



D3.4 Report on inclusive digital & entrepreneurship capacity building programs in Africa

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Abstract	This report details the implementation of the Capacity Building Program. The program was developed by BongoHive and MEST, the African-based innovation hubs. The program utilized case studies from a Zambian and a Ghanaian logistics company to develop the entrepreneurial and digital skills of the program participants in order to increase their chances of employment. Participants of the program came from five African countries, namely, Ghana, Nigeria, Kenya, South Africa and Zambia.
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* **R:** Document, report (excluding the periodic and final reports)

DEM: Demonstrator, pilot, prototype, plan designs

DEC: Websites, patents filing, press & media actions, videos, etc.

OTHER: Software, technical diagram, etc.





EXECUTIVE SUMMARY

The European Commission's goal of reinforcing the development and establishment of Pan-African networks of innovation gave rise to the DIGILOGIC Project, a three-year multi-party collaboration between Digital Innovation Hubs (DIHs) on the continents of Africa and Europe. As part of the interventions planned to support innovators, startups and SMEs through the project, the Capacity Building Program was developed and executed with the aim of strengthening the technology transfer capabilities of the DIHs to better equip African innovators and professionals for job opportunities, as well as providing the support needed for digital skills development among African youth for the jobs market, and self-employment/ entrepreneurship.

This skills development program was deployed in an instructor-led virtual mode with participants coming mainly from five African countries: Ghana, Nigeria, Kenya, South Africa and Zambia. They participated in a four-week, three-hour daily session learning about Design Thinking, Entrepreneurship Prototyping, and the use of Figma to hone their design and prototyping skills. Additionally, the participants acquired skills and gained exposure that improve their problem-solving capabilities, communication, teamwork, and pitching skills altogether. To give participants a complete experience and achieve the learning objectives, the sessions were a mix of trainers and facilitators from Meltwater Entrepreneurial School of Technology (MEST) and BongoHive, as well as group work on case studies from real problems shared by partner businesses in the logistics space. There were also guest lectures from industry experts who shared insights from their personal experiences in logistics.

To shortlist candidates who qualified to be in the program, a marketing campaign was launched for a period of five weeks, which required participants to complete an application form responding to questions on their personal data, work status, and motivations for applying to the program. Additionally, they were expected to complete three pre-learning courses (Design thinking for beginners, business model canvas and introduction to Figma) and submit their completion certificates together with the form. Judging from the age of an applicant, their employment status and the quality of their responses to open-ended questions on the form, the applicant was invited for a virtual screening interview. They were also assessed on the completion of the pre-learning courses. The finalists were then invited to an onboarding session to properly explain the components of the program and align expectations for both parties before the program started. The first cohort shortlisted 38 candidates (18 female and 20 males) while the second cohort had 36 candidates (11 females and 25 males).

The recruitment team deployed and made the call for application via the online channels of the two leading partners for this task, MEST and BongoHive, as well as the DIGILOGIC Community Platform and that of the other consortium partners. Using online posts on Twitter, Instagram, Facebook, LinkedIn and Whatsapp, together with email newsletters and information sessions, the marketing campaign reached 220 and 112 applications respectively for the first and second cohorts.

As part of the instructional teaching and knowledge-sharing function of the program, the participants also undertook a group project work on a case study of a challenge witnessed by logistics companies Solar taxi (Cohort 1) and Afridelivery (Cohort 2) based in Ghana and Zambia respectively. Representatives from each company were present to explain further the challenge experienced by the organization and answer questions from participants. The participants deployed the skills acquired in the lectures to tackle the problem and design solutions they believed would address the challenges. They pitched their ideas on the final day, and a winning team was selected, who as part of their reward earned a one-month internship with the case study company. During their internship, they got the opportunity to develop their solutions with guidance from the leaders in the organizations. They received rich work experience and also were provided with a stipend to cater for their internet



expenses as the internships were virtual. As a progression of this project, a Virtual Job Fair was organized for all participants in any of the DIGILOGIC projects, as well as other candidates within the networks of the consortium partners. Of the 128 job seekers who attended the fair, 21 of this number were previously on the Capacity Building Program.

At the end of the program, a survey was conducted to assess the level of impact the program had on all participants. It was observed that in both the first and second cohorts, participants reported having become more confident about their knowledge and skilled in the topic areas tackled during the program. This was compared to a pre-program survey that was conducted prior to program implementation. On various aspects of support provided to participants by the hosting DIHs, a majority of the participants reported that they were satisfied with the support received on different aspects of the program elements.

Finally, all this success did not come without challenges. The program was designed to deliver a total of 30 participants graduating from each of the first and second cohorts. With an intake class size of 38 and 36 respectively for cohorts 1 and 2, we had 8 and 11 participants drop out in each cohort respectively. The biggest challenge faced was inability to access constant internet service to be able to join the virtual sessions for the period of the program. This was either due to poor connectivity in their locality, or financial constraints making it difficult to access the internet. Also due to the virtual nature of the program, participants were not able to, or simply decided not to take up the offer to join sessions from the DIH's hub where internet and constant power supply were provided.

Some key lessons and recommendations we arrived at upon program completion are that completely virtual trainings will be faced with internet connectivity issues; the absence of physical interaction will reduce the level of engagement from participants as they do not see who they should be accountable to; and finally, not completing pre-work issued before a training will affect how well a candidate will perform. By way of recommendations, some form of resource support for internet data, power and computing devices will be beneficial and attractive for applicants. Also, making provision for a reimbursable fee to be collected from, and held in trust for participants may ensure they stay and commit to the entire duration of the program.



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ABBREVIATIONS

B-HIVE	BongoHive
DIH	Digital Innovation Hub
DOP	Design Options Paper
EU	European Union
MEST	Meltwater Entrepreneurial School of Technology





1 INTRODUCTION

1.1 BACKGROUND AND CONTEXT

The European Commission aims to reinforce the development and establishment of Pan-African networks of Digital Innovation/Tech Hubs by strengthening local digital innovation and start-up ecosystems. This was done through the H2020-ICT-58-2020 tender with the topic "International partnership building between European and African innovation hubs".

The DIGILOGIC project contributes to this mission by boosting cooperation and partnership among European and African Digital Innovation Hubs (DIHs). Within the DIGILOGIC project, DIHs aim to support innovators, start-ups, and SMEs to jointly develop smart logistics solutions in close cooperation with industries and ventures. DIGILOGIC sees the horizontally connecting logistics industry as the converging point of interest and priority for digital innovation, and social and business development, a crucial node for Europe and Africa's sustainable prosperity. DIGILOGIC intends to build bridges between the islands of innovation scattered across Europe and Africa, leverage, strengthen and connect DIHs in Europe and Africa to build the first Smart Logistics Pan EU-Africa Digital Innovation Hub Network fostering a broad digital transformation in the African logistics sector.

As part of its mission and other objectives, DIGILOGIC intends to

- a. strengthen the DIHs technology transfer capabilities to advance African innovators and ICT professionals for better job opportunities, and
- b. empower African youth, especially women and vulnerable groups with entrepreneurial and digital literacy skills to significantly increase good quality employment opportunities, including self-employment.

To achieve this, DIGILOGIC implemented an inclusive digital & entrepreneurship capacity-building program for unemployed youth and vulnerable groups. The program was conducted by the African DIHs MEST and BongoHive (B-Hive). The digital upskilling and reskilling for the DIGILOGIC Capacity Building program was designed based on the insights of a **Design Options Paper (DOP)**, which showed how the learning experience of the program beneficiaries can lead to systemic change in the smart logistics sector. Furthermore, MEST and BongoHive leveraged their combined experience in conducting entrepreneurial and tech programs to design and conduct this program successfully.

The program was divided into two cohorts of participants who were offered a 30-day course from 6th June to 1st July and from 7th November to 2nd December 2022. The program was conducted in a hybrid format with the option for participants to attend sessions physically at the facilities of MEST in Accra, Ghana and BongoHive in Lusaka, Zambia.

This document provides details of the various parts of the program and how they were conducted, including

- o The program format
- o Target audience
- o Marketing
- o Participant Recruitment
- o Training Curriculum and Case Study
- o Graduation and Next Steps
- o Monitoring and Evaluation
- o Lessons Learnt and Recommendations





1.2 OBJECTIVES

The main objective of the Capacity Building program was to foster employment opportunities for vulnerable youth. At the end of the program, the participants were expected to have developed the following skills:

- Problem-solving
- Intercultural communication
- Teamwork in interdisciplinary and multicultural teams
- Business model development (based on the business model and lean canvas)
- Critical thinking and Human Centred Design principles and approaches
- Prototyping, and
- Pitching.



2 SCOPE OF THE CAPACITY BUILDING PROGRAM

2.1 PROGRAM CONTENT

The program was implemented over four (4) weeks. During the first week, participants were introduced to topics to develop their entrepreneurial skills and in the second week the topics focused on building their tech skills, specifically designing and prototyping (*see page 14 for full curriculum*). In the third and fourth weeks, participants further developed their skills by applying what they had learned in weeks one and two.

Participants worked in multidisciplinary and multicultural teams of 4-5 to enhance their learning experience. The sessions took place five days a week for three hours. The first one and a half hours were theoretical and in the second the participants worked in their groups with the oversight of a facilitator.

In addition, MEST and BongoHive invited professionals from local and international logistics companies to deliver presentations on their industry, their work experience and opportunities within their companies or in the industry. The entire program was based on real-life logistical challenges in the form of case studies developed and presented by local logistics companies. Solar Taxi, a Ghanaian start-up provided the case study for the first cohort while Afridelivery, a Zambian company provided the case study for the second cohort (*see Appendix A*). The program culminated in an online demo day where participants, in their groups, pitched their solutions to a panel of judges from Solar Taxi and Afridelivery. The winning teams were awarded a four-week internship with the case provider and a small stipend that they provided to support their work. The program was delivered virtually via ZOOM through the DIGILOGIC Community Platform. Additionally, in Accra and Lusaka, MEST and BongoHive provided desk space and a stable internet connection to any participant that required the support and was able to go to the Hubs. All the modules and session recordings were made available on the DIGILOGIC Community Platform to the program participants only.

2.2 TARGET AUDIENCE

The program was targeted at unemployed youth between the ages of 18-35 years based in Ghana, Zambia, South Africa, Kenya and Nigeria.

The applicants were selected based on the following criteria:

- Unemployed for at least three months
- Between the ages of 18-35
- Interested in upskilling and reskilling in the areas of business, logistics, technology and entrepreneurship
- Motivated, self-starter, eager and committed to learning
- Able to commit to the time demands of the program
- Would like to explore careers in the logistics, digital and entrepreneurial space

Overall, MEST and BongoHive aimed to achieve a ratio of at least 40% women and 60% men in the program.

2.3 MARKETING

The programs were marketed for five weeks throughout the application and recruitment period. The marketing campaign was delivered through various outlets including MEST, BongoHive and the DIGILOGIC newsletters, various social media platforms such as Twitter, Instagram, Facebook, LinkedIn and WhatsApp, the DIGILOGIC community platform, information sessions, emails and the websites of the consortium members and the wider ecosystem. Below are a few examples of marketing that was deployed.

2.4 INFORMATION SESSION

Information sessions are instructive webinars that were held to inform potential candidates about the program, support them with any challenges during the application process and answer any burning questions. One information session was held for each cohort during the call for applications period. They were live webinars on ZOOM and Facebook through the DIGILOGIC Community Platform and were recorded and made available on the Community Platform for reference anytime.

The Information Sessions were hosted by the implementing teams who used a PowerPoint presentation to share information about DIGILOGIC and the objectives and outline of the program, eligibility criteria, and how to submit a successful application through the community platform. The information session was concluded with a Q&A session to answer the potential participant's questions. Below is an example of a social media card that was developed and shared to market the first information session.



FIGURE 1:EXAMPLE OF SOCIAL MEDIA CARD USED TO ADVERTISE THE INFORMATION SESSION

2.5 PARTICIPANT RECRUITMENT PROCESS

The goal was to reach a minimum of 200 applications. During the first cohort, 220 applications (93 female and 127 male) were received and 112 (40 female and 72 male) in the second cohort making a total of 332 applications received for the Capacity Building Program.

MEST and BongoHive developed an assessment rubric to shortlist the applicants (see Appendix B). A total of 38 (18 female and 20 male) participants were accepted into the first cohort and 36 (11 female and 25 male) into the second cohort.

The program accepted more participants than was requested by DIGILOGIC'S KPIs, to cater for any dropouts during the program. As anticipated, dropouts were experienced, in total 8 participants dropped in the first cohort and a total of 11 from the second cohort (*more on this in section 6*).

The following elements were part of the recruitment process.

2.5.1 Pre-learning course

As part of the application process, candidates had to finish pre-learning courses and provide a certificate of completion as proof. This enabled the recruitment team to gauge the applicant's commitment but more so, it helped prepare potential candidates for the demanding program. The three pre-learning courses are listed below:

1. **Design Thinking Course for Beginners** (2.5 hours) - IBM Acclaim Profile - please click [here](#)
2. **Business Model Canvas** (2 hours) - Open Learn Create - please click [here](#)
3. **Introduction to Figma**: please click [here](#) (20 mins)

The courses were freely accessible on the respective websites via sign-in.

2.5.2 Application form

Applicants were required to complete an application form through the DIGILOGIC community platform. Applicants had to be registered as users on the [community platform](#) to access the application. A screenshot of part of the form can be seen in Figure 2. An instructional video is also provided via this link: <http://bitly.ws/AQsl>

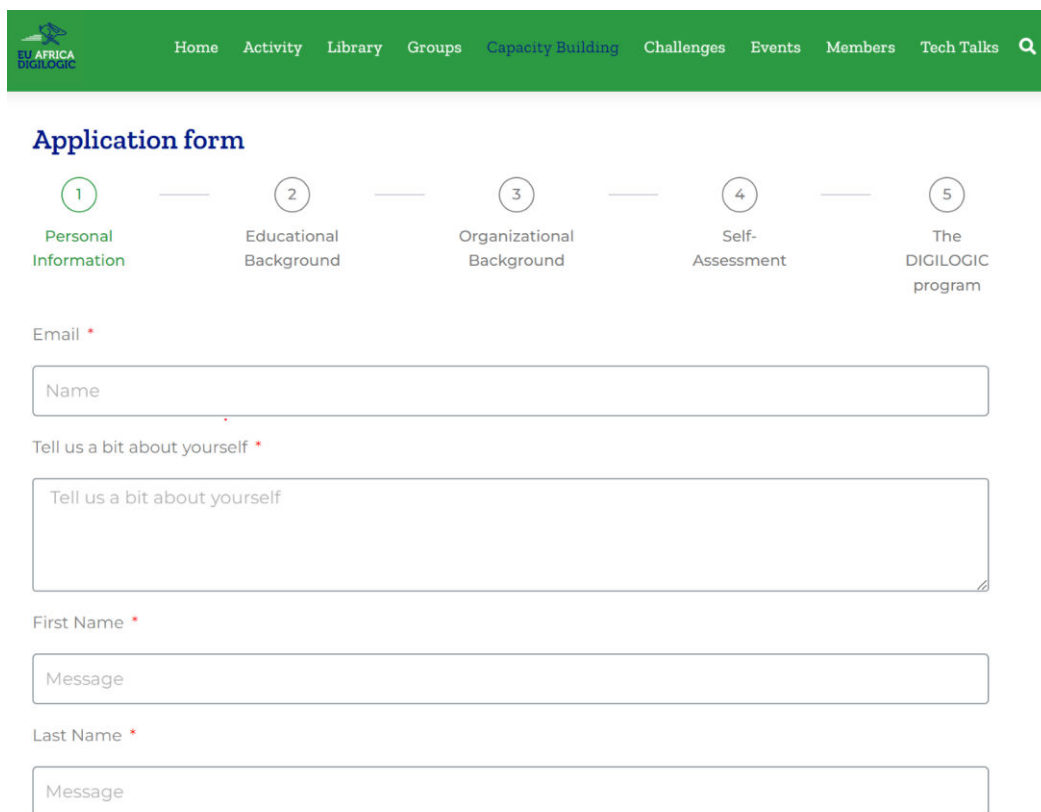


FIGURE 2: SCREENSHOT OF PART OF THE ONLINE APPLICATION FORM

2.5.3 Application review process

Using the assessment rubric in Appendix B the BongoHive and MEST recruitment teams evaluated all applications submitted through the community platform to identify potential applicants. MEST and BongoHive provided 2 – 3 team members as evaluators who each received instructions on how to score the applications. The main criteria that were considered included the candidate's age, employment status, the quality of their responses to the questions on the application form, and their pre-learning course certificates. Weekly reviews and evaluations of the applications were conducted to monitor the number and quality of applications, ensure fairness and objectivity by discussing and validating the results and progress of the evaluators and make any necessary adjustments to the marketing plan.



2.5.4 Virtual interviews

The shortlisted candidates (176 in cohort 1 and 98 in cohort 2) were called for one-on-one and group interviews with BongoHive and MEST during the final week of applications (see interview guide in Appendix C). These interviews were conducted to assess each participant's readiness for and dedication to the program by asking them to confirm their availability for the duration of the program, whether they had access to a device that would allow them to participate in the program, their employment status and proof of completing the pre-learning courses if they hadn't yet done so. If a candidate did not qualify for the program, they received a regret email from the implementing team and in the case of the cohort, they were encouraged to try to apply for the second cohort.

2.5.5 Onboarding management (virtual)

The successful candidates were invited to a virtual onboarding session to give them an overview of the program and its curriculum, to set expectations for the program, and to show them how to use the community platform effectively. One week before the program, participants were given access to onboarding materials, which included the case study and the PowerPoint presentation that was used during the onboarding session.



3 TRAINING CURRICULUM AND CASE STUDY

The participants' entrepreneurial skills were developed using design thinking concepts during the first week, and their technical abilities were developed during the second week using Figma, a collaborative interface design tool, to turn their solutions into prototypes. Throughout the third and fourth weeks, participants interacted with guest speakers from the logistics sector who discussed their experiences, and career opportunities in their respective organisations, and the sector. They also received pitching training to pitch their solutions for a chance to earn an internship with the company that provided the case study.

The DOP highlights collaboration as one of the best practices to foster innovation, knowledge sharing, pooling of resources and co-creating innovative ideas. Based on this, MEST and BongoHive agreed to collaboratively design and implement the programme. This involved sharing best practices on how projects are designed and implemented at the respective hubs and pooling resources such as trainers from each of our networks to enable further knowledge exchange. For example, MEST and BongoHive trainers got the opportunity to learn from each other, one of the BongoHive trainers recalled appreciating how a MEST trainer delivered his session on pitching. Moreover, although offering an internship opportunity for the winning teams was not a requirement of the DIGILOGIC project however, based on insights from the DOP, there is potential for digital upskilling to be a valuable means to an end when it comes to increasing employability. As a result of participating in the Capacity Building Program, nine participants, already gained some work experience during the program.

The curriculum is highlighted in the table and further detailed in the text below.

TABLE 1: CAPACITY BUILDING PROGRAM CURRICULUM

Date/Time	Monday	Tuesday	Wednesday	Thursday	Friday
WK 1	6 Jun 22	7 Jun 22	8 Jun 22	9 Jun 22	10 Jun 22
3 HRS	Introduction to Design Thinking Methodology & Problem Space Mapping	Understanding the User, their Journey and Pain Points to be addressed	Ideation (Exploring solution concepts)	Prototyping & Introduction to the Business Model Canvas	Developing Business Model Canvas & Reflection
WK 2	13 Jun 22	14 Jun 22	15 Jun 22	16 Jun 22	17 Jun 22
3 HRS	Introduction – Digital skills Product design	Sketching	Designing in Figma	Prototyping in Figma	Testing Designs
WK 3	20 Jun 22	21 Jun 22	22 Jun 22	23 Jun 22	24 Jun 22
3 HRS	Guest Speaker & Q&A Hands on case study	Guest Speaker & Q&A Hands on case study	Hands on case study	Pitching Training	Hands on case study
WK 4	27 Jun 22	28 Jun 22	29 Jun 22	30 Jun 22	1 Jul 22
3 HRS	Iterations and feedback	Iterations and feedback	Dress Rehearsal for all teams	Pitch/Demo Day	Graduation

3.1 ENTREPRENEURSHIP BASICS

The first week's modules were a curated experience, designed to equip the cohorts with the fundamental entrepreneurship and intrapreneurship skills, Design Thinking and Human Centered Design tools and principles that would empower them to be more conscious and empathetic user-centered problem solvers and change-makers and to provide structure in the problem-solving process. Below is a brief overview of each course:

- **Introduction to Design Thinking Methodology & Problem Space Mapping:** design thinking is a non-linear, iterative process that teams use to understand users, challenge assumptions, redefine problems and create innovative solutions to prototype and test. Participants were guided on how to think about the challenges provided in the case study from a user point of view.
- **Understanding the User, their journey and pain points:** participants were expected to map out the user journey and highlight gaps or challenges that the users faced while interacting with the services of the Solar Taxi and Afridelivery.
- **Ideation:** participants brainstormed as many solutions as possible to the challenges they identified, and they selected the most ideal tech-related solution to prototype using Figma in the second week of the program.
- **Prototyping:** Participants were introduced to prototyping and what it entails and practiced prototyping using Microsoft word or pen and paper before being introduced to Figma.
- **Developing Business Model Canvas:** participants were introduced to the business model canvas. They had to use it to make a business case for their solutions.

3.2 DIGITAL SKILLS

In the second week, the participants were introduced to Figma, a collaborative web application for interface design which they used to create digital prototypes of their solutions thus practising their digital skills. Below are the steps they followed to produce their prototypes:

- **Sketching:** this is a process used to propose, explore, refine and communicate ideas.
- **Wireframing:** the participants drew overviews of interactive products and services to establish the structure and flow of their possible solutions.
- **Designing:** this process entailed imagining, creating, and iterating products that addressed the problems of the users they were solving for.
- **Prototyping:** the participants implemented their ideas into tangible digital solutions to capture the design concepts and test them. These prototypes were refined through feedback from the facilitator before they were shared with Solar Taxi and Afridelivery.

3.3 GUEST SPEAKERS

The table below provides some detail on the speakers that were invited to engage with the participants. The speakers were advised to speak for 30 minutes and the question-and-answer sessions lasted 30 minutes.

TABLE 2: GUEST SPEAKERS

Cohort	Company	Name of Representative	Position	Location
1	Proctor and Gamble	Chuka Alumona	Director, Gulf, Levant and Global Expansion Markets' Supply Network Operations	Dubai, the United Arab Emirates
1	Snocode	Sesinam Dagadu	CEO	Ghana
2	Jabu Logisitcs	Tamale Shapi	City Manager	Zambia
2	Proctor and Gamble	Tarryn Allie	Human Resource Business Partner and Talent Acquisition Manager	South Africa

3.4 CASE STUDY BASED AND COMPETITIVE LEARNING

The DIGILOGIC Capacity Building Program used two instructional strategies: case study-based learning and competitive learning. This technique involved presenting participants with scenarios that required them to evaluate their comprehension of and solutions to problems encountered in real-world situations while engaging in peer competition. Because the main objective of this program was to increase the participants' employability, this technique not only enhanced the learning experiences for the participants but also accurately replicated real-world working conditions, making the entire experience realistic. Also, it provided the winners with a fantastic launchpad into their internships, where they could expand on their solutions.

A case study was provided by two local companies, one based in Accra Ghana named Solar taxi and the other based in Lusaka, Zambia called Afridelivery. The participants received the case study along with their onboarding documents one week before the program started which they were expected to familiarize themselves with. During the first session, a representative from the case company came to introduce the case study and provide more insights on the challenges the companies were facing and answer any questions the participants had for an hour. Throughout the program, each course that was taught by the trainers helped the participants to solve the case by providing and guiding them with a structured way to approach problem-solving. The trainers taught the course in an interactive session for between 45 mins – 1.5 hours and the participants applied what they learned for the rest of the session. The duration of the daily sessions was three hours.

Case study companies:

Company Name: **Solar Taxi** (cohort 1)

Solar Taxi is an e-mobility Ghanaian start-up that provides modern, eco-friendly, affordable and sustainable mobility facilities and services for modern Africans. The company designs and locally assembles electric-powered vehicles (EVs - bicycles, tricycles, mini cars), trains locals on how to operate the vehicles, and offers affordable, eco-friendly transport services while giving customers the potential to own their vehicle. Currently, the company offers electric vehicles for lease to customers and provides courier services with its electric motorbikes. The business also has a mobility software platform as a service for people looking to rent out their vehicles, or lease one for temporary use.

Company Name: **AfriDelivery** (cohort 2)

AfriDelivery was founded in January 2018 by Afshon Wallace Ngige and Jens Brocher. The company's goal is to make it easy for restaurants, retailers, and service providers to connect with customers, thereby solving the last-mile delivery problems in Africa.

The detailed case studies can be found in Appendix A.



4 GRADUATION AND NEXT STEPS

After four weeks of intense learning and hands-on practical sessions, Solar Taxi and Afridelivery selected their winning teams based on whom they believed provided the best solution to their case study challenge.

At the end of the period, the teams pitched their solutions to the representatives of the companies, and the winning team was selected. The selection criteria were determined by the company representatives because they know and understand their business best. In addition to properly implementing the principles imparted to them during the training, the teams were judged on additional dimensions such as ease of deployment of the solution etc.

The winning teams comprised of participants originating from several African countries; Ghana, Nigeria, Zambia, South Africa, and Kenya. These winners from cohort one and two interned with Solar Taxi and AfriDelivery respectively. The participants were given short projects to work on for the duration of their internship which they successfully completed, and a small stipend was provided to them to support their work. All the internships were virtual, owing to the fact that the interns were spread across multiple countries.

Following the Capacity Building Programs, the participants were all invited to join the DIGILOGIC virtual job fair that took place on February 7th, 2023. The event aimed to connect job seekers with potential employers from the logistics industry and the wider tech ecosystem. The job fair took place on the MeetYOO platform. Overall, more than 128 job seekers attended the event, among them 21 participants were from the Capacity Building Program.





5 MONITORING AND EVALUATION

As the aim of the Capacity Building program was to help African youth to upskill to become better job creators and seekers a baseline survey was administered to understand the knowledge level of the participants and to enable the training implementation team to tailor the delivery of the content to address the knowledge gap of these participants. The post-cohort survey was taken to measure the impact of the training program on the participant’s knowledge and skills. The results of the surveys are presented below for each of the cohorts.

5.1 FEEDBACK SUMMARY FOR COHORT 1 – JUNE 2022

The baseline survey was completed by 25 participants in cohort 1, and 31 participants in cohort 2. Upon completion of the training, 28 and 19 participants completed the post-program survey for cohorts 1 and 2 respectively.

A simple question was posed to participants to self-assess their competency in six knowledge areas of Design Thinking, Figma, Business Model Canvas, Sketching, Prototyping and Product Design. On a rating scale of 1 – 5, with 1 representing “Not Skilled” to 5 representing “Very Skilled”. The participants gave an indication of how familiar they were with the concepts and tools in each of the subject areas. As would be expected, no participant ranked themselves as being “very skilled” in any area, and the proportion of participants who selected “not skilled” for each of the six areas was higher than any of the other rankings. The table and attendant graph below highlight the distribution of selections made by respondents.

TABLE 3: BASELINE SURVEY RESULTS (COHORT 1)

Cohort 1 - Baseline Survey Results	DESIGN THINKING	BMC	FIGMA	PROTOTYPING	PRODUCT	SKETCHING
Not Skilled	8	10	16	15	13	15
Somewhat skilled	6	6	3	3	3	2
Neutral	7	7	3	7	6	6
Skilled	4	2	3	0	3	2
Very Skilled	0	0	0	0	0	0

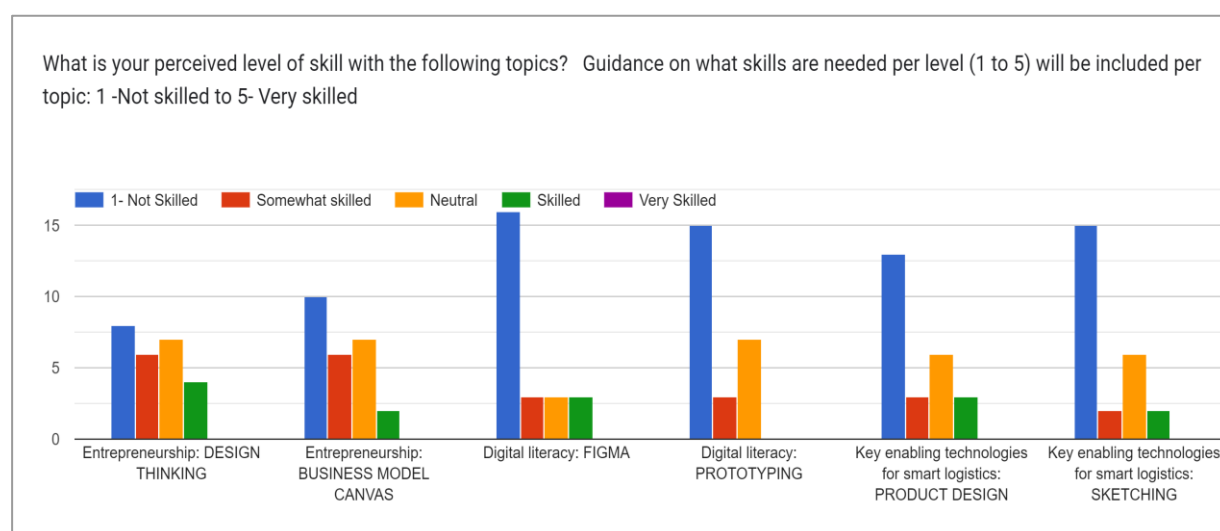


FIGURE 3: BASELINE SURVEY – PERCEPTION OF SKILL LEVEL (COHORT 1)



Upon completion of the training, more participants reported having been skilled in the knowledge areas previously assessed at the start of the training. This increase in number goes to show that the training was effective in imparting skills to participants. A breakdown of the responses from the participants is shown below in the table and the graph:

TABLE 4: ENDLINE SURVEY RESULTS (COHORT 1)

Cohort 1 - Post Cohort Survey Results	DESIGN THINKING	BMC	FIGMA	PROTOTYPING	PRODUCT	SKETCHING
Not Skilled	0	0	0	0	0	0
Somewhat skilled	2	5	4	3	3	3
Neutral	6	5	7	7	8	4
Skilled	12	11	12	16	14	14
Very Skilled	8	7	3	1	2	6

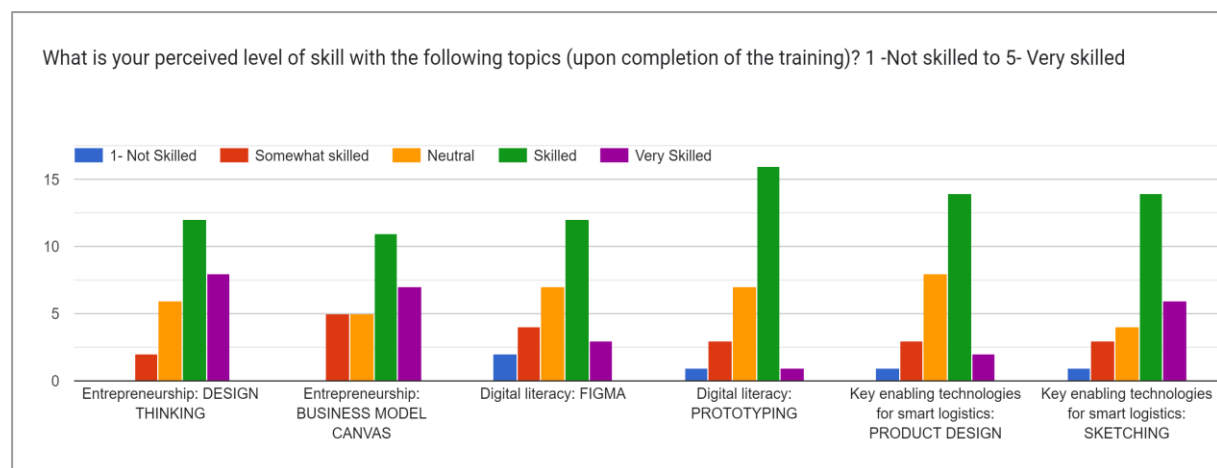


FIGURE 4: ENDLINE SURVEY – PERCEPTION OF SKILL LEVEL (COHORT 1)

As part of initiatives to improve the experience of participants in our programs, the post-cohort surveys requested participants to highlight the good and negative aspects of the program we could work on or improve upon. When asked how satisfied respondents were on the support generally provided on a scale of 1 – 5 with 1 being 'Very Dissatisfied' and 5, 'Very Satisfied', 89% of participants indicated that they were either Satisfied or Very Satisfied. The remaining 11% said they were neutral.

On the different aspects of support provided, the general feedback was positive (please see the graph below).

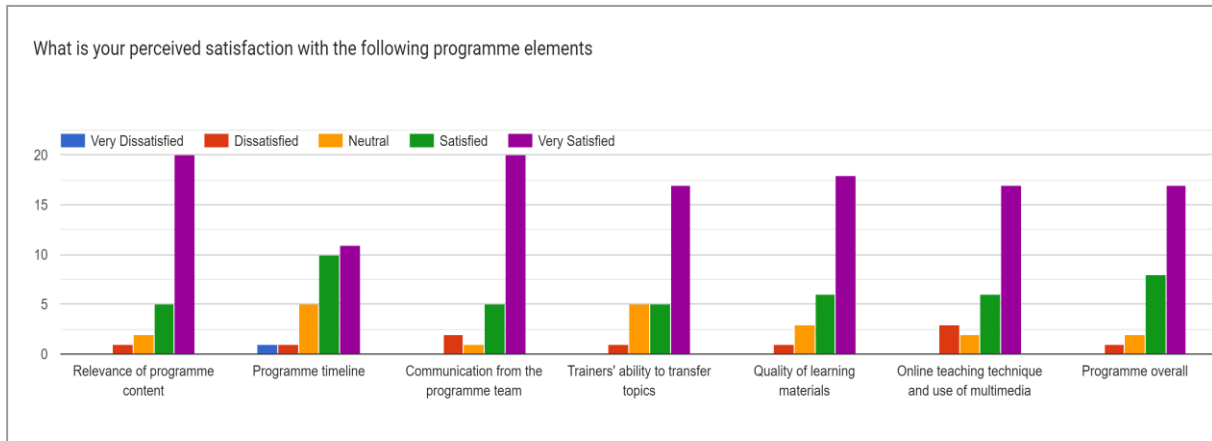


FIGURE 5: ENDLINE SURVEY – PERCEIVED PROGRAM SATISFACTION (COHORT 1)

5.2 FEEDBACK SUMMARY FOR COHORT 2 – NOVEMBER 2022

Similar to the practice for Cohort 1, the 2nd Cohort of the program was also assessed to establish the knowledge and skills baseline of the group coming into the program. Unlike the first cohort however, this cohort saw more respondents completing the pre-program surveys, but in a similar fashion, a majority indicated they had 'little to no knowledge of the subject areas planned for the training.

TABLE 5: BASELINE SURVEY RESULTS (COHORT 2)

Cohort 2 - Baseline Survey Results	DESIGN THINKING	BMC	FIGMA	PROTOTYPING	PRODUCT	SKETCHING
Not Skilled	6	13	15	15	15	16
Somewhat skilled	7	6	7	5	7	4
Neutral	9	6	4	6	4	9
Skilled	7	4	4	5	5	2
Very Skilled	2	2	1	0	0	0

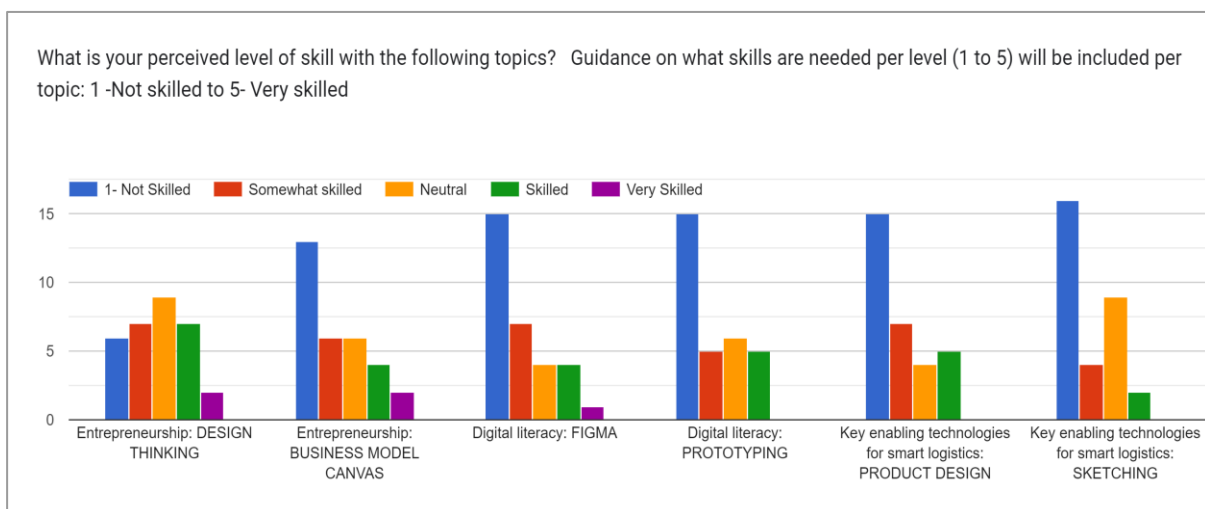


FIGURE 6: BASELINE PERCEIVED SKILL LEVEL (COHORT 2)



The 2nd Cohort experienced a higher dropout rate compared to the first; as such there were only 19 responses for the post-cohort survey. There was evidence of learning having been imparted to participants as a higher proportion identified having acquired the skills and knowledge from the training.

TABLE 6: ENDLINE SURVEY RESULTS (COHORT 2)

Cohort 2 - Post Cohort Survey Results	DESIGN THINKING	BMC	FIGMA	PROTOTYPING	PRODUCT	SKETCHING
Not Skilled	0	0	0	0	0	0
Somewhat skilled	0	1	2	1	0	0
Neutral	6	6	4	4	3	3
Skilled	9	7	10	11	14	12
Very Skilled	4	5	3	3	2	4

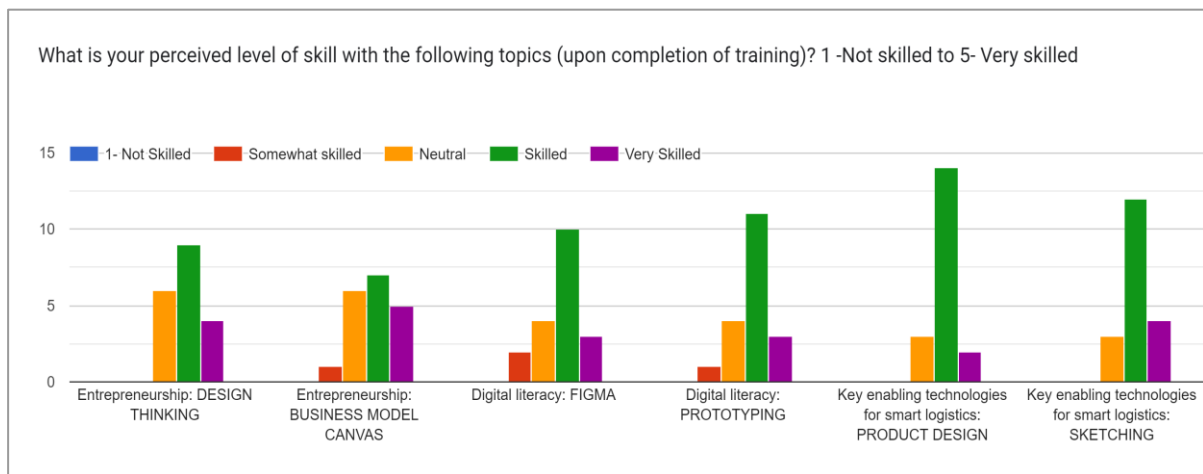


FIGURE 7: ENDLINE SURVEY PERCEIVED SKILL LEVEL (COHORT 2)

On the matter of satisfaction with the program elements and support provided, the feedback was similarly as positive as that of Cohort 1.

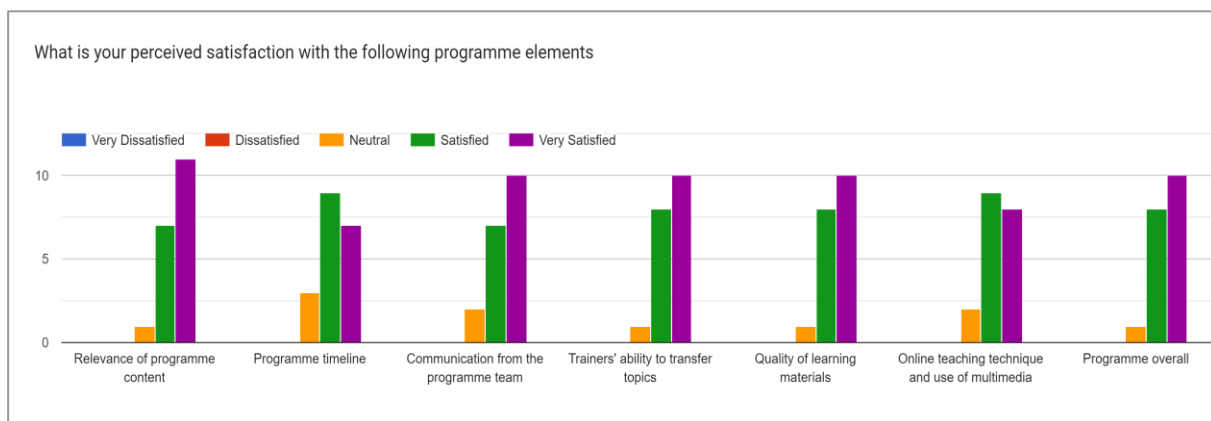


FIGURE 8: ENDLINE SURVEY PERCEIVED SKILL LEVEL (COHORT 2)

6 PROGRAM IMPLEMENTATION CHALLENGES

The program experienced several dropouts as indicated in section 2.3.1, and this was the key challenge experienced.

As with virtual learning programs, especially when they are instructor-led, a number of factors co-existing compound a problem and leads to disengagement of participants, subsequently causing them to drop out of the program. During this Capacity Building program in both cohorts 1 and 2, there were several instances where participants did not have data on their devices or were unable to acquire some due to financial constraints and so could not join the virtual sessions over the internet. Although accommodations were made for participants to access the hub offices of MEST and BongoHive, some individuals did not take advantage of this, while others were unable to because they reside in different countries. Finally, there were candidates who did not honour the invitation to join the cohort, and some who underestimated the work involved and as such could not keep up with the program requirements.

Some interventions and structures were put in place to reduce the effect of the challenges enumerated:

- With a target of 30 candidates graduating from the program, a selection of more than 30 candidates were shortlisted and offers made so the starting class size was large enough to accommodate any drop-offs.
- The recruitment and selection processes were made robust and included interviews of candidates to assess their true commitment.
- Pre-learning courses were made part of the application process so that candidates come into the program with the basics covered so they can follow through the sessions.

7 LESSONS LEARNT AND RECOMMENDATIONS

7.1 LEASSONS LEARNT

Virtual training

Running virtual training models presents numerous challenges for participants such as no access to internet, power interruptions and unavailability of devices. These issues seemed to hinder the continued engagement of the participants, and eventually resulted in some dropping off and not completing the training in the Capacity Building Program.

Program Format

Some level of physical interaction between participants and the instructors promotes learning and commitment. In the absence of physical interactions, it was challenging to hold participants accountable for their engagement in the program, resulting in some drop-offs. A remedy would have been to have some level of in-person meetings, but with the disbursement of participants across countries, this kind of meeting was practically impossible.

Preparation

For participants to get the most out of an intense training, they must come fully prepared. The mandatory completion of pre-learning courses helped participants form an expectation of the program and understand the fundamental principles which helped them have a better experience during the program.

7.2 RECOMMENDATIONS

Resource support

To reduce the risk of dropouts and disruptions in the program, some mitigation plans could be considered. Common threats such as power outages, lack of devices and unavailability of internet connectivity can be mitigated by providing data bundles for participants or transportation stipends to work from local innovation hubs.

Reimbursable fee

Including a small but significant reimbursable fee to join the program could be considered to increase commitment levels. Participants would pay a small fee that will be reimbursed if they successfully complete the program. This could add a layer of accountability from the participants.



APPENDIX A: CASE STUDIES – SOLAR TAXI AND AFRIDELIVERY

SOLAR TAXI CASE STUDY

Solar Taxi is an e-mobility Ghanaian start-up limited liability company that provides modern eco-friendly, affordable and sustainable transportation/mobility facilities and services for modern Africans. The company designs and locally assembles electric-powered vehicles (EV's) (bikes, tricycles, mini cars) locally, trains locals on how to operate the vehicles, and offers affordable, eco-friendly transport services while giving customers the potential of owning their own locally assembled vehicle. Currently, the company offers electric vehicles for lease to customers and provides courier services with its electric motorbikes. The business also has a mobility software platform as a service.

The Solar Taxi initiative is a project that focuses on producing solar-powered electric vehicles for use across the country. Started in September 2018, Ghana's Solar Taxi project was launched by Kumasi Hive in partnership with the Mastercard Foundation. The initiative aims to alleviate poverty, create employment and protect the environment.

Solar Taxi is banking on this cheap cost to “fuel” the car as well as the savings from the low maintenance costs associated with driving an EV to get Ghanaians driving EVs. Solar Taxi's minimum lease contract is for just one month! This flexibility will certainly appeal to consumers in a market where standard vehicle financing options are as widely available as in other parts of the continent like South Africa.

Solar Taxi is building an online platform to facilitate cheaper deliveries via subscription or rental packages for small and large e-commerce businesses using locally manufactured electric motorcycles.

The current business process for Solar Taxi is that customers make orders on their App, website, or via phone, then an online shop or vendor receives the order via OPS or through the same medium as requested, from there, the vendor connects offline with separate delivery or company for drop-off, then finally clients make a cash payment to the rider or via Momo or card (in the case of online shops).

Currently, Solar Taxi operates in four different parts of Ghana, namely Accra, Kumasi, Takoradi, and Tamale. Although Solar Taxi has operational teams in these four parts of Ghana, their mobile ride App ‘WOTEE’ was recently launched and is being used in operations - but currently only in Accra.

The launch of the App became a necessity when they could not get any of the current ride Apps to offer them the services or to include their EV's on their platform, and since Solar Taxi is an e-commerce business, they needed an online platform to operate.

Before this, the company served its customers by leasing electric vehicles to their customers and by providing courier services with its electric motorbikes. It was realized that they were not reaching their full potential of accessing their full target market resulting in a loss of projected revenue and low profitability. After the launch of the App, the number of customers has started to rise but yet not to the full number projected. This may be because the App runs only in Accra currently, leaving the other three parts of the country limited. They would like to extend the ride App to the other parts of the country. They currently only have a team of three software engineers; which makes it difficult for them to work on getting the WOTEE to the other parts. Solar Taxi is not in the position to employ additional software engineers due to the low income they can offer and the high cost of hiring software engineers.

Having teams across four different parts of the country has posed a challenge to the management team in being able to manage and control employee efficiency, which has also been seen as a reason for the low performance of the company. However, the management team has brainstormed a lot and has come up with the idea that it would be helpful to create a dashboard to centralize the tasks of the various teams across the country but stacked on the design of the dashboard, they currently thought of outsourcing it to a consultancy firm, again they withheld the development of the dashboard due to cost or the fee charged by the consultancy firm.

Upon some complaints from customers that there is no proper and easy laid down channel for them to report their issues to them, they were advised to buy the Enterprise Resource Planning software which would help them to easily manage their customers as they look to increase their customer numbers with



the introduction of the WOTEE. They believe it is best they acquire the ERP software because it could be used for managing their accounting systems and also their Human Resource Management systems. Above all these current issues are happening internally, Solar Taxi is very optimistic that they will become the most sourced e-commerce company in Ghana in the near future. Because of this vision, this case study has developed for you and presented to you in your teams.

The scenario is that Solar Taxi has come to your company; which is a consultancy firm and your manager has assigned you as the team that needs to work on this project to find the necessary solutions for Solar Taxi, and you have the 4 weeks of the program to complete this project.

The team with the solution that most impresses Solar Taxi, will be offered a Virtual Internship opportunity for one month.

Requirements

1. Evaluate the business processes of Solar Taxi to find any Challenges/Opportunities that could give them a competitive edge that can be used to their advantage or propose a solution to the challenges identified.
2. How do you think new policies in Ghana concerning Momo tax would influence their operation and business success?
3. What can Solar Taxi do to get the WOTEE App in all the other parts of the country?
4. Brainstorm and design the dashboard for the centralization of the employee task efficiency management.
5. Do you think Solar Taxi needs the Enterprise Resource Planning software, if yes why? if no what other ways could they achieve the same purpose.



AFRIDELIVERY CASE STUDY

The **AfriDelivery** case study will explore the company's origins, goals, and operations. The paper will also provide an in-depth analysis of how the company has succeeded in addressing Zambia's last-mile delivery issues. AfriDelivery was founded in January 2018 by Afshon Wallace Ngige and Jens Brocher. The company's goal is to make it easy for restaurants, retailers, and service providers to connect with customers, thereby solving the last-mile delivery problems in Africa.

AfriDelivery currently provides its services through the platforms listed below.

- AfriDelivery offers its customers a mobile app through which they can order food and other goods from restaurants and retailers in major cities, to be delivered to their location.
- AfriSupermarket is an eCommerce store that offers groceries and other retail items to be delivered right to customers' doors. Deliveries are currently based in major cities, so it's easy and convenient for customers to order what they need and have it delivered to them on the same day.
- AfriWholesale is an online platform that makes it easy for merchants to order stock for their shops at wholesale prices and have it delivered to them on the same day.

AfriDelivery is also working on building an online platform that will help to facilitate the process for merchants. This will include managing sales, orders, and the management of their shops.

The current process of ordering groceries through AfriDelivery is as follows:

1. Customers place an order on the app or website (Afridelivery Mall) by selecting a store and picking the items they want to purchase.
2. A customer service agent then receives the order and dispatches a motorcycle rider to the selected store to pick up the items for the customer off the shelf.
3. If all items are found, the rider makes the purchase and proceeds to deliver the items to the customer who pays by mobile money, debit card, or cash.
4. However, if the rider is unable to find one or more items in the store, the rider informs the customer service agent by phone.
5. The customer service agent then calls the customer to inform them that some of the requested items are unavailable.
6. The customer at this point can choose to either amend their order by buying the items that are available or cancelling the order.

AfriDelivery is currently up and running in three Zambian cities: Lusaka, Ndola, and Kitwe. Although there are operational teams based in these three cities, their eCommerce store "AfriSupermarket" was recently launched and is currently only available for delivery in Lusaka.

The need for AfriSupermarket arose from the growing number of orders that had to be amended or cancelled due to items being out of stock in the store at the time of the order. AfriSupermarket is an online store where customers can order groceries and other household items. These items are stocked by AfriDelivery in their warehouse. If an item is not in the warehouse, it will not be listed for purchase on the website. This cuts down on the frustration that both riders and customers experience when they are unable to complete their order because of items that are out of stock in other stores.

Before this, the company served its customers by providing delivery services for restaurants and stores with its fleet of motorcycles. It was realised that they were not reaching their full potential of accessing their full target market resulting in a loss of projected revenue and low profitability. AfriSupermarket was launched in October 2022 with the hope that there will be an increase in the number of customers. AfriSupermarket currently only



runs in Lusaka, and is yet to expand to the other cities AfriDelivery is in. They would like to extend the AfriSupermarket to other parts of the country. They currently only have a warehouse in Lusaka.

Having employees in three different cities has been a challenge for the management team when it comes to managing and controlling employee efficiency, which has also been cited as a reason for the company's low performance. However, the management team has brainstormed and come up with the idea of creating a dashboard to centralize the tasks of the various teams across the country. The only issue they have is with the design of the dashboard and so they are currently thinking about outsourcing it to a consultancy firm. But they have withheld the development of the dashboard due to the cost or fee charged by the consultancy firm.

Micro merchants across the city are currently required to travel to the central business district to replenish stock in their stores. This causes them to be forced to close shop in the middle of the day, which is highly inconvenient. AfriDelivery has the opportunity to supply the micro-merchants with new stock by offering them their delivery services. AfriDelivery is considering building a wholesale eCommerce platform that will allow micro-merchants to order goods in bulk at wholesale prices, which would be highly beneficial.

AfriDelivery is confident that, despite all of the internal problems currently being experienced, they will soon overtake all other eCommerce businesses in Zambia. This case study has been created for you in light of this vision and given to you in your teams.

The situation is that AfriDelivery has visited your company, a consultancy, and your manager has assigned you to the project team charged with coming up with the solutions AfriDelivery needs. You have four weeks left in the program to finish the project.

The team with the solution that most impresses AfriDelivery will be offered a Virtual Internship opportunity for one month.

Requirements

1. Evaluate the business processes of AfriDelivery to find any Challenges/Opportunities that could give them a competitive edge that can be used to their advantage or propose a solution to the challenges identified.
2. How do you think the new Ministry of Micro Small and Medium Enterprises could develop policies in Zambia that would influence AfriDelivery's operations and business success?
3. What can AfriDelivery do to get AfriSupermarket deliveries in all the other parts of the country?
4. Brainstorm and design the dashboard for the centralization of employee task efficiency management
5. Do you think AfriDelivery merchants need their own eCommerce platform, if yes why? If not, what other ways could they achieve the same purpose?



APPENDIX B: APPLICATION ASSESSMENT RUBRIC

TABLE 7: APPLICATION ASSESSMENT RUBRIC

ELEMENT	WHAT TO LOOK OUT FOR	VALUE	MAX. VALUE
Age	<p>Desired: Should be aged 18 - 35 years (matured, preferably not in school)</p> <p>Preferred: born from 1985 – 2003</p> <p>Not desired: born before 1985 or after 2003</p>	<p>Age: 18-35 - 2 points (preferred)</p> <p>Age: under 18 or over 35 years - 0 points (not our target)</p>	2 points
Employment Status	<p>Preferably unemployed, or doing their own work to be able to commit the time</p> <p>Should not be in school/ university</p>	<p>Employed in a formal organization Or a student still in school - 0 points</p> <p>Unemployed - 3 points (ideal)</p> <p>Self-employed or an Entrepreneur - 1 point</p>	3 points
Application Form	<p>Completed and submitted the application form</p> <p>All questions were appropriately answered</p> <p>Coherent development and presentation of ideas</p> <p>Relevant responses to questions asked</p> <p>Professional communication and use of the English language</p> <p>Prior experience in logistics is not required, but one should be able to communicate his/her need to pursue the training and the eventual utilisation of skills acquired</p>	<p>Great Communication - Minimal grammatical errors, relevant answer to question - 5 points</p> <p>Standard Communication - Some grammatical errors, but generally relevant responses to questions asked - 2 points</p> <p>Poor Communication - Many grammatical errors and irrelevant responses to questions asked - 0 or 1 point based on assessor's discretion</p>	5 points
Pre-Learning Courses	Complete and submit the certificate for Pre-Learning Courses	<p>No certificates submission - 0 points</p> <p>Submitted Certificates - 5 points</p>	5 points

Application Assessment Key

Please use this colour key guide to highlight each applicant in the appropriate colour, after assessing and reviewing their application data.

- Red:** Has not met the minimum requirements of the application form
- Orange:** Has met minimum requirements on the application form
- Yellow:** Has not submitted a certificate of completion for the pre-learning course
- Green:** Has completed and met all requirements on the application form
- Dark Green:** Has submitted a certificate of completion for the pre-learning course

APPENDIX C: INTERVIEW GUIDE

Call Script For Shortlisted Candidates

1. Pleasantries:

Introduce yourself and ask how they are doing or how their day is going.

2. Location:

Find out where they currently live and if they are in Ghana or Zambia. Find out if they live in Accra or Lusaka, to know if they can be in the hubs if the need be

3. Status:

Get a clear understanding of what they currently do and what their schedule will be like during the 4 weeks of training i.e. if they are students or working or have any other commitments that might interfere with the training if they are selected.

4. Equipment:

Find out if they have a laptop/computer and can access a stable internet required for the training

5. Aspirations:

Why they applied and what they hope to achieve if they are selected to partake in the training.