubator and Academy <http://spice4life.co.za/champions-of-change/organisations_making_a_difference/entrepreneur-incubator-academy/>; Growth Space [www.growthspace.biz](http://www.growthspace.biz); Impact Amplifier [www.impactamplifier.co.za](http://www.impactamplifier.co.za); MTN Solution Space <http://www.gsb.uct.ac.za/s.asp?p=518>; New Ventures Studio [www.newventuresstudio.co.za](http://www.newventuresstudio.co.za); Platform9 [www.platform9.co.za](http://www.platform9.co.za); Seed Academy [www.seedacademy.co.za](http://www.seedacademy.co.za); Silicon Cape Initiative [www.siliconcape.com](http://www.siliconcape.com); Spin Street House [www.spinstreet.co.za](http://www.spinstreet.co.za); Startup90 [www.startup90.com](http://www.startup90.com); The Bureau [www.the-bureau.co.za](http://www.the-bureau.co.za); The Grindstone Accelerator [www.knifecap.com](http://www.knifecap.com); Twenty Fifty [www.desksurfing.net](http://www.desksurfing.net) and [www.ventureburn.com](http://www.ventureburn.com); Springlab [www.springlab.co](http://www.springlab.co) and Umbono.

Thumbnail sketches of five Western Cape based initiatives are presented below.

1. **BANDWIDTH BARN WOODSTOCK AND KHAYELITSHA: CAPE INNOVATION AND TECHNOLOGY INITIATIVE (CITI)**

The Barn is the CiTi tech hub initiative located at two sites in Cape Town, one site in Khayelitsha and one in Woodstock. They provide shared workspace, meeting rooms, networking opportunities, high speed Internet, printing services, training programmes for entrepreneurs in business skills and, mentoring for entrepreneurs and startups. Also called Hubspace, they facilitate access to capital, creating “a synthesis of design, entrepreneurship and dedication”. The focus for The Barn Khayelitsha is on “tech and innovation as well as empowering women in business and youth tech”. The Barn Woodstock is located at the Woodstock Exchange (WEX), a tech hub community for artists, fashion designers, musicians, photographers and other innovators. Startups and businesses in the Barns include ITWeb, Dynatech, Innovate, Women in Engineering, Light Bulb Research and Ubuntu-Khayelitsha on Bikes, whose aim is to give tourists a real experience of the Khayelitsha environment. For more information go to <http://www.citi.org.za/the-barn-khayelitsha/>; <http://www.citi.org.za/the-barn-woodstock/>; and [www.woodstockexchange.co.za](http://www.woodstockexchange.co.za)

1. **CAPE TOWN GARAGE/88MPH**

Located in Cape Town and providing working space, high speed Internet, mentorship, funding and networking opportunities for mobile web startups, 88mph invests in “web/mobile startups that target the African markets”. 88mph has two more hubs on the African continent, one in Kenya and another in Nigeria. The Cape Town based startups include ApexPeak, BabyGroup, Graphflow, Near A Builder, Wabona and Weaver. As of June 2015, 88mph announced that it was taking a break from investing in startups and would be focusing on growing the ones already taken on, in order to realise a return on its investments. For more information go to [www.88mph.ac](http://www.88mph.ac)

1. **LAUNCHLAB**

LaunchLab, located at the University of Stellenbosch, offers working and networking space, coaching and mentorship to startup companies. This technology and business incubator operates in the areas of agriculture, clean technology, education and digital technologies. LaunchLab provides support through its contacts and network in terms of accessing funding, e.g. Nedbank and the Department of Trade and Industry (the dti). Entersekt (authentication and mobile security solutions provider) is the lab’s start-up success story. For more information go to [www.launchlab.co.za](http://www.launchlab.co.za)

1. **RLABS**

RLABS is part of a global movement. In South Africa, its offices are based in Athlone, Cape Town. The hub aims at social upliftment and “the core activities are skills and training, community development, social and disruptive innovation, mobile and Internet solutions, social enterprise incubation, impact investing and social franchising”. It is a “social revolution reconstructing communities through innovation”. RLABS is a community based tech hub, partnering with academic institutions and creating solutions to social problems through living labs and consulting. For more information go to: [www.rlabs.org](http://www.rlabs.org)

1. **WORKSHOP 17**

Workshop 17, located at the V&A Waterfront, Cape Town, offers space for “start-ups, experienced companies, profit and non-profit” and hosts “more than 240 entrepreneurs, innovators, professionals and 80 companies”. Amongst other services, the hub provides co-working space, high speed Internet, printing facilities and other services, including the proverbial coffee shop/café style that is common to high tech hubs. It hosted the 1st Coworking Africa Conference on 15 March 2016. Cape Town Travel referred to Workshop 17 as “where innovative like minded people and small businesses can get together to collaborate towards a better country and continent through various projects”. For more information go to [www.workshop17.co.za](http://www.workshop17.co.za)

**KWAZULU NATAL INNOVATION CENTRES/HUBS**

The following tech hubs were identified in KwaZulu Natal (KZN).

1. **INVOTECH**

InvoTech designs solutions in green technologies, creative and digital technologies and, agriculture impact technologies. This tech hub makes a range of resources easily accessible to entrepreneurs and startups, including skills and knowledge development, equipment and other resources. It offers 360° support from the initial idea stage through business development, mentoring and marketing. Durban University of Technology and the Technology Innovation Agency (TIA) are partners with InvoTech. One of the successful startups is the South African Cane Growers, “the biogas pilot project”, engaged in converting sugar cane to biogas. For more information go to [www.invotech.co.za](http://www.invotech.co.za)

1. **SMARTXCHANGE**

This Durban-based tech hub aims to “provide enterprise development services to small, medium and micro enterprises (SMME’s) in the media, information communication technology and electronic sector” and “partners with corporates from the MICTe industry, tertiary institutions and the government sector”. The core activity is identifying and training entrepreneurs and youth in the MICTe sector for businesses. SmartXchange offers funding to SMME’s in the MICTe space. SMME’s housed at SmartXchange include Indonsa Consulting and Training, Ndiza Information Systems, Nyachengos Video productions and Vanquisher Technologies, amongst others. For more information go to [www.smartxchange.co.za](http://www.smartxchange.co.za)

**EASTERN CAPE INNOVATION CENTRES/HUBS**

One tech hub was identified in the Eastern Cape. A further search may reveal more.

1. **EASTERN CAPE INFORMATION TECHNOLOGY INITIATIVE**

This initiative is designed to to accelerate successful development of entrepreneurial companies through various resources and services. The incubator, located in East London and Queenstown in the Eastern Cape Province, offers mentorship and coaching, skills development, networking opportunities, financial management and, access to potential funders and investors. The areas of focus include computer hardware and software, film and photography, web and app development, learning and innovation, media and communication. Startups and small businesses housed at these incubators include Amanzi.com, MK2 Networks, Miso Media House, SivuBuhle Media and Widelink Technologies. For more information go to [www.eciti.co.za](http://www.eciti.co.za)

**CONCLUDING REMARKS**

These tech hubs and collaborative working spaces represent a new initiative on the African continent, bringing young talent into the Internet, media, apps and digital innovation arena.

**OPEN AIR: OPEN AFRICAN INNOVATION RESEARCH AND TRAINING**

**PROFILE OF THE OPEN AIR RESEARCH PROGRAMME AND THE HIGH TECH HUBS FOCUS**

**TITLE OF SOUTH AFRICAN “TECH HUBS” RESEARCH STUDY**

Digital tech hubs and knowledge governance: Innovation entanglement as a scaling up strategy for tech hub sustainability and advancement

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The LINK Centre at Wits University is conducting research on the nature of tech hub evolution, the characteristics of tech hub development and the knowledge governance arrangements (in particular intellectual property governance) that foster innovation success at tech hubs. This is part of a larger continental study on knowledge governance conducted by the Open AIR research network, see <http://www.openair.org.za/> and for the high tech hubs research focus, see <http://www.openair.org.za/high-technology-hubs/> The research project is designed for public benefit.

**OVERVIEW OF THE HIGH TECH HUBS RESEARCH**

A variety of tech hubs and collaborative working spaces have formed in South Africa (approximately 50) and on the African continent (over 200 in 2016), reflecting varying forms of knowledge governance and innovation success, with respect to innovation in general and digital innovation in particular. Start-up businesses and tech entrepreneurs operate from these tech hubs. Following an initial detailed study of one such tech hub, a software development, digital arts and digital transformation tech hub in an inner city renewal zone (Braamfontein, Johannesburg), this next phase of the research will review three to five tech hubs in different geographic and socio-economic contexts. The purpose of this phase of the review is to further explore the factors underpinning success, particularly with respect to the innovation-focused behaviour of the scientists, entrepreneurs, digital youth and innovation managers who inhabit these spaces and the related knowledge governance modalities.

On our website, the Open AIR research partnership describes the high tech hubs research focus as follows:

Intellectual property (IP) laws function on the assumption that formal protections are necessary to encourage innovation. This assumption has underpinned the IP policies of developed countries for decades. The rapid proliferation of IP rights, however, can result in thickets of vague and overlapping claims, increased litigation or threats of litigation, and, ultimately, the predatory behaviour of patent trolls. We have already seen this start to happen in places like the United States, causing serious questioning of current IP laws and policies.

Meanwhile, in most of Africa, the explosion of high tech innovation is occurring in what is essentially an IP vacuum. Especially over the past five years, incubators, accelerators, maker spaces, and tech hubs have proliferated throughout Africa. While the majority are private ventures, some of these hubs are located within universities and others are government initiatives. The number of entrepreneurs and innovators seeking support from such spaces continues to outpace the available resources, providing evidence that there is a very strong culture of innovation throughout Africa.

There is also strong competition among some African nations for the title of “the next Silicon Valley”, or the Silicon Savannah. This title, however, does not take into account the numerous and drastic differences that exist between current African tech innovation spheres and California’s Silicon Valley, most especially, that African innovation and entrepreneurship is occurring in what is a near patent vacuum. To ease the paradox between the openness that facilitates new ideas and the collaborations that characterize these hubs, with the pressure for proprietary protection of new ideas and knowledge, Open AIR will analyse to what extent formal IP rights are important to the success or failure of Africa’s burgeoning tech initiatives at and around high technology hubs.

1. Zwegers, A. & Sassen, A-M. (2015). Digital innovation hubs at ICT 2015. European Commission, Digital Single Market [blog]. Retrieved from <https://ec.europa.eu/digital-single-market/en/blog/digital-innovation-hubs-ict-2015> [↑](#footnote-ref-1)
2. Huwart, J-Y. (2015). Growth, challenges and promises of co-working in Africa. Presentation to Coworking Africa 2015, Cape Town, South Africa. Retrieved from <http://www.slideshare.net/Jeanyveshuwart/2-keynote-coworking-africa-2015-jy> [↑](#footnote-ref-2)