

# The Ghanaian Ecosystem of Tech Startups and SMEs

Current State, Challenges,  
and Opportunities





Young  
Africa  
Works



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MEST is an Africa-wide technology entrepreneur training program, internal seed fund, and network of hubs offering incubation for technology startups in Africa.

For young aspiring and established African entrepreneurs, MEST Africa provides the skills, mindset, and experiences to build a globally successful tech company. Beyond tech and entrepreneurial skills training, MEST Africa provides a real-world advantage to entrepreneurs through funding, business incubation, and access to a global tech network.

Over the last 13 years, the Meltwater Entrepreneurial School for Technology (MEST) has supported young people and ventures in technology in Ghana and beyond. In 2020, in partnership with the Mastercard Foundation's Young Africa Works in Ghana program, MEST started three new programs to scale its impact: Pre-MEST, MEST Express, and MEST Scale. In this report, we summarise the outcomes of the research that served as the evidence-based design of the programs.

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# 1. Executive Summary

With the backdrop of how digital innovation has contributed to significant growth in lower-middle income (LMIC) economies we see the increasing adoption of technology in Africa and Ghana in particular. The past three years, though challenging in many ways due to COVID-19<sup>1</sup>, has witnessed exponential growth in startup activity, while the SME space in Ghana still remains underdeveloped. Both startups and SMEs are not close to creating the level of economic transformation witnessed in upper-middle (UMIC) and high-income countries (HIC), and desired in low-income (LIC) and lower-middle income countries (LMIC).

Our research aims to better understand the potential for increased tech entrepreneurship and innovation in Ghana. We attempted to find answers to the following questions: what is the current state of the startup and SME ecosystems in Ghana; what are the main challenges they face and what opportunities are there to support startups and SMEs to drive socio-economic progress in Ghana? We summarise our findings in the sections that follow.

Ghana has a growing and thriving startup ecosystem with many stakeholders including Entrepreneur Support Organisations (ESOs), innovation hubs and tertiary educational institutions all contributing to developing the digital ecosystem. This ecosystem has given birth to many startups that are in the early (pre-seed) stage with most bootstrapping operations and hoping to attract support to launch into the growth phase after achieving product-market fit. In Ghana, Greater Accra accounts for approximately 70% of the startups in the country.<sup>2</sup>

The startup ecosystem faces many challenges, including; lack of financing options, digital talent and is highly fragmented. The SME ecosystem, on the other hand, is impacted by complex or counterproductive government regulations, poor access to working capital and informality.

Most SMEs are informal, while many of the formal SMEs operate in Accra. The informal nature of the SMEs and their ecosystem creates many challenges that affect their access to critical resources that may help them scale.

Access to innovation and technology will greatly enhance the opportunities for SMEs to scale their businesses. While SMEs can benefit from increased access to technical talent and services, startups can benefit from increased exposure to deeper business skills and growth capital.

Both startups and SMEs operate in the three key industries in Ghana: agriculture, industry and services. The Ashanti and Greater Accra region represent more of the services sector<sup>3</sup>; while the Bono and Northern regions represent more of the agriculture and industry sectors.

Technological innovation and the digitalisation of businesses in Ghana provides a unique opportunity for startups and SMEs to unlock much bigger access to markets, significantly improve operational efficiencies and scale revenues and profits. The resulting economic growth will positively impact people and communities through improved employment opportunities and access to better services<sup>4</sup>.

Our key recommendations from this report are to significantly increase initiatives for startups and SMEs that increase access to relevant capital for startups and SMEs, deep technical and business skills and services, value chain consolidation and proliferation, and relevant and transformational strategic and operational capacity and capabilities.

1 Oxford Business Group (2021)-The Fourth Industrial Revolution in sub-Saharan Africa: Key to the Coronavirus Recovery?

2 VC4A (2018)-Ghana Startup Ecosystem Analysis

3 UNCDF (2021)-Understanding MSMEs and Entrepreneurs Appetite for Crowdfunding Solutions in Ghana

4 World Bank (2021)-Ghana Rising, Accelerating Economic Transformation and Creating Jobs



## 2. Introduction

Ghana is well-positioned to take a leading role in the growth of tech and digital entrepreneurship: with great and growing levels of internet penetration, bankability of the population, and a stable political economy, the country is attracting more investors with bigger funds, and multinational technology powerhouses such as Google, Microsoft, and Twitter setting up shop in Ghana. Ghana's digital economy is growing exponentially thanks to its young and dynamic population and a highly urbanised environment.

Thanks to a decade of economic growth, rapid urbanisation, internet penetration, and bankability of its population – Africa is going digital<sup>5</sup>. In the past five years, the number of African tech startups receiving financial backing grew 46% annually, six times faster than the global average<sup>6</sup>. Mobile money in Africa drove financial inclusion with the number of accounts doubling since 2014<sup>7</sup>. Technology innovation is developing fast in African countries, Ghana is no different as it has seen internet penetration increase across the past 5 years. However, in

the past decade, there has been a stark divide between technology penetration in rural and urban areas<sup>8</sup> – as remote areas do not have the infrastructure that enables digitalisation. Nevertheless, technology is slowly reaching rural economies and improving market connectedness.

In recent years, Ghana has been claiming the role of an African tech hub<sup>9</sup> – competing with the more established African powers such as Kenya, Nigeria, and Egypt. What enables a tech hub<sup>10</sup> to stand out is the political and economic stability of the country, the potential of an economy to digitalise, internet penetration, and a strong entrepreneurial ecosystem. As Ghana's role as a tech hub grows, the Ghanaian government with industry stakeholders and development partners are supporting initiatives to support domestic small and medium-sized enterprises (SMEs) to be more competitive<sup>11</sup>.

The Fourth Industrial Revolution has rolled into Ghana as the country leads the region in technological innovation with digital companies

5 Brookings Techstream (2021) - The Promises and Perils of Africa's Digital Revolution

6 BCG (2021) -Overcoming Africa's Tech Startup Obstacles How Established Enterprises Can Help the Region's Innovators Scale Up

7 World Bank (2019) - Ghana Digital Economy Diagnostic

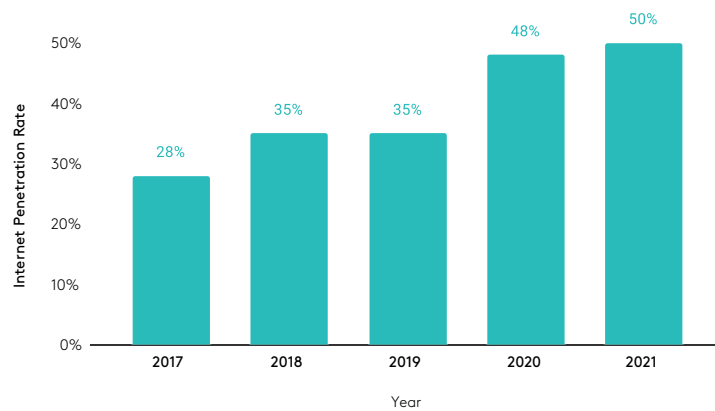
8 OECD (2020) - Rural Regions of the Future: Seizing Technological Change

9 TechCabal (2021) -The Dawn of Ghana's Tech Ecosystem: Here's What You Should Know

10 Forbes (2019) - Africa Now Had 643 Tech Hubs Which Play A Pivotal Role for Business

11 GEPA (2020) -National Export Development Strategy





Ghana Internet Penetration Rate Growth  
Source: Datareportal

growing in number and size<sup>12</sup> (particularly since the onset of the COVID-19 pandemic<sup>13</sup>). As a result, there has been a dramatic rise in startups. In recent years the information, communication and technology (ICT) sector has seen exponential growth, which has also contributed to an increased share of GDP for Ghana. However, given the majority of Ghanaian businesses are informal SMEs who are still not using technology or digital solutions, the opportunities for innovation and growth are still largely unrealized. While infrastructure has also played a critical role in Ghana's digital rise, further investments are needed to spur the growth of the tech ecosystems with improvements needed in digital (internet and mobile), physical (roads, energy, real estate, etc.) and regulatory infrastructure<sup>14</sup>.

This report focuses on the startups and SMEs ecosystem in Ghana, with the former concentrating on Greater Accra, Ashanti, Bono and the Northern region, and the latter on the Greater Accra region only. In this research, we define startups as early or growth-stage businesses that have traction (revenue and users); have been in operation for 1-3 years; are at the pre-seed or seed stage of investment, and are digitally enabled. While, SMEs are defined as commercially viable businesses; with between 5-250 employees; annual sales ranging from \$150,000 - \$1 million; and a clear financial breakeven path, if not already profitable.

In this report, we delve into three key areas

1. The current state of the startup and SME ecosystems in Ghana
2. The main challenges that both ecosystems face
3. The potential opportunities to support startups and SMEs to drive socio-economic progress in Ghana

The data and findings presented in this report are the outcome of several research efforts conducted by MEST to help inform MEST's strategy and design for three new programs<sup>15</sup>. These three programs are addressing challenges within the Ghanaian tech ecosystem for startups and SME (see Annex - MEST Programming for more details:

- Pre-MEST: supporting young people to get digital skills so they can gain digitally-enabled work
- MEST Express: supporting early-stage digitally-enabled startups to grow and accelerate.
- MEST Scale: supporting established SMEs to scale.

<sup>12</sup> World Bank (2019) -Ghana Digital Economy Diagnostic

<sup>13</sup> GSS, UNDP and World Bank (2020) -How COVID-19 is affecting firms in Ghana Results from the Business Tracker Survey

<sup>14</sup> World Bank (2014) -Improving Institutional and Infrastructure Development in Ghana

<sup>15</sup> This research was conducted by MEST in 2020 and 2021



## 3. Startup Ecosystem

The Ghanaian startup ecosystem has been growing in various regions in the country as the realisation that technology and its application can be transformative in people's everyday lives from food delivery services to accessing healthcare. Disrupt Africa reported that between 2019 and 2021, Ghanaian startups raised a total of \$60,800,000 across 45 deals with startups involved in fintech, agtech, healthcare, logistics, etc<sup>16</sup>.

To better understand the state of startup ecosystems in the regions, MEST worked with four regional hubs across the country who supported our research into the local startup ecosystems<sup>17</sup>.

### Current State

There is a thriving startup ecosystem in Ghana with a variety of startups working across Ghana's key sectors of services, manufacturing and agriculture attempting to streamline, simplify and add value to various actors in these sectors. Many other startups are also working in other emerging areas

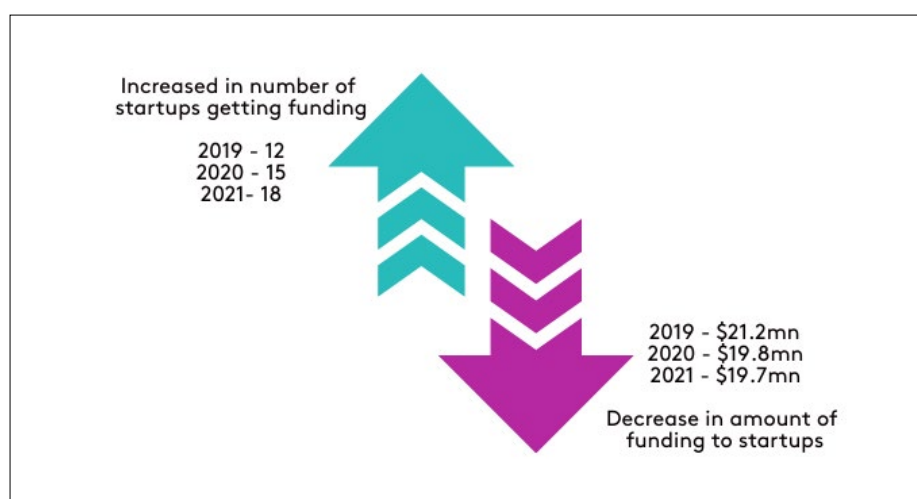
such as transport and logistics, e-commerce, fashion, edtech, real estate, media and entertainment, healthtech among other areas. Accra represents the greatest sector diversity in the Ghanaian startup ecosystem.

In general, there are still many traditional businesses operating without any digital technology in these ecosystems, which means there is huge potential for startups to support the digital transformation process. However, the majority of startups within the ecosystem are at either the pre-startup or early-stage startup stage.

According to Ghana Tech Lab (GTL), there are approximately 145 innovation and tech hubs across Ghana as of 2021. These hubs have been influential in developing a supply of digital talent across the ecosystem, but physical and institutional infrastructure has affected the demand for digital talents within specific regions. These hubs also vary quite substantially from one another, as there are some focused on basic computing skills to those that accelerate startups - this tends to be heavily driven by the regional context.

<sup>16</sup> Disrupt Africa (2021)-African Tech Startups Funding Report 2021

<sup>17</sup> Partners include Whizzy Academy and Kumasi Hive in the Ashanti region, Grassroots Hub in the Bono region and HOPin Academy in the Northern region



African Startups VC Funding  
Source: Disrupt Africa, 2021

Each region has unique opportunities based on their sector, like the Ashanti region has a wealth of natural and agricultural resources such as gold and cocoa, as well as a large service sector; Northern provide agricultural crops and Bono is the breadbasket of Ghana providing agricultural produce and mining resources. These sectors are in need of innovation through digitalisation to upgrade their existing resources and make them more effective and efficient and allow them to grow further (see Annex - Regional Economic Profiles for further details).

## Challenges

Startups face a number of challenges that relate both to their internal capacity and the external ecosystem they operate within. We have identified six key startup-challenge trends, including:

1. Financing support
2. Digitally skilled talent
3. Coordination, collaborations and partnerships
4. Value propositions and customer markets
5. Operational capacity
6. Fintech sector

## Financing Support

There is a general lack of financing available for startups across all ecosystems. The funding options that do exist are disproportionately concentrated in Accra, which leads to increased competition in a city that is already unable to meet the funding demands. Banks provide unfavourable terms by charging high interest rates on loans, and the few investors in the ecosystem tend to offer little investment for a large share of equity.

On the startup side, they lack an understanding of the financing landscape and how to approach investors and funders. Due to inadequate governance and legal structures, many Ghanaian startups are generally unprepared to properly absorb investments. The types of financing that startups were specifically interested in included working, pre-seed and seed capital.

## Digitally Skilled Talent

There is a significant digital skills gap in supply and demand across all levels of digital skills in Ghana, as well as in the supply of more intermediate and advanced skills<sup>18</sup>. There are many training and support programmes training, or attempting to train, young people with digital skills to get digitally-enabled work.

The level of digitally skilled talent varies hugely across different regions given access

<sup>18</sup> IFC (2019) - Digital Skills in Sub-Saharan Africa Spotlight on Ghana

to resources (laptops, smartphones, etc.) and infrastructure (internet and network connectivity). Accra is where most digitally skilled talent tend to reside due to the vast digital opportunities available as compared with other cities like Sunyani in the Bono region, which has the fifth lowest proportion of tech-enabled workers in Ghana. This is as a result of businesses in the region being less technologically inclined.

With digital talent, there is also an issue of regional brain drain, as in Kumasi there are many young people trained at tertiary institutions such as Kwame Nkrumah University of Science and Technology (KNUST), but many graduates are more likely to move to Accra for better opportunities.

### **Coordination, Collaborations and Partnerships**

Generally coordination, collaboration and partnerships are not something that startups have time for or take seriously at first. It is also difficult for startups to take a high level or strategic view of their business within and beyond their sector, given that they are so concentrated on making their business work. The startup ecosystem in Ghana is still a small space, even in the biggest market of Accra, startups are vying for many of the same customers. For example, in the fintech space, there are many startups with very similar product and service offerings such as digital mobile money wallets, payment services and saving platforms. Each of these startups is only getting a small section of an already small market, and it therefore becomes difficult to grow

### **Value Propositions and Customer Markets**

Many startups in the ecosystem are still early-stage and tend to lack the ability to clearly outline their value proposition. They do not have an intimate understanding of their target market, customer segments and personas, and consequently whether their product/service will deliver value or not.

The knock-on effect can be seen in many ecosystems such as in the Northern region where startups are unable to effectively

market and communicate the value they can provide to potential customers and thereby losing business.

### **Operational Capacity**

For startups, their operational capacity - production over a period of time - is usually stretched, and being resourced effectively is a challenge. Unfortunately, this is part of the nature of startups that are bootstrapping and have little resources.

As is typical for startups, founders and early employees typically have to do multiple tasks such as managing operations, human resources (HR), payroll, which might make sense from a cost-saving perspective but lead to inefficiencies in key business processes.



### **Fintech Sector**

Fintech is one of the most rapidly growing and promising sectors in Ghana<sup>19</sup>, however it is also looking to innovate a traditional financial sector that has rigid structures, which has made it difficult for startups to have the intended impact envisioned.

The fintech sector has also experienced serious difficulties as the Bank of Ghana (BoG) regulations have prevented companies startups from growing including the

<sup>19</sup> Addison Bright Sloane (2022) - Fintech 2022 Practice Guide

introduction of the fintech licence and the minimum capital requirements needed for startups<sup>20</sup>. Some fintech startups were in breach of these regulations through their operational activities. In many instances, BoG guidance does not cover the newer development in the fintech. The issue is that government and regulatory bodies are constantly playing catchup to a sector that is rapidly innovating but is constrained by inflexible, outdated or non-existent regulations.

More recently, the government's proposed electronic transaction tax, better known as 'E-levy' is another regulation that will severely affect the ability of fintechs to operate and do business<sup>21</sup>. The implementation of E-levy could result in loss of employment in e-commerce and fintech sectors with a reduction in online sales

## Opportunities

The potential opportunities for startups to grow and add value exist both in the internal ability of startups and the external actors in the ecosystem

1. Strategic M&A, collaborations and partnerships
2. Local investor and angels engagement
3. Growth of software startups
4. Flexible working capital

### Strategic M&A, Collaborations and Partnerships

With so many startups in the ecosystem overlapping and even duplicating each other's businesses, there are opportunities for mergers and acquisitions (M&A) between entities as it would combine and consolidate the markets that they may be operating in, and allow for further growth and potential scale.

An international M&A example is Emergent

Technologies, a fintech company that acquired InterPay, a Ghanaian payments processor in 2018<sup>22</sup>. Regional M&A is becoming more common with Nigerian startups acquiring Ghanaian startups to expand their operations into Ghana such as Stabus, a mobility startup being acquired by PlentyWaka, which rebranded into Treepz<sup>23</sup>. There are big opportunities for local M&A deals, as startups in Ghana join forces to create a bigger impact in their existing market as well as new markets.

While collaborations and partnerships among startups can give them a deeper reach into their market, this strategy could be particularly useful across different regional ecosystems as startups look to expand into different locations, they can collaborate and partner with those startups that can provide additional value in that context.

### Local Investor and Angels Engagement

There is a growing investor and angel network in Ghana which includes, but is not limited to venture capital (VC) firms such as Chanzo Capital, Ingressive Capital, 4DX Ventures, Golden Palm Investments and angels such as the Accra Angels Network. However, this is still relatively small in comparison to other African tech hubs such as Nigeria or Kenya.

More local investors and angels engaging and backing startups would not only help with the much-needed capital but would signal validation in the ecosystem of the startups being produced and encourage more investment engagement and activity in Ghana. There is also a need to further educate investors on startups and their financing options, particularly those that are not familiar with tech startups in Ghana.

<sup>20</sup> Bank of Ghana, Fintech and Innovation Office (2020) -Fintech License Categories

<sup>21</sup> UNCDF (2022) -Ghana Announces Electronic Levy: Possible Scenarios on the Progress of Digital Financial Inclusion

<sup>22</sup> Emergent Technologies (2018) -Emergent Technology Acquire Interpay Africa

<sup>23</sup> Pulse Ghana (2021) -Treepz Ghana Launched to Provide Affordable and Comfortable Transport Service

## Growth of Software Startups

There is a need to grow and support more software startups that can provide digitalisation services to traditional businesses, specifically micro, small and medium enterprises (MSMEs).

Technology or digital integration for traditional businesses is a big gap that could be filled by software startups, offering services, for example, in agricultural management (from finances to CRM to value chain additions). There is a twofold barrier in customers being able to utilise potential digital solutions, first is being able to access and afford technology products and services, and the second is a willingness to use it. If and when these two issues are overcome, there is a huge potential to reach a large number of businesses and customers.

There are many rural banks and associations across the Ashanti, Bono and Northern regions that are still using paper records for deposits, investments, and withdrawals in their respective organisations. Fintech startups can provide CRM and financial management software that makes these rural banks and associations more effective and efficient, while producing more immediate insights for them to make strategic decisions in the future.

## Flexible Working Capital Opportunities

Building a provision for flexible working capital is vital and necessary for startups, as they face extreme difficulty in accessing any form of working capital, particularly those from banks.

Startups need working capital to be able to grow and accelerate their businesses for a number of key reasons:

1. Build out their app and web platform
2. Acquire more productive assets like equipment, computers, etc
3. Hire key talent
4. Develop and refine products and services

While location helps influence the average amount needed (e.g. Accra startups on average require more than places like Tamale), we found that the general working capital needs range between \$1,000 and \$20,000. Additionally, startups require capital that have lower repayment rates over a customised, and often longer duration than what is currently offered by financial institutions.

Governments and financial institutions can work with startups to design a framework for better lending practices so that startups can access more flexible working capital. Additionally, more grant capital opportunities through donors and ESOs would also help startups during this critical, difficult, and often high-risk early stage.



## 4. SME Ecosystem

SMEs in Ghana represent 85% of all businesses, thereby making SMEs the backbone of the Ghanaian economy<sup>24</sup>. In trying to understand the views of SMEs, MEST has been exploring ways to work with SMEs both traditional and tech-based, to help them scale.

The missing middle is a concept to explain the lack of financing available for SMEs as they are too big for microfinance and too small and considered high risk for formal banking institutions. The survival and scale of more SMEs could lead to transforming lower and middle-income (LMIC) economies, and as a result positively impact livelihoods - making it an imperative reason to support SMEs' journey to scale.

To better understand the SME ecosystem, MEST engaged a variety of business experts and SMEs within the Greater Accra region to support the research in 2021.

### Current state

Globally, SMEs are known as the engines of economic growth and job creation, and they are even more significant for Ghana, as they account for more than 80% of employment and 70% of GDP (gross domestic product)<sup>25</sup>.

According to the National Employment Report in 2015, 2 out of 5 people in the Greater Accra region are employed in their own enterprises. Most of these enterprises are in the services sector representing over a million businesses, followed by the manufacturing sector with over 200,000 businesses and the agriculture sector with approximately 20,000 businesses. The majority of these SMEs are informal and employ between 1 and 4 people.<sup>26</sup>

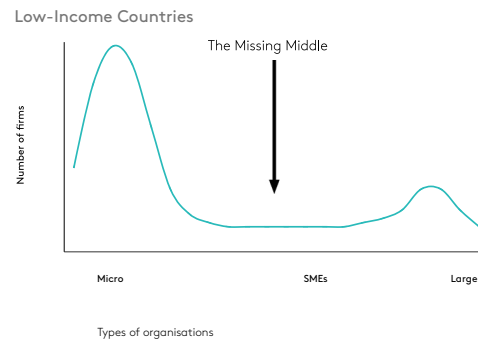
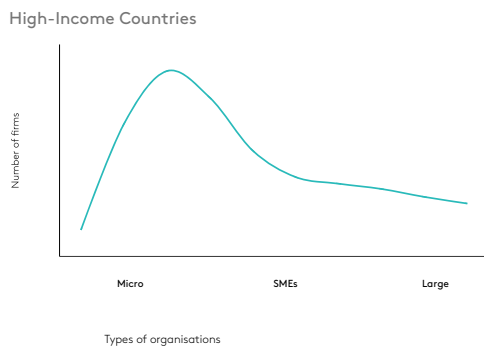
The majority of SMEs in Greater Accra do not use technology for their businesses<sup>27</sup>. With the growth of SMEs stagnating in Ghana, there is a need to support them to scale which could better realise their own ambitions as well

<sup>24</sup> ITC (2016)-SME Competitiveness in Ghana: Alliances for Action

<sup>25</sup> Ministry of Trade and Industry Ghana (2019)-National Micro, Small and Medium Enterprises (MSME) Policy, Ghana

<sup>26</sup> GSS (2015)-National Employment Report, Ghana

<sup>27</sup> Daniel Quaye, Isaac Mensah and Charles Andoh (2019)-Digitization, Customer Engagement and Performance of Small and Medium Enterprises in Ghana



as impact their customers and livelihoods<sup>28</sup>. MEST's working definition of scale is the ability of a venture to achieve exponentially more impact - profitability, customer reach, etc - with greater efficiency and/or reach - improved unit economics, integrated technologies, bolstered systems and processes, quicker market saturation, etc.

## Challenges

Though the challenges SMEs face are similar to those startups face, there are some key differences.

1. Access to finance
2. Agriculture sector
3. Ineffective sales and marketing approaches
4. Complex governmental regulations
5. Scaling strategies
6. Skilled talent

Digging deeper into the nuances of where and how SMEs are currently operating and the issues they face reveals the differences between the SMEs and startups.

### Access to Finance

Access to finance for SMEs is a twofold issue, as first there is not enough financial support for SMEs in general, and secondly accessing what little funds do exist are difficult (SMEs

lack the knowledge on what financial sources are available and the know-how to approach investors and funders for finance). The forms of financing that have been referenced include but are not limited to bank loans, venture capital, angel investment, donors and government funding.

Venture Capital funding in Africa has been abundant for early-stage ventures (pre-seed, seed, Series A), but sharply cuts off for growth, or scale-stage ventures - Series B and C funding - which further exacerbates the barriers SMEs face in trying to scale.<sup>29</sup> Long-term finance is particularly difficult to access, which prevents the ability of SMEs to develop new products and services, enter new markets, innovate and improve productivity<sup>30</sup>. Tellingly, in 2020, private credit growth in Ghana slowed down to 9% with the COVID-19 pandemic taking a toll on businesses' ability to borrow and lenders seeing a bigger risk in lending<sup>31</sup> (see Sector Credit to GDP chart).

### Agriculture

The main agriculture challenges are a lack of skilled workers, informal legal structure and operations, limited digitalisation, and minimal automation. These challenges, and others, prevent many agriculture companies from accessing larger markets, receiving much needed financial services, projecting nature or yield trends to inform operations.

There are also looming challenges with agricultural value chains, as the sector is more export oriented, owing mostly to the belief that

<sup>28</sup> Guy Thompson Agyapong (2016) -Factors Influencing the Development and Growth of Small Medium-Sized Enterprises; The Case of Ghana

<sup>29</sup> BCG (2021) -Overcoming Africa's Tech Startup Obstacles How Established Enterprises Can Help the Region's Innovators Scale Up

<sup>30</sup> IFC (2017) -Creating Markets in Ghana, Country Private Sector Diagnostic

<sup>31</sup> World Bank (2021) -Ghana Rising, Accelerating Economic Transformation and Creating Jobs



the local market size is relatively small. There are not enough market linkages in agricultural value chains, resulting in the high dependence on imports for domestic consumption.

### **Ineffective Sales and Marketing Approaches**

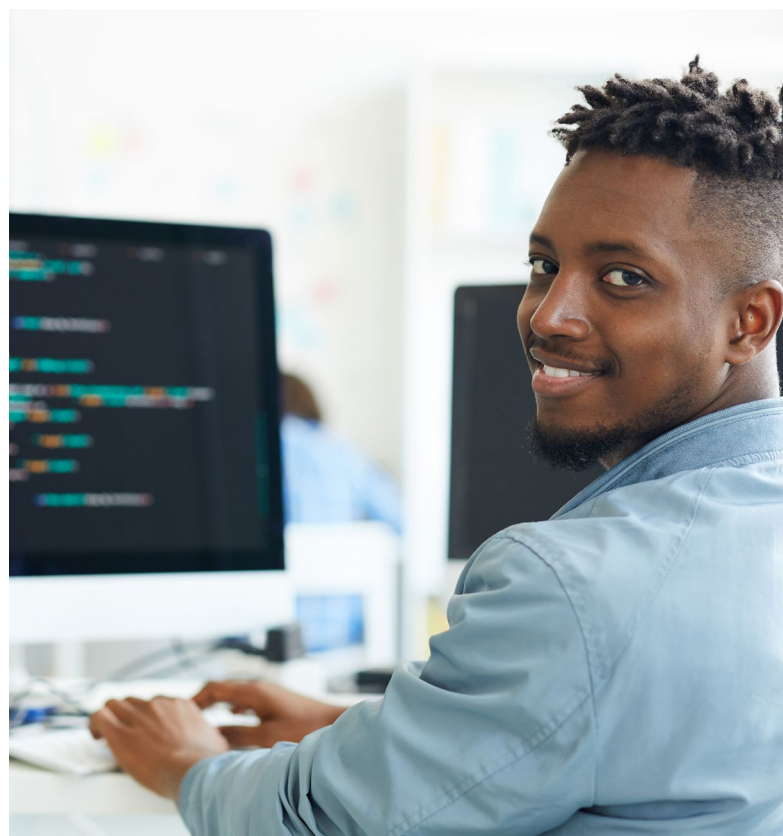
Sales and marketing approaches are ineffective as a result of not having a clear idea on customer personas, segmentation and target market. This also stems from unclarity on the value the business is trying to provide. Additionally, sales and marketing units tend to be under-resourced and stretched with one person potentially doing both roles which can be ineffective and inefficient.

### **Complex Governmental Regulations**

In Ghana, there are a number of complex and counterproductive governmental regulations that restrict many SMEs ability to scale. There are specific costs and charges relating to operating SMEs depending on the sector, and added layers of bureaucracy that take critical resources and time away from the strategic objectives SMEs should be focusing on<sup>32</sup>. For example, Ghana has made paying taxes complicated and costly, as they convert a portion of the recoverable value added tax (VAT) into two new levies that are a cost to SMEs: the Ghana Education Trust Fund and the National Health Insurance Levy<sup>33</sup>.

### **Scaling Strategies**

There is a lack of clarity on what scaling strategies are, what options exist, and model companies who have done it in the past. Similarly, it is unclear what scale strategy/set of strategies would be appropriate for a given SME and how and to develop a scale strategy, and critically, how to then implement a given strategy in the market.



### **Skilled Talent**

A common challenge is the difficulty for SMEs in finding and affording the right employee mix with the right capabilities. There are many young and inexperienced workers, and finding high quality, affordable, skilled talent is difficult. Even when they find the right talent, the issue tends to come down to how much financial resources SMEs have, which determines who they can hire, how long for or even if they can hire them at all. More specifically, as SMEs begin to invest in technology, recruiting digitally skilled talent becomes even more difficult. As these talents are prized assets, they tend to be already working with large companies and are paid a premium rate that may be outside of what SMEs might be able to afford or budget for. Though there are many young software developers that have been trained and are interested in working for SMEs, they also lack work experience or are expensive to hire.

<sup>32</sup> Kwabena Mintu Nyarku and Stephen Oduro (2017)-Effect of Legal and Regulatory Framework on SMEs Growth in the Accra Metropolis of Ghana

<sup>33</sup> World Bank (2020)-Doing Business 2020, Comparing Business Regulation in 190 Economies

## Opportunities

MEST sees four key opportunity areas for helping SMEs to scale

1. Growth of Software SMEs
2. AfCFTA
3. Leveraging digital technology
4. Programming and financial support

### Growth of Software SMEs

MEST sees a long-term opportunity to support the growth of startups or SMEs focused on providing technological services and solutions that can then support traditional, non-technology-focused, SMEs ability to scale. This can be further supported by specific programming to help grow software startups into SMEs or accelerate software SMEs ability to scale. One example of this is the Inclusive Digital Commerce Accelerator run by Catalyst Fund with ground support by MEST, which focuses on supporting digital commerce companies whose customer base is informal micro and small enterprises (MSEs)<sup>34</sup> (see Annex - Example: Tech Solutions for Informal MSMEs)

### African Continental Free Trade Area (AfCFTA)

AfCFTA is an agreement to create a single continental market for goods and services, with free movement of people and investments across the continent; an expansion of intra-African trade through coordination and harmonisation of trade.

With AfCFTA, there is scope to make Ghanaian SMEs and their products/services internationally competitive. Through the improved domestic production and quality, this would create a lot more jobs, but also reduce Ghana's reliance on imported goods and services. At a regional level, this could also allow for further expansion beyond Africa with better trade deals and stronger negotiation power as a trading bloc.

The Ghanaian government needs to support the creation of the right framework conditions for AfCFTA to work for SMEs. These conditions include macroeconomic factors such as policy and regulation, and sector-specific factors such as infrastructure, access to finance, raw materials among others. At this stage, more guidance on AfCFTA, as many SMEs are unaware of what it is and how it could help them<sup>35</sup>.

### Leveraging Digital Technologies

Digital technologies are imperative to scale, SMEs mentioned that the following technologies were vital for them to scale<sup>36</sup>: artificial intelligence (AI), blockchain technology, customer relationship management (CRM), digital payment (other than mobile money), social media, application programming interface (API), enterprise resource planning (ERP) and automation.

Many SMEs will need guidance on understanding which tools are appropriate for them, and a digital strategy in order to correctly integrate technologies into their businesses, as well as maintain and upgrade them through their journey to scale.

### Programming and Financial Support

More programming and financial support on supporting SMEs (both traditional and digital) to scale is needed. The programming support needs to strike a healthy balance between cohort-based learning, relevant connections to experts, mentors and investors, and bespoke strategic and operational guidance to a given SMEs needs and context.

Given the vast sectors and regions SMEs are operating in, there needs to be a concerted, coordinated and collaborative approach by government entities, donors and foundations and ESOs to develop, deliver, and fund this effort.

<sup>34</sup> Catalyst Fund (2022)-Inclusive Digital Commerce

<sup>35</sup> CUTS and GIZ (2021)-Improving Framework Conditions to Unlock the Potential of AfCFTA for SMEs in Ghana

<sup>36</sup> Prince Kelvin Owusu and Michael Kofi Abrokwa (2019)-The Impact of E-Commerce on SMEs in Ghana: Case Study of SMEs in the Greater Accra Region



## 5. Recommendations

Our recommendations apply to the startup and SME ecosystems as both face similar issues, but at different stages of their business. The recommendations are practical actions that can take place across various areas of each ecosystem. Our recommendations focus on five key areas:

1. Financing
2. Agriculture sector
3. Fintech sector
4. Business dynamics
5. Technologies to scale

### Financing

As outlined above, availability and accessibility of financing is a major issue for startups (working, pre-seed and seed capital) and SMEs (working, Series A and B capital).

Working capital is the most common funding that is difficult to access, as financial institutions are unwilling to compromise with organisations who have little collateral and credit history. When loans are offered, it is usually at unfavourably, and often,

unreasonable high rates. We recommend financial institutions to work better with startups and SMEs to develop a better credit assessment and access framework for lending. Additionally, both ventures and financial institutions could potentially work with a number of growing credit-focused technologies to help de-risk working capital investments by traditional financial institutions. Considering how many startups and SMEs are in the Ghanaian ecosystem, the win/win for much-needed capital for startups and SMEs, and new and growing customer channels for financial institutions is clear.

While VC funding is growing, and the deal sizes are large in number, the issue remains that it is limited to a few select startups and SMEs that meet investor expectations. Startups and SMEs need more support in becoming investment ready, but investors need more direct engagement with startups and SMEs to understand the context and be more flexible in the investments they are able to make.

## Agriculture Sector

Agricultural production in Ghana has tremendous room for innovation and growth such as in the areas of value addition, food processing, packaging and storage<sup>37</sup>. Introducing technology through equipment or hardware, for example, agro-processing machines or off-grid refrigeration would allow for higher profits along the value chain and the ability to stop the export of raw materials.

Data is disparate, so there are opportunities to improve efficiency and effectiveness across the agricultural sector, which would allow agriculture companies to more effectively make decisions relating to business, operations, and customers along the agricultural value chain.

## Fintech Sector

Strengthening the regulatory framework for digital transformation would enable startups and SMEs to grow and trade e.g., through tax schemes, certifications, and investment incentives. Embracing digital transformation for regulators is a step in the right direction to bolster the pace of the growing sector, especially given that current fintech innovation is massively hindered by unfavourable, unclear, and frequently changing regulations.

Startups and SMEs in the space could benefit from considering strategic M&A opportunities, partnerships, collaborations and coordination to deliver more effective and honed services, across a larger market share than working siloed. Additionally, many complimentary companies could benefit from the transfer of technological and value-based knowledge between these entities.

## Business Dynamics

Appropriate, relevant, and timely support across business areas could help startups accelerate, and SMEs scale. Specifically:

### Startups

- Better articulating value propositions to customers and potential partners
- Clearer sales and marketing strategies
- Better understanding of customers profiles, segments, and their contexts
- Investment readiness

### SMEs

- Improving and better-utilising sales and marketing approaches
- Government easing regulations to make it easier for SMEs to do business - relaxing credit policies, simplifying loan conditions, easing registrations processes, etc.
- Developing sound and practical scaling strategies that can be implemented and tracked
- Developing a recruitment and employment strategy with clear roles and resources defined
- Incorporating technologies into business functions, products and services
- Investment readiness

## Technologies to Scale

While early-stage startups are already integrating different types of technologies quicker than just a few years ago, MEST still sees at least four more opportunities to help startups accelerate:

- Open APIs, specifically open banking technologies, will become highly necessary with banks having to collaborate with fintechs. This allows customers to have more control of their financial data, for example with a number of digital financial services available from digital bank accounts, mobile money, e-wallets, etc. across a range of different apps and platforms it can help users to consolidate, aggregate and better understand their finances.
- Know Your User (KYC) enabling technologies are becoming an imperative for startups in fintech, retail, healthcare, delivery and logistics among others as their users need to have verified and authenticated records before being able to utilise their products<sup>38</sup>.
- Cyber security is a missing element for startups, and many of them are dealing with customers PII (personally identifiable information). There is a growing need to adopt cyber security given data privacy issues and regulations across Ghana.
- Analytics as a business function needs to be further integrated by startups to produce more rapid data insights for decision making

For SMEs, there is a need to create, adopt and integrate technologies to keep pace with the changing social and economic environment.

MEST identified at least four key technologies for SMEs to consider to aid their path to scale:

- Big data and CRMs will be fundamental digital tools for SMEs to integrate to get a better and fuller picture of their businesses. For those businesses dealing with many customers, it will streamline operations with all sales and customer data held on one organised platform, allowing for SMEs sales and marketing teams to improve efficiency and productivity, as well as better understanding and predicting consumer behaviour.
- Growing blockchain technologies can benefit SMEs in a number of ways such as automation, distribution and immutability through the decentralised distributed ledger systems<sup>39</sup>. For supply chain management in agriculture or shipping and logistics, it would allow for more transparency on how goods are sourced, processed and transported, alongside reducing any delays and fraud.
- AI and predictive analytics, can play a critical decision-making role for SMEs as it can support the automation of routine and non-routine processes and tasks which can help increase efficiencies and lower operational costs. The potential for biased data, lack of AI regulation, and data governance issues are some considerations that need to be taken into account.<sup>40</sup>
- Cloud computing can help make SMEs more efficient and offer a better opportunity for scale, as it significantly reduces the cost of software, licences and data, allows for enhanced data security, and mobility to access work and data from any location.

<sup>38</sup> AFI (2019)-KYC Innovations, Financial Inclusion and Integrity In Selected AFI Member Countries

<sup>39</sup> GIZ (2020)-Blockchain in Africa, Opportunities and Challenges for the Next Decade

<sup>40</sup> Pollicy (2021)-Engendering AI: A Gender and Ethics Perspective on Artificial Intelligence in Africa

## 6. Conclusion

Our hope is that this research has shone a light on the challenges, opportunities, and potential path forward for the startup and SME ecosystems in Ghana. Though challenges abound, the startup ecosystem is at the forefront of development and attention; while the SME ecosystem has been vastly underdeveloped and underestimated. The opportunity for all segments of society to contribute to socioeconomic progress in both ecosystems is equal parts vast and exciting.

Technological innovation and digitalisation in Ghana are both necessary and an opportunity; necessary to compete locally and in the global economy, and an opportunity to support employment creation, revenue growth, and value creation for businesses, consumers, and governments. Technology is no longer a standalone sector, but a critical cornerstone for how work is and will be done in society. Used properly, technology in startups and SMEs have the amazing ability to positively impact people and communities.



# Annex



## MEST Programming

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MEST in partnership with Mastercard Foundation developed three new programs. These programs represent MEST going deeper into the Ghanaian tech and business ecosystem by engaging with young people, innovation hubs, startups and SMEs. Starting with digital skills training in Pre-MEST, through rapid startup growth and acceleration in MEST Express, all the way to supporting SMEs to scale in MEST Scale.

These programs will enable MEST to scale its own impact and reach exponentially more young people at more touch points along their entrepreneurial and employment journey in Ghana, and in time, across the continent.



# Pre-MEST



The Pre-MEST program is a 12-week, full-time, tuition-free early-stage training program designed to help participants acquire skills in software development, digital marketing and social media marketing.

Pre-MEST provides more than just skills training, through workshops, training sessions and practical learning, trainees are taught the core skills needed to launch a career in business and technology.

Software development trains young people in the foundational MERN javascript stack:

- Front end frameworks - React.js
- Express frameworks - Node.js
- Database - MongoDB
- Unit testing
- Soft skills

Digital marketing train young people in the fundamentals of marketing, content creation and editing:

- Marketing
- Design thinking
- Content creation and marketing
- Web and social media analytics
- A/B testing
- Soft skills

Social media marketing is a specific niche training program to train young people in the field of social media management:

- Social media management
- Social media content production
- Facebook, Instagram and LinkedIn for Business
- Facebook and Instagram advertising
- Soft skills

# MEST Express



MEST Express is an accelerator program focused on providing investment readiness support to early and growth-stage startups in Ghana. It is designed to deliver hands-on business interventions that are focused on rapid protocol application and observable business outcomes. The program works with founders to ensure their businesses are an episode for growth and increased impact.

After 20 weeks of hands-on exper-led workshops and mentorship, startups in each cohort have the opportunity to participate in a pitching session where the top-performing ventures receive equity-free grant funding.

The types of businesses we support are:

- Early to growth-stage Ghanaian startups
- 1-3 years in operation
- Technology or tech-enabled
- \$100K or less in funding
- Proven problem-solution fit
- Generating revenue
- Can demonstrate traction
- Any business model

The program focuses on the following areas of support:

- Funding and investment readiness
- Risk management and crisis resilience
- Product management and positioning
- Business and revenue modelling
- Sales and customer acquisition
- Market research and competitive analysis
- Marketing and brand awareness
- Organisational structuring

# MEST Scale



MEST Scale is venture acceleration program to help SMEs strengthen their operations addressing key technology gaps and increase their ability and capacity to scale their growth

The types of businesses we support are:

- Commercially viable and has achieved product-market fit
- Sales and traction between \$150,000 and \$5 million
- Personnel and talent with at least 5+ team members and a senior management team
- Scalability
- Clear financials (revenue and profit) dating back three plus years
- Businesses are based and headquartered in Ghana

The program is split into three key phases:

## **Phase 1** - Scale diagnosis and strategy (4 months)

SMEs senior leadership engage with the MEST Scale team to create or enhance their strategic scale plans for scaling. The company will also identify the types of technology enhancement that would be helpful for their scaling objectives.

## **Phase 2** - Bespoke scale preparation (8 months)

Specialists will hold sessions with leaders at their companies to help address key challenges identified during the diagnosis phase. This phase will include technology consulting as well as bespoke consultative services to resolve business management inefficiencies and technology gaps.

## **Phase 3** - Implementation (6-36 months)

SMEs implement their scaling plans, with continued support from the MEST Scale team, which takes place in the form of financial linkages, advisory support, and other partnering roles.

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## Ghana Regional Economic Profiles

Ghana is a very diverse country, in many different aspects: it has various ecological zones with their local produce and industries; it has a growing middle-class yet also struggles with poverty; it has a growing population of over 30 million people with at least 34% constituting youth (aged 15-35)<sup>41</sup>; the population is concentrated in the southern part of the country, particularly around the most urbanised areas surrounding Accra and Kumasi, yet there are great opportunities for market expansion in the sparsely populated rural areas in the northern regions. Infrastructure serves these urbanised areas the best, and therefore businesses are concentrated in these areas. Below is a brief overview of the economic profiles of the four regions featured in this research.

### Greater Accra Region

The Greater Accra region is the smallest of the country's 10 regions, yet it is the most flourishing economic hub in Ghana.

Indeed, hosting the capital city, an international harbour and airport, it is the main commercial, industrial, and trading hub. This region is also the most highly urbanised, as 91% of the population lives in urban areas.

The Greater Accra region is the wealthiest in the country, as it contributes the largest revenue at GH¢ 86.6 billion, representing 65% of revenue generated by the industry sector. In general, the economy of the Greater Accra region is widely informal – with 85% of the employed population in the informal sector.<sup>42</sup> Below are a few additional components that make up the business ecosystem in Greater Accra<sup>43</sup>:

**Wage work:** The region also has the widest employment of white-collar jobs, as much as 45.9% (GH¢13.2 billion) of all wages and salaries were paid to employees located in Greater Accra.

**Agriculture:** Despite the fact that agricultural production plays a minor role

<sup>41</sup> GSS 2019-Ghana Living Standards Survey (GLSS) 7

<sup>42</sup> The highest record of informality is recorded in northern regions, such as Brong Ahafo, where it reaches 97% of the employed population (GSS 2015)

<sup>43</sup> GSS 2018-Integrated Business Establishment Survey Phase II, Comprehensive Sectoral Report

in the regional economy, the region still records the highest value in agricultural stocks for resale and processing.

Industry sector: the Greater Accra region contributed GH¢9.4 billion to the total value of raw materials and supplies representing 93.3% with the remaining regions making up the difference of 6.7%. Furthermore, the region has the highest value of assets and machinery in comparison to other regions.

**Retail:** Greater Accra region, 84.5% of the overall stock values come from the wholesale and retail sector.

### **Bono Region**

The Brong Ahafo region was the second largest region in Ghana. It has since been divided into three areas: Bono, Bono-East, and Ahafo regions, each still sharing many of the same characteristics. The region has varied vegetative cover, ranging from forest, transitional to savanna, roughly representing the southern, middle, and northern parts of the region respectively.

The Brong Ahafo region is known as the breadbasket of the Ghanaian economy. Sixty percent of land area is arable (23,734 km<sup>2</sup>); 46% of arable land is under cultivation (9,746 km<sup>2</sup>). Crop production accounts for 70% of regional agricultural output; 30% constitutes livestock production, inland fishing/aquaculture vis-a-vis agro-processing and agriculture marketing.

Agriculture and forestry are the common sources of economic activity for the majority of inhabitants of the region. The region is a major producer of cocoa and a leading producer of cashew, which has been described as the “next cocoa of Ghana”.

**Mining and quarrying:** Many of the districts have rich deposits of minerals,

such as gold, diamond, iron-ore, and bauxite, which have proven to be economically viable.

### **Ashanti Region**

Occupying a central role in Ghana’s economic development, the Ashanti Region has the highest population with nearly 6 million inhabitants. The rapidly urbanising city of Kumasi is the capital city of Ashanti Region.

The Ashanti Region is largely self-sufficient, being driven by its service sector, natural resources, and traditional cloth production. It is one of the world’s top 10 gold producers, and it is the second largest cocoa producer in Ghana.

Agriculture and forestry are a common source of economic activity for the majority of inhabitants in the region. Major among them are those who live in non-urban districts and communities. Cocoa, oil palm, and citrus crops are very common in about 9 districts out of the 30.

**Mineral Resources:** The region is endowed with mineral resources such as gold, diamond, bauxite, manganese, silica, sand, limestone, clay, and stone deposits. Industry: The Ashanti region’s industrial sector is primarily characterised by automotive manufacturing and the repair of motor vehicles and motorcycles, manufacturing, other service activities and accommodation, and food service activities.

## Northern Region

The Northern region is the largest region in Ghana in terms of land mass, representing 29.5% of the country's total land area. Tamale, the capital city in the Northern region, is Ghana's third-largest city in terms of population size, behind Accra and Kumasi. The Northern region of Ghana contains 16 districts.

**Agriculture:** The majority of people in the region are engaged in agriculture. The crops that they produce include yam, maize, millet, guinea corn, rice, groundnuts, beans, soya beans, and cowpea.

**Non-agriculture:** There is very limited manufacturing in the region. Wholesale and Retail Trading also accounts for only (7.5%) of all industrial activity. Only about (0.7%) of the population is engaged in mining and quarrying activities. A variety of other enterprises in the industry sector, such as Fishing, Hotels and Restaurants, Communication, Health and Education, comprise 10% of the total industrial activity in the region. Following the discovery of an abundant deposit of lime, a cement factory by Savannah Cement Company (SAVACEM) has been established at Buipe, in the Central Gonja District. Buipe is also where a shea nut processing factory is located, as well as the Bulk Oil Storage & Transport (BOST) company. Many women in the region are engaged in retail trade.



## Case Study: Trotro Tractor



**TROTRO Tractor** Limited

With support from Kosmos Innovation Center (KIC) and in partnership with MEST, Trotro Tractor (TT) was founded in 2016 to improve access to mechanisation through technology for farmers.

Trotro tractor's path of growth commenced with an incubation at MEST, which provided an environment of support and growth during the business' initial stages, providing an opportunity to develop and test the product.

In the second year of its existence, the Alliance for a Green Revolution in Africa (AGRA) awarded a contract to test the product by on-boarding 15,000 farmers, where 60% to 70% of the cost of the product was covered by Agra, totaling about USD \$250,000. This significantly aided in piloting the product and provided an avenue to observe and ascertain loopholes that had not been anticipated at the development phase.

The emergence of COVID-19 made it possible to expand into neighbouring countries like Togo, Benin, Nigeria, and Zimbabwe. The technology TT employs is USSD, as many farmers may not have access to smartphones or the internet. It is an easy and convenient way to on-board or get farmers to use the product. Recently, however, android and iOS variants of the system are also available and accessible depending on their feasibility. Mobile money interoperability has been integrated into its services. Starting with agents on the ground, the mobile money system has now been digitised and has improved the business.

In Ghana, the USSD system employs English as the mode of communication, whereas French is used in Togo. In Nigeria however, other local languages such as Ibo, Yoruba, and Hausa are utilised. In all respective countries, jingles and other marketing commercials are produced in local languages, depending on the area of deployment. The strategies for improving awareness and operations include the use of community radio stations, information centres, location-based agents, district agricultural officers, farmer-based organisations (FBOs), flyers, and through partnerships (e.g., USAID, Advance II, GIZ, etc.).

In Ghana, TT operates in every part of the country, except in the Western regions where the landscape is mostly forest and only suitable for tree crops such as cocoa, rubber plantations, etc. There are no ploughing or harrowing services needed. TT fundamentally employs an uber model; a rent-based platform that links farmers with tractors, and other agricultural machinery. The core business consists of production (and not with activities at the end of the value chain). Given that there are no repair shops for machinery and other training services in rural areas, TT is shifting towards 'decentralised mechanisation centres' (DMCs), which will cater to all farm needs. Currently, there are 3 DMCs stationed in the Afram Plains, Ashanti, and North-East regions. To ensure farmers can find markets for their produce and reduce post-harvest losses, a new product is being developed called 'agriket', which will help farmers link to markets or customers. In the interim, DMCs are helping farmers find markets. In essence, the DMCs cover all facets of the value chain, including production, land preparation, storage, and linking farmers to markets.

### Example: Tech Solutions for Informal MSMEs

The Catalyst Fund Inclusive Digital Commerce Accelerator is managed by BFA Global. It is supported by Mastercard Foundation, and executed in partnership with MEST in Ghana. Below are the six companies that were supported by the IDC Accelerator.



The Ghanaian food retail sector is dominated by the informal sector. Shopa.life seeks to substitute the wholesale food market that supplies informal retailers with a digital solution. This business idea was sparked during the pandemic, when hygienic concerns prevented many informal retailers from accessing the wholesale markets and the need for a digital solution was highlighted. Shopa promises to fill in the supply end of the business through their online platform, WhatsApp, USSD technology or phone-call orders. Moreover, from the preparatory research that the entrepreneurs conducted prior to the launch of the platform, it appears that this service will also cut the supply costs by 15%. In fact, Shopa is set to decrease the transportation costs and the high margins imposed at the market, allowing retailers to restock their shops and providing underprivileged communities with essential goods.



Boost serves retailers as well as suppliers through intelligent stock ordering. Boost found that small retailers in Accra have three major problems: 1) Frequent and costly self-procurement of stock from multiple wholesalers; 2) High stock prices because of extended distribution chains; and 3) Insufficient working capital to purchase sufficient and diverse stock. Boost solves these challenges via an intelligent stock ordering app that retailers can depend upon.



With its multifaceted solution, Kudigo provides a range of retailers (supermarkets, clothing & textiles, bar & restaurant, pharmacies, spa & saloon, and hardware stores) with a way to execute e-commerce, book-keeping, and online payments. Kudigo realised that SMEs in Ghana need a mobile application to manage stock and sales, and 8,000 traders are already experiencing the benefits, interacting with 97,000 end-customers. Kudigo brings top-notch tech innovations to MSMEs, which generally struggle to make data-driven business choices. Via data and tech, Kudigo enables oversight, transparency, and traceability across the value chain for enterprise clientele.



# OZÉ

MSMEs often fail to grow or even stay in business because they struggle with accounting and bookkeeping, and thus lack insights on their performance and health of their business. Furthermore, without clear data, businesses cannot access financial services. OZÉ is a platform whose mobile app equips small business owners in Africa with the ability to make data-driven decisions to improve their performance, tap into networks, and access capital. Its portal for financial institutions also enables businesses to source and support a small-business loan portfolio.

# swoove

Logistics, delivery, and communications are important gaps in the market in Ghana, affecting the operations of MSMEs. Across industries and economic sectors, value chains remain scattered because of unpredictable and unreliable logistics and delivery services – particularly last-mile deliveries. The Swoove platform facilitates scheduled orders for delivery through its Swoove delivery app, Swoove delivery USSD Shortcode for MSMEs, and the Swoove delivery open API for corporate clients. With more than 8,000 deliveries completed and over 1,000 businesses served, Swoove is enabling MSMEs to reach their customers' doorsteps, anywhere in Ghana.

# tendo

Tendo enables anyone to start their online business without investing any capital. The platform connects small businesses to individual independent resellers, who can add their profit margin to products on Tendo's platform, share on social media, have products delivered, and earn money each time a purchase is made. With over a 1,000 registered users to date in both retail and wholesale, Tendo is supporting MSMEs in both the business roles of suppliers and resellers who make a margin profit on the product sold through their contacts.

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