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Executive Summary

Ayitic Goes Global was a pilot initiative that sought to explore how to tackle poverty and gender inequality in Haiti through digital employment and the strengthening of Internet connectivity.

**Project rationale.** Looking at the future of work and emerging opportunities in international digital markets, the project rationale is that digital employment can mitigate poverty and gender inequality in Haiti. More specifically, the central assumption that the project set out to test is whether mitigating skills and infrastructure deficits is enough to enable young Haitian women from disadvantaged backgrounds to access jobs online.

**2019: Project Execution and Documenting Lessons.** In 2017, Ayitic Goes Global focused on conducting background research to inform how to approach project execution. In 2018, Ayitic Goes Global built on this research feedback and moved onto project execution. In 2019, the project was centered primarily on: (a) finalizing the second and third editions of the trainings for Women and IT Professionals; (b) honing program’s employment activities; (c) finalizing the activities of the ICT Cluster and (d) most importantly, drawing lessons from the project through the M&E Process. Project findings contribute to a better understanding of the Future of Work holds for marginalized communities in the Global South, particularly women.

**Project Management.** In February 2019 LACNIC and IDRC signed an amendment to its original contract including a revised budget and a project extension until December 2019. In connection to budget execution, the project incorporated three new budget lines to support: (a) activities of the ICT Cluster, (b) the purchase of tablets for female trainees and (c) the creation of an employment fund to support the program’s Employment Strategy. Additional funds were allocated to Personnel, namely to extend the work of the employment component through September 2019. The wrap-up activities programmed for September 2019 had to be cancelled due to political unrest affecting the country; funds were re-allocated to support the program’s Exit Strategy. In terms of progress with the Project Schedule, the current political crisis in Haiti resulted in delays to the completion of courses with Cohort 2 and 3, and it limited the scope of employment and M&E activities. Nonetheless, the project managed to conclude successfully. Project partners made efforts to continue supporting graduates in securing employment through October 2019 and the M&E team resorted to alternative data collection strategies. In terms of M&E strategy, LACNIC staff worked with 3x3 Design in further honing factors to be studied. Factors to be prioritized in 2019 included: Socio-Cultural Background (Time use and Baseline Capabilities) Pedagogical Factors (Course Learning and Facilitation, Practical Sessions and Peer-learning) and Employability Factors (Employment Preferences and Application of Digital Skills Beyond Work). Project management also included constant support to Employment Activities. The original Employment Coordinator, Alda Berardinelli left Haiti and was replaced by two locals: ESIH’s Marlene Sam, and COI’s School of Data Fellow, Lyse Ladouceur. To mitigate infrastructural barriers, the program secured an office space equipped with laptops, reliable
power and Internet connection, for all employment activities. LACNIC also coordinated the second and third edition of IT Professional courses and supervised the ICT Cluster activities which in 2019 focused on Internet Security and interconnection in Haiti.

**Research findings and results against agreed objectives.** The overall goal of the project was to create the enabling conditions for young Haitians—more specifically women—to find employment in the digital economy in Haiti by addressing skills and infrastructure deficits. This final report seeks to highlight final conclusions and findings derived from the Monitoring and Evaluation by reporting project results around the five specific objectives established for this project. A sixth section is added to document findings around the project’s gender impact.

<table>
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<th>a. Understanding the conditions to improve online employment opportunities for young women in Haiti.</th>
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<td>The project’s original assumption was that mitigating infrastructure and skills deficits would allow to level the playing field for unemployed Haitian women to access work online and be as competitive as other remote workers across the Global South. However, while the project succeeded in enabling skills upgrading, results on the employment front were modest.</td>
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<td>Research findings are summarized into two subsets. On the hand, this section summarizes factors that allowed for successful training completion and enabled skills upgrading in resource-constrained settings such as Haiti. On the other, given that mitigating infrastructure challenges and upgrading skills was not enough to allow women trainees to secure online work, this section identifies additional factors played a role in the context of Haiti and that may also affect workforce development programs in the Global South.</td>
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<td><strong>Factors for Successful Training Completion.</strong> Factors that have impacted positively on students course completion include: (a) students’ degree of motivation and interest in developing work-oriented competences; (b) close vetting of program applicants during the selection process; (c) provision of digital equipment to Women Trainees and and lack of requirement to travel daily to an education center; and (d) course relevance and pedagogical effectiveness. In connection to this latter point, most salient contributing factors include: (i) Facilitation, (ii) Peer-to-Peer Support, (iii) Relevance of Course Contents (iv) Autonomous Learning.</td>
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<td><strong>Factors affecting access to employment:</strong> beyond skills and infrastructure deficits, the project found that there were other factors affecting access to employment in Haiti. These barriers are grouped into two: platform barriers and preference-related barriers that correspond to individual aspirations and cultural expectations. Platform-related Factors include: (i) Credibility, understood as lack of prior experience and certifications which limited participants’ perceived credibility and self-confidence to apply to jobs. (ii) Financial Inclusion, namely establishing payment pathways to be paid for work on the platforms; this barrier indicates a need for alternative payment strategies as well as workshops on financial literacy. (iii) Language Skills, primarily, lack of proficiency in English which limited opportunities in an already competitive environment. And (iv) Time Invested; the unpaid time it takes to win a bid lowers the income rate and demotivated the graduates from applying to more bids.</td>
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<td>Cultural and Preference-related Factors, on the other hand, respond to beneficiaries’ work and career preferences which led program graduates to choose not to engage in proposed employment</td>
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activities. Factors identified include: (a) Limited Return on Upfront Temporal Investment, by which the unpaid upfront time required to position applicants to win bids lowered effective income rates. And (b) Cultural Preferences for Domestic Market Opportunities, where graduates indicated a preference for jobs in the domestic market due to familiar culture and language and a belief that in-person application interviews provide more viable opportunities to make connections and convince potential employers.

b. Building capacities among women beneficiaries

Course Development Completed. The Caribbean Caribbean Open Institute (COI) completed the development of its digital and data literacy course for program trainees, entitled “Internet and Data Practitioner Course.” The course is composed of five self-paced e-learning segments: Foundations of Being Digital, Productivity Tools for Digital Workers, Data Fundamentals and Capstone Project. Contents were developed in English and in French. To graduate and obtain a certification, students are required to complete all course segments and reach a grade of at least 60% on all assessments. Contents were designed and delivered using an online authoring tool, ADAPT as opposed to ESIH’s platform Thess.

Trainings. The project held three training rounds. A total of 358 women were admitted into the program. The course wrapped up with a graduation rate of 84%, and an attrition rate of only 3%. All program beneficiaries received a tablet to complete the course.

c. Strengthening Internet connectivity and infrastructure

Course Development Completed. LACNIC completed the development of two technical courses for IT Professionals on the following subjects: Network Management and Internet Security. The courses are organized in 12 week modules. Each module wraps up with an online quiz and there is a final in-person exam.

Trainings. The project held 3 training rounds. A total of 163 IT Professionals were admitted into the program, 26% of whom were female. The technical courses had a low attrition rate of only 7%, however the graduation rate stalled at 52%.

ICT Cluster. The goal of ICT Cluster was to coordinate efforts among organizations and professionals from the local technical community to bring about concrete improvements to Internet infrastructure in Haiti. Activities conducted throughout the project included: (a) the integration of program graduates and facilitators into the local and regional technical communities; (b) the strengthening of the local Internet Exchange Point; (c) trainings and support provided to local ISPs to conduct IPv6 deployment; (d) trainings on Internet Security, including a course on how to set up Security Operations Centers.

d. Securing employment and private sector involvement

Employment activities coordinated by the program included: (a) efforts to connect women with work opportunities on online talent platforms; and (b) private sector outreach activities within the domestic market and complementary professional development activities conducted with graduates. As the program came to a close, two graduates presented a proposal to continue the program’s employment activities; this was identified as a viable exit strategy and the proposal was supported.
Employment results from Online Platforms. The program’s initial strategy was to encourage program graduates to create individual profiles on multiple platforms. Results following this strategy were very limited. The M&E team recorded only 17 bids being placed from individual profiles during this time period. Two major changes were adopted to tackle graduates’ limited engagement with online platforms: first, the program secured an office space equipped it with four laptop computers to mitigate infrastructural limitations. Second, the Employment Coordinator centralized the job search and bidding under a single profile using a corporate account. With the creation of the corporate profile, the total number of bids placed increased to a total of 137 between Freelancer and Guru, which ended up being the two platforms most suited to the skills profile of program graduates. Bids placed have been mostly on translation, Data Entry, PDF to word conversion and Copy-Paste. As a result from the bidding process, program graduates managed to secure 2 clients whom, between the two, assigned a total of 5 gigs to them.

Private Sector Engagement and Professional Development Activities. Outreach with private stakeholders within Haiti’s domestic market sought to secure internships and work opportunities for program graduates. As result from these activities, graduates secured 11 internships and jobs. The program also offered complementary professional development activities including a mentorship program, an online Entrepreneurship course with Cisco Net Academy and access to coding courses.

Exit Strategy: Continued Efforts led by Program Graduates. The program interns that supported the search for jobs on the online platforms submitted a proposal to continue with the Employment activities of the program. The goal is to establish an agency of data entry operators and remote work that can sustain itself in the long-run. To support this transition, the program has provided four laptop computers, office rental for an additional six months and a yearly professional membership on Freelancer. In return, they will be expected to submit a report to LACNIC documenting results, prioritize the involvement of Ayitic Goes Global graduates and invest in devising a sustainability plan.

e. Establishing partnerships for scaling.

The focus of partner outreach activities has not been exclusively around securing partners for scaling but also, establishing partnerships to strengthen the activities of the program. Throughout the period the grant, the program liaised with some 14 organizations and cooperation bodies. The main outcome in this year has been Google’s support to scale the courses developed in Central America and the Caribbean. COI and Slashroots Foundation obtained a USD $500,000 grant from Google to train 1,500 young people (40% women) in seven to nine countries in Central America and the Caribbean region. In addition, LACNIC launched a Spanish language version of the Network Management and Internet Security courses on its online campus in 2019 year. LACNIC offered one edition of each course, with 1,174 students registered to the Network Management course (56.47% graduation rate) and an additional 2,017 to the Internet Security Course (49.18% graduation rate). In addition, ESIH will continue offering the technical courses to its student population as an optional choice. The organization is also considering incorporating them as part of their official curriculum beginning in 2020.

The project sought to secure 3 funders engaged in project by providing financial and/or in-kind contributions for existing or new activities. In 2019, the project closed with Google as confirmed donor for scale-up of the courses, CISCO provided in-kind contribution through its Entrepreneurship course (see Section 3.d) and ESIH and LACNIC will continue to replicate the technical trainings in Haiti and in the LAC region respectively.
Ayitic Goes Global was built upon the premise that women in Haiti face greater barriers to access education, employment and the digital economy due to the prevalence of gender-based discrimination present in their society. The program adopted a Gender and Development (GAD) approach, seeking to tackle traditional gender role expectations for women in Haiti by promoting training and employment in a male-dominated sector, such as ICTs. M&E results show that most students from the Internet and Data Practitioner course joined the program for its ability to empower them through technology. Main gender transformations documented include: (a) Improvement of women’s experience online, (b) change in gender roles and expectations within social circles of program beneficiaries and (c) greater gender awareness as result from gender workshops offered by the program.

**Main Dissemination Efforts.** There were three major dissemination efforts in 2019: Project Partners conducted a [Webinar to present Project results in November 2019](#); LACNIC produced a [final communications piece summarizing project results](#), and coordinated a [Workshop at the Internet Governance Forum on the Future of Work](#) along with other IDRC grantees.

**Contributions to Research.** Ayitic Goes Global wraps up with some important contributions around three Research areas: Future of Work, Skills Upgrading and Gender Transformation efforts among marginalized communities in the Global South, as described in Section 5.

**Report Structure.** This report is organized in five sections. Section 1 (Research Problem) revisits the rationale of the project, and introduces main goals pursued in 2019. Section 2 (Project Implementation and Management) summarizes progress with project activities coordinated by LACNIC and provides updates regarding project schedule and budget execution. Section 3 (Research findings) discusses introduce project results based on the five specific objectives agreed for the initiative; Section 4 (Project Outputs and Dissemination) summarizes results agreed outputs and it lists dissemination efforts conducted as part of the project; finally, Section 5 (Contribution to Research Areas) wraps up the report summarizing how this pilot initiative has contributed to literature primarily on the Future of Work and Digital Skills Upgrading and Gender Transformation in the Global South.
1. The Research problem

Ayitic Goes Global was a pilot initiative that sought to explore how to tackle poverty and gender inequality in Haiti through digital employment and the strengthening of Internet connectivity.

Revisiting contextual facts:

- **Haiti has high poverty levels.** 60% of Haiti’s 10.5 million citizens live on less than US$2 per day. Haiti ranks 163 in the Human Development Index from a total of 188 countries (UNDP) and is the least developed country in Latin America and the Caribbean.

- **Unemployment is widespread with a shortage of skilled labor; women are particularly affected by unemployment.** According to 2014 World Bank estimates, there are 4.59 million Haitians in the labor force; underemployment is widespread with few jobs in the formal sector. There is a marked shortage of skilled labor (CIA Factbook). Women are particularly disadvantaged as they suffer from higher levels of unemployment, lower educational levels, poorer overall living conditions and greater vulnerability to exploitation (Caribbean Development Bank).

- **Access to education remains a challenge, particularly for girls and women.** Adult literacy rates are alarmingly low. Estimates from the CIA Factbook place adult literacy at 61% – 64% for males and 57% for females – while UNDP reports an even lower adult literacy rate of 48.7%. Access to education is particularly low among children, 50% of which do not attend school (UNICEF and World Bank). This situation is markedly worse among women. The average girl in Haiti only attends school until the age of 7 years; girls are often pulled out of school to assist with household chores or when families are faced with steep tuition fees (Save the Children). According to the Gender Inequality Index, Haiti scores 0.603 ranking 138 out of 155 countries in 2014 (UNDP). Unequal gender relations in Haiti contribute to the lower status of women and girls in the public and economic spheres, leading to the concentration of women in lower paid and often informal jobs; 22.5% of adult women have reached a secondary or higher level of education compared to 36.3% for their male counterparts (Caribbean Development Bank).

- **Internet penetration is low.** With 1.2M Internet subscribers (12% penetration) Haiti is one of the countries with the lowest Internet penetration in the Caribbean (42% average penetration) (ITU statistics). Access to mobile phones has increased rapidly, rising from 500,200 in 2005 to 7,160,000 in 2013 (ITU statistics) but smart phone use with access to data packages, is limited.

1. a. Project Rationale

Looking at the future of work and emerging opportunities in international digital markets, the project rationale was that digital employment can mitigate poverty and gender inequality in Haiti. More specifically, the central assumption was that mitigating skills and infrastructure
deficits would enable young Haitian women from disadvantaged backgrounds to access jobs online.

Guided by this assumption, the project worked on building digital capacities among young women and assisting them in securing online jobs. Given that connectivity represents a key challenge to the growth of a digital services market in Haiti, the project also worked on a range of actions to strengthen local capacities and infrastructure.

Project execution was structured around three central components:

**Training for women.** Education and the creation of a qualified pool of human resources is understood as one of the keys to unlock unemployment. In this sense, the project trained 358 women using a combination of online learning and in-person facilitation to develop digital skills for online work, with a focus on basic-data processing and online marketing. Target beneficiaries included women from low and low-middle income households. As part of this component, the project sought to test what processes can help women build digital capacities and whether these new skills can help them achieve more sustainable livelihoods.

**Employability.** Remote, online work is touted as an opportunity to overcome unemployment for workers across developing countries. As part of this component, the project sought to connect program graduates with online work opportunities through a combination of strategies that included talent platforms and domestic work opportunities.

**Internet development.** To enable the growth of an online market for digital services in Haiti, Internet infrastructure and network services need to be strengthened. Promoting the growth of a digital service market in Haiti has to come hand in hand with mid-term efforts to improve Internet access and infrastructure. On this front, the project worked to strengthen local capacities by training IT professionals and to bring about concrete improvements to connectivity through an ICT Cluster.

Ayitic Goes Global was designed as a pilot program which set out to test:

- What training strategies are most effective to develop digital skills among women from disadvantaged backgrounds in resource-constrained environments such as Haiti.
What factors lead to women’s success in completing courses and securing employment.
What dynamics from the online employment market enable or hinder the participation of disadvantaged groups in the digital economy.
To what extent connectivity challenges limit the participation of Haitian youth in the digital economy and how these challenges may be overcome.

1. b. Ayitic Goes Global in 2019: Project Execution and Documenting Lessons

In 2017, Ayitic Goes Global centered around conducting background research that would determine how the project was going to be executed. This included: (a) delimiting the project’s target population; (b) identifying microwork opportunities in the online employment market that Haitian women could perform remotely; (c) defining thematic focus and pedagogical strategies for course development; and (d) contextualizing how the project would play out in Haiti based on existing course offering in the country and Internet infrastructure challenges.

In 2018, Ayitic Goes Global moved from programmatic research to project execution with focus on 4 key areas: (i) launch of trainings for women; (ii) launch of trainings for IT professionals and collaborative activities organized by the ICT Cluster; (iii) initial efforts on employment with program graduates and (iv) ongoing research through Monitoring and Evaluation (M&E).

In 2019 the project was centered primarily on:

- **Finalizing the second and third editions of the trainings for Women and IT Professionals.** The first semester of 2019 saw the wrap up of the second and third round of trainings. Political unrest delayed the calendar but the online nature of the courses allowed for the courses to conclude without major delays.

- **Honing program’s employment activities.** The project continued to work with program graduates testing strategies to: (a) engage women with the proposed employment activities and (b) to achieve better results on the online platforms. Employment results were modest; however, activities allowed the M&E team to document factors limiting women’s access to work.

- **Finalizing the activities of the ICT Cluster.** The year 2019 saw the execution of the final activities programmed for the ICT Cluster, with a focus on Internet Security and Interconnection.

- **Drawing lessons from the project through the M&E Process.** The main objective of the year was to draw conclusions from this pilot initiative, primarily around strategies for skills-upgrading and for connecting disadvantaged communities to online work. The findings contribute to a better understanding of the Future of Work holds for marginalized communities in the Global South, namely, what work opportunities exist and specific factors affecting workers in challenging environments such as Haiti.
1. c. Revisiting Project Objectives

Project progress in this report will be measured against the agreed project objectives:

**Project General Objective**
Create the enabling conditions for young Haitians to find employment in the digital economy in Haiti through addressing skills and infrastructure deficits.

**Specific Objectives**
(a) Enable a better understanding of the conditions needed to improve online job opportunities for young women in the country.
(b) Address the demand of overseas (and local) digital markets by building capacities among at least 300* young women in Haiti to provide data-related services and expand entrepreneurial opportunities in the country.
(c) Contribute to improving Internet connectivity and infrastructure in the country by building capacities and technical knowledge on advanced network deployment, expansion, security and management among at least 150 advanced IT professionals**.
(d) Encourage private sector, development, and financial institution engagement by (i) creating a local enterprise (to secure clients with quality and timely delivery of results) and (ii) launching a coalition with Haitian diaspora professionals and business leaders to support the initiative with the training/mentoring and remote jobs for graduates.
(e) Expand the number of beneficiaries by using this project as a pilot for forthcoming regional initiatives that could support scaling the initiative: (a) National Vocational Training Centers (members of the Inter-American Centre for Knowledge Development in Vocational Training (CINTERFOR) network) / Slim Foundation (b) Caribbean country members of the IADB Compete Caribbean Network.

* Updated from 500 to 300 as agreed with IDRC in November 2017.
** Actions to improve Internet connectivity now also include the work of the program’s ICT Cluster, which is dedicated to generating concrete improvements to local Internet Infrastructure.
2. Project Implementation and Management

Throughout 2019, LACNIC has continued supervising the project’s general coordination and has led activities related to Internet Development component. Responsibilities have included:

a) Handling the project’s general coordination, supervising both budget and project execution
b) Overseeing progress of research activities, now primarily through the process of Monitoring and Evaluation
c) Coordinating efforts for supporting program graduates with online work and connecting them with local job opportunities.
d) Overseeing the implementation of technical courses for IT Professionals
e) Overseeing the work of the ICT Cluster to encourage local leadership among IT professionals and Internet Development within Haiti

This section will be organized around these five responsibilities. For each, this section will describe the various activities supported to date, introduce most salient work strategies and report on management challenges during this reporting period.

2. a. Project’s General Coordination

This section touches upon two central aspects around the project’s general coordination: budget monitoring and adjustments to project schedule in 2019. The project coordination was severely affected by the deepened political unrest experienced in Haiti in 2019. The section explains how these growing unrest impacted on the project and strategies deployed to circumvent it.

2. a. i. Budget Monitoring

In February 2019 LACNIC and IDRC signed an amendment to its original contract including a revised budget that contemplated better project execution that had been carried out during 2018 and was planned for 2019:

- **Three new budget lines were incorporated.** Funds originally allocated to Training were reassigned to support: (a) activities of the ICT Cluster, (b) the acquisition of tablets for female trainees and (c) the creation of an employment fund to support the program’s Employment Strategy. US $35,082 have been invested in ICT Cluster activities during 2018 and 2019; US $27,037 have been used to purchase tablets for all women trainees and US $18,629 were executed to cover for expenses of the project’s employment strategy. The extension of the project schedule has demanded extra funding to extend the work of the Employment Component. Funds originally budgeted to translate project results, produce project promotional materials and
provide extra support for data gathering activities have been channeled to cover for additional expenditure under this budget line and to organize closing networking activities with graduates.

- **Additional funds were allocated to Personnel.** The amendment of the contract included an extension of the project’s execution deadlines. To cover for three extra months of work of the Employment Coordinator, additional funds were allocated under the budget line: Personnel. Alda Berardinelli, who was hired in 2018 for the role of Employment Coordinator and concluded her work in July 2019. For the remaining three months of work (July-September 2019), the project hired Marlène Sam and Lyse Ladouceur as Employment Coordinator and Employment Assistant respectively. The project’s overall coordination continued under responsibility of Transversal; the supervision work continued until the end of 2019 without implying additional funding. Similarly, the project extension required three additional months of work for the Research Assistant which were covered by LACNIC.

In addition, during 2019 funds were reallocated to cover for the project’s closing activities in Port au Prince. The activities demanded an increase of the budget for International Travel as speakers from abroad were invited to participate in the events, as well as under the budget line “Closing event”. Initially, US $8,699 were spent to host the closing events. Unfortunately, due to the political and social crisis in Haiti, the activities had to be cancelled. The project received a 50% refund from the Marriott Hotel which was channeled to the Employment Fund to support the program’s Exit Strategy. An additional US $5,033 were invested in laptop computers (to reemplace the equipment stolen during the looting of the co-working space in which the beneficiaries had been working); space rental at Transversal and an annual prime membership on Freelancer.

The amount spent under International Travel also increased due to an unforeseen trip to Ottawa to attend the Networked Economies Partner’s meeting organised by IDRC in 2018.

LACNIC received two fund transfers from IDRC in 2019 for CAD $95,000 and CAD $25,880 respectively, in accordance with the new payment schedule established at the contract’s amendment. One last fund transfer for upto CAD $58,920 is pending the submission and approval of the last technical and financial report.

Lastly, LACNIC contributed with USD 9,793.20 from its own funding in 2019, completing a total amount of USD 26,353.70 throughout the project development. LACNIC’s contribution in 2019 was used mainly to fund three extra months of work of the Research Assistant, staff travel to Haiti and the Dominican Republic for the launch of Google and COI’s Caribbean School of Data, and translation costs of a closing communications piece.

2. a. ii. Project Schedule

The following schedule reflects how project activities have unfolded throughout the 30 months of the project execution.
The original project schedule suffered two main changes during this period:

a) As reported in 2017, course launch was postponed until May, 2018 to afford project partners more time to work on better characterizing the profile of women beneficiaries, preparing course contents and conducting a more thorough first recruitment process.

b) Course delivery, Employment activities and the M&E suffered delays during 2019 due to the current political crisis in Port au Prince. The start of the third round of trainings had to be postponed from March to mid April due to social unrest. The situation worsened during the second half of the year, impacting on the work of the employment component and data gathering activities for M&E. Project partners made efforts to continue supporting graduates in securing employment through October 2019 and resorted to alternative data collection strategies to meet date needs for the M&E.

Originally, the project was due to wrap up in June 2019 but on February 18th, 2019 IDRC and LACNIC signed an amendment to allow a six-month extension on project execution. The extension: (a) allowed additional and more comprehensive efforts with graduates from Cohort 3 around employment; and (b) afforded project partners more time for documenting and reporting results.

The table below summarizes the various project execution phases.

<table>
<thead>
<tr>
<th>Program Research</th>
<th>Program Design and Evaluation Plan</th>
<th>Course Delivery and Evaluation of Cohort 1</th>
<th>Course Delivery and Evaluation of Cohort 2</th>
<th>Course Delivery and Evaluation of Cohort 3</th>
<th>Overall Assessment + Exit Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand Research Study, 3x3 Design.</td>
<td>Program Design, all partners with LACNIC in the lead.</td>
<td>Course delivery – ESIH. M&amp;E Instruments and Report by 3x3 Design with support of Slashroots. Data Collection, by Local M&amp;E Coordinator. Program Adjustments, all partners with LACNIC in the lead.</td>
<td>Course Delivery – ESIH. M&amp;E Instruments and Report, 3x3 Design with support of Slashroots. Data Collection, Local M&amp;E Coordinator. Employment Activities, Coordinator (Aida Bernardinelli). Program Adjustments, All partners with LACNIC in the lead.</td>
<td>M&amp;E Instruments and Report, 3x3 Design with support of Slashroots Foundation Program Adjustments for employment component, LACNIC</td>
<td>M&amp;E Instruments, 3x3 Design with support of Slashroots Foundation Data Collection, Local M&amp;E Coordinator Overall M&amp;E and Scaling Report, 3x3 Design</td>
</tr>
</tbody>
</table>

Socio-political Unrest in Haiti and its Impact on Project Activities

Since 2018, Haiti has seen a surge of political protest and social unrest after the Commerce and Economic Ministry announced a sharp increase in gasoline prices, amid corruption accusations. The situation has worsened with economic stagnation and violent riots demanding the resignation of president Jovenel Moïse.
While the country has frequently suffered cycles of political and economic distress, the current crisis is described by local project partners as extremely grave. Since September 2019, the country has come to a standstill, with soaring prices, fuel shortage, collapse of public services and a growing sense of insecurity. During riots, many residents have stayed on lockdown with businesses, schools and public buildings also closing for several weeks.

Trainings were not severely affected by the political unrest during 2018, the online nature of the trainings and facilitation allowed most students to stay on schedule with course contents, reinforcing the benefits of online training.

In person activities, however, had to be rescheduled multiple times in 2019 due to growing difficulties to access public transport, with barricades impeding traffic and general insecurity. The application window for Cohort 3 was extended from two weeks to a month to ensure adequate time for all programmed activities. As the year progressed, activities of the employment component and M&E data gathering were the most affected due to difficulties that graduates suffered to move safely around the city and get to the coworking space where they conducted the online job search. The crisis further exacerbated infrastructural challenges, as graduates faced greater barriers as a result of inconsistent electrical power supply, higher cost of backup electricity generation due to gasoline shortages, and intermittent access to the Internet and to computer laboratories. Survey responses were lower and a focus group with graduates of Cohort 3 had to be replaced by email interviews.

Closing activities with all the graduates scheduled for the first week of September at the Marriott Hotel had to be canceled and on September 27th, a few days before concluding Employment activities, the coworking space where graduates gathered was looted and the computers that the project had provided were stolen. These computers were eventually replaced using the refund received from the Marriot Hotel and a new office space at Transversal has been secured for the beneficiaries to pursue online work as part of the program’s Exit Strategy.

2.b. Research Activities: Monitoring and Evaluation

Since the completion of the project’s research phase in 2017, Monitor and Evaluation has been the main research activity led by project partner 3x3 Design and the major mechanism through which the project has collected and systematized results from this pilot initiative. The project’s evaluation aimed at identifying factors affecting the successful completion of the program and monitoring their performance to provide recommendations for program improvement and scaling up.

As described in the second interim report of 2018, the scope of work of the M&E was extended and additional funding was channeled for its development. Throughout 2018 and 2019, M&E focused on:

a) assessing the change or impact attributable to programmatic activities;
   b) isolating key factors to test within the overall program design that affect impact; and
c) identifying environmental conditions or factors that affect the successful implementation of programmatic activities.

**Key Factors Analyzed through Monitoring and Evaluation**

Factors studied throughout the M&E process can be divided into two: Environmental and Programmatic Factors.

**Environmental Factors.** These include socio-economic, cultural, and infrastructure barriers. Factors studied include: income, domestic responsibilities, access to reliable connectivity and power supply.

**Programmatic Factors.** These factors look at program activities which are isolated and tested for efficacy. Programmatic activities analyzed include: (a) online skills-building; and, (b) strategies to improve women’s access to online work.

In March 2019, after the completing the evaluation of the second round of trainings, LACNIC and 3x3 Design revised the M&E Framework and decided to further narrow the focus of the M&E for the remaining cohorts. Focus centered on:

a) **Socio-Cultural Background**
   i) **Time use.** Research sought to analyze different patterns of time use between female and male students of the IT Professionals courses, as well as the weight of unpaid domestic work among female student of the Internet and Data Practitioner course.
   ii) **Baseline Capabilities.** Language and digital skills and their impact in course performance and particularly in employment.

b) **Pedagogical Factors**
   i) **Course Learning and Facilitation.** The program tested and compared online and in person facilitation modalities.
   ii) **Practical Sessions and Peer-learning.**

c) **Employability Factors**
   i) **Employment Preferences.** The program sought to understand graduates’ preferences in terms of employment and how they value talent platforms.
   ii) **Application of Skills.** M&E research aimed at identifying positive impacts of the Internet and Data Practitioner training beyond gaining employment. It examined whether the program had contributed to strengthening graduates’ overall application of digital skills to other spheres of life beyond work.

**M&E Methodology**

The evaluation of Cohort 2 and 3 followed the same methodological approach as Cohort 1. Data was collected from trainees, facilitators, and project partners using both qualitative and quantitative method at the the start, mid-point, and end of the trainings.
• **Baseline data.** An online application form, designed in coordination with ESIH and 3x3 Design, was distributed among applicants. The information from this form, in addition to screening interviews and baseline skills tests conducted at ESIH, were used to determine program admission and gather key baseline indicators from applicants. Through the application process, the program gathered data on socioeconomic and infrastructural factors as well as baseline skills. Baseline digital capacity was measured through self-rating of students’ proficiency using the same application form as in Cohort 1 and 2. COI and LACNIC’s baseline skills tests for Women and IT Professional students respectively were distributed among Cohort 3 applicants. As in Cohort 1 and 2, applicants to the IT Professional courses were invited to sign up to Thess (ESIH’s online learning platform) to take the baseline skill test prior to coming to ESIH for the interview, seeking to test, not only skills, but also proper Internet Access for an online course. Female students for the Internet and Data Practitioner course took the test at ESIH during the interview to allow the interviewer to evaluate their digital skills in person.

• **Survey Analysis.** During course delivery with Cohort 2 and 3, 3x3 Design conducted mid- and end-term course assessment surveys with both Women and IT Professionals. The surveys gathered key quantitative information on different aspects of the program and captured students’ experience with different pedagogical factors. Response rate was moderate across all three cohorts in spite of follow-up efforts by local program partners.

• **Course Assessment Focus Groups.** The program held focus groups with students from Cohort 2 and 3, following the same methodology as with students from Cohort 1. The focus groups provided qualitative information on the performance of the program and assessed the experience with the program and course curriculum. The focus groups captured data on participants’ motivations, barriers to meaningful participation, expectations from the program, what went well, what did not go well, what could be improved.

• **Interviews.** End-term Interviews were conducted with four students and two facilitators from both the IT Professionals and the Internet and Data Practitioner course to provide qualitative information on the success of the initiative and gather feedback on program performance. These interviews provided a deeper insights into the findings of the focus groups and surveys, particularly around motivation, challenges, behaviors, and aspirations.

• **Impact Assessment Survey.** Two months after the completion of all three rounds of trainings, an Impact Assessment Survey was distributed among the program’s graduates to gather data on the program’s impact and graduates experience joining the digital workforce. The survey was useful to gather information on the following factors: application of skills learned, perception of online platform and employment activities, challenges, overall experience, and feedback for program improvement.

• **Employment Program Assessment Focus Groups.** To provide qualitative information on the performance of the program and assess employment activities, two additional focus groups were conducted with graduates of Cohort 1 and 2 to examine motivation and barriers to meaningful participation in the employment activities, expectations from the program, what went well, what did not go well, what can be
improved, definition of success and expectations around employment, application of skills learned, gender barriers and transformation experienced. A focus group with graduates of Cohort 3 had to cancel due to political unrest. Interviews were conducted to gather data from students from this third training edition.

- **Employment Program Assessment Interviews.** Following the conclusion of employment support activities, interviews were conducted with the Employment Coordinator, two interns working for the program on job search and two employers: Digicel (local Haitian IT company) and a client from Freelancer. The aim was to provide qualitative information on the success of the employment component and get a deeper insight into the findings of the focus groups and surveys including motivations, challenges, behaviors, and aspirations.

- **Reporting form Project Partners.** 3x3 Design continued collecting data directly from the program's partners. Baseline, mid-term, and end-term pilot reflection reports gathered information and feedback to document the planning process for the recruitment and selection of the students, induction sessions, and course delivery.

Data from all the sources was compiled and compared to validate findings, conclusions, and recommendations regarding the performance of Cohorts 2 and 3. Findings were also validated and confirmed with program partners through online presentations and discussion at the end of Cohort 2 and 3.

The following table summarizes all data collection activities.

<table>
<thead>
<tr>
<th>Onset of the Training</th>
<th>Mid-Point of the Training</th>
<th>End of the Training</th>
<th>Post Training /Employment Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Online Application and Screening Interviews with applicants of both IT Professional courses and Internet and Data Practitioner course.</td>
<td>1. Course Assessment Survey with students from both courses (IT Professionals Course and Internet and Data Practitioner Course).</td>
<td>1. Course Assessment Survey with students from both courses (IT Professionals Course and Internet and Data Practitioner Course).</td>
<td>1. Impact Assessment Survey with graduates</td>
</tr>
<tr>
<td>2. Baseline Reports from the Partners.</td>
<td>2. Program Assessment. Focus Group with all students.</td>
<td>2. Assessment Focus Group with all students.</td>
<td>2. Focus Group discussions with graduates of the IT Professionals and Data &amp; Internet Practitioner courses (C1 and C2)</td>
</tr>
<tr>
<td>3. Mid-Term Reports from the Partners.</td>
<td>3. End-Term Reports from the Partners.</td>
<td>3. End-Term Reports from the Partners.</td>
<td>3. Interviews with the graduates of Cohort 3</td>
</tr>
<tr>
<td>4. Assessment Interviews with students and course facilitators.</td>
<td>4. Assessment Interviews with students and course facilitators.</td>
<td>4. Assessment Interviews with students and course facilitators.</td>
<td>4. Employment Program Assessment Interviews with the Employers, Employment Coordinator, and the 2 interns</td>
</tr>
</tbody>
</table>

### 2.c. Coordination Support to Employment Component

During 2019 Ayitic Goes Global consolidated its employment strategy. As it was described on LACNIC’s Second Intern Report of December 2018, the program prioritized working with online talent platforms.
The Employment Coordinator played a central role introducing graduates to online platforms and providing support when bidding and completing gigs on online platforms.

As the employment strategy evolved, the Employment Coordinator was also tasked with:

- Testing different bidding strategies on online platforms
- Pursuing job and internship opportunities within the domestic market to help program graduates gain professional experience.
- Conducting additional training activities with graduates to improve transversal competencies for employment.

A follow-up survey conducted by the M&E team with graduates of Cohort 1 revealed that infrastructure was a major constraint preventing graduates from engaging with employment-related activities. To tackle this barrier, from March 2019, activities of the employment component were conducted at an office rented at Banj, a co-working space in Port au Prince. In April, the project provided four computers and two graduates were hired as interns to support job search at online platforms and keep the space open during office hours. Having a space available to receive graduates, train them on job search and complete online gigs had a crucial impact on the development of the employment strategy. Offering a working space with stable Internet and power supply substantially increased the quality of employment activities coordinated by the program, introduced the graduates to a community of freelancers and offered networking opportunities.

Alda Berardinelli continued in her role as Employment Coordinator until July 2019, leaving the country due to the political unrest. Marlène Sam, ESIH’s Academic Director, together with Lyse Ladouceur, former facilitator for the women courses, replaced her; they were hired as Employment Coordinator and Employment Assistant respectively from July to September, 2019. Their prior work with program graduates in particular was highly valued by LACNIC when choosing them for their roles. Marlène Sam led ESIH’s research work, beneficiary selection and course delivery for all three cohorts. Lyse Ladouceur first got involved with the project as School of Data Fellow with the Caribbean Open Institute. In 2018 she completed a degree in Computer Science at ESIH and continued working for Ayitic as a tutor for the women trainees. Lyse Ladouceur was the leading contact with the graduates, supporting both job search at online platforms and the completion of gigs. Marlène Sam focused on potential job and internship opportunities at the domestic market and in the consolidation of alliances to secure further training opportunities.

2.d. Development of Technical Courses for IT Professionals

The development of technical courses for IT Professionals by LACNIC has been largely based on the organization’s prior experience in IT capacity-building in Haiti. Ayitic Goes Global has sought to reinforce local knowledge on subjects that are crucial for Internet development in Haiti: Network Management and Internet Security.

In 2019, the project completed the second and third round of the 12-week online trainings. To comply with student’s request for a more practical approach training rounds 2 and 3 included two videos with practice scenarios, reformulated quiz questions for a less
theoretical approach and two sessions with the facilitators to discuss practical applications of the course content.

After the completion of training round 2, extra adjustments were made to improve the pedagogical experience and graduation rates. The program introduced opportunities to retake the exam on weekends were provided; and adjusted weekly quizzes to emulate the final exam more closely.

Louis Junior Bien-Aimé and Berwith Francois continued working as course facilitators for the Network Management and Internet Security course respectively. As in Cohort 1, they were involved with student selection for Cohort 2 and 3.

Detailed results of the IT Professional courses throughout the project are provided in section 3. c. i.

2.e. Overseeing the Work of the ICT Cluster

**Max Larson Henry**, director of Transversal and member of the Haitian Association for Information and Communication Technologies (AHTIC) has continued to lead Internet Development activities throughout the project.

In spite of the political and economic crisis, the project managed to continue working on Internet development. During 2019, the ICT Cluster focused on Internet Security and interconnection in Haiti.

Details on the work conducted are describe in section 3. c. ii.
3. Research Findings

The research findings presented in the First Interim Report of Ayitic Goes Global of January 2018 were geared towards understanding how to best approach project execution. These findings shaped the project’s selection of program beneficiaries, development of course contents, design of pedagogical strategies, and the design of the employment plan.

The second report presented in December 2018 documented preliminary research findings around factors for successful training completion and lessons on how to connect young Haitian women with online employment opportunities.

This final report seeks to highlight final conclusions and findings derived from the Monitoring and Evaluation of the project.

This section will be organized around the five specific objectives established for this project, reporting --as applicable-- research findings and/or activities results for each one of them. A sixth section is added to document findings around the project’s gender impact:

a. Understanding the conditions to improve online employment opportunities for young women in Haiti.

b. Building capacities among women beneficiaries;

c. Strengthening Internet connectivity and infrastructure;

d. Securing employment and private sector involvement; and

e. Establishing partnerships for scaling.

f. Gender Impact

3. a. Understanding the Conditions to Improve Online Employment Opportunities for Young Women in Haiti

This section is targeted at fleshing out research findings around specific objective (a).

(a) Enable a better understanding of the conditions needed to improve online job opportunities for young women in the country.

In order to improve opportunities for Haitian women to secure jobs online, the project worked on two fronts: first, on upgrading digital skills through trainings; and second, on supporting program graduates to connect with online work opportunities.

This section will be divided in three segments. Subsection (i) will revisit findings from the initial research phase of the project which sought to map out work opportunities for Haitian women within the online job market, suitable pedagogical strategies and Internet infrastructure challenges. This input was used to design programmatic activities. Subsection (ii) will introduce project findings around skills upgrading in resource constrained environments such as Haiti. Subsection (iii) will summarize conclusions from the project’s
efforts to connect women with online work. Research findings are derived from the Monitoring and Evaluation conducted throughout the project. For in depth information, please refer to: Evaluation Report for Training Round 1, Evaluation Report for Training Round 2, Evaluation Report for Training Round 3 and Ayitic Goes Global: Overall Assessment Report.

3. a. i. Revisiting Preliminary Research Results

In 2017, the project conducted preliminary research aimed at collecting contextual data to inform project design. This initial research phase focused on four areas of inquiry as listed below. Information in this section is summarized from the research reports presented by 3x3 Design (Digital Jobs in Haiti: Demand Opportunities), Slash Roots (Ayitic Goes Global: Pedagogical Strategy) and ESIH (Offre en Haiti: Competences & formations du secteur TIC).

i. Demand-Side Needs: this body of research was led by the 3x3 Design team; it focused on identifying job opportunities in North American markets that could be fulfilled by program trainees based in Haiti. Main results included:

- **Top Sectors.** The top five sectors that offer the most digital opportunities included media, entertainment, financial services and investment, information and communication technology, professional services, and healthcare.

- **Job Opportunities.** When considering job complexity --in an effort to identify jobs that matched the characteristics and baseline qualifications target beneficiaries-- data entry, market research and data extraction emerged as the leading job opportunities followed by virtual assistant, SEO clerk and web and mail security. This led to course development for women trainees to be structured around two tracks: Data Practitioner (for data-processing related work) and Internet Practitioner (for social media and online marketing jobs).

- **Marginal Role of Haitian Diaspora.** Research showed that companies with Haitian Diaspora leadership was limited. This was corroborated at the Experts Consultation where the program concluded that Haitian Diaspora was not in a position to source remote employment for program graduates.

ii. Supply-Side Needs: This research stream was led by ESIH and consultant Yacine Khelladi; it studied characteristics of potential program beneficiaries and sought to identify their baseline qualifications.

- **Women Beneficiaries:** upon studying potential target populations, and following feedback from the Experts Consultation, it was determined that the program would exclude women from very-low to low-income groups with unfinished secondary education. Selection would concentrate on women from low-income to middle-low income households who have reached the end of highschool and/or are beginning to engage in tertiary education.

- **Challenges to Online Education.** Research indicated that target beneficiaries had limited access to digital equipment, virtually no broadband access, unreliable electricity supply, and difficulties to access transportation, mainly due to cost.

- **Baseline Skills.** In terms of digital literacy, the research concluded that while target beneficiaries had exposure to technology, most had no systematic know-how. Most
had no work experience and required support to develop skills for professional settings. In terms of language skills, Haitian Creole was identified as the preferred language of communication among target beneficiaries; they had basic to medium knowledge of French and little knowledge of English.

iii. Pedagogical Strategies: This body of research was led by Slash Roots. It focused on identifying most suitable teaching strategies for digital skills development among low-income women. Recommendations included:

- **Student Acquisition.** A robust application evaluation process should be developed to separate applicants with a general interest from strong candidates who are likely to succeed. This process should include exercises as well as an in-person interview to reveal whether or not the applicant has the basic capability to enter the program and the commitment to complete the same. All recommendations were applied and student selection was identified as a key factor for successful course completion.

- **Skills Building Approach: Competency Based Curriculum Design.** Learning objectives should be designed with competency and employability in mind. Each learning objective should have clearly defined competency standards, specifying the type of evidence required to verify skills mastery. The Internet and Data Practitioner course developed by COI incorporated this recommendation.

- **Student/Instructor Interaction.** Course delivery should be designed to facilitate in-person interactions at key points in the learning pathway so as to sustain high student engagement. Student/Instructor instruction within the online learning space should employ asynchronous techniques (e.g. video and/or voice recordings of key learnings) as well as synchronous techniques (video chat and/or real-time forums) to ensure the most effective learning experience. The Instructor should always remain a tangible facet of the course, accessible to the student. The trainings incorporated online and in-person facilitation; this element also proved crucial for successful training completion among women beneficiaries.

- **The Adult Learner in an Online Space.** Course design and delivery should always maximize on the characteristics of an adult learner: allowing autonomy; being goal-oriented; providing heavily practical content and; being structured for a community experience.

- **Student Collaboration.** Course content should encourage student collaboration through dynamic activities including group work and team sprints. In order to achieve the goal of the “self-evolving student” the program must incorporate technology-driven, regularized self assessment sessions.

iv. Internet Infrastructure Challenges. This body of research was led by ESIH, with contributions from Yacine Khelladi and Max Larson Henry. It sought to contextualize Internet connectivity challenges to understand the infrastructure barriers for online teaching and online employment. Main highlights included:

- **Limited Internet Access.** Haiti has the lowest Internet penetration rate in the Caribbean. This situation is the result of multiple factors: unreliable access to power; high connectivity costs that render Internet access unaffordable by a great majority of the population; investment barriers that keep ISPs from investing in several
regions; the lack of public policies to incentivize Internet growth; widespread poverty; and high local bandwidth costs (Bionda FONSECA-HOEVE).

- **Connectivity Cost and Quality of Service as Main Challenges.** The average monthly Internet plan is equal to 25 USD which is way above the 5% of GNP recommended by ITU (Haiti’s legal daily minimum wage is USD 5.5). In spite its cost, quality of service is subpar with the market dominated by two major providers, Digicel and NatCom. Internet access remains expensive and inaccessible to most households.

- **Lack of Qualified Human Resources.** Industry players interviewed expressed the need for market-driven local training in ICTs. In their view local training programs remain too generic and disconnected from latest ICT trends and developments owing mostly to lack of local trainers. Employers also highlighted that IT professional must strengthen analytical/ critical-thinking capacities to be creative to conceptualize, plan and organize.

- **Strategies for Internet growth.** (a) Promoting private demand for connectivity has the potential to drive improved and increased Internet service. On this front, the growth of a digital service market and expansion of online employment positively contribute to this goal. (b) Strengthening capacities among local IT professionals can encourage both entrepreneurial initiatives and more state-of-the-art networks and infrastructure development. (c) Encouraging the growth of a more varied Internet ecosystem by strengthening local IXP, promoting the emergence of small ISPs and the development community networks as a means to reach underserved populations and bring about greater competitiveness in a market dominated by two large service providers.

- **IT Pros Beneficiaries.** Research confirmed that building capacities among technical professionals in Haiti would represent a positive contribution to the strengthening of the local Internet Ecosystem. Just as the research teams profiled women beneficiaries for employment courses, the target population of IT Pros was characterized. IT-Pros were aged 19-34, most had completed a University degree; some had advanced educational degrees. The great majority had access to a laptop and owned a smartphone. French was identified as preferred language of instruction even when Creole is their native language. The great majority had some kind of broadband access.

3. a. ii. Research Findings: Skills Upgrading in Resource-Constrained Environments

As presented in greater detail, in Section 3.b. of this report, 358 young Haitian women were successfully trained in digital skills, with a graduation rate of 84% and a low attrition rate (3%). In spite of sociocultural and infrastructural barriers faced by the program trainees, the project proved that upgrading digital skills through online trainings is possible, even in resource-constrained environments such as Haiti.

In the case of IT Professionals, as reported in Section 3.c. of this report, the graduation rate was 52% with an attrition of 7%. This was attributed mainly to work and domestic
responsibilities of adult professionals, which posed greater challenges to pursue online training parallel to other personal and professional obligations.

Factors Affecting Student Performance

The program grouped factors affecting student performance into two groups: environmental conditions and programmatic aspects. In connection to environmental conditions, the M&E considered socio-cultural and infrastructure factors; in connection to programmatic aspects, analysis centered on pedagogical factors and their impact on students’ performance.

Documented factors for both women and IT Professionals included:

**Socio-Cultural Factors**

**Time Use and Domestic Responsibilities**
- Most Women and IT professionals received support from their families but domestic responsibilities such as a sick elderly at home or care of child often affected the performance of the students negatively.
- Time management also played a large role in dealing with coursework and family-related work. The female IT professionals bore greater burden of domestic responsibility. Time management challenges were mitigated through specific modules in the Internet and Data Practitioner courses and through a time management workshop in the orientation sessions for IT Pros.
- Motivation and more one-to-one support played a significant role in encouraging students who faced challenges related to time use.

**Financial Constraints**
- Financial limitations were mostly linked with transportation costs.
- Provision of tablet and lack of requirement to travel daily to ESIH played an important role in making it feasible for Women Trainees to successfully complete the program.
- There was also an indication that higher the income, lower the performance, because of more time spent on work than on the course.

**Infrastructural Factors**

**Internet Connectivity**
- Limited connectivity was amongst the biggest barriers that dissuaded, constrained or obstructed the student’s meaningful participation in the online course.

**Electrical Power Supply**
- Frequent power cuts and access to electricity at home were a significant barrier that constrained access to the course materials and practice. Frequent power cuts and unreliable supply affected the use of technological devices and presented an obstacle to access the course materials and quizzes.

**Transportation Barriers**
The challenge of transportation was closely tied to financial constraints for Women Trainees. Each travel was an investment and required significant changes in their spending habits to meet the expense. It had less bearing on the performance of the IT professionals who only had to visit ESIH for final exams.

**Access to digital device**

- The provision of tablets to the Women Trainees allowed to overcome the barrier of access to digital device.

**Pedagogical Factors**

**Course Learning and Facilitation**

- **Access to Facilitators, Women Trainees:** Course learning and facilitation support was the biggest factor influencing women’s experience and successful completion of the course. There was an overwhelmingly positive response towards the patience, availability, and dedication of the facilitators. Women trainees were inspired by the facilitators and perceived them as mentors.

- **Access to Facilitators, IT Professionals:** Most experiences of the IT Professionals with the facilitators were positive but there was a somewhat neutral response on the effectiveness of the facilitation support. Students indicated a need for practice sessions and in-person discussions, so the program integrated online and in-person sessions starting with the second edition of the course.

- **Preference for Online Facilitation among women trainees.** With the first edition of the courses, both Women and IT Professionals reported interest in more practical and in-person sessions. However, to achieve greater scalability, the program sought to test whether the courses could still be effective if facilitation took place mostly online. To this end, with Cohort 2 and 3 students were given the option to choose between online and in-person facilitation (each option capped at a maximum). In the case of Women Trainees, most preferred online facilitation, partly because of the difficulty in traveling back and forth to ESIH and partly because they wanted to learn how to self-regulate their work. There was no significant correlation between the performance of the women trainees in (i.e., scores on quizzes and exams) and the choice of facilitation context (i.e., in-person or online). In the case of the IT Pros, however, preference overwhelmingly inclined towards in-person sessions despite scheduling conflicts due to employment and work travel.

**Peer Learning**

- **Peer Support and learning:** Students sought moral support from their peers and helped each other to improve comprehension of the course content. Women Trainees reported that peer learning improved their understanding of the course.

**Self-regulation and self-directed learning**

- Women Trainees were encouraged by the goal-oriented and autonomous character of the curriculum design. The access to course schedule in advance, ability to track grades, multiple attempts at quiz, and links to outside materials played an important role in instilling a culture of self-regulation and planning in Women Trainees.
Factors for Successful Course Completion

Four core aspects that have contributed to course completion:

1. **Student Motivation.** Student motivation played a key role in keeping both Women Trainees and IT Professionals engaged with course materials. Motivation in both cases is closely related to efforts to develop work-oriented competences.
   a. Women have reported an interest in technology and the development of digital competences. They see in this skill development a door to accessing work opportunities.
   b. IT Professionals reported an interest in acquiring new, specialized knowledge and the development of specific technical skills. The interest in the course also ties to a potential professional benefit, be it through access to internships or better employment opportunities.

2. **Selection Process.** Both in the cases of Women Trainees and IT Professionals, outreach through partner organizations and direct contact through interviews was a key factor for success. This was particularly relevant for women who could only apply to the program if an associated NGO supported their application. Together with high motivation, this thorough vetting process contributed to courses’ low attrition and high graduation rates.

3. **Provision of digital equipment to Women Trainees and online nature of courses.** Provision of tablets and lack of requirement to travel daily to an education center played a important role in enabling Women Trainees to stay in and graduate from the program. Distributing tablets solved the barrier of access to a digital device, while the online nature of the course and optional participation in in-person activities allowed students to save on transportation costs.

4. **Course relevance and pedagogical effectiveness.** In connection to course effectiveness, drivers for success include:
   a. **Facilitation.** Facilitation proved to be crucial for both Women Trainees and IT Professionals. In the case of the Women courses where students and facilitators met in person at multiple stages, facilitators played a more significant role in guiding the learning experience, and were perceived even as mentors. This contribution is understood to have played a crucial role in ensuring low drop-out rates. IT Pros on the other hand, who only met with facilitators at the onset of the course, practice sessions and for the final exam (that is to say, provided facilitation mostly online), expressed the desire and preference for in-person sessions.
   b. **Peer-to-Peer Support and Learning.** Peer to Peer support was a crucial factor for success, particularly for Women Trainees. Women reported helping one another to understand course contents, but also identified peer-to-peer interactions as key aspect in getting through emotional challenges connected to the learning experience. Among IT Professionals there was a unanimous desire for more in-person group activities.
   c. **Relevance of Course Contents.** Beyond specific feedback to improve certain course modules, Women Trainees and IT Professionals manifested overall satisfaction with course contents. Women in particularly highlighted the
importance of acquiring relevant and applicable digital skills, while IT Pros indicated the importance of being exposed to novel content.

d. **Autonomous learning.** The courses strove to cater to adult learners, by allowing for student autonomy and providing clear learning objectives. These characteristics proved to work well. In the Women course, students reported an increased level of self-discipline as the course progressed and appreciated course design features such as being able to track exam results. IT Professionals on the other hand emphasized the timeliness and predictability of the course, which is also understood as crucial to allow for students autonomy and better planning throughout the learning process.

3. a. iii. Research Findings: Factors Limiting Access to Online Employment in the Context of Haiti

Once Women Trainees graduated from the online courses, they began receiving program support to access online work opportunities. Results for this project component were extremely modest. Due to socio political unrest, the graduates from the third and most numerous edition of the course had less exposure to employment activities. The program graduates who received employment support only managed to secure 2 clients and complete 5 gigs on one of the talent platforms used, Freelancer.

The project’s original assumption was that mitigating infrastructure and skills deficits would allow to level the playing field for unemployed Haitian women to access work online and be equally competitive as other remote workers across the Global South. However, research findings indicate skills upgrading and mitigation of infrastructure challenges alone did not suffice to allow for the swift integration of women trainees into the digital economy. This section seeks to shed some light as to what additional factors played a role in the context of Haiti and it identifies key areas to develop more effective workforce development strategies in the Global South.

**Employment Strategy**

The original proposal submitted to IDRC foresaw the creation of small enterprise composed of women graduates that would service North American companies interested in outsourcing business processes to Haiti.

As the program progressed, the research and implementation teams identified several limitations to original employment strategy, which led to the analysis of alternative models. Detailed information into the exploration of various models may be find in the December 2018 Interim Technical Report.

The model chosen for the project was that of **Talent Platforms**, which entailed providing support for Women Trainees to create profiles and secure gigs online, working independently.
Key characteristics of the employment strategy included:

- **Infrastructure challenges mitigated.** Early into the work with program graduates around employment, it became evident that infrastructure deficits needed to be tackled to be able to more effectively connect women with online opportunities. As such, the program secured an office at Banj, a co-working space in Port-au-Prince, which was equipped with four laptops and reliable power and Internet connectivity. The office space centralized employment activities. It succeeded in mitigating challenges around access to equipment, power and connectivity, though transportation costs remained a limitation to some of the graduates.

- **Centrality of the Employment Coordinator Role.** The project hired an Employment Coordinator to provide support to program graduates and lead efforts to expose women to the world of online platforms. The employment coordinator became a lead point of contact for women beneficiaries following training completion. The role entailed getting women familiar with the online platforms, and also providing quality checks when gigs got confirmed.

- **Online Platforms as primary strategy, but domestic opportunities also considered.** The employment strategy prioritized online platforms as a potential source for jobs for program beneficiaries. However, as program graduates reported the need to gain greater professional experience and practice skills, the employment component sought to complement the online job search search with opportunities in the domestic market. A total of 9 internships and 2 jobs were confirmed in the local market.

- **Focus on Beneficiaries’ Transition to Professional Life.** Beyond supporting women in the job search, the employment strategy sought to prepare program graduates to transition into professional life and consider career paths beyond some of the entry level jobs offered by the online platforms or the domestic market. The Employment Coordinator spearheaded the coordination multiple activities geared towards building a professional demeanor and developing confidence for women beneficiaries to succeed on their own. These included: review of CVs and coaching for job interviews; additional trainings on Coding and Entrepreneurship; mentoring program with the support of local NGO Haiti Femmes et TICs; and a gender workshop.

- **Testing ramp-up strategies on platforms.** The project tested various strategies to improve women’s access to work online on through talent platforms. Strategies are reported in section 3. d. Most salient ones include bidding below the average gig price and the use of a corporate account on the talent platforms (as opposed to individual profiles) to allow graduates to work as a team. Despite these efforts, results were limited with only 2 clients secured and 5 gigs completed.

**Program Participants and Their Views on Employment**

A key element to understand the results on employment front lies in the background and views of program beneficiaries. With students from Cohort 2 and 3, the M&E process centered on identifying student personas and pathways post graduation which provide interesting insights around how program beneficiaries perceived opportunities on the online platforms, and how they chose to invest their time.
The project identified in each cohort 3 profiles: (a) University Students; (b) Workers and Job Seekers and (c) Home-based or Unemployed students. University Students represented 50%-60% of program beneficiaries; they were pursuing a higher education degree, had higher digital skills and greater access to connectivity. Some 10%-20% of students were employed or actively seeking employment, usually in non-digital fields. This group had less access to connectivity and digital equipment. They had some level of digital skills and had rated themselves as having strong soft skills, as they had prior exposure to work environments. Lastly, some 30/40% of students were unemployed or home-based; this group was the least likely to have Internet access or access to digital equipment, and generally had lower digital skills. The following tables summarizes challenges, aspirations and student priorities around employment.

### Student / Part-time worker (50-60%)

**Challenges**
The key challenge is infrastructural followed by time management.
- Inadequate broadband connectivity and frequent power cuts
- Conflict of schedule with university activities
- Needs to make sacrifices to find time for the course workload of both the university and AGG training and employment program
- Time Balance priorities: Studies, Household Activities and Cooking, Sports / Recreation, and Religion / Spiritual

**Aspirations**
The person desires to cover university expenses and is mostly driven by peer recognition within industry & female empowerment:
- Recognition in the industry for being a pioneering woman and an expert at digital skills
- Sense of success driven by the ability to set goals and achieve them
- Family oriented seeking to provide family a better future.

**Employment**
Top three job priorities are Career Growth (83.33%), Job Stability (43.33%), Good Working Environment (46.67%), and Salary (33.33%)

Key challenges in order of priority:
- Previous Work Experience
- Confidence
- Transportation
- Interview Skills

Infrastructure and lack of client referrals are the main barriers to freelance work

Source: M&E Data, Training Round 2 & 3

### Worker / Job Seeker (10-20%)

**Challenges**
The key challenge is pedagogical followed by time management and infrastructural. 
- Learning new materials is hard and requires a shift in mindset
- Inadequate broadband connectivity and frequent power cuts
- Needs to make sacrifices to find time for the course workload of AGG program & work activities
- Time Balance priorities: Work, care of elderly / child

**Aspirations**
The person is mostly self-driven and desires stability and good socio-economic status in society:
- Financial Success to have a better tomorrow
- Sense of success driven by the fear of failure, specifically in a country that is in political turmoil
- Individualistic and self reliant and seeks to learn from past mistakes
- Pursue part time employment to study further or gain additional income while polishing skills

**Employment**
Top three job priorities are Career Growth (55.56%), Job Stability (44.44%), Good Working Environment (44.44%), and Salary (33.33%)

Key challenges in order of priority:
- Previous Work Experience
- Transportation
- Confidence and Interview Skills

Infrastructure is the main concern for freelance work

Source: M&E Data, Training Round 2 & 3
Beyond differences among these three student personas, there are also some commonalities that determined how they engaged with program activities around employment:

- **Time use and coexisting responsibilities.** All program participants had other activities or responsibilities beyond participating in the program, whether it was university, work or domestic responsibilities. Coexisting responsibilities meant that program beneficiaries had to make decisions as to where to invest their time. As a result, the engagement in platform-related program activities of unemployed (37.7%) and part-time employed students (9.3%) was highest compared to other groups. By contrast, the program graduates who were engaged in higher education studies and full-time employment were also the group that participated the least in the capacity building sessions organized by the program. These results indicate that the vast majority of graduates leveraged the program to improve their skills and digital proficiency and preferred university education as the next milestone rather than joining the digital workforce.

- **Pursuit of multiple pathways and interest in part-time or independent work.** The majority of the program students agreed to the intent of seeking a job after the completion of the course. A preference was seen towards continuing with part-time (25.8%) and full-time (19.2%) university studies in addition to employment. Following close are the graduates who seek online work for greater autonomy and flexibility of hours so they can pursue other activities - household, business, family. Part-time and independent work were preferred due to the greater autonomy and flexibility they offered. However, the great majority sought flexibility to continue to pursue other responsibilities, mainly domestic and study.

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**Home-Based / Independent (30-40%)**

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Aspirations</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The key challenge is infrastructural followed by time management and pedagogical.</td>
<td>The person is mostly driven by desire to balance work and life, values autonomy, and worth in the eyes of family members:</td>
<td>Top three job priorities are Career Growth (63.34%), Independence and Self Management (36.36%), Flexibility in schedule (36.36%), and Good Working Environment (36.36%). Key challenges in order of priority:</td>
</tr>
<tr>
<td>Inadequate broadband connectivity and frequent power cuts</td>
<td>Family oriented seeking to provide family a better future</td>
<td>Previous Work Experience</td>
</tr>
<tr>
<td>Lack of motivation and commitment</td>
<td>Desires professional success and gain of dignity in society</td>
<td>Transportation</td>
</tr>
<tr>
<td>Struggle with learning techniques</td>
<td>Seeks full time employment or part time employment to either pursue further studies or be there for family while practicing skills</td>
<td>Interview Skills</td>
</tr>
<tr>
<td>Time Balance priorities:  Business, Childcare, Household Activities and Cooking, and Religion / Spiritual</td>
<td></td>
<td>Confidence</td>
</tr>
</tbody>
</table>

*Source: M&E Data, Training Round 2 & 3*
Factors Affecting Access to Employment: Beyond Skills and Infrastructure Deficits

The project’s original assumption was that mitigating infrastructure and skills deficits was sufficient to level the playing field and allow Haitian women to access work online. The project however found that there were other factors at play in Haiti -- some of which may be also playing a role in other countries across the Global South.

These barriers are grouped into two: platform barriers, some of which are already documented in existing literature, and preference-related barriers that correspond to individual aspirations and cultural expectations.

**Platform-related Factors**

Several constraints prevented most program graduates from engaging successfully with the online platforms and submitting job applications. Most salient factors include:

**Credibility.** Lack of prior experience and certification limited participants’ perceived credibility and self-confidence to apply to jobs, which put program graduates at a relative disadvantage in comparison to other bidders on the online platform. 83.33% of the program graduates reported this issue as a top challenge.

**Financial Inclusion.** Establishing payment pathways via PayPal, as required by the platform, was challenging for many due to a common inability to provide a linked credit card. This barrier indicates a need for alternative payment strategies as well as workshops on financial literacy. 54.39% of the program graduates reported this issue as a top challenge.

**Language Skills.** Lack of proficiency in English limited access to platforms and online jobs, which decreased the number of accessible opportunities in an already competitive environment. 42.98% of the program graduates reported this issue as a top challenge.

**Time Invested.** As it has been widely documented in existing literature of the gig economy, the unpaid time it takes to win a bid lowers the income rate and demotivated the graduates from applying to more bids. This factor links closely to preference-related factors listed below.

**Cultural and Preference-related Factors**

Cultural expectations, beneficiaries’ preferences and engagement with a diversified pool of post graduation pathways led program graduates to not engage in proposed employment activities. Factors identified include:

**Limited Return on Upfront Temporal Investment.** All of the program graduates struggled with the reverse auction bidding system of the online platforms. The significant unanticipated unpaid upfront time required to position applicants to win bids lowered effective income rates and demotivated graduates from applying to more bids.
return on the time invested in bidding on online platforms led many graduates to decide to invest their time in applying for jobs in the domestic market.

**Cultural Preferences for Domestic Market Opportunities.** Graduates described a cultural norm of distrusting strangers in Haiti. Fears of fraud and scams also prevented some graduates from engaging in online work that is paid post-delivery. Moreover, some graduates indicated a preference for jobs in the domestic market due to familiar culture and language and a belief that in-person application interviews provide more viable opportunities to make connections and convince potential employers.

3. b. Building Capacities among Women Beneficiaries

This section is targeted at understanding research findings and progress achieved around specific objective (b).

| (b) Address the demand of overseas (and local) digital markets by building capacities among at least 300 young women in Haiti to provide data-related services and expand entrepreneurial opportunities in the country. |

With the completion of the second and third training rounds in 2019, the program was able to meet its training goals: a total of 358 women beneficiaries were trained in digital skills.

3. b. i. Content Development: the Internet and Data Practitioner Course

The Caribbean Open Institute (COI) was the organization in charge of developing course contents for women beneficiaries. COI designed a competency-based curriculum in digital and data literacy aimed at strengthening digital competences. Five self-paced e-learning segments, each consisting of four modules, were developed with content in English and in French. Course content was drafted in consultation with the students and faculty at the University of West Indies and curated from various Open Education Resources available online.

The following graph summarizes the Data and Internet Practitioner course content; a full course description can also be accessed online.
Each course segment is to be completed within two weeks time, including its corresponding quiz at the end of each segment. To graduate and obtain a certification, students were required to complete all course segments and reach a grade of at least 60% on all the quizzes. At the end of each course, students were expected to take a test in order to assess whether they had adequately assimilated the course materials and developed corresponding competencies. These tests were administered in a controlled class setting, and consisted of online multiple-choice questions and two short reflexion questions that invited the student to reflect on the learned concepts and cognitively apply them to familiar contexts. The pass mark for each of these tests is 60%.

In addition, COI developed a capstone module. The capstone module presented a business scenario related to a specific target job. Students were expected to analyze the issue at hand, and select and apply the appropriate digital tools to solve it. The capstone module was designed to test competencies as well as effective critical thinking, problem-solving, and communication skills in a job scenario.

3. b. ii. Course Delivery and Training Results

The program completed its three rounds of trainings in 2019. Target beneficiaries included young women from low to low-middle income households; educational background ranged from women with complete secondary education to women with some level of tertiary education.

ESIH led the recruitment process for all three training rounds and worked in collaboration with Civil Society Organizations based in low-income communities that were in close proximity to potential target beneficiaries. Applications were only accepted from women recommended by these grassroots organizations.

ESIH’s local leadership and contacts were key to attract a considerable number of applications and meet the target profile. In particular, the strategy to select only women recommended by partner NGOs proved crucial in selecting highly motivated applicants with greater chances of completing the course. The Selection Committee in charge of making a final decision on accepted applicants included ESIH, COI and LACNIC staff, allowing for a more transparent and informed selection process. Applicants were interviewed in person and asked to self assess their digital skills.

ESIH organized in-person orientation sessions for the kick-off of the courses for all three cohorts. The orientation session served multiple purposes. First, it was as an opportunity for students and facilitators to meet in person and discuss the way in which facilitation was to take place and agree on communication channels. Second, it allowed project partners to meet students and explain how the course fit in within the larger context of the Ayitic Goes Global Program. The sessions further established trust and credibility with the students and provided them a platform to raise any questions or doubts. During the sessions, the facilitators coordinated the handing of Tablets and briefed students on how to troubleshoot.
potential technical problems that could be encountered during the course. Students were also explained how to use the tablets and key applications for the program such as slack and Google Suite products.

For Cohort 2 and 3, the orientation sessions included the participation of the Employment Coordinator. Time was set aside to explain the work of the employment component and discuss students expectations in terms of employment. A Time Management workshop was also offered at orientation. M&E results showed that guidelines and productivity tools shared during these workshops were highly valued by students.

Training Results

A total of 358 young Haitian women were accepted into the program. The course had a graduation rate of 84% and a low attrition rate (3%). These results represent a major achievement of the project, given the infrastructural barriers found in Haiti. Based on similar programs, Ayitic Goes Global had initially foreseen a graduation rate of between 60 and 75%.

All Women used tablets to access the course material and selected French as the language of instruction. Besides the initial technical problems encountered with downloading apps on the tablet, the students found course navigation easy.

Student- Facilitator ratio varied in each cohort. The first cohort achieved a ratio of 1:17, but as the number of students doubled for the second cohort, only one extra facilitator was engaged. This decreased the ratio to 1:26; while this did not reduce overall performance, the M&E reported students reported a need for extra facilitators. As a result, three additional facilitators were engaged for Cohort 3.

The following table summarizes key data for all three training rounds:

<table>
<thead>
<tr>
<th>Women enrolled in the Internet and Data Practitioner Course</th>
<th>Attrition rate</th>
<th>Graduation Rate</th>
<th>Students provided with tablets.</th>
</tr>
</thead>
<tbody>
<tr>
<td>358</td>
<td>3%</td>
<td>84%</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.3. Strengthening Internet Connectivity and Infrastructure

This section is targeted at understanding research findings and results achieved around specific objective (c).

(c) Contribute to improving Internet connectivity and infrastructure in the country by building capacities and technical knowledge on advanced network deployment, expansion, security and management among at least 150 advanced IT professionals.
LACNIC has proposed two major strategies to work on improving Internet connectivity and infrastructure in the context of this program:

a) Training 150 IT Professionals to reinforce local technical capacities.

b) Creating an ICT Cluster to bring together program graduates and the local technical community to work on concrete and tangible improvements to local infrastructure.

This section will summarize work on these two sets of activities.

3. c. i. Technical Trainings for IT Professionals

As detailed in Section 2, in 2019 LACNIC concluded its second and third round of trainings for IT Professionals. A total of 169 technicians participated of the 12-week online courses on Internet Security and Network Management. The program accepted over 150 students, concluding with a graduation rate of 52%.

Application and selection process

The recruitment and selection process was led by ESIH throughout the program, with the support of a selection committee composed of LACNIC staff and course facilitators, Berwith Francois and Louis Junior Bien-Aimé.

The selection followed the same procedure in all three training rounds. Students applying to the course were requested to complete an online application prepared by ESIH and 3x3 Design. ESIH distributed the call for applications among higher education institutions that specialize in Information Technology and local organizations from the Technology and Internet sectors. The program targeted IT university students or graduates interested in pursuing a specialization in Networking and Internet Security. Those called in for an interview were requested to take an online test to assess their baseline skills. To finalize the list of admitted students, three main criteria were taken into account: applicant’s gender, employment status and result of baseline test. The goal was to prioritize female applicants and to have an even representation of students employed and unemployed. Only students that scored 60/100 or higher in the entry test were admitted.

Project partners used Cohort 1 to determine the courses’ approximate attrition rate and increase the number of admitted students accordingly in the future training rounds. Only 50 students were admitted in Cohort 1. Cohorts 2 and 3 admitted an additional 50 and 63 students respectively. Aligned with its gender approach, the program made special efforts to increase the percentage of female students selected to participate in IT Professionals courses. The percentage of female students for all three training rounds is 26%.

In person orientation sessions were organized at the start of each cohort. These sessions included a time management workshop for students of Cohort 2 and 3. M&E results revealed that students greatly appreciated orientation sessions, as they provided an opportunity to meet the facilitators and familiarize themselves with the course structure. In addition, the Time Management sessions helped students better tackle the challenges of combining
employment and online learning: 25% of students reported time management as a top barrier with women reporting 1.5 more time spent household work than men.

Training results

Facilitators Berwith Francois and Louis-Junior Bien-Aimé were charge of course facilitation for all three cohorts. Each of them provided 12 hours of facilitation per week for each cohort. The number of students per facilitator gradually increase after each cohort, from 1:25 for Cohort 1 to 1:26 and 1:32 in cohorts 2 and 3 respectively.

Despite some delays on the completion of the weekly quizzes, students performance measured by the results of weekly quizzes was very satisfactory. The average result for all quizzes was above 75/100 points for both Internet Security and Networks Management course. Students, however, found the final in-person exam more challenging. The final exam consisted of a practical application of the course content with the minimum passing grade set at 60%. Students were given the option of choosing when to take the final exam from three possible dates, however many students faced difficulties to attend the dates for the final exam, either due to pre-existing work responsibilities or due to the security situation in Port au Prince.

The following table summarizes the results of the IT Professional courses:

| 163 | 52% | 7% |
| IT Professionals enrolled in the program | Graduation rate | Attrition Rate |
| 26% | 100% | 56% |
| IT Pros were female | IT Professionals had pursued Higher Education | IT Professionals were employed |

3. c. ii. ICT Cluster

The goal of ICT Cluster was to coordinate efforts among organizations and professionals from the local technical community to bring about concrete improvements to Internet infrastructure in Haiti. The initiative, led by Max Larson Henry, developed throughout the program, from 2017 to 2019. This section summarizes the key areas of work of the ICT Cluster.

Integration of Ayitic Graduates and Facilitators to the Technical Community

The ICT Cluster sought to foster the integration of graduates from Ayitic’s IT trainings into the local technical community. Three internships for program graduates were completed
successfully at the local firm, DINASA. Following the internship, two students were offered full time employment and the third one was hired as a Security Consultant.

As described in the 2018 interim report, efforts were made to integrate facilitators from the program into the broader technical community of Latin America and the Caribbean. Berwith Francois and Louis Junior Bien-Aimé were invited by LACNIC to participate in the event LACNIC 29 in Panama and the Cybersecurity FIRST Symposium. In 2019, Louis Junior Bien-Aimé was sponsored to participate at LACNIC 31 in the Dominican Republic. He coordinated the participation of group of Haitian professionals and took part in a panel where he presented efforts conducted by Ayitic Goes Global to enhance technical abilities among the Haitian IT Professionals.

A group of female graduates from the Internet Security and Network Management courses also attended the LACNIC event and participated in a focus group organised by LACNIC to assess women's involvement in the IT technical community in LAC.

**Support to the local Internet Exchange Point (IXP)**

One of the main initiatives put forth by the ICT Cluster has been the strengthening the local Internet Exchange Point (IXP). The Haitian IXP is managed by the Haitian Association for Information and Communication Technologies (AHTIC). The ICT Cluster proposed to support the IXP by working on four fronts: (i) facilitating processes automation at the IXP; (ii) promoting technology and knowledge transfer; (ii) coordinating hardware renewal; and (iv) facilitating the incorporation of additional Content Delivery Networks (CDNs).

In 2018, the ICT Cluster supported the IXP in deploying IPv6, installing and configuring multiple servers (Proxmox Servers, HTTP Server, .ht DNS server, IXP Manager VM, two BIRD Route Servers) and installing network monitoring software. To improve processes automation at the IXP, Kyle Spencer, Executive Director of Uganda IXP, was invited to Haiti to train local experts. The goal of this South-to-South collaboration was to support the Haitian IXP in deploying tools and software to automate tasks that were completed manually. The workshop also supported the set-up of a monitoring system. Half-a-dozen Haitian engineers received technical training to ensure that local professionals can support the management of the IXP. At the end of Kyle Spencer’s seven-day visit to Haiti, a conference on “Internet and IXPs in Africa” was offered for the technical community at the Hotel Montana in Port au Prince.

In terms of hardware renewal, Ayitic Goes Global funded in 2018 two core switches to replace outdated equipment at the IXP and promoted the cooperation of AHTIC and the .ht consortium to acquire extra equipment.

In 2019, AHTIC with the support of Max Larson Henry signed a Memorandum of Understanding with Cloudflare for the installation of their CDN node at the local IXP.

Louis Junior Bien Aimé, hired in 2018 for enforce the development of the IXP had continued working throughout 2019.
In addition, and thanks to the collaboration between the ICT Cluster, AHTIC, Fondation Réseau de Développement Durable d’Haiti and the ccTLD .ht. the IXP deployed an .ht ns1.nic.ht DNS server. Housed within a few meters of a copy the F-Root anycast node, this DNS server contributes to the resilience and robustness of the Internet in Haiti.

**Support for IPv6 Deployment in Haiti**

Aligned with LACNIC’s work in the region, the ICT Cluster supported a range of activities to promote IPv6 Deployment in Haiti.

In 2017, CONATEL commissioned an IPv6 readiness assessment of the local operators (Telecom operators, ISPs and the Central Bank and local private banks). The report identified the need for further IPv6 deployment support for local ISPs. In May 2018, LACNIC’s Research and Development Coordinator, Alejandro Acosta, offered an IPv6 deployment training in Port au Prince for 35 members of the local technical community. In addition, Alejandro Acosta held one-on-one workshops with staff from two local ISPs, Access Haiti and Haiti Data Networks to assist them in deploying IPv6.

At the end of Alejandro Acosta’s visit to Port au Prince a conference was offered to the local technical community on IPv6 deployment in Latin America and the Caribbean. Kevon Swift, Head of Strategic Relations and Integration at LACNIC joined Alejandro Acosta in this presentation.

**Support for greater attention to Internet Security in Haiti**

Lastly, the ICT Cluster has also worked on Internet Security, an issues which has been traditionally neglected in Haiti. As detailed on the previous report on October 21st, 2018 Max Larson Henry and Alejandro Acosta from LACNIC participated of the CyberCon2018 Forum in Port au Prince. They hosted an Internet Security Panel that addressed the following topics: (a) Protection of telecom infrastructure and infrastructure during disasters and (b) Security of the Internet: DNSSEC, RPIK and IPv6.

In addition, Berwith Francois, the facilitator of the Internet Security course hosted a conference and workshop on the importance of implementing a CSIRT (Computer Security Incident Response Team) in Haiti. Students from Ayitic’s technical trainings also participated in the event.

In September 2019, a group of IT Professionals, graduated from the Internet Security course that Ayitic had offered, were invited to participate of a workshop titled: How to set up a Security Operations Center. Hosted at Transversal, the workshop sought to discuss pressing issues and challenges to Internet security in Haiti while sharing best practices towards the development of Security Operation Centers.

Blaise Arbouet, a Haitian security expert currently living in Canada and Berwith Francois, facilitator of Ayitic’s Internet Security course were in charge of facilitating the workshop,
together with professionals from the ISOC Chapter. Participants identified: Hacking, Malware, Phishing, Ransomware and Spam as the most common security threats for organizations in Haiti and highlighted the need to set up a Computer Security Incidents Response Team. Best Internet security practices for the local context were also discussed and professionals explained to each other successful strategies implemented at their organizations.

3. d. Securing Employment and Private Sector Involvement

This section is targeted at understanding project results around specific objective (d).

(d) Encourage private sector, development, and financial institution engagement by (i) creating a local enterprise (to secure clients with quality and timely delivery of results) and (ii) launching a coalition with Haitian diaspora professionals and business leaders to support the initiative with the training/mentoring and remote jobs for graduates.

Multiple project partners have contributed towards this objective, including the program’s Employment Coordinators, Alda Berardinelli and Marlene Sam, the Employment Assistant, Lyse Ladouceur, Max Larson Henry in his role as local project Coordinator, and LACNIC, as overall manager of the initiative.

Two of the original ideas enshrined in this objective, creating a local enterprise with program graduates and collaborating with the Haitian Diaspora, were discarded early on into the execution of the project, as research indicated they were either not viable alternatives or posed significant challenges in their implementation.

In terms of private sector engagement, the decision to rely on online talent platforms to secure clients eliminated the need for proactive program outreach. Nonetheless, as the Employment Strategy began developing, the program identified much value in reaching out to private sector within the domestic Haitian market to secure internships and jobs. These efforts are documented in this section.

Lastly, in devising an Exit Strategy with program graduates, the two interns that supported the work of the Employment Coordinators presented a proposal to continue working along with other graduates on the online platforms. The key agreements reached are documented and presented in this section.

The current section will present the results of the Employment activities coordinated by the program. It is structured in three segments: section (i) will cover results on the online platforms; section (ii) will cover private sector outreach activities within the domestic market and complementary professional development activities conducted with graduates; lastly, the section (iii) will wrap up summarizing some of the agreements with the graduates that will continue working to search for employment on the platforms.
3. d. i. Employment results from Online Platforms

Activities with program graduates took place from September 2018 to September 2019. Activities reached students from all three editions without reaching, however, 100% engagement with any of the three cohorts.

The initial strategy was to encourage program graduates to create individual profiles on multiple platforms. Results following this strategy were very limited. The M&E team recorded only 17 bids being placed from individual profiles during this time period.

Early on in the process, it became evident that expecting beneficiaries to bid for jobs individually had its limitations. Unless using paid memberships, most platforms have a monthly caps on the number of bids a worker can submit. In addition, program beneficiaries reported several challenges, including the need for further assistance navigating the platforms, connectivity issues, as well as other impediments such as time constraints, insecurity applying, and unavailability to invest time in bidding and searching for jobs on the platforms.

Two major changes were adopted to tackle graduates’ limited engagement with online platforms: first, the program secured an office space at a co-working space and equipped it with four laptop computers to mitigate infrastructural limitations. Second, and for the remaining of the project, the Employment Coordinator centralized the job search and bidding under a single profile using a corporate account. Two program interns were hired to support with the job search and lead the bidding process. When gigs got confirmed, the Employment Coordinator and interns coordinated the distribution of tasks with other program trainees.

With the creation of the corporate profile, the total number of bids placed increased to a total of 137 between Freelancer and Guru, which ended up being the two platforms most suited to the skills profile of program graduates. Bids placed have been mostly on translation, Data Entry, PDF to word conversion and Copy-Paste.

As a result from the bidding process, program graduates managed to secure 2 clients whom, between the two, assigned a total of 5 gigs to them. All gigs completed were won on Freelancer and a total of 12 program graduates participated in completing the gigs.

3. d. ii. Private Sector Engagement and Professional Development Activities

While the primary strategy of the project was to employ women online, other professional development activities proved crucial to keep the program beneficiaries motivated and strengthen their work experience and exposure to professional life.

One of the primary activities conducted, included reaching out to private stakeholders within Haiti’s domestic market in an effort to secure internships and work opportunities for program graduates. These included HR Recruitment agencies, local online job platforms and
potential employers/internship sites. As result from these activities, graduates secured 11 internships or jobs including companies such as Digicel.

Other complementary professional development activities included:

a) A mentorship program developed with Haiti Femmes & Tics. Professional women from the Haitian ICT sector volunteered to support and motivate the program graduates to pursue a career in ICTs.

b) An online Entrepreneurship course was offered with Cisco Net Academy. Program graduates were tutored by professionals from Push Haiti, an organization working to bridge the gap between tertiary education and the Haitian job market. Graduates received guidelines to develop their own business and financial skills.

c) Graduates from Cohort 3 were selected to attend an introductory online course to Phyton at CODE9 a local learning platform.

3.d.iii. Exit Strategy: Continued Efforts led by Program Graduates

The program interns that supported the search for jobs on the online platforms, Herdline Casimir and Sherline Francis, submitted a proposal to continue with the Employment activities of the program. Specifically, they have proposed the following goals:

1. To establish an agency of data entry operators and remote work that can sustain itself in the long-run
2. To expand the number of program participants with an profile created on the online work platforms and continue to explore work opportunities online through talent platforms
3. To coordinate continued capacity-building activities to hone digital skills and acquire new ones.
4. To continue learning how to use the online work platforms among program graduates, and incorporate, whenever possible, other young Haitian women
5. Once the agency achieves certain autonomy, to integrate more women in the field of ICT and online work

This proposal submitted was welcomed by project partners which collectively agreed to support it. The proposal of creating an agency for remote work takes up the original idea of the project proposal of creating a local enterprise with the program graduates.

In light of this development, Haiti Femmes et TICs has proposed to extend the mentorship activities conducted with program graduates.

To support this transition, the program has provided:

- Four laptop computers
- Office rental for an additional six months
- Yearly professional membership on Freelancer

In return, they will be expected to submit a report to LACNIC documenting results, prioritize the involvement of Ayitic Goes Global graduates and invest in devising a sustainability plan.
3. e. Establishing Partnerships for Scaling

This section is targeted at understanding project results around specific objective (e).

(e) Expand the number of beneficiaries by using this project as a pilot for forthcoming regional initiatives that could support scaling the initiative: (a) National Vocational Training Centers (members of the Inter-American Centre for Knowledge Development in Vocational Training (CINTERFOR) network) / Slim Foundation (b) Caribbean country members of the IADB Compete Caribbean Network.

Outreach activities throughout the project were led primarily by IDRC LACRO staff, LACNIC, Max Larson Henry and supported by other projects partners.

The focus of partner outreach has not been exclusively around securing partners for scaling but also, establishing partnerships to strengthen the activities of the program.

Throughout the period the grant, the program liaised with Slim Foundation, Google, IADB’s Compete Caribbean, IADB’s State Modernization, UN Women Uruguay, Haiti and Global Office, ILO’s CINTERFOR, USAID’s Global Development Lab, European Union Delegation in Uruguay, UNDP Uruguay, UNDP Haiti, Ford Foundation, and World Bank’s ICT Department. Other meetings with potential partners -- not necessarily potential donors— have been held with local chambers of commerce in Haiti, Export to Caribbean initiative, Avassant Foundation, Center for Facilitation of Investment in Haiti (CFI), among other.

Other than these contacts, outreach activities have centered around private sector engagement for the employment component as reported in section 3.c.

The main outcome in this year has been Google’s support to scale the courses developed in Central America and the Caribbean. COI and Slashroots Foundation sought and obtained a USD $500,000 grant from Google to train 1,500 young people (40% women) in seven to nine countries in Central America and the Caribbean region. COI and Slashroots are developing the program and using the learnings from the evaluation activities to meet some barriers and gaps early on, specifically the employment program.

In addition, LACNIC launched a Spanish language version of the Network Management and Internet Security courses on its online campus in 2019 year. LACNIC offered one edition of each course, with 1,174 students registered to the Network Management course (56,47% graduation rate) and an additional 2,017 to the Internet Security Course (49,18% graduation rate). Course Evaluation Surveys showed a high level of satisfaction with the course materials. Over 90% of survey respondents classified the courses as Very Good or Excellent. For both courses, over 52% of participants were between ages 20 and 34, meaning that the course has appealed to young technical audiences in the region. In terms of female participation, it continued to be low reaching 14% in both courses. In Haiti, the number of women taking the technical courses was higher due to a special effort during the recruiting and admissions phase. In addition, ESIH will continue offering the technical courses to its
student population as an optional choice. The organization is also considering incorporating them as part of their official curriculum beginning in 2020.

In terms of projects outcomes, the project sought to secure 3 funders engaged in project by providing financial and/or in-kind contributions for existing or new activities. In 2019, the project closed with Google as confirmed donor for scale-up of the courses, CISCO provided in-kind contribution through its Entrepreneurship course (see Section 3.d) and ESIH and LACNIC will continue to replicate the technical trainings in Haiti and in the LAC region respectively.

3. f. Gender Transformation

Ayitic Goes Global was built upon the premise that women in Haiti face greater barriers to access education, employment and the digital economy due to the prevalence of gender-based discrimination present in their society.

The program adopted a Gender and Development (GAD) approach, seeking to tackle traditional gender role expectations for women in Haiti by promoting training and employment in a male-dominated sector, such as ICTs. M&E results shows that most students from the Internet and Data Practitioner course joined the program for its ability to introduce them to the digital world, teach basic digital skills, and provide an entry into numerous work opportunities in the ICT sector. This is illustrated by the following quote from a program beneficiary from the focus group conducted with Cohort 3:

"My intention was that when you look at all the big and high-level positions in Haiti it is always men that are present. Even in our families you can see that it is always men that have the last say when it comes to making decisions. This is why I really thank this association that is bringing this technology program to Haiti to help teach and valorize the female population. We can see that almost everything is based on technology today and this is one of the ways that can help change Haiti. We have to put effort and dedication in learning all that we can about technology."

The gender division of labour is persistent in the Haitian society. M&E research evidenced that time spent by female students is domestic chores is the main barrier to successfully completing the program’s activities after infrastructure barriers. A total of 90% of students, however, report that having adequate family support and encouragement to pursue the course.

This section will discuss Gender Barriers faced by women trainees and the Gender Impact generated by the project.

3. e. i. Gender Barriers faced by Women Trainees

The following table details the main gender barriers identified through the M&E process, illustrating with quotes from interviews and focus groups with trainees.
3. e. ii. Gender Impact of the Project

The program succeeded in allowing: a) upgrading digital skills of program beneficiaries; b) exposing program graduates to work opportunities on the online platforms and the domestic market; and c) promoting change in gender roles and expectations within social circles of program beneficiaries.

In addition, while working with IT Professionals, they program made special efforts to select female professionals for technical courses. As mentioned earlier, a small group of these professional students participated of LACNIC’s event LACNIC 31, where they took part in a focus group discussing women’s involvement in the LAC technical community.

Main gender transformations include:

(a) Improvement of women’s experience online

Skills learnt by students at the Internet and Data Practitioner course were applicable not only at professional level, also in their personal lives, making Internet access more useful and safer for women trainees. M&E reports that learning the social code of conduct related to communication online was considered valuable by most of the graduates. In addition, graduates reported feeling more comfortable using the Internet knowing that they have control over their privacy and their passwords were secure.

Enhanced digital skills also promoted further Internet access. M&E data collected through the mid-term survey for Cohort 3 indicates that 25% of students invested in various mechanisms to improve their Internet access.

(b) Enhanced perception of women’s role

Access to digital equipment was a key element in the program’s gender impact. Access to tablets not only provided a means through which to connect to the Internet and pursue the
course, tablets also improved the way women trainees were perceived by friends and family. Some 64% of respondents of the mid-term survey conducted among students from Cohort 3 declared that family members were now more prone to accept their working role.

In addition, participating in the program made beneficiaries question traditional women roles within their families. After completing the trainings, the graduates reported that their families believed they would have better access to work opportunities. Beneficiaries also reported becoming a point of reference for friends and younger siblings when it came to solving technical problems related to Internet access or digital equipment. Both these elements highlight changes in how program beneficiaries were perceived by their social circles, as illustrated by the following quote of a program beneficiary from the focus group conducted with Cohort 3:

“Regarding my online study, my family and I perceive that it did not only enrich my knowledge for the job market, but also this program helped me to be self-reliant, and able to support my parents. And finally with this knowledge that I have, I can also help my friends.”

(c) Gender awareness

The program offered graduates from the Internet and Data Practitioner course a two-day workshop to discuss gender roles, social constructions of male and female identities and its impact on power relations and access to resources. Conducted by the local organization Kasik, the workshops also included an overview of the feminist movement in Haiti and information on organizations supporting victims of gender-based violence.

For Cohorts 1 and 2, four workshops on gender took place at Kasik’s office with a total of 89 participants. For Cohort 3, a single workshop was hosted at a venue provided by with the World Health Organization (OMS / OPS) which accommodated nearly 100 participants.

These workshops had a significant impact on graduates, as they provided a space to discuss, share experiences and reflect on the discrimination that they suffer daily as women, including in many cases the violence to which they are being subjected. Kasik’s staff responsible for the facilitation of the workshops reports being surprised by the percentage of women (an estimate of 50% in the last workshop) identifying themselves as victims of gender-based violence. Graduates were eager to discuss and ask questions; facilitators succeeded in raising awareness about gender inequalities. They also emphasized that women are not responsible of the violence and discrimination they suffer and the importance for victims of violence to seek help.
4. Project Outputs and Dissemination

- The project completed three research papers on the onset of the project (2017) aimed at informing project execution
  - All 3 papers produced in 2017 and available online:
    - Offre en Haiti: Comptences & formations du secteur TIC, ESIH
    - Digital Jobs in Haiti: Demand Opportunities, 3x3 Design
    - Ayitic Goes Global: Pedagogical Strategy, SlashRoots
  - In addition, the Monitor and Evaluation process played a key role in informing the project's progress and in providing data to adjust execution. Three reports have been produced by 3x3 Design, one after each round of training:
    - Evaluation Report for Training Round 1
    - Evaluation Report for Training Round 2
    - Evaluation Report for Training Round 3
  - One final report with overarching lessons:

- 6 online courses developed, piloted and validated
  - The number of courses to be developed was reduced to 3:
    - Women Courses: Internet and Data Practitioner Course
      - Modular online course for development of digital skills. It includes introductory course for digital learners and two learning specializations: Data Practitioner and Internet Practitioner.
    - IT Pros Courses
      - Modular online courses in Network Management and Internet Security. Courses developed in French and Spanish. Spanish versions will be used in LACNIC’s online campus starting in 2019.

- A cohort of 300 students (women age 18 to 25) trained in digital skills and 10 teachers trained to teach digital education for women
  - Students: trainings were delivered in three tranches:
    - Cohort 1: First 50 women
    - Cohort 2: 100 women trained.
    - Cohort 3: 208 women trained.
      - Graduation rate for all three cohorts was 84% accounting for 300 female graduates.
  - Teachers/Facilitators:
    - Cohort 1: 3 facilitators trained.
    - Cohort 2: 1 extra facilitator trained
    - Cohort 3: 2 extra facilitators trained.

- A cohort of 150 advanced IT professionals trained in topics related to Internet Development
  - Students. Trainings are delivered in three tranches:
- Cohort 1: First 50 IT Pros trained
- Cohort 2: 50 IT Pros trained.
- Cohort 3: 63 IT Pros trained.
  - Graduation rate for all three cohorts: 52%
  - Teachers/Facilitators: 2 facilitators trained.
  - In addition, LACNIC offered the courses in its online campus in 2019 to audiences across Latin America and the Caribbean. Results were as follows:
    - Network Management: 1,174 students registered (56.47% graduation rate)
    - Internet Security Course: 2,017 students registered (49.18% graduation rate)

- A group of 25 Haitian diaspora professionals and business leaders engaged in project by providing mentoring, job opportunities, and/or funds.
  - The research conducted by 3x3 Design and the Experts Consultation represented key opportunities to begin developing connections with the Haitian Diaspora. Some 30 members of the diaspora are estimated to have been contacted through these activities. In year 1, 9 diaspora professionals showed interest in the project.
  - Given that the research and Experts Consultation indicated that the Haitian Diaspora would not be in a position to provide work opportunities for program graduates, in Year 2 the project stopped actively pursuing the engagement of diaspora members. As stated in section, 3.d. (Employment and Private Sector Engagement), the program has worked more actively with private sector domestically, as local contacts present in Haiti are understood to play a more crucial role in facilitating opportunities for program graduates.

- A group of 3 funders engaged in project by providing financial and/or in-kind contributions for existing or new activities.
  - Throughout the period the grant, the program liaised with Slim Foundation, Google, IADB’s Compete Caribbean, IADB’s State Modernization, UN Women Uruguay, Haiti and Global Office, ILO’s CINTERFOR, USAID’s Global Development Lab, European Union Delegation in Uruguay, UNDP Uruguay, UNDP Haiti, Ford Foundation, and World Bank’s ICT Department. Other meetings with potential partners -- not necessarily potential donors--- have been held with local chambers of commerce in Haiti, Export to Caribbean initiative, Avassant Foundation, Center for Facilitation of Investment in Haiti (CFI), among other.
  - In terms of projects outcomes, the project sought to secure 3 funders engaged in project by providing financial and/or in-kind contributions for existing or new activities. In 2019, the project closed with Google as confirmed donor for scale-up of the courses, CISCO provided in-kind contribution through its Entrepreneurship course (see Section 3.d) and ESIH and LACNIC will continue to replicate the technical trainings in Haiti and in the LAC region respectively.

In terms of dissemination efforts:
- Presentations at conferences:
A roundtable session was organised at the 2019 IGF to discuss the Jobs of the Future for Vulnerable Populations and Women at the Margins. Several IDRC funded projects were invited to briefly present insights on the future of work in the global south. Carolina Caeiro (LACNIC) presented the results of the Ayitic Goes Global initiative. Laurent Elder from IDRC served as moderator for the session. https://www.youtube.com/watch?v=sehZmRtc9dE&t=3357s


In 2019:

- A final communication piece with project results and a selection of articles was distributed among colleagues and people that had been in touch with the project throughout its development:
- A online presentation of results was organised on November 7th. Project results were shared by project partners to group of professionals working in Haiti and abroad on digital skills building:
  - https://www.lacnic.net/4116/1/lacnic/
- Cesar Díaz, on behalf of LACNIC, participated of the launch of the Caribbean School of Data. An initiative by the Caribbean Open Institute and Google that builds on the experience of Ayitic Goes Global.
- A series of articles were published at LANIC News:
Several news articles were published:

- http://caribbeanopeninstitute.org/csod/school_of_data_fellow_pascale
- https://www.youtube.com/watch?v=Ba7ypFshNhM
- https://issuu.com/ahciet/docs/telecomunicaciones_de_am_rica_latin_15ffab15c2c0e7
- https://prensa.lacnic.net/news/cooperacion/ayitic-goes-global-fortalece-a-ac-tores-tecnicos-de-haiti
5. Contributions to Research Areas: Skills-Upgrading and Online Work in the Global South

Ayitic Goes Global wraps up with some important contributions around three Research areas:

**Future of Work.** The project tested whether job opportunities in the platform economy could provide sustainable livelihoods for young women in Haiti. It identified barriers that limit the extent to which vulnerable populations can access to work and derive sustainable incomes from online talent platforms. It shed light on why most marginalized communities in the Global South have relatively low participation in online talent platforms.

**Skills Deficits.** The project proved that developing digital capacities through online trainings is possible in resource-constrained environments such as Haiti with restricted access to power, digital equipment and connectivity. The program identified key drivers for successful online learning in Haiti. It also showed that upgrading abilities in ICTs can be achieved through online courses.

**Gender Transformation.** The project adopted a Gender and Development (GAD) approach as it sought to redefine traditional gender role expectations for women in the Haitian society by promoting employment in a male-dominated sector, such as ICTs.