



Market Review | Uganda

April, 2020

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Country Overview



Population & Economy

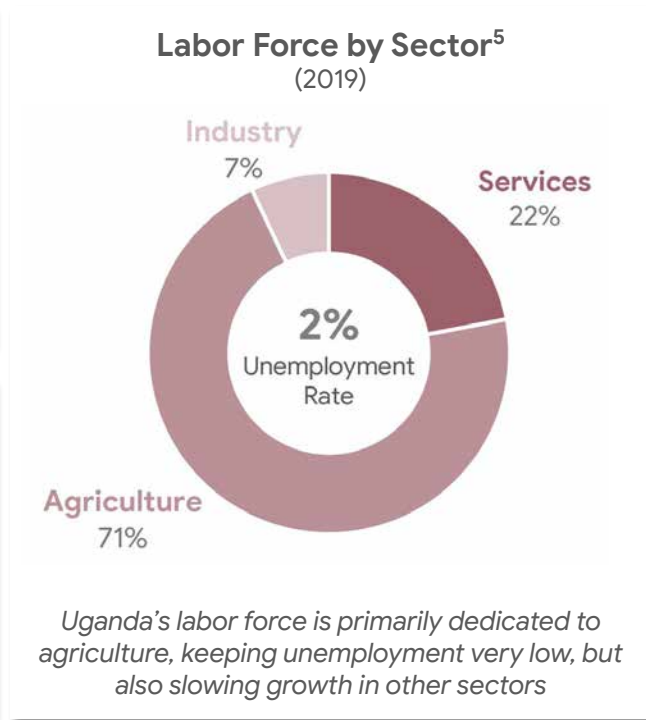
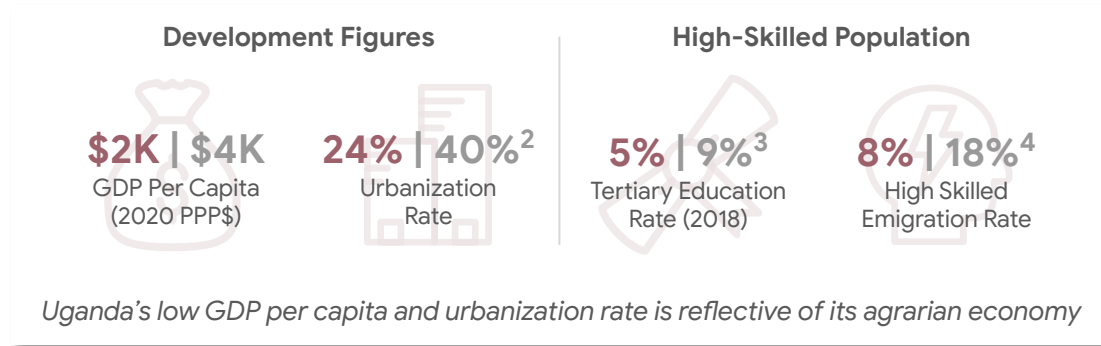
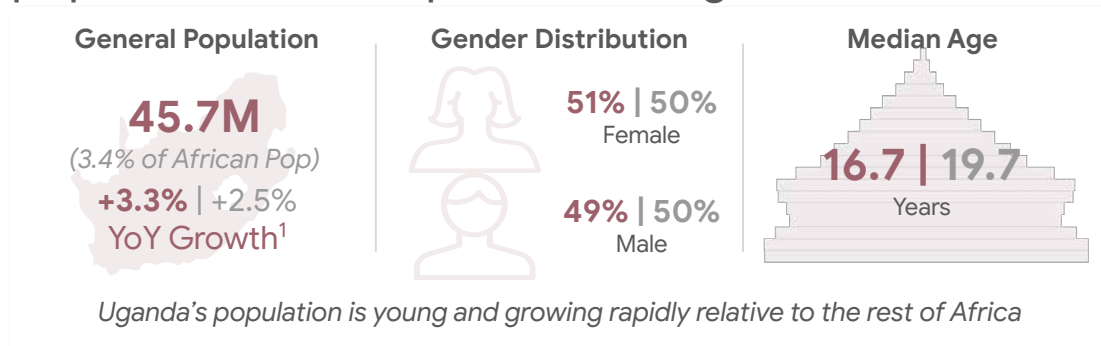


Technology Infrastructure



Government Involvement

Uganda's labor force is predominantly agrarian, but its young and growing population creates potential for growth



High connectivity costs and an underdeveloped tech infrastructure pose obstacles to ecosystem growth

Infrastructure Indicators

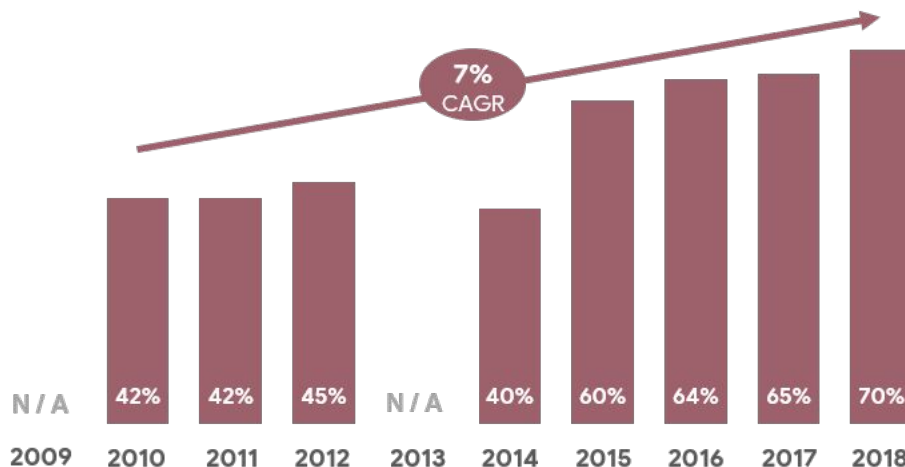
Above / Below Global Average | Global Average

36% 59% Internet Penetration (FY20E)	57 69 Mobile Phone Subscriptions per 100 People
13.6 30.5 Mobile Internet Download Speed (Mbps)	\$4.69 \$8.53 Cost of 1GB Mobile Internet (PPP\$)
14.8 74.3 Fixed Internet Download Speed (Mbps)	\$66 \$50 Monthly Cost of 5GB Fixed Internet (PPP\$)
39 1,620 Servers shipped (FY20E)	22% 89% Population with Access to Official Electric Grid

Tech infrastructure in Uganda is not accessible or affordable for a large percentage of the population, which limits growth within the tech ecosystem

Population Covered by at Least 3G (2018)

(90% global average)



Uganda's 3G coverage has witnessed consistent growth over the last few years, still significantly below the global average

Relative to peers, Ugandan government provides fewer measures to spur growth in tech ecosystem

Notable Government Policies



The United Nations Capital Development Fund launched Kampala Innovation Week **to showcase Ugandan startups and attract investors**



The Inclusive Digital Economy Program is designed to increase inclusivity in the tech ecosystem **by expanding accessibility of tech**

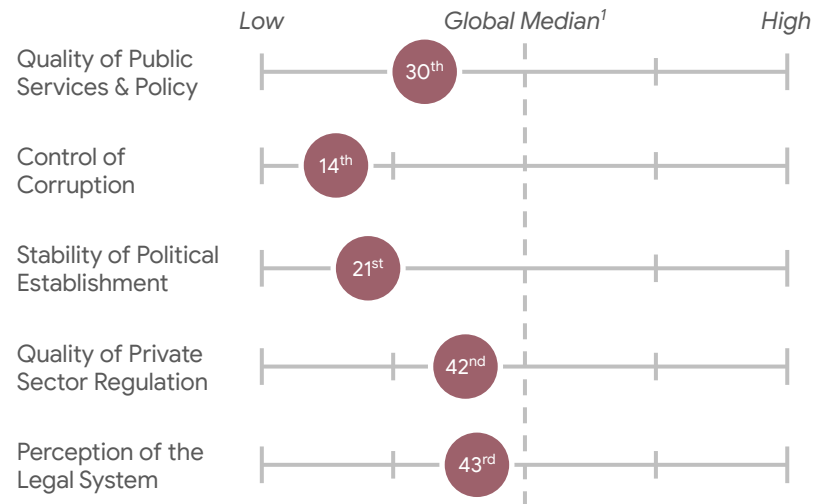


Ugandan regulators **have yet to put in place initiatives such as tax relief and incentives** to drive growth as neighboring countries have



The government partners with UKAID on UpAccelerate, a program **offering young entrepreneurs up to \$10K in funding**

Governance Indicator Percentiles



High levels of corruption and political instability are significant constraints on economic and tech ecosystem growth in Uganda



Developer Population



Demographics



Education



Employment



Experience

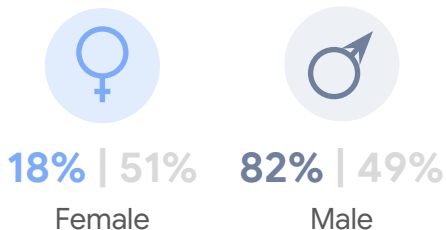
The Ugandan developer population skews young, as over 80% of coders are below the age of 35

Developer Population (FY20E)

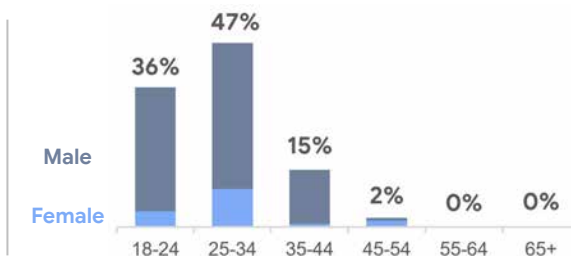


Gender Breakdown^{1,2}

Developer Pop | Uganda General Pop



Age Distribution^{1,2}



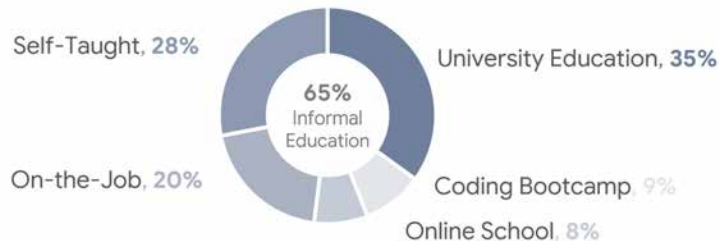
Top Regions for Developers

- 1 **Central Region** (Kampala)
- 2 **Western Region** (Mbarara, Masindi)
- 3 **Northern Region** (Dokolo)

Activities¹



Technical Education



Universities are a viable education pathway for young coders in Uganda, but older coders are more likely to pursue training via informal channels

FORMAL EDUCATION

University³

35%¹

Gender²



85% 15%

Top Industries

- 1 Comms., Media, Technology
- 2 Financial Services
- 3 Cons. Products & Services

Median Age

18-24

Avg. Monthly Salary

\$900

Full-Time

16%

INFORMAL EDUCATION

Bootcamp, online courses, on-the-job, self-taught

65%¹

Gender²



80% 20%

Top Industries

- 1 Comms., Media, Technology
- 2 Cons. Products & Services
- 3 Financial Services

Median Age

25-34

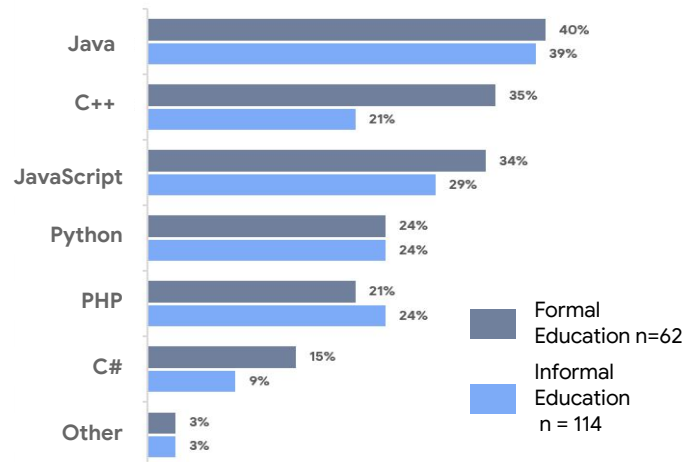
Avg. Monthly Salary

\$1,000

Full-Time

13%

LANGUAGE PROFICIENCY by EDUCATION



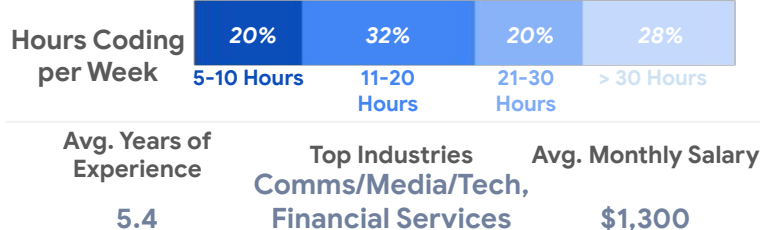
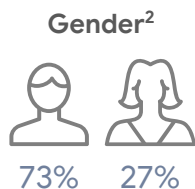
"Most software developers at startups are from universities. Online programs, like Coursera are very popular with university graduates and new learners."
- Entrepreneur, Kampala

Question: How did you primarily learn to program or code?

Software development is a lucrative profession in Uganda with full-time coders earning over 3x the average monthly salary in the country

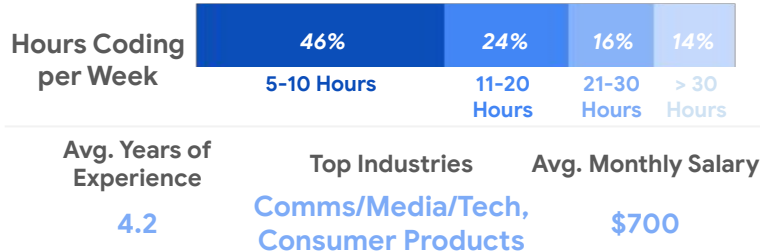
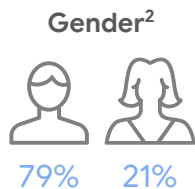
FULL-TIME ROLE

28%¹

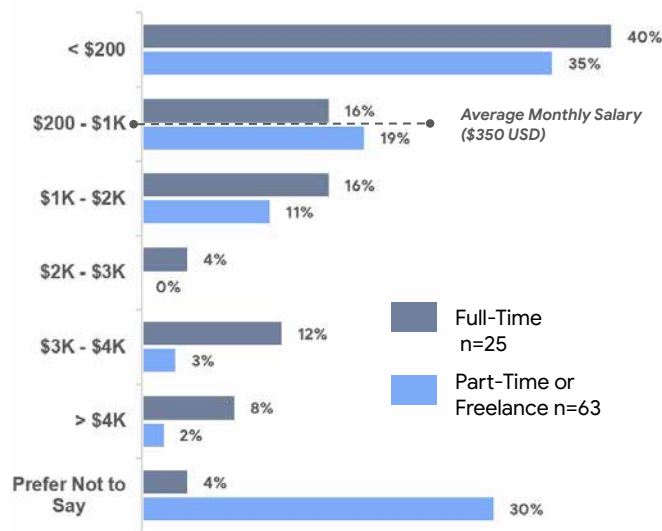


PART-TIME or FREELANCE ROLE

72%¹



MONTHLY BASE SALARY FROM CODING



Question: How do you spend your time coding or programming?

Junior developers focus primarily on desktop and mobile, while senior developers are more likely to code for advanced platforms such as blockchain

JUNIOR DEVELOPER

Less than 6 years of coding experience

75%¹

Gender²



Open Repository Contributions



Top Languages

1. Java
2. JavaScript
3. C++

Top Industry

Comms/Media/Tech

Avg. Monthly Salary

\$600

Full Time

13%

SENIOR DEVELOPER

Over 6 years of coding experience

25%¹

Gender²



Open Repository Contributions



Top Languages

1. JavaScript
2. PHP
3. Java

Top Industry

Comms/Media/Tech,
Financial Services

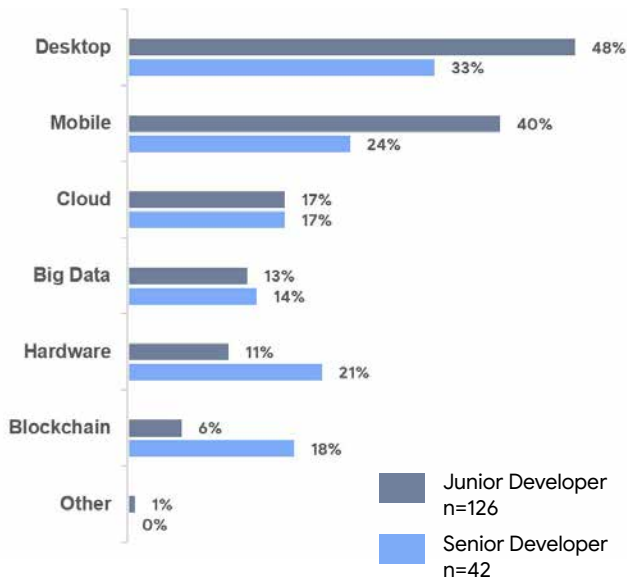
Avg. Monthly Salary

\$1,900

Full Time

19%

DEVELOPER PLATFORMS OF CHOICE



Question: How many years of professional coding or programming experience do you have?



Technology Ecosystem



Innovators (*focus areas*)



Innovators (*fundraising*)



Investors



Educators



Enablers

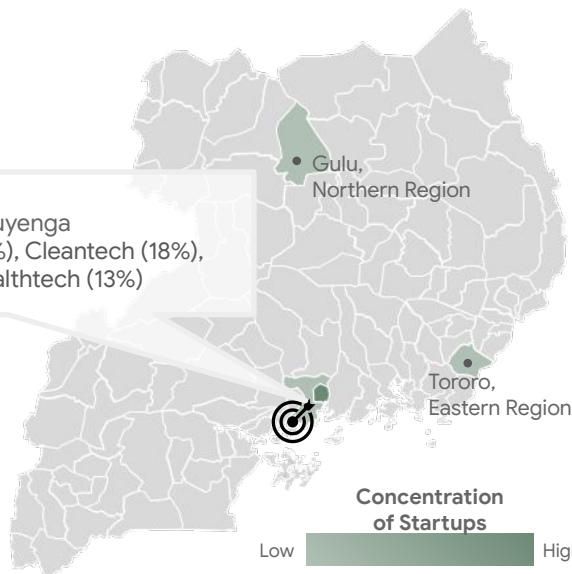


Social innovation, cleantech and fintech startups drive growth

Kampala Region

Major City(s): Kampala, Muyenga

Top Verticals: Fintech (20%), Cleantech (18%), Social Innovation (16%), Healthtech (13%)



"Most Ugandans are employed, but so many are under-employed because they work in agriculture. Entrepreneurship offers a path for additional employment."

- Investor, Kampala

Breakdown by Top Verticals



19%
Social
Innovation



18%
Cleantech



18%
Fintech



11%
Healthtech



6%
Agritech



6%
Adtech /
Mediatech



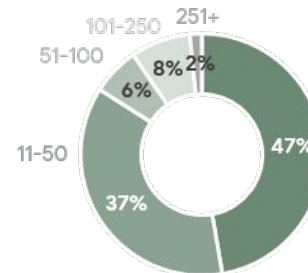
6%
AI, Big Data,
Cloud



16%
Other

Headcount & Founder Demographics (2020)

Headcount Breakdown



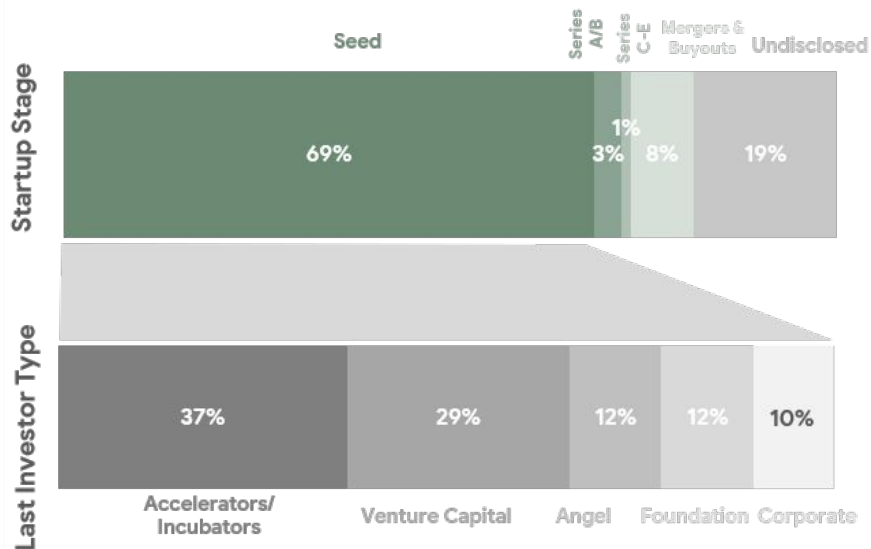
34%

Startups with **at least one woman founder**; of which social innovation, healthtech & fintech are leading verticals



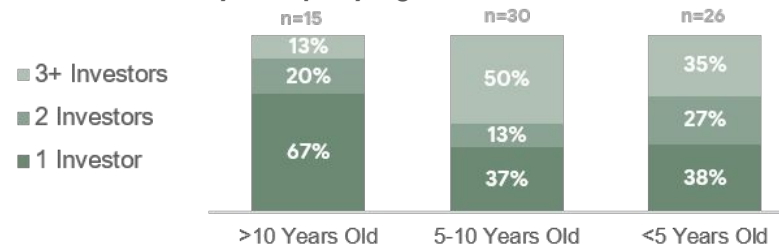
Accelerators, incubators and venture capitalists play a leading role

Distribution of Startups by Stage (2020)



There is increasing participation by angel investors, foundations and corporate investors in seed rounds for Ugandan startups

Investor Count by Company Age (2020)



Most startups are between 5-10 years old and have the highest percentage of multiple disclosed investors

Innovator Characteristics

46%

of the startups primarily focus on the B2B market



38%¹ of the startups operating in Uganda are headquartered internationally



20% of the startups are part of the agriculture, forestry and fishing sector



Local sources provide only 11% of investments, while investors from the United States and European Union account for over 60%

Investor Geography

Investors



Leading Ugandan Investors



Shona is an accelerator with ~30 successful graduates in East Africa, made 18 investments, of which 4 have exited.



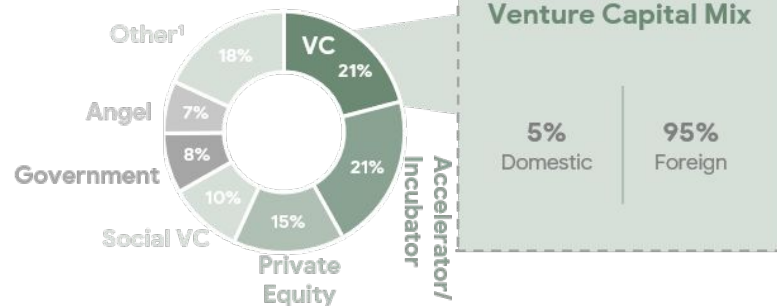
Kain is an angel investment network located in Kampala, aimed at increasing early-stage investments in Uganda by partnering with the Innovation Village.



Angels Initiatives is an impact investment fund helping incubators, hubs and social impact businesses raise money.

"Not many early stage investors will provide \$100-300K because there are not many major exits for investors."
- Entrepreneur/Investor, Kampala

Type of Investors (2020)



Areas of Focus



35% of foreign investors only invest in seed or early stage vs 73% of local investors



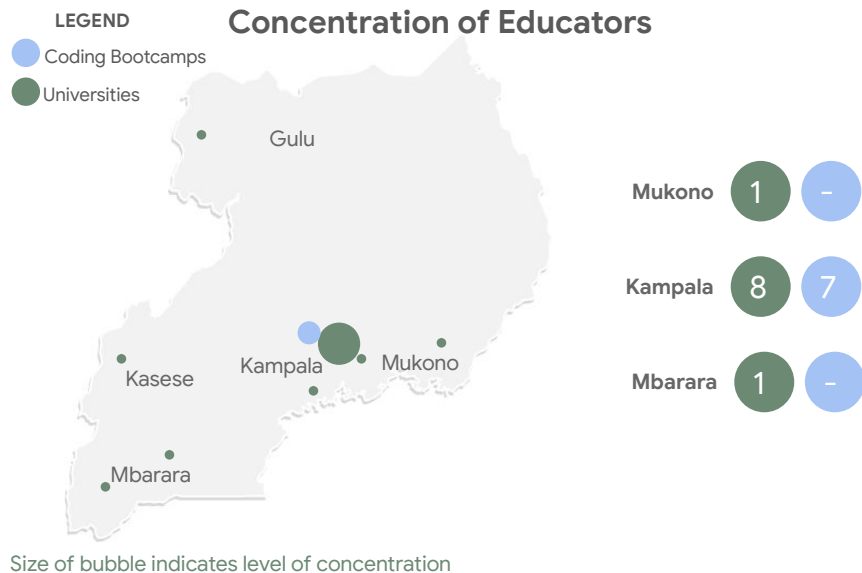
26% of investors active in Uganda invest in agriculture sector



10% of investors invest solely in cleantech focused startups



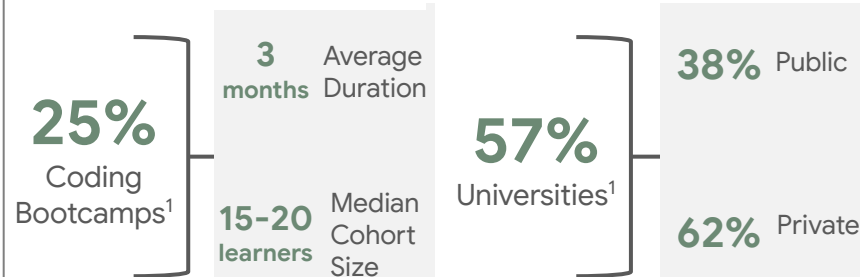
Kampala-based informal education channels create additional resources for coders



"Continued education is really important. Many companies have sessions every Friday to upskill coders. Free online courses are also really important because Coursera is expensive and bootcamps are still growing."

- Entrepreneur, Kampala

Educator Type Breakdown



Case Study: Women in Technology Uganda

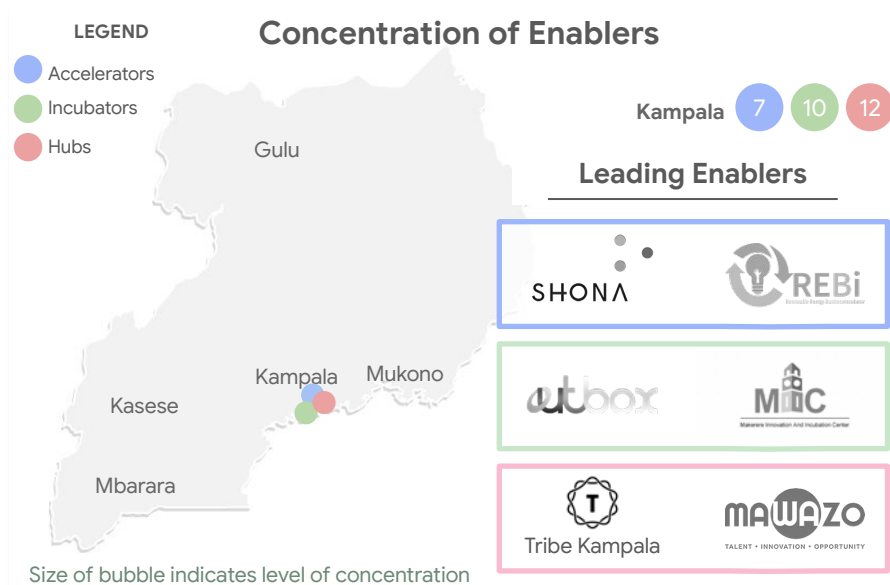
Overview: A hub that seeks to encourage and train more women in the tech ecosystem by providing a space for them to learn coding, business, health, and life skills. WITU has **helped 300+ women** find STEM jobs and create their own businesses.

Partners (not exhaustive):



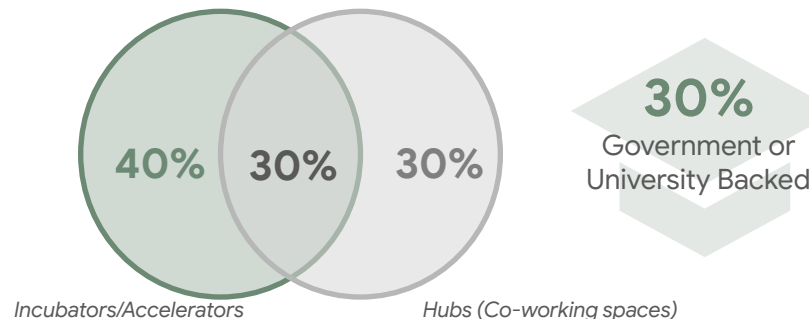


Enablers centralized in Kampala are key to the development of the ecosystem



"Investors may develop relationships with incubators, such as Innovation Village, to use them as a pipeline for investments."
- Entrepreneur/Investor, Kampala

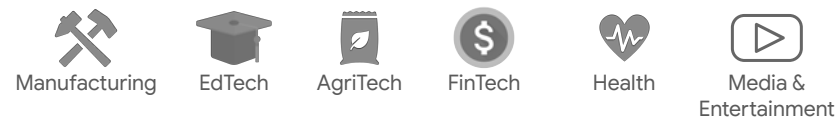
Incubators/Accelerators vs Hubs



Case Study: The Innovation Village

Overview: A one-stop shop for Ugandan entrepreneurs to grow their ideas through the hub's service portfolio: ACE - **acceleration, capital, expertise**. Members also include **investors, accelerators, corporates, and public agencies**, numbering 140+ in total.

Focus Sectors (sample):





Supporting Materials

Glossary

Term	Definition
Countries Analyzed	South Africa, Egypt, Morocco, Nigeria, Kenya, Ghana, Rwanda, Ethiopia, Uganda, Tanzania, Ivory Coast
African Startup	A company that meets the following criteria: <ul style="list-style-type: none"> • In growth stage of funding (e.g., seed round, series A - F) • Technology-focused • Headquartered in Africa or driving the majority of its revenue in Africa
Tech Ecosystem	The network of people, organizations and institutions that enable innovation
Innovator	African startup (see definition above)
Investor	Provides funding in the tech ecosystem (e.g. venture capital, corporate venture capital, angel investors, government funding, private equity)
Educator	Provides technical training or education (e.g. university, bootcamps, online courses, on-the-job training)
Enabler	Provides support in the form of work space, training, education, mentorship or funding (e.g. accelerators, incubators, work hubs)
Professional Developer	An individual that is employed in a job that involves coding and spends 5 or more hours per week coding
Junior Developer	An individual with less than six years of coding experience
Senior Developer	An individual with six or more than six years of coding experience
Formal Education	Universities or secondary schools that provide information communication technology (ICT) curriculum
Informal Education	Bootcamps, online course, self-taught or on-the-job curriculum to teach coding skills
Female Founded Startup	Startup with at least one female founder