Food and Agriculture Organization of the United Nations

READY TO GO DIGITAL?

Assessing the digital readiness of young agripreneurs in East Africa

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Prepared by
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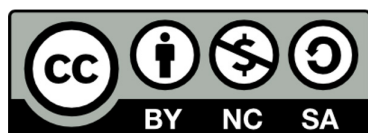Food and Agriculture Organization of the United Nations
Nairobi, 2022

CONTENTS

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1. INTRODUCTION

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About the Integrated Country Approach programme

Food and Agricultural Organization's Integrated Country Approach (ICA) for boosting decent jobs for youth in agrifood systems supports the implementation of youth-inclusive and employment-centred agrifood system development policies, strategies and programmes.

Combining policy-level and programmatic interventions at country level, ICA promotes the creation of more and better job opportunities for youth along agricultural value-chains. At the global and regional levels, ICA contributes to knowledge generation and fosters increased participation of young rural women and men in the governance mechanisms of agrifood systems.

About the African Youth Agripreneurs digital platform

The African Youth Agripreneurs (AYA) platform is an online community designed for individual agripreneurs and rural youth organizations to connect, share and learn from each other in their journey to embrace agriculture as a decent and profitable work.

It is a youth-centred and youth-friendly digital space for people who share the same passion and struggles in agribusiness. It provides access to agribusiness-related content, online courses, mentoring, coaching and do-it-yourself innovation toolkits as well as other support services to enable growth and sustainability of youth-led ventures.
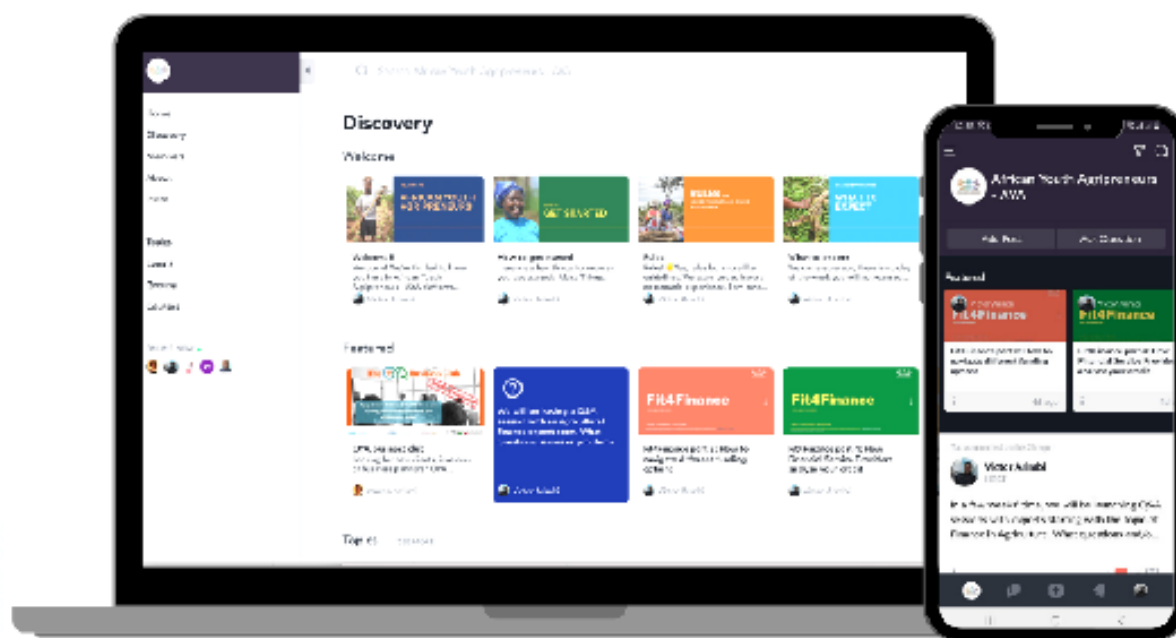
WWW.AYAPLATFORM.ORG

Youth agripreneurs in the digital space

Digital technologies and online networks play an undisputable role to support young entrepreneurs in launching, sustaining, or expanding their agribusinesses through easier access to information, services, markets and skills, among other benefits. The COVID-19 disruptions prompted many innovative and enterprising youth across Africa to adapt their business models and shift to the digital space (FAO, 2020). But even before the pandemic, tech-savvy young people have been driving the transformation of agricultural value chains. In fact, most AgTech companies, start-ups and digital platforms are owned by young people: in Kenya, a leading country in this sector, the average age of AgTech firm owners is 33 (ODI, 2020).

Yet, significant barriers to digital inclusion exist for young people in Africa and intersect with other vulnerabilities. While virtually all young persons in developed countries use the Internet, **in the African region over 60 percent of the youth population remain offline** (ITU, 2021). And this happens despite a steady growth in Information and Communication Technology (ICT) infrastructure, access and use over the past decade.

"Despite a steady growth in ICT infrastructure, access and use in the region over the past decade, over 60 percent of the African youth population remain offline."

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Both a gender gap and the rural/urban divide persist, especially in sub-Saharan Africa where a large portion of young people live in remote rural areas (IFAD, 2019). However, the largest gap is associated with people living in areas covered by a mobile broadband network but not using internet. **This usage gap is almost 3 times larger than the coverage gap itself** (GSMA, 2021). In other words, on top of access and affordability barriers, young Africans also lack the necessary skills to take advantage of digitalization.

Are agripreneurs subject to the same digital divides as other African youth?

How do they interact with digital technologies?

This digital readiness assessment sought to answer these questions.

2. WHY THIS ASSESSMENT?

Youth's demand for networking and knowledge sharing

In November 2019, around fifty young agripreneurs from Kenya, Uganda and Rwanda gathered for a Regional Youth Forum in Kampala. Organized by the Eastern Africa Farmers Federation (EAFF) in partnership with FAO and the International Fund for Agricultural Development (IFAD), this regional event aimed at unlocking major bottlenecks that inhibit youth access to rural finance and policy dialogue. Participants came out with concrete recommendations and proposals: one was to **reduce information asymmetries and enhance cross-country exchanges among youth through a regional communication platform.**

This demand by the youth inspired FAO to join forces with EAFF for the establishment of an online community that could facilitate networking and information sharing, peer learning, collaboration, and participation in policy dialogue, as a contribution to advance the meaningful engagement of African youth in agrifood systems. The African Youth Agripreneurs (AYA) platform was launched in August 2021 as a result of a human-centred design process that involved young farmers, entrepreneurs, service providers and members of youth organizations in selected East African countries.

Engaging with prospective community members

When developing a youth engagement strategy that leverages digital technologies, it is crucial to investigate and take into due consideration access barriers that specific youth groups may face - such as connectivity in rural areas, affordability, content relevance - as well as existing levels of digital literacy and varying preferences when it comes to communication formats and channels. Capturing actionable insights at a very early stage will allow to centre the design process on the users and develop digital content and services that truly reflect their demands (Pafumi, forthcoming).

This digital readiness assessment was carried out to capture expectations, behaviours and underlying needs of young women and men engaged in agribusiness in selected East African countries, as prospective users of the AYA regional online platform.

Specific goals of the assessment were:

• **Profile prospective target users of the AYA platform:** collect information on their demography, location, agribusiness development stage, knowledge needs; outline their digital profile (access, preferences, content consumption, learning behaviours, use of ICTs for doing business).

• **Inform the platform design and user experience:** based on the insights and youth expectations gathered, pre-identify core content and services for the AYA platform and make strategic choices on appropriate IT infrastructure, formats, channels, and the overall user journey.

Understanding the digital ecosystem

In parallel, a Mapping of platforms for youth in agribusiness in Africa allowed to capture the existing offer of digital content and services targeting this specific group of youth, particularly in the areas of: information provision; knowledge sharing; marketplaces; e-learning and mentoring.

The mapping exercise, coupled with the digital readiness assessment, helped to identify gaps and potential synergies in the landscape of online services available to young agripreneurs. This in turn was the basis to define the AYA platform's theory of change and value proposition, ensuring that it aligns with the core users' expectations.

3. METHODOLOGY

Web-based research

The assessment used a mixed methods approach and was conducted entirely online, between February and April 2021, with target users of the AYA platform identified as: young (18-35 years old) men and women engaged or interested in agribusiness in selected East African countries.

Participants were recruited – using direct mailing or WhatsApp – in close collaboration with the following ICA stakeholders: Eastern Africa Farmers Federation (EAFF), Rwanda Youth in Agribusiness Forum (RYAF), Young Farmers Champions Network of Uganda (YOFCHAN), Young Farmers' Federation of Uganda (UNYFA), Kakamega County Youth Agripreneurs Association and other local youth groups in Kenya's Kiambu and Siaya counties.

The study adhered to the principles of ethical social research: participation was entirely voluntary; anonymity and confidentiality were granted.

Two-step data collection

An online survey captured general data on agribusiness information flows, youth digital access and preferences, ICT use for business including e-commerce, e-learning and mentoring, and digital engagements of youth networks. Out of the overall 363 survey respondents, 296 expressed their availability to join group discussions on the same topics. A subsample of 36 youth (10 percent of the total survey respondents) was purposively selected to participate in focus groups, based on criteria of country, gender and business stage representativeness.

Figure 1. Two-step data collection

Online
survey
*363
respondents*

Focus group
discussions
*36
participants*

Source: Authors' elaboration

The focus group sessions, held through video calls, served to validate insights from the survey, capture motivations behind certain behaviours and underlying needs. The group discussions also allowed to further investigate youth interaction with digital technologies either as entrepreneurs or service providers and as members of a youth organization.

Figure 2. Snapshot from a focus group discussion with Ugandan youth

©FAO/Marzia Pafumi
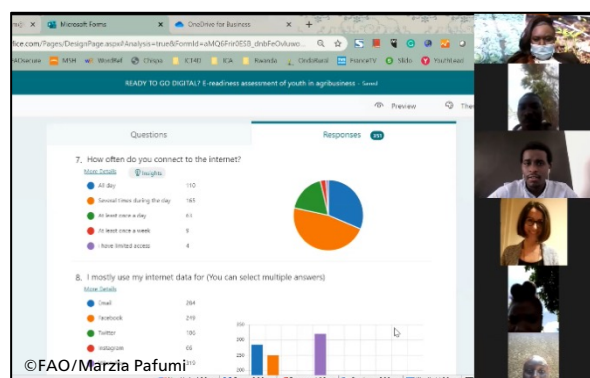
4. ABOUT THE PARTICIPANTS

Survey participants (n=363)

Age

15 - 20	21 - 25	26 - 30	31 - 35	35+
2%	**29%**	**34%**	**28%**	**7%**

Gender

Male: **74%**

Female: **26%**

Country

KE UG RW

Kenyan youth respondents were 2 times the Ugandans and 20 times the Rwandese.[1]
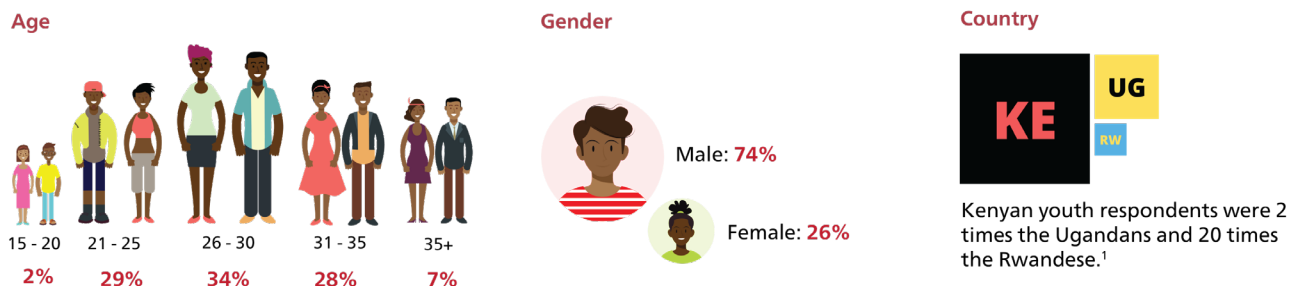
Business Stage (self-reported)

Business Idea : **19%**   Growth: **10%**   Operating: **41%**   Startup: **28%**   Exit: **2%**

Engagement with youth or farmer organizations

Member of a farmer organization	Board of a farmer organization	Member of youth organization	Board of youth organization	Not associated with any organization
23%	**9%**	**32%**	**16%**	**20%**

Only 1 in 5 respondents indicated not being affiliated to any organization. [2]

Focus group participants (n=36)

Gender

Female: **44%**

Male: **56%**

Role in the agrifood system

Individual agriprenuers	Group leaders	Service Providers
53%	**30%**	**17%**
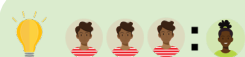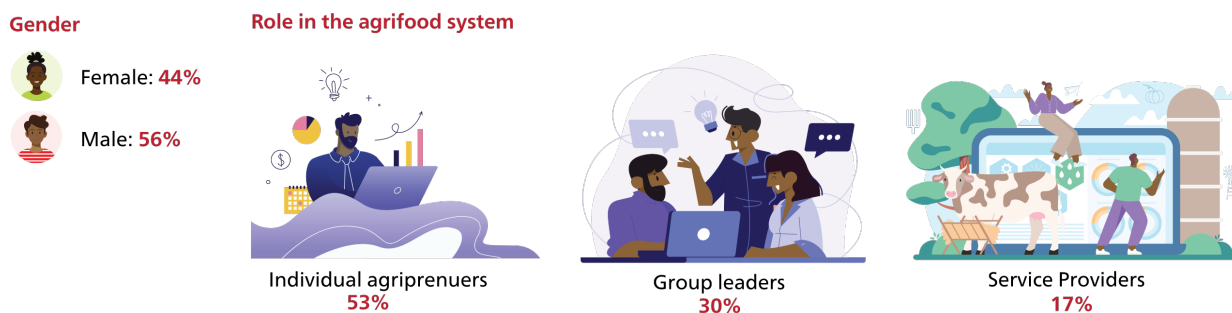
Male respondents outnumbered female respondents by 3 to 1, which seems to be consistent with the general picture of young women's participation in agribusiness. Moreover, only 2 percent of the youth who reported being boards of a youth organization in all three countries were women. These staggering figures testifies to a **gender gap** yet to be filled, especially when it comes to women in leadership positions within youth in agribusiness groups.

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[1] Uneven distribution of participants by country was a research limitation. For this reason, key findings are presented disaggregated by country and it is acknowledged that findings from Rwanda may not be representative.
[2] This figure is consistent with the strategy used to disseminate the survey, i.e. through youth in agribusiness networks.

5. FINDINGS

Agribusiness information flows

Sources of information

When asked about **where they usually look for information on agribusiness**, the young agripreneurs and leaders of youth groups mentioned diverse sources. The most recurrent responses are listed below by country along with quotes captured from focus group discussions.

KENYA
- **Youth groups and forums conveying diverse players in the agribusiness ecosystem** at local and county level (e.g. agronomists, farming input providers).
- **Internet** namely online search engines and agribusiness knowledge exchange platform.
- **Social media** especially Facebook and WhatsApp groups.
- **Physical trainings** delivered by youth and development organizations (e.g. EAFF, FAO, GIZ).

UGANDA
- **Internet** namely online search engines and newsletters from organizations working on agribusiness
- **Social media** especially Facebook and WhatsApp groups.
- **Local radio stations** broadcasting programs on farming or offering spaces for farmers to call and get info (e.g. on prices)
- **Agrodealers** and agricultural shops
- **Extension workers** from their youth organizations

RWANDA
- **Social media** especially RYAF Twitter page, farmers WhatsApp groups and YouTube.
- **Online courses** on agribusiness (e.g. Coursera, FAO eLearning Academy).

UG 🧑 Leader of Youth Group
"Most people get info through internet and social media but for me I always get info from extension workers and pass that info to fellow youth in my area. I subscribed to the newsletter of a network organization working on agribusiness."

RW 🧑 Individual Agripreneur
"Internet search and other farmers are my main sources. During the pandemic I took the chance to take many online courses. I look on YouTube and have a YouTube channel to share my own videos on how to cultivate mushrooms - many people contact me from there."

Methods for knowledge sharing

Participants across the three countries reported using the same approach to **share information and knowledge on agribusiness with other youth**:

- WhatsApp Groups
- Social media – namely Facebook, Twitter, YouTube, LinkedIn, Telegram
- Texts, calls and bulk SMS for youth in rural areas with little to no access to the internet.
- Community-based agribusiness platforms

UG 🧑 Service Provider
"It's hard to find info on how to make value out of agriculture, how to convince youth to see it profitable. People with experience are not keen to share and ask for money in their demo farms."

RW 🧑 Individual Agripreneur
"I have no problem to find info online, but it would be great to have only one link to access all information that is spread-out all-over internet."

Topics of Interest

To improve their agribusiness, the **youth expressed an interest in learning more about** specific topics listed below. Thematic clusters are ranked from the most to the least frequently mentioned, in bold are the themes that they considered harder to find online.

Figure 3. Ranking of in-demand topics

Thematic cluster	Subthemes [in bold those considered harder to find online]
ACCESS TO FINANCE (popularity = 5.0)	• Financial literacy • **Credit facilities for business growth** • **Fundraising and proposal development for grant funding** • **Advocacy skills for access to finance or policy making**
BUSINESS MANAGEMENT (popularity = 4.5)	• Value chain analysis • Risk analysis and management • **Business plan writing** • Record keeping, data reporting, financial management • Financial viability analysis and business sustainability • Taxation and formalization • **Partnership building**
MARKETING (popularity = 3.5)	• Market research • **Market linkages for diverse agricultural products** • **Leveraging digital marketing for fresh produce** • **Access to international markets**
PRODUCTION AND VALUE ADDITION (popularity = 3.2)	• Crop production (e.g. mushrooms, vegetable growing) • Livestock rearing (e.g. dairy farming, goat keeping) • **Crop protection from pests and diseases** • Scaling up production • **Value addition (e.g. on grains, legumes, vegetables)** • **Packaging and storage during transport**
BEST PRACTICES (popularity = 3.0)	• Agronomic good practices • Agribusiness best practices • Innovation in agribusiness
ICTs (popularity = 2.5)	• Online business development • Digital marketing • ICTs for agriculture

Source: Authors' elaboration

Digital readiness

Access to Internet

KENYA

As shown in Figure 4, majority of the Kenyan respondents have easy access to internet, with 52 percent connecting several times a day and 34 percent all day long. Less than 2 percent reported problems in accessing internet daily. This frequency of access was confirmed by the youth in the focus groups.

Figure 4. Frequency of internet access by country – Kenya (n=231)
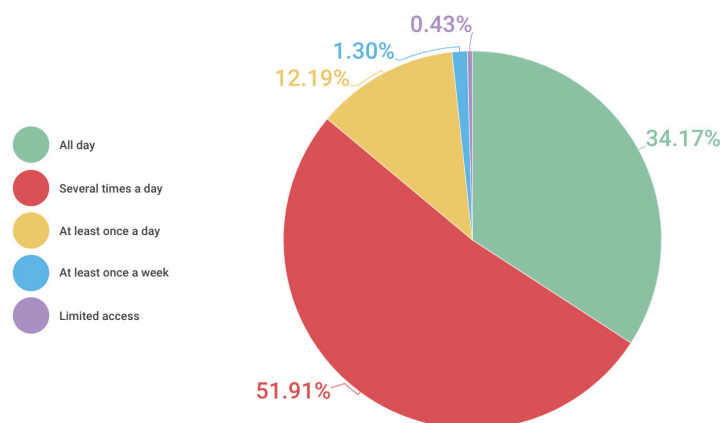
Source: Authors' elaboration

These results can be compared with the Digital 2021 Kenya Report (DataReportal, 2021) whereby 40 percent of the national population use internet, with 96 percent of them accessing internet through their mobile phones. The **urban/rural gap in mobile penetration** (88.2 percent of urban mobile owners compared to 68.8 percent in rural areas) is attributed to the weak electricity infrastructure in rural areas, low digital literacy and affordability issues (KNBS, 2018).

Figure 5. Mobile, internet and social media use in Kenya
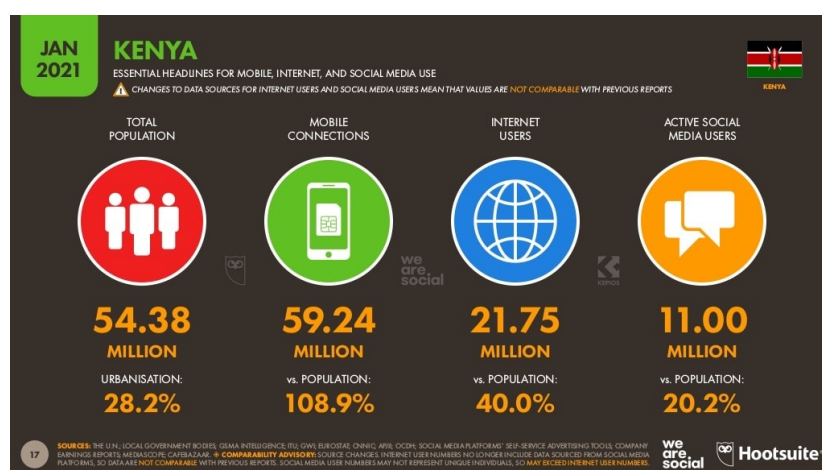
Source: DataReportal, 2021

According to the Kenya National Bureau of Statistics (2018), close to 90 percent of Kenyan youth (aged 18-35) use mobile phones, 37 percent the Internet, and 18 percent computers.

The **main challenges** reported by Kenyan youth in accessing internet include:
- Poor connectivity due to weak infrastructure
- Unreliable network coverage especially in rural areas
- Costly data bundles that run out quickly
- Lack of finances to purchase internet connectivity daily.

KE 🧑🏾 Member of a Youth in Agribusiness Group
"Expensive data bundles and unreliable network coverage on cheaper networks are major access barriers. I confirm this is true for most of the rural youth members of our organization."

The applications most accessed by young agripreneurs through their mobile data bundles are **WhatsApp, Facebook, Email and YouTube**. It was interesting to note that usage of web conferencing apps like Zoom and accessing e-learning content gained traction due to the COVID-19 pandemic.

UGANDA

Ugandan youth agripreneurs reported a diverse degree of access to the internet compared to their Kenyan peers, with 24 percent accessing internet all day and 36 percent several times during the day, while slightly more than 10 percent is not able to connect on a daily basis.

Figure 6. Frequency of internet access by country – Uganda (n=120)
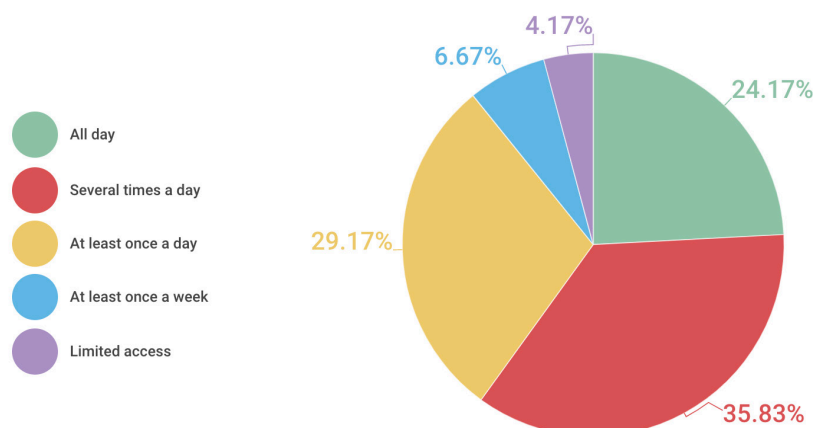
Source: Authors' elaboration

Survey findings do not hold true for the whole of Uganda, as evidenced by focus group participants. In the Northern areas of the country the digital gap is wider due to post-conflict issues, as most youth in that area do not even own smartphones. At the national level, the Digital 2021 Uganda Report (DataReportal, 2021) reveals that only 26.2 percent of the population use internet with 97.9 percent of them using mobile phones.

Figure 7. Mobile, internet and social media use in Uganda
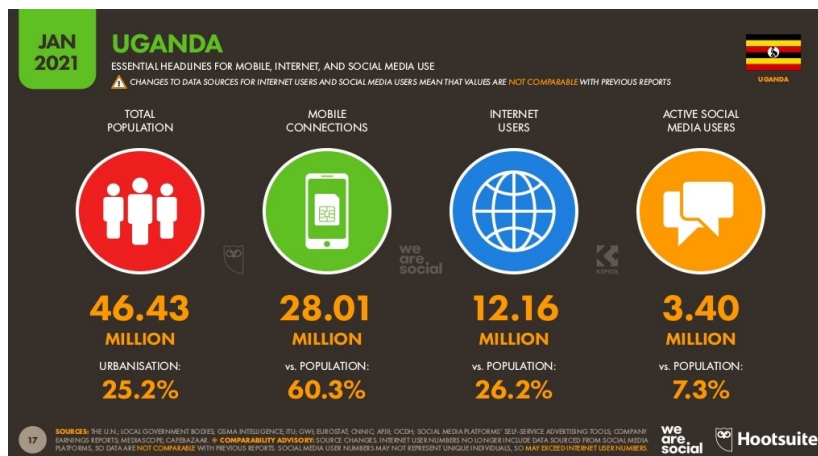
Source: DataReportal, 2021

According to Ugandan youth, **the main challenges experienced in accessing internet** include:

- Digital illiteracy even when owning a smartphone
- Social media tax[3]
- Access and excessive cost of mobile data bundles
- Poor network coverage in remote areas
- Limited smartphone ownership in certain areas

> **UG** 🧑🏾 Member of a Youth Group
> *"In our rural setting we have network issues. Concerning hardware youth can make an effort to acquire a smartphone but still are digitally illiterate and fail to exploit it, so prefer manual calling."*

Most applications used are **WhatsApp and email**. Social media usage is minimal due to the hindrances brought by the social media tax.

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[3] Since 2018, the Government of Uganda introduced a daily tax of 200 shillings ($0.055) on the use of more than 50 mobile communication apps, including social media services like Facebook, Twitter, instant messaging and voice communication apps like WhatsApp. The tax caused a decline in the number of internet users.

RWANDA

In the small sample of Rwandan respondents, 80 percent used internet at least several times during the day while nobody had limited access.

Figure 8. Frequency of interent access by country - Rwanda (n=11)
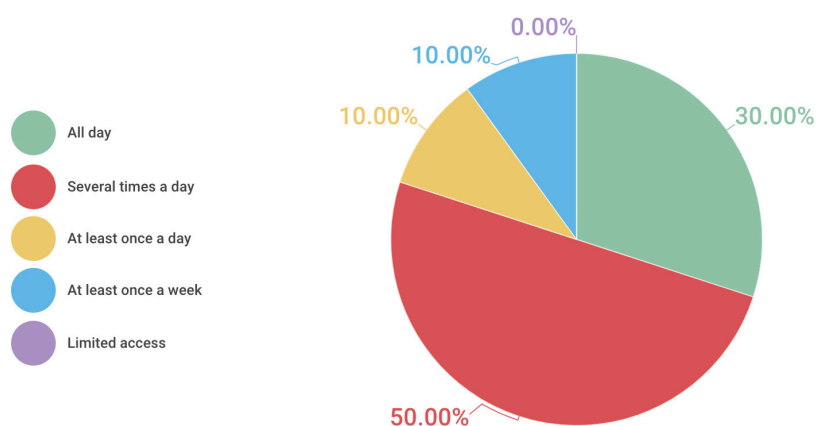
Source: Authors' elaboration

According to Digital 2021 Rwanda Report (DataReportal, 2021), 31.4 percent of the Rwandan population use internet. 850 000 thousand of internet users use social media with 96.7 percent of them accessing it via mobile.

Figure 9. Mobile, internet and social media use in Rwanda
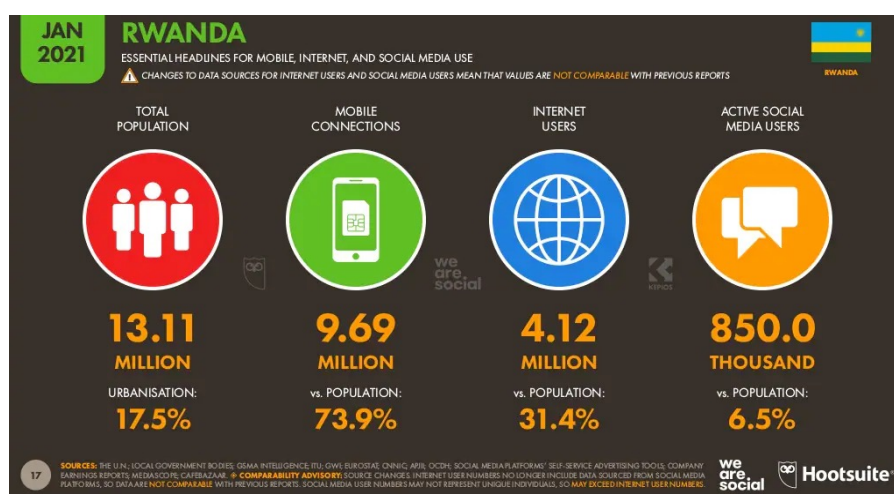
Source: DataReportal, 2021

The main **challenges with internet access** as reported by Rwandan youth are:

- Digital illiteracy
- Affordability: buying data is hard for youth who are not working
- Unstable connections in rural areas

Based on findings from the focus groups, most popular applications used are **WhatsApp and Facebook**. Zoom and Microsoft Team have been used more for virtual meeting lately as people cannot interact physically as before.

> 🇷🇼 👤 Individual Agripreneur
> *"Connectivity in Rwanda is 90% covered, but the problem is access to smartphones and those who have the device may have difficulties to buy data."*
>
> 🇷🇼 👤 Leader of Youth Group
> *"In rural areas only 50% of the young farmer have smartphones but internet connectivity and getting to benefit from it may be only true for 30%."*

Desired Digital Skills

In terms of digital skills that they wish to acquire, focus group participants consistently prioritized:

• **Digital communication and marketing** – this was meant to improve branding and marketing of their products and services, to attract contacts and clients, to manage customer relations online, but also to educate or share relevant knowledge and information with fellow youth and farmers (about market, production, etc).

• **Web design and management skills** - this was motivated by the need to be able to manage their own organizations or company website (serving as access to market linkages and funding opportunities), or at least update it without relying on costly external service providers.

• **Finance management tools** – this was mentioned by agripreneurs at an advanced business development stage who referred to advanced Excel skills and other software.

• **Data collection and analysis tools** – this was mentioned by members of youth-serving organizations who wanted to learn how to collect and showcase compelling data for their advocacy work or for information management about their members (e.g. for SACCO and cooperatives).

Many of the youth reported they acquired digital skills by themselves and learned by doing.

Use of digital technologies for doing business

Digital Applications

When asked about the technologies they use for business-related activities (e.g. communication, marketing, sales, research) the youth unanimously indicated **WhatsApp as the top digital technology they rely on in all stages of agribusiness**, followed by social media, email and mobile banking applications.

Figure 10. Top four digital technologies reportedly used for agribusiness activities
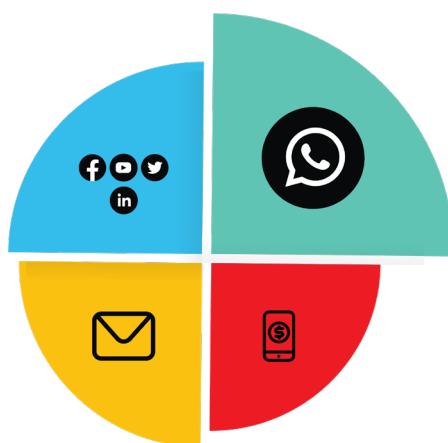
Source: Authors' elaboration

Moreover, some youth reported using **professional software solutions and internet-based applications** to access information services and market linkages, track expenses, plan and manage farm activities, among other uses. Figure 11 showcases examples of mobile or web-based applications mentioned by participants and clustered according to the youth self-reported stage of business development.

Figure 11. Examples of applications used by young agripreneurs in different business stages

	BUSINESS IDEA	STARTUP STAGE	OPERATING/GROWTH STAGE
Information services	**Gestimator**: a free animal pregnancy term calculator designed to help farmers determine gestations estimations of various farm and domestic animals. **AfriFarm**: assists farmers in detecting crop illnesses and receiving specific information about where they are spreading and how to combat them.	**Stepwise**: offers step by step farming techniques for coffee farmers **Shade Tree Advice Tool**: guides farmers with on-farm advice regarding climate change adaptation and mitigation.	**The Organic Farmer platform**: focuses on providing practical advice through a monthly farmers' magazine and program. **Farm Weather**: provides farmers reliable weather information and forecast
Farm management	**SmartFarm**: complete farm management solution with robust and flexible system for farm data management with traceability and output predictability. **Smart Cow app**: help farmers shift from dairy farming to dairy business using smart cow dairy management software		
Accounting software	**Sage**: accounting software	**Microsoft Excel**	**Zoho Books**: accounting software.
Marketplaces	**Iprocure systems**: provides complete procurement and distribution solution for farm supply	**Farmunera**: sources for genuine quality affordable farm inputs and provides convenient last-mile delivery within 24 hours to farmers across East Africa.	**Mkulima Young**: offers online marketplace for farmers to limit the role of middlemen. **Jiji**: marketplace for horticulture products and services among other things.
Digital Finance	**Eclof Kenya:** offers agricultural loans with insurance and credit life cover.		
One-stop shop for farmer's needs		**Ezy Agric app**: aids farmers manage all agribusiness activities.	**M-Shamba**: use of emerging technological tools like Artificial Intelligence, Machine Learning, Internet of Things and Blockchain to create sustainable solutions for the farmer.

Source: Authors' elaboration

From the perspective of **young service providers**, digital platforms and social media like Facebook are key to promote services and reach out to potential clients. Something worth exploring further is whether digital platforms help reducing the **bias experienced by young women** who feel they are not equally trusted as men as service providers in the agrifood sector.

E-commerce

E-commerce platforms are used mostly for price comparison and forecasting but not actual selling. Most youth reported challenges in joining platforms like Jumia or Jiji, both in terms of subscription fees and registration fatigue (because of the documentation required onboarding is time-consuming).

They did not consider those e-commerce platforms as the best channel to reach their customer base which is more local than urban. For marketing purposes, they prefer using the channels used by their end users, therefore mostly Facebook and WhatsApp.

Kenyan agripreneurs seemed the keenest to use e-commerce platforms for marketing services. Several youths reported using **Mkulima Young** which was considered easy to access as no subscription fee is required. Another youth-led e-commerce platform that started operating in Kenya is called **E-mBOGA** and is used to sell/deliver vegetables and fruit across the country.

> **UG** 🧑🏿 Individual Agripreneur
> *"Mostly we use social media because Jumia and Jiji are common in the cities, while we deal with agriculture at the village level and potential customers in the city are far away from us."*

> **UG** 🧑🏿 Service Provider
> *"We don't know how to use e-commerce platforms to sell. We have the mindset that this is for town people, that we cannot market our agricultural products the way people do it for TVs."*

E-learning

More than 70 percent of the survey respondents have experience with technology-based training (e.g. e-learning courses, computer-based training, live sessions via Zoom, multimedia learning in video/audio format) and 86 percent indicated they are comfortable learning anything online.

Some examples that they found helpful include:

• Online courses on topics ranging from climate smart technologies, marketing, ICTs,hydroponic farming, poultry farming,to business plan development, business management,employment creation or food system impact on biodiversity (e.g. offered by FAO, KALRO, Coursera, Ajira)

• Youth mentorship or incubation programs (e.g.by e360, GIZ, SDCP, Global Hero)

• Webinars and live sessions via Zoom

• YouTube tutorials

• Video, audio and reading materials shared via email or WhatsApp

> **KE** 🧑🏿 Individual Agripreneur
> *"Info found online needs to be first tested out and if it works is scaled up. Most youth don't trust online info sources."*

> **RW** 🧑🏿 Leader of Youth Group
> *"The limit of e-learning is the lack of a mentorship component which is needed for agribusiness. Coursera is good to learn for free, but you need to pay for the certificate and this is challenging."*
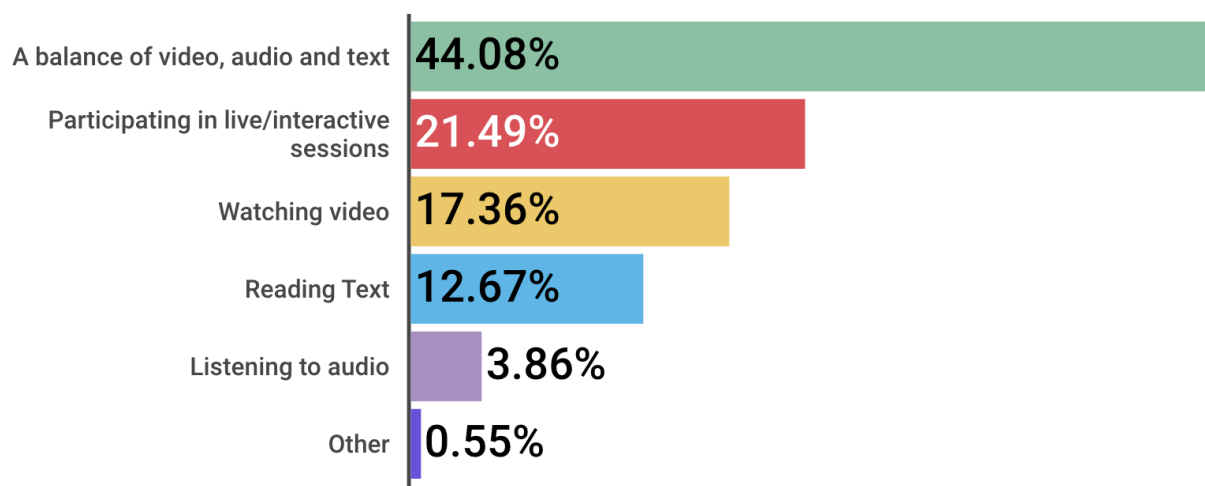
> **UG** 🧑🏿 Service Provider
> *"Free e-learning content has shallow info, but then subscription for detailed info is high (e.g. online trainings in organic farming from international universities). I was looking for a platform to share my innovation in vegetable growing and even for this you must pay! And in foreign currency, with a VISA card!"*

Regarding preference of e-learning content consumption: 44 percent of the total respondents prefer a balance of videos, text, and audios against a 21 percent who preferred to learn through live interactive sessions.

Figure 12. E-learning consumption preferences

A balance of video, audio and text	**44.08%**
Participating in live/interactive sessions	**21.49%**
Watching video	**17.36%**
Reading Text	**12.67%**
Listening to audio	**3.86%**
Other	**0.55%**

Source: Authors' elaboration

More than 90 percent of the youth enjoy a learning environment where they interact with fellow youth but half of them is more comfortable with one-on-one interaction rather than group projects. Additionally, less than half of the total respondents prefer self-paced learning rather than attending a session at a given time.

While many youths reported an increased access to online courses and events since the COVID-19 pandemic, unreliable network connectivity and cost of service were flagged as persisting limitations for youth in rural areas. Additional **challenges experienced in accessing e-learning content** were:

- Affordability (paying a fee is not an option for most youth)
- Online payment gateways in a foreign currency that make purchase difficult
- Shallow content or unreliable information available for free on existing e-learning platforms
- Adaptability struggle (it is very difficult to switch from face-to-face to online learning)
- Fear of scammers
- Lack of self-motivation

💡 🏫

A service provider from Uganda shared her organization's experience providing online training to youth in agribusiness. Beyond the connectivity issues, she highlighted the need for preparator work to help the youth familiarize with learning support platforms such as Zoom or Google Meet and slowly adopt even basic digital tools such as the email that are needed for login:

"As an organization you need to put an effort to sensitize, it's a steep learning curve."

Online Mentorship

The youth tended to disagree on whether they would be comfortable with online mentorship.

This is because part of the participants felt mentorship for agripreneurs needs practical demonstrations and doing so virtually proves inadequate. While acknowledging the **convenience** of online mentorship to save time and costs of travel to a physical venue, they were also concerned about **flexibility** and availability of mentors and trainers.

For example, the ideal mentorship structure as outlined by focus group participants would be:

• Getting a mentor who is flexible with the agripreneurs' schedule.

• Mentorship sessions that have a shared plan and schedule to achieve the agripreneurs' goals - it may be 1 day in the workdays and 1 in the weekend.

In addition, the issue of trust and **preference for face-to-face interactions** was raised, with participants debating about this being a deep-rooted cultural issue or something that the new generations can overcome. Finally, also for online mentoring, the youth mentioned the **cost of service** as an issue, along with unreliability of the service providers.

UG Individual Aspiring Agripreneur
"It becomes a challenge for some topics that might require demonstration."

UG Service Provider
"I would be 50% comfortable, because online interactions don't seem as real as face-to-face. Trust is particularly important."

KE Individual Agripreneur
"I am very comfortable because it is convenient, you can save time from travel."

RW Individual Agripreneur
"I haven't experienced [online mentorship] yet, I actually need that! I would be comfortable but of course would also need some push from someone physically."

Digital engagement by youth networks

Youth agripreneur networks across the region are very flexible in their engagement with the members. Focus group participants included members and local leaders of well-structured organizations such as the Rwanda Youth in Agribusiness Forum (RYAF), the Young Farmers' Federation of Uganda (UNYFA) or the Kakamega County Youth Agripreneurs Association, as well as smaller and informal youth groups from the three countries.

The type of support offered by these youth organizations is within the scope of training, market linkages, access to market information and job opportunities. Their digital activities are relatively limited, particularly when it comes to providing services to their members online, although COVID-19 restrictions forced them to leverage more the digital channels.

UG Individual Agripreneur and Member of a Youth Group
"Smartphones are gadgets used by people who at least have knowledge to use them. Rural youth never went to school, live in remote areas, it's not that they are not interested in digital platforms but it's just an exceptionally low percentage who can access."

KE Board of a Youth in Agribusiness Group
"As a [youth] group we look for a platform to connect with people, something attractive and inclusive. We need a platform to access not only knowledge, jobs, agriculture events, but also news, resources, pitches/video contests to attract youth."

UG Service Provider and Member of Youth Organization
"Before introducing a digital technology, it's important that youth are informed and understand that through these platforms they can add markets, see the need and benefits."

Examples of support services that have been provided online and worked, as reported by focus group participants, include:

• Surveying youth members and categorizing them by value chain to deliver targeted information via bulk SMS/USSD and facilitate experience sharing via WhatsApp groups.

• Blended training (e.g. on saving skills, financial literacy, agronomic practices, business development) delivered to youth members through face-to-face and pre-recorded videos.

• Capturing data from farmers and their agribusinesses to advocate for policy change.

• Multimedia content and YouTube channels (the latter more likely to be managed by individual youth champions, like the case of a Rwandan youth on a mission to instruct unemployed youth in his district on agricultural practices).

Among the challenges faced by youth organizations trying to deliver online support services were:

• **Digital illiteracy** of their youth members, who must be trained on using technology before they can enjoy support being offered.

• **Lack of information** on available resources and opportunities to take advantage of (e.g. market matchmaking platforms).

• **Resistance to shift to a collaborative way of working** by some youth, which hindered for instance their efforts to conduct collective marketing surveys and aggregation among the group members.

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To overcome COVID-19 restrictions and in general to reach the unconnected youth in rural areas, who do not own a smartphone or are not enough tech savvy, youth networks rely on alternative low-tech channels:

• Physical meetings and farm visit
• Distributing magazines
• Calling on phone or sending bulk SMS
• Use of radio and TV

6. KEY INSIGHTS

Obtaining and disseminating agribusiness information

Young agripreneurs **find information on agribusiness mostly online**, namely through search engines, free online courses, and social media, especially Facebook and WhatsApp groups. Slight differences were noted by country, whereby Kenyans frequently referred to county-level youth in agribusiness platforms while Ugandans also mentioned extension workers and local radios as trusted sources of information.
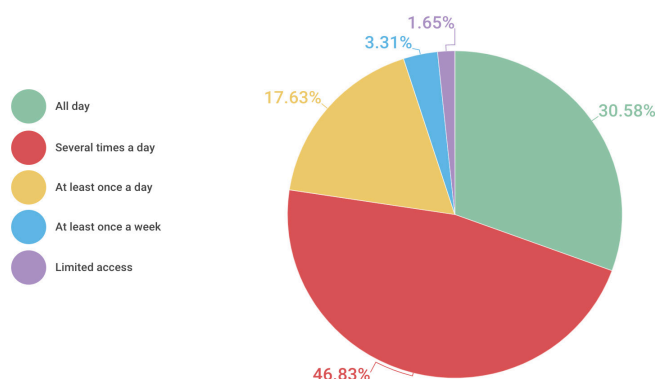
In terms of **sharing knowledge with other youth**, participants across the three countries concurred on the prevalence of **WhatsApp groups followed by social media platforms** specifically Facebook, Twitter, YouTube, LinkedIn, Telegram, and community-based agribusiness platforms. To reach youth in rural areas with little to no access to the internet, the most used channels are physical meetings, calls and SMS.

In-demand topics revolve around the following macro themes: access to finance, business management, marketing, production and value addition, best practices, ICTs. Among those, the youth flagged as harder to find online the information about funding opportunities and credit facilities for business growth, as well as market information that is relevant enough to their local context.

Digital Readiness

Despite nearly all (95 percent) of the youth who participated in the assessment can connect to the internet at least once a day,[4] **use of ICT for agribusiness proves to be a challenge for many**, not only because of unreliable **connectivity** but also due to **affordability** of internet data and the lack of advanced **digital skills**.

Figure 13. Frequency of internet access (n=363)

Legend:
- All day
- Several times a day
- At least once a day
- At least once a week
- Limited access

30.58%
46.83%
17.63%
3.31%
1.65%

Source: Authors' elaboration

In this sense, **digital expertise the youth wish to gain** include: digital communication, branding and marketing; web development and management; finance management tools; data collection and analysis tools.

Among the internet-based applications commonly accessed by young agripreneurs **WhatsApp** stands out (used by 90 percent of respondents), along with **email** (81 percent), **Facebook** (70 percent) and **YouTube** (50 percent). Compared to other countries, in Uganda social media usage is minimal due to the national tax introduced in 2018 on the use of social media and other mobile communication apps. E-learning platforms reportedly had a boost with COVID-19, just as videoconferencing tools like Zoom (35 percent) that were likely not even in use before the pandemic.

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[4] It is worth noting that digital access figures may be biased due to the primary data collection method being an online survey, therefore intercepting mostly connected youth. Similarly, the results could be skewed towards higher internet access by the larger proportion of Kenyan respondents in the sample.

Figure 14. Use preferences of internet-based applications (n=363)

| Application	Percentage
Email	81%
Facebook	69.9%
Twitter	30%
Instagram	18.45%
Whatsapp	90%
Tiktok	6%
Youtube	49.8%
News content	38.8%
Online training/webinars	49.8%
Music streaming platforms	9.3%
Videoconferences	34.7%
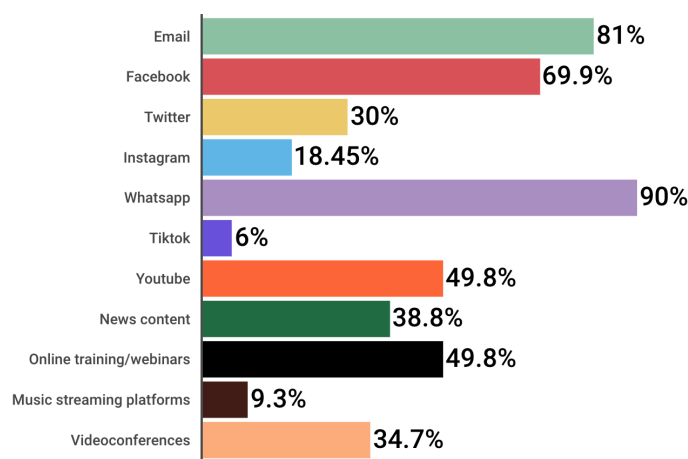
Source: Authors' elaboration

Focus group participants across the three countries consistently pointed to the **additional barriers faced by youth in remote rural areas**, especially within the scope of poor connectivity, limited smartphone ownership and digital illiteracy. Physical meetings, calls and SMS remain the most viable options to reach them. However, it is encouraging to see many youth leaders and organizations find alternative ways to offer support to fellow youth agripreneurs both online and offline and even go further by offering training to help them adopt technologies and innovate in their businesses.

Access to business support services online

Most survey respondents reported they access online business support services (for example, e-commerce sites, digital finance, online courses, mentorship/coaching and other professional services) regularly (34 percent), quite often (17 percent) or all the time (7 percent). However, 10 percent had never accessed such kind of services.

Figure 15. Frequency of access to online support services (n=363)

Category	Percentage
Never	10.19%
Not often	32.51%
Regularly	33.88%
Quite often	16.80%
All the time	6.61%
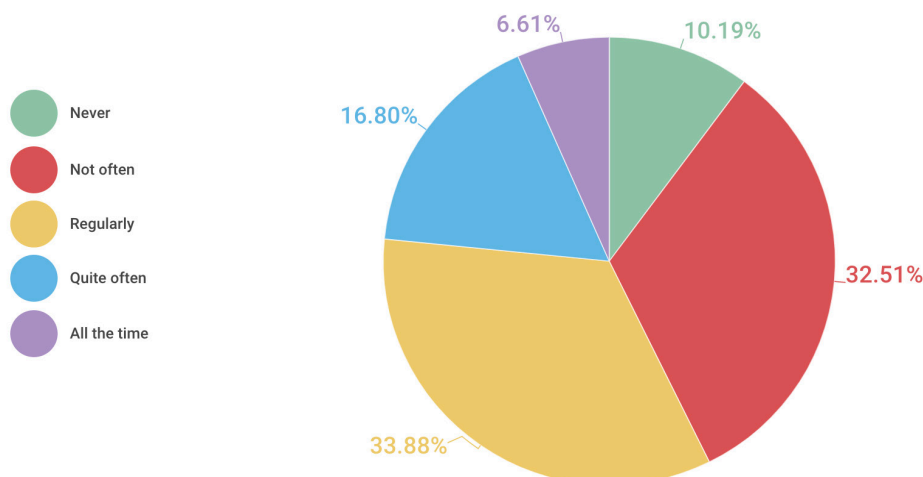
Source: Authors' elaboration

Most young agripreneurs **see the value of adopting digital technologies to grow their business, networks and client base.** Benefits they have experienced mostly relate to the convenience and ease of doing agribusiness working remotely with suppliers, buyers and sellers, saving time and money from physical mobilization. Similarly, digital technologies allowed them to increase outreach and exposure to relevant stakeholders outside their local area and access reliable information which in turn helped them increase their yields. However, they are still cautious about the time and money they invest on digital platforms and take them with **caution due to a perceived risk of scams and fraud.**

They tend to focus on using **digital technology for marketing their products, access market information and learn or share best practices** on their farming and business processes.

E-commerce platforms are not immensely popular and are used mostly for price comparison and forecasting rather than actual selling. This is due to the access barriers the youth face in terms of subscription fees and registration, plus their customer base being mostly local and easier to interact with on channels like Facebook and WhatsApp.

> KE 👤 Leader of a Youth in Agribusiness Group
> *"The time we spend on internet has to pay off, in terms of conversion of customers, it has to translate in income flowing in."*

Online mentorship may be an option if mentors are flexible with the agripreneurs' schedule and the youth are given the allowance to request content based on their real time needs. The **ideal mentorship structure** would be through mentorship sessions that have a shared plan and schedule to achieve the youth's goals, split during workdays and weekend.

Digital engagement by youth networks

This seems to be still **limited to information sharing** (e.g. through WhatsApp or social media) and some attempts of blended learning. There is a great need to **upgrade the digital skills** of youth leaders to better engage and serve their members. Similarly, it is vital to empower young women to increase their involvement and representation in agribusiness, both online and offline.

Design challenges for a youth-centred online platform

Participants clearly expressed their interest in **networking across national borders** to share learning and experiences about their businesses and life as youth agripreneurs. Some explicitly mentioned that they would appreciate a **go-to platform with youth-friendly informative and attractive content**, where they can easily find information otherwise dispersed on how to develop their business, add value to their products, access new markets.

> RW 👤 Individual Agripreneur
> *"I have no problem to find info online, but it would be great to have only one link to access all information that is spread all over internet."*
>
> UG 👤 IndividualAgripreneur
> *"Advice the youth to look at untapped opportunities in the ag sector, encourage them to innovate, venture into new crops. Tell the youth that when they join this platform, they can contact people from other regions who share the same interest and challenges in this field."*
>
> KE 👤 Individual Agripreneur
> *"Mentorship needs role models. The platform needs success stories."*

At the same time, the **major pain points** reported by the youth in accessing online platforms and services need to be considered for an improved user experience:

- Accessibility: costs of mobile data bundles limit prolonged internet usage and consumption of heavy multimedia content.

- Digital literacy: lack of advanced digital skills prevents the full exploitation of the benefits of digital technology and services by many youth.

- Affordability: excessive cost of e-learning platforms, mentorship programs and courses (with some having a foreign currency payment gateway) discourages young entrepreneurs from pursuing e-learning and other business support services online.

Derived from the findings of this assessment, the following **design challenges** were formulated to orient the development of a digital platform centred on the needs and expectations of the youth agripreneurs:

- *How to develop a dedicated community that enables extensive interactions among youth agri-preneurs and nurtures networking and collaboration across the region?*

- *How to provide digital content about the topics of outmost interest to the youth that is at the same time friendly, entertaining, actionable and technically sound?*

- *How to make access to online learning, mentorship and/or coaching effortless, free and appealing to the youth?*

- *How to develop a safe space for male and female youth to be champions and role models to inspire their peers?*

- *How to encourage youth entrepreneurs to adopt or develop innovation and digital technologies to bring their agribusiness to the next level?*

All the above informed strategic decisions on the appropriate IT infrastructure, core content, formats, services and overall user journey of the **African Youth Agripreneurs (AYA) platform.**

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Digital technologies and online networks play an undisputable role to support young entrepreneurs in launching, sustaining, or expanding their agribusinesses. Yet, significant barriers to digital inclusion exist for young people in Africa and intersect with other vulnerabilities. Through its Integrated Country Approach for boosting decent jobs for youth in agrifood systems (ICA programme), FAO carried out a digital readiness assessment of youth in agribusiness in partnership with the Eastern Africa Farmers Federation (EAFF) and youth-led organizations in Kenya, Rwanda and Uganda.

Over 360 young male and female entrepreneurs engaged through an online survey and virtual focus group discussions that generated insights on their interaction with digital technologies, either as entrepreneurs, service providers or members of youth organizations.

This summary note presents key findings on the following topics: agribusiness information flows, youth digital access and preferences, ICT use for business including e-commerce, e-learning, online mentoring, and online activities of rural youth networks.

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