



Empowering Women through Digital Markets

Digital Jobs in Haiti: Demand Opportunities

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About the project

The “Ayitic Goes Global: Digital Jobs and Gender in Haiti” is a pilot initiative of the Latin America and Caribbean Network Information Centre (LACNIC) that seeks to create enabling conditions for young Haitians to find employment in the digital economy by addressing skills and infrastructure deficits in Haiti. With a lens on gender equity, the pilot initiative is composed of three project components:

1. **Promoting the growth of a data-related job market in Haiti:** Through the teaching of digital skills and facilitating access to remote jobs in overseas markets, LACNIC aims to boost employment opportunities in digital data-related markets for female youth in Haiti. Focusing on skills building, the capacity building programs will target Haitian women between the ages of 18 and 25. LACNIC will also support the creation of a local outsourcing enterprise that will actively pursue and facilitate employment opportunities for graduates of the program.
2. **Boosting Internet Infrastructure and connectivity in Haiti:** Building on LACNIC’s previous work, this project component will focus on enhancing the capabilities of advanced ICT professionals to encourage the growth and improvement of Internet services in Haiti. The target beneficiaries will include employed ICT professionals working across public, private and academic institutions.
3. **Encouraging Data-Oriented Culture in Haiti:** The Caribbean is generally regarded as being “data poor”, while this refers to the limited access to and availability of locally relevant data, it also refers to the lack of institutional awareness around the use of data during policy and decision making. The Caribbean Open Institute has been tasked with creating a “data literacy” program aimed at developing increased awareness, attitudes, competencies and capacity of young Haitians.

3x3 Design has been engaged by International Development Research Center (IDRC) and the Latin and Caribbean Internet Registry (LACNIC) to support the creation of digital and data skills course and curriculum through the study of demand opportunities in overseas market. The demand study sought to identify opportunities for greater fluidity in digital data markets between Haiti and abroad. Specifically, it focussed on remote work offering an opportunity to enable greater participation in the global digital economy and fostering an inclusive growth in Haiti.

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Executive Summary

The technological and socio-political changes of the ‘fourth industrial revolution’ are poised to transform employment and recruitment across industries and countries. Three trends in particular present new forms of employment opportunities in developing countries within the digital economy—advances in computing power and big data, changing work environments, and the sharing economy and peer-to-peer platforms (World Economic Forum 2016). Haiti can leverage these opportunities to tackle its critical youth unemployment challenge by increasing access to new remote work arrangements offering greater employability and overall economic development.

In order to examine the opportunities related to online outsourcing, this research investigated remote work arrangements and opportunities to foster greater Haitian participation in the global digital economy. The qualitative market analysis focused on industry needs in North America’s digital economy where a skills-building initiative could enable Haitian female youth to build sustainable careers and livelihoods. Further, an examination of both projected and future market needs enables the identification of transversal technical skill needs for immediate employability in the market, simultaneously preparing Haitians for work in future economy.

The study focused on three main areas of inquiry - (1) value chain opportunities for greater Haitian employability in the international digital-data market, (2) competencies, attributes, and skillsets that can make young Haitians resilient in the digital economy, and (3) strategies that an impact sourcing enterprise can employ to accelerate recruitment and overcome the barriers to remote work opportunities in the global market. The key opportunities that emerged are:

- In order to thrive in a rapidly changing time fuelled by automation, globalization, and consolidation, impact sourcing initiatives should consider pursuing opportunities that have demonstrated upward growth, are less vulnerable, and provide a steady source of income.
- Large IT shops or companies that already have Service Level Agreements with Fortune 500 companies are more likely to outsource microtasks as they can absorb the cost associated with the risk.
- The geographical markets that offer the biggest market along with the presence of large Haitian Diaspora population are New York, Florida, and Quebec. The top five sectors that offer the most digital opportunities are media, entertainment, and information, financial services and investors, information and communication technology, professional services, and healthcare.
- Connecting with companies with Haitian Diaspora leadership is an effective outreach strategy but because of its small size should not be a determining factor in understanding the interest in impact sourcing in Haiti. Special consideration should be given to companies that have presence in both Caribbean and North American markets as well as employers who are motivated to “give back” by developing partnerships with the initiative.
- Email and Web Security, Data Entry, Financial Statement Spreading, Market Research, and Medical Billing emerged as the top job opportunities that showed future growth and better indication of thriving the volatile environment of digital economy.
- Curriculum should be designed around core transversal skills, while offering specialized tracks with optional courses in the last round of training. The core transversal skills will enable participants to access job and educational opportunities following their employment, and provide resilience in a dynamic job market. The specialized skills can allow participants to build skills to enhance their employability in a niche sector.
- Interpersonal skills, critical and innovative thinking, information literacy, language skills, and intrapersonal skills emerged as the core transversal skills. Security, accounting, customer relationship management, and medical coding emerged as the specialized competency areas.

Capturing the opportunities will require the initiative to mitigate the perception of risk associated with Haiti such as perception of instability, infrastructure deficits, the work culture divide between North American and Caribbean markets, and the regulatory barriers. The initiative can overcome these barriers by providing project management, handling contracting, putting a risk management and remote communication system in place, and offering a competitive pricing to clients while providing a positive workplace culture and support to

remote workers. Presence of manager will bridge the gap between the client and the remote workers, helping with quality control of the products. Low attrition rates, positive work culture, and quick response times to infrastructural issues or failures in process will boost the trust with employers. Competitive pricing will help compete with service providers globally. Effective messaging that combines the readily understood term ‘impact sourcing’ while articulating the competitive advantages associated with Haiti will help companies overcome the perceptions associated with the country.

1. The Research Problem

Research Goals

To inform the development of a skills-building curriculum aimed at improving employability and fostering remote work connections amongst Haitian female youth, three guiding questions were formulated for identifying industry needs in the global digital economy :

1. Where are value chain opportunities for greater Haitian employability in digital-data related international market?
2. What competencies, attributes, and skill sets can make young Haitians resilient in the digital economy?
3. How can an enterprise accelerate the recruitment process and overcome the barriers to remote work opportunities in the global market?

The approach was to develop a larger understanding of industry need, wherein specific skill gaps and remote (micro)work opportunities in the global workforce could be identified. Examining both current and projected future market needs allowed for the identification of transversal skill needs for immediate employability in the marketplace, while also preparing Haitian female youth for work in future economy. Due to the gender equity goals of the initiative, specific lines of questioning were developed to identify barriers and motivators related to female participation in the digital economy.

Literature Review

Haiti and the Fourth Industrial Revolution

According to the 2016 World Economic Forum Global Insight Report,¹ the onset of a fourth industrial revolution is poised to disrupt age-old business models. The technological and socio-political changes will have a profound impact on the employment landscape including employment rates, skillset needs, and employment and recruitment models across industries and countries. The potential implications of these disruptions to business models necessitate rapid adjustment to a new reality and its potential opportunities, particularly for developing states where remote work arrangements will enable access to new employment opportunities. Three trends in particular present opportunities within the digital economy, specifically for Haiti to tackle its critical youth unemployment challenge (World Economic Forum 2016) -

1. **Advances in computing power and Big Data** - An unprecedented amount of data is now available to businesses due to innovations in processing power and cloud computing. But realization of the full potential of the data requires it to be structured and analyzed. This has opened up low skilled digital work opportunities including conversion of unstructured data into structured databases and creating necessary data logic to make sense of the data.
2. **Changing work environments** - The shift towards flexible working arrangements now allow organizations to have a small pool of core full-time employees for fixed functions, supported by remote workers engaged on a project or as-needed basis. Further, innovations in remote communication and project managements applications and cloud storage has made engaging remote workers from other countries easier and cheaper.
3. **Crowdsourcing - the sharing economy and peer-to-peer platforms** - Businesses are able to unbundle tasks that previously required large scale organizations. There is an increasing trend to break tasks down into tiny, well definable microtasks that can be performed by companies and individuals through peer-to-peer platforms and other online marketplaces. In some cases companies are able to connect to specific talent and resources, through crowdsourcing platforms, that are more important than the in-house resources they possess.

The onset of the above trends can provide new livelihood opportunities, particularly for large youth population in Haiti. One such opportunity is online outsourcing which involves the contracting of third-party workers, often overseas, to supply services or perform tasks via a managed enterprise. There are two key factors that are working in favor of Haiti as a destination for online outsourcing - (1) investments in telecommunication infrastructure and (2) government efforts to promote Haiti as a BPO and IT destination.

¹ World Economic Forum, *The Future of Jobs: Employment, Skills, and Workforce Strategy for the Fourth Industrial Revolution*. (world Economic Forum, 2016), 15-16, http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf.

Investment in Telecommunication Infrastructure

Until 2010, most businesses were required to rely on satellite and wireless technologies due to poor fixed-line infrastructure. Recent investments and developments in the telecom landscape have been effective in boosting Haiti's telecommunications infrastructure but due to political and economic turmoil and natural disasters, Haiti's telecoms sector still remains one of the least developed in the world. With the introduction of Natcom in 2010 - a public-private partnership between the Government of Haiti and Viettel, Vietnam's largest mobile network operator - it allowed Haiti to attain a mobile density of approximately 350 telephones per 1000 people, quadruple international connectivity and expand fixed-line broadband services. The construction of three international gateways, over 6,000km of fiber optic cables, and 1,550 base stations have expanded fixed-line broadband services in major cities and increased nationwide coverage to 93%.² Natcom has become the wholesale provider for a small number of Internet Service Providers (ISPs) in the country, and has brought stability to the Central Bank of Haiti (BRH) and the Conseil National des Telecommunications (CONATEL) allowing it to focus on regulatory reform instead of service. Still, significant challenges remain for fixed-line broadband development such as low income levels, low PC penetration, and widespread equipment theft. Such practical challenges mean that connectivity is achieved through mobile networks for the majority of people and businesses.³

It has been reported that, to date, 65 percent of the population has access to a mobile phone. Natcom's entrance to the market also had the added effect of mobilizing the established mobile operator - Digicel - to expand its presence, mobile penetration, and countrywide coverage.⁴ Aldo, Digicel and Natcom have become the primary home internet providers, laying new fiber optic cables and building antennas to expand their internet networks.⁵ Natcom provides fiber optic cable Internet, which facilitates improved internet connection speeds and allows for Voice over Internet Protocol (VoIP). Most Haitians use internet based applications such as Google Voice, Skype, Viber, and WhatsApp on their mobile phones. Mobile money transfers are also expanding, with Digicel's TchoTcho mobile payment platform securing two million subscribers. Despite challenges for broadband development, economies of scale coupled with Digicel's agenda to expand LTE and mobile services like mobile banking should enhance internet connectivity in rural areas in coming years where fixed-line infrastructure remains inadequate.

Haiti - A BPO and IT destination

The recent efforts to improve telecommunication infrastructure and the installation of two undersea fiber cables have also significantly enhanced the country's attractiveness for business process outsourcing (BPO) service investments. The access to abundant bandwidth connectivity has attracted investors to set up business and industrial parks in the free-zone with office buildings offering IT services, call centers and other BPO services. This includes the Lafite Global Business Park, the Caracol Industrial Park, and the Triangular Business Park. The Center for Facilitation of Investments (CFI), Haiti is now actively promoting Haiti as a nearshore market for BPO and IT given the close proximity U.S. and Canadian markets and strong affinity to North American culture.

All these factors indicate that Haiti's current employment prospects aren't constrained by a limited local job market. However, the country will have to overcome major challenges around infrastructure and required skills in order to become a suitable destination for online outsourcing.⁶

Demand Opportunity - Online Outsourcing

Online outsourcing (OO) allows clients to outsource paid work to a distributed, global labor pool of remote workers while enabling coordination, quality control, delivery, and payment of such services online through tech-enabled channels. Also known as online talent platforms, these are marketplaces and tools that connect individuals to the right work opportunities. There are many categories of online talent platforms including online marketplaces for contingent work, matching individuals with traditional jobs, and talent management. The research primarily focused on online marketplaces for contingent work where firms manage the relationship with both clients and workers directly.

² Lancaster, Henry. "Haiti - Telecoms, Mobile, Broadband, and Digital Media - Statistics and Analyses" *BuddeComme*, March 17, 2017, <https://www.budde.com.au/Research/Haiti-Telecoms-Mobile-Broadband-and-Digital-Media-Statistics-and-Analyses>

³

⁴ Concordia, "Modernization through Public-Private Partnership: An analysis of Haiti's Natcom," *Concordia*, 2014, https://uploads.concordia.net/2014/12/Haiti_Case_Study.pdf

⁵ Jean David Rodney, "Haiti - Telecommunication Industry," *Export.gov*, June 26, 2017, <https://www.export.gov/article?id=Haiti-Telecommunications-Industry>

⁶ CFI, "BPO and IT," *CFI Invest in Haiti*, September 11, 2017, <http://cfihaiti.com/index.php/investment-sectors/bpo-it>

Further, the definition of OO encompasses two major segments: Microwork and Online freelancing. The research focused only on microwork where projects are broken down into microtasks and workers require basic numeracy and literacy skills. The low barrier to entry makes it particularly attractive to unemployed and underemployed individuals without specialized skills. A formal managed service platform would provide IT infrastructure or training to workers and provides quality control for clients.

The use of online outsourcing as an opportunity for economic development and providing employment to disadvantaged youth makes it slightly different from the traditional Business Processing Outsourcing. Also called impact sourcing, the goal of such managed platforms is to secure contracts for digital services in big markets and break down the tasks into microtasks for remote workers in developing regions of the world.

Macro-trends in the Digital Data Economy

The global digital economy index (*Figure 1.1*) is an aggregator of indicators from various sources measuring: ICT supply and innovation, business usage, consumer usage, and government usage across 34 OECD (The Organization for Economic Co-operation and Development) countries. The index provides a percentage rank of different countries by measuring their digital economy across the indicators mentioned above. For the purpose of this study, the research primarily focused on three countries with large Haitian diaspora - United States, Canada, and France.

The index shows that the United States, Canada, and France rank 11th, 19th, and 20th out of 34 OECD member states.⁷ This indicates a gap as the United States is a leader in innovation in the broader digital economy, but number of average tech users is lower due to lack of digital literacy, awareness of digital tools, and adoption by consumers and workers.

Further segmentation shows that the United States, France, and Canada rank 7th, 13th, and 16th out of 34 countries for ICT supply and innovation, and 9th, 22nd, and 18th for Business Use, 12th, 20th, and 21st for consumer use, and 13th, 18th, and 14th for government use respectively. In both cases, United States and France have a gap between ICT supply and innovation and government usage. The government ICT usage evaluates government efficiency and the importance of ICT to the government's future. While the United States has been a global leader in opening government data sets for private-sector usage and innovation, but its own e-government services for citizens are not as well developed as those in the leading countries. Japan, Sweden, and the United Kingdom outperform the United States across all of these categories.⁸ The low usage of ICT indicates less demand for digital work. There are few examples where governments in the United States and Europe are currently using Online Outsourcing—for example, the U.S. Food and Drug Administration (FDA) has used Amazon Mechanical Turk to process handwritten drug accident safety reports—most of the demand is private. For this purpose, the demand research focussed primarily on private sector, specifically in United States.

Figure 1.1: Measuring the US, Canada, and France digital economy against global peers by Percentage Rank

Total		ICT Supply & Innovation		Business Use		Consumer Use		Government Use	
Sweden	1.00	U.K.	1.00	Norway	1.00	U.K.	1.00	South Korea	1.00
U.K.	0.98	Sweden	0.97	Iceland	0.96	Sweden	0.98	Estonia	0.96
Finland	0.95	Switzerland	0.96	U.K.	0.91	Norway	0.97	Luxembourg	0.88
Norway	0.92	Japan	0.92	Sweden	0.91	Denmark	0.96	Sweden	0.86
Netherlands	0.92	Finland	0.92	Japan	0.87	Finland	0.93	New Zealand	0.84
Japan	0.88	Netherlands	0.90	Switzerland	0.87	Netherlands	0.92	Finland	0.83
South Korea	0.85	U.S.A	0.83	Luxembourg	0.85	South Korea	0.82	Norway	0.82
Switzerland	0.85	Estonia	0.81	Finland	0.83	Luxembourg	0.81	Japan	0.82

⁷ European Commission, *Measuring Digital Skills Across the EU: EU-Wide Indicators of Digital Competence*, (European Commission, May 2014), <https://ec.europa.eu/digital-single-market/en/news/measuring-digital-skills-across-eu-eu-wide-indicators-digital-competence>

⁸ McKinsey Global Institute, *Digital America: A tale of the haves and have-mores*, (McKinsey & Company, December 2015). Pg. 84

Estonia	0.81	South Korea	0.78	U.S.A	0.81	Iceland	0.81	Portugal	0.79
U.S.A	0.80	Luxembourg	0.73	Netherlands	0.75	Switzerland	0.80	Netherlands	0.78
Denmark	0.79	Ireland	0.73	Denmark	0.72	Japan	0.76	Israel	0.71
Iceland	0.75	Israel	0.71	New Zealand	0.71	U.S.A	0.74	U.K.	0.69
Germany	0.68	France	0.71	Austria	0.67	Germany	0.70	U.S.A	0.64
Israel	0.68	Norway	0.69	Australia	0.65	Australia	0.70	Canada	0.58
Australia	0.66	Iceland	0.65	Israel	0.62	Estonia	0.69	Germany	0.58
Austria	0.65	Canada	0.63	Germany	0.61	Austria	0.66	Austria	0.55
New Zealand	0.64	Belgium	0.61	Estonia	0.59	New Zealand	0.63	Ireland	0.55
Canada	0.62	Germany	0.61	Canada	0.59	Israel	0.56	France	0.54
France	0.61	Czech Republic	0.59	Belgium	0.51	Belgium	0.56	Australia	0.54
Ireland	0.61	Italy	0.59	Ireland	0.48	France	0.56	Chile	0.52
Belgium	0.57	Denmark	0.55	South Korea	0.44	Canada	0.55	Switzerland	0.52
Czech Republic	0.46	Turkey	0.55	France	0.44	Ireland	0.52	Denmark	0.52

Source: Network readiness index 2015, World Economic Forum; OECD; Magna Global; Forrester; Euromonitor; Strategy Analytics; McKinsey Global Institute analysis

Sectors positioned for growth

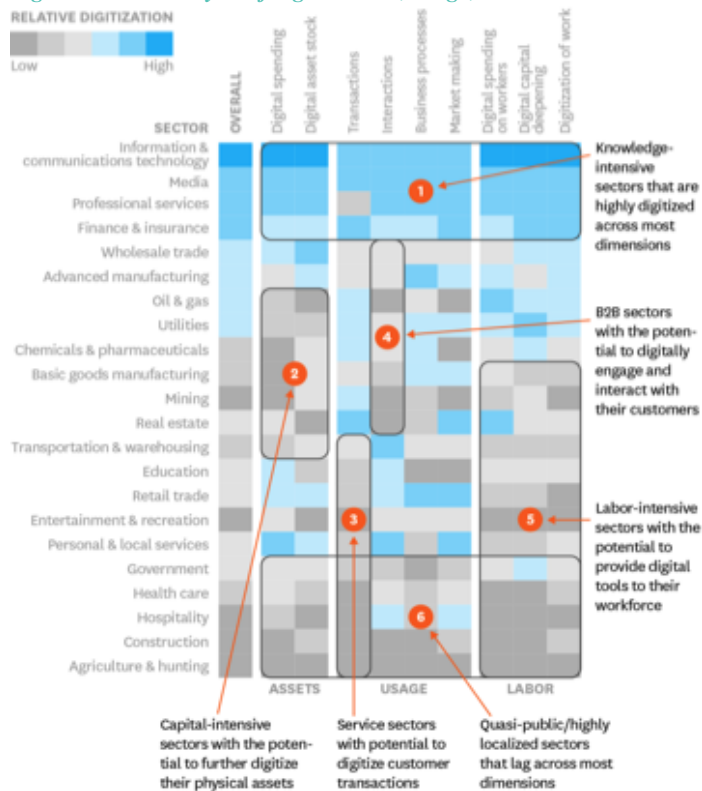
Sectors positioned for growth in digital work were assessed against three factors. The first factor was the state of digitization indicating the readiness of the sector for digital work, second was the percentage rate of disruption indicating the potential for digital work in near future, and third the percentage rate of hiring big data expertise.

State of Digitization

The state of digitization was assessed through the digitization index created by the Harvard Business Review using research conducted by McKinsey Global Institute (MGI). The index assesses the state of digitization in sectors across the U.S. economy looking at 27 indicators that fall into three broad categories: digital assets, digital usage, and digital workers as shown in *Figure 1.2*.⁹ The result revealed an uneven progress, especially for the lagging sectors - some organizations have made progress in certain areas but have not yet addressed foundational tasks their workers perform indicating an erratic digital engagement of the workforce.

The leading sectors are all knowledge intensive and highly digitized across most dimensions including those that relates to tasks performed by workers. At the top is the technology sector, followed closely by media, finance, and professional services, all of which have far more sophisticated digital capabilities than other industries or sectors. For the purpose of this research, the third category - the degree to which the sector leaders put digital tools in the hands of their employees to ramp up productivity - plays a major role. As the study indicates, the companies in leading sectors also have workforces that are 13 times more digitally engaged than the rest of the economy.

Figure 1.2: An analysis of digital assets, usage, and labor



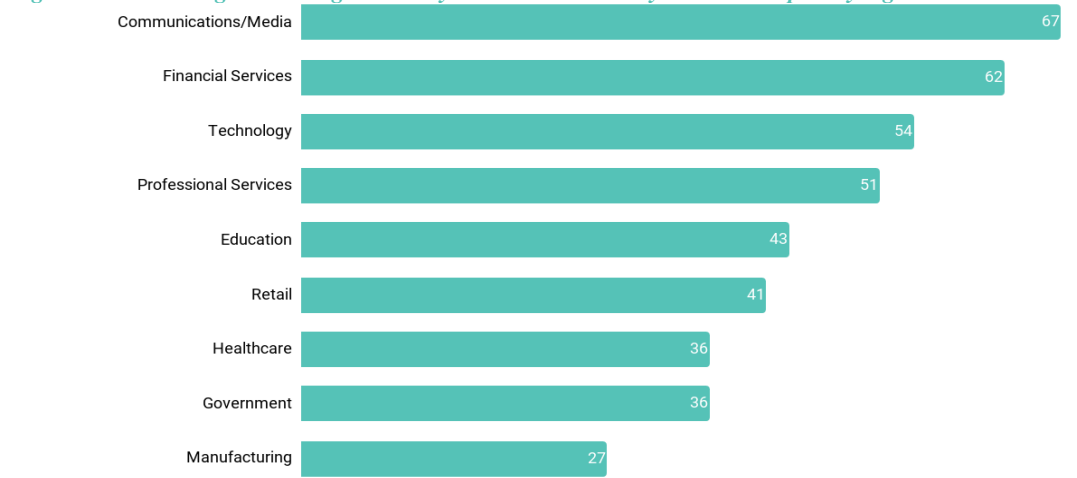
Source: HBR.ORG based on Data Analysis and Expert Interviews conducted by the McKinsey Global Institute

⁹ Prashant Gandhi, Somesh Khanna, and Sree Ramaswamy, "Which Industries are the most digital (and why)?," (*Harvard Business Review*, April 2016), <https://hbr.org/2016/04/a-chart-that-shows-which-industries-are-the-most-digital-and-why>

Rate of Disruption

The state of digitization was cross-referenced with the percentage rate of disruption. The rate of disruption by digital trends is related to the degree by which product and services rely on digital technologies in a particular industry. It is useful to note that the four leading sectors are also more likely to be disrupted by digital trends as indicated in the *Figure 1.3*.^[1]

Figure 1.3: Percentage indicating how likely it is that the industry will be disrupted by digital trends.

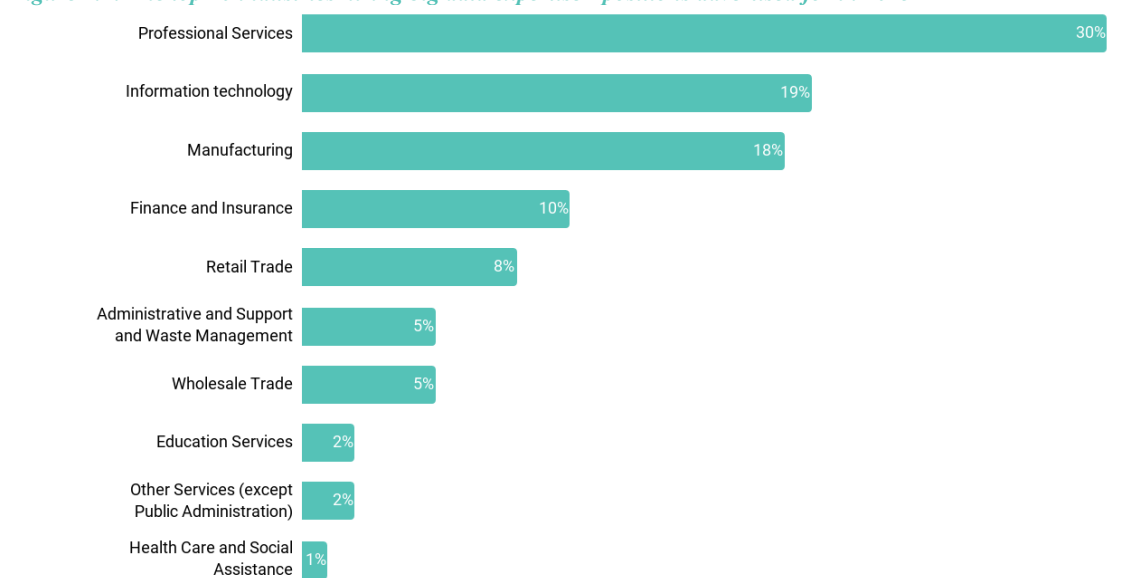


Source: Harvard Business Review Analytic Services Survey, December 2016

Percentage rate of hiring big data expertise

An analysis done by Louis Columbus, and enterprise software and cloud computing expert, presents a close look at the current hiring patterns related to big data expertise. The analysis was completed using a series of talent & strategic analytics applications for WANTED Analytics, a CEB company. The company currently maintains a database of more than one billion unique job listings and is collecting hiring trend data from more than 150 countries. As indicated in Figure 1.4, the analysis shows the top ten industries with high rate of hiring.

Figure 1.4: The top 10 industries hiring big data expertise - positions advertised for in 2015



Source: WANTED Analytics, a CEB Company, 2015

Sector Analysis summary

The comparison of the state of digitization, percentage rate of disruption, and percentage rate of hiring indicate that the four sectors that are most well positioned for growth are (1) Communications/media companies, (2) Financial services including insurance, (3) Technology companies, and (4) Professional services. While healthcare does not rank as high as education or retail, it is another sector to consider when considering Haitian Diaspora and their role in the facilitation of linkages between the service provider and markets in U.S. and Canada. Being a doctors is accorded great prestige among Haitians. An estimated third of black doctors in New York State are Haitians and there are around 1,100 Haitian doctors in the New York Metropolitan area alone.¹⁰

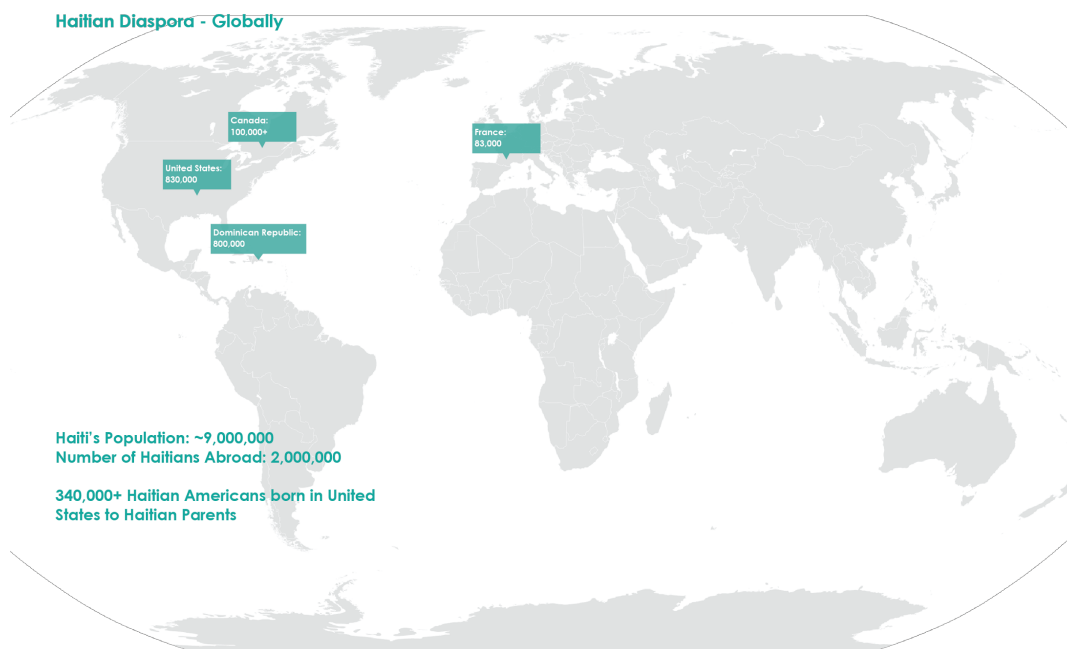
Geographical locations positioned for growth

In addition to the identification of focus sectors, the study was also narrowed to five geographical locations that would provide the most opportunities for online outsourcing. Two factors were taken into consideration - Size of Haitian Diaspora and size of market for online data related jobs.

Size of Haitian Diaspora

Haiti has a sizeable diaspora, present primarily in United States (830,000), Canada (137,995), France (83,000), Dominican Republic (800,000), and the Bahamas (80,000).¹¹ Within North America, a sizeable portion of diaspora lives in South Florida, especially the Miami enclave. New York City, especially in Flatbush, East Flatbush, and Springfield Gardens, has a thriving community. In Canada, 119,185 (97%) of the total Haitian population resides in Montreal and other parts of Quebec.¹² The other cities include Ottawa and Toronto. In France, Paris has the most significant Haitian population.

Figure 1.4: Haitian Diaspora - Globally and North America



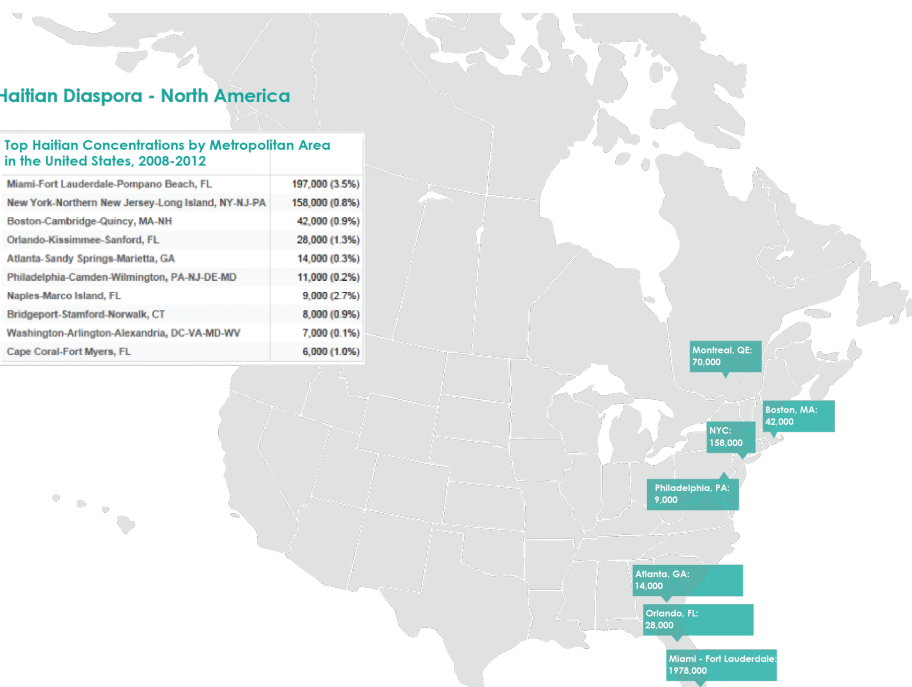
¹⁰ Footnote 27 of the ICG paper, cited from Crisis Group Interview, Gary Pierre-Pierre, (New York: *The Haitian Times*, 23 September 2007), See also Pierre-Louis 2006, 101.

¹¹ MPI tabulation of data from the U.S. Census Bureau pooled 2001-12 ACS.

¹² Canada 2011 Census

Haitian Diaspora - North America

Miami-Fort Lauderdale-Pompano Beach, FL	197,000 (3.5%)
New York-Northern New Jersey-Long Island, NY-NJ-PA	158,000 (0.8%)
Boston-Cambridge-Quincy, MA-NH	42,000 (0.9%)
Orlando-Kissimmee-Sanford, FL	28,000 (1.3%)
Atlanta-Sandy Springs-Marietta, GA	14,000 (0.3%)
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	11,000 (0.2%)
Naples-Marco Island, FL	9,000 (2.7%)
Bridgeport-Stamford-Norwalk, CT	8,000 (0.9%)
Washington-Arlington-Alexandria, DC-VA-MD-WV	7,000 (0.1%)
Cape Coral-Fort Myers, FL	6,000 (1.0%)



[Source: MPI tabulation of data from the U.S. Census Bureau pooled 2008-12 ACS.]

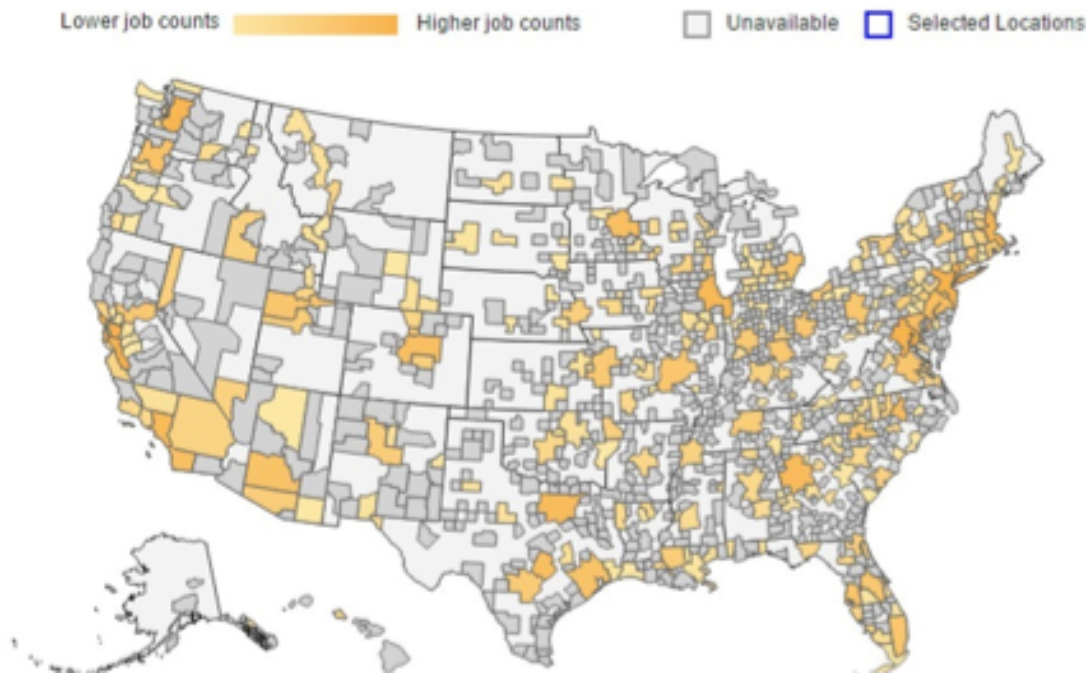
Market Size

For United States, the locations with large Haitian population were also compared with geographical locations that have big market size related to digital data work. Big data hiring trends were highlighted in Forbes by Louis Colombo, principal at IQMS and teaches marketing at a number of US universities. He derived the trends using a series of talent & strategic analytics applications for WANTED Analytics, a CEB company. The company currently maintains a database of more than one billion unique job listings and is collecting hiring trend data from more than 150 countries.

Part of the insights is a summary of the top employment markets with information on job volumes, salary ranges, candidate supply, and hiring scale by Metropolitan Statistical Area. It is important to note that the New York Metropolitan Area (New York City, Northern New Jersey, and Long Island) ranks third and is among the top U.S. big data employment markets. This supported by the large presence of Haitian Diaspora makes it an important market to consider. While the California ranks the highest, the location was not taken into consideration due to low presence of Haitian Diaspora (4000 Haitian immigrants). Washington, DC and Seattle, WA, other top ranking big data employment markets, also have low number of Haitian immigrants. The numbers are so low that they are not indicated in the Migration Policy Institute tabulation of data from the U.S. Census Bureau's pooled using 2011-2015 American Community Survey.

Another point to note is that despite the higher number of candidate supply in New York Metropolitan area, the hiring score is still as high as 74. The higher the score, more difficult it is to find the right candidate for open positions, indicating a skill gap in the market.

Figure 1.5: Top five employment markets by Metropolitan Statistical Area (MSA)



Location	Job Volume	Salary Range	Candidate Supply	Hiring Scale
San Jose-Sunnyvale - Santa Clara, CA	2,701	\$119K-194K	27,000	75
San Francisco - Oakland - Fremont, CA	2,682	\$104K-170K	28,000	84
New York - Northern New Jersey - Long Island	2,333	\$96K-172K	41,000	74
Washington - Arlington - Alexandria, DC	2,034	\$112K-190K	21,000	78
Seattle - Tacoma - Bellevue, WA	1,501	\$96K-139K	17,000	74

[Source: WANTED Analytics, a CEB Company, 2015]

Skills, competencies, and attributes

Digital jobs are characterized by their ability to harness the opportunities created by the knowledge economy. In addition, it enhances the employability and resilience of individuals through the development of transferable technical and life-skills that prepare the workers to work in future economy. An overview of existing research on online outsourcing emphasize the need to look at not just the development of technical skills but also soft skills and personal competencies and attributes in order to be successful in remote digital jobs.

Conclusion

The literature review helped narrow the search for value-chain opportunities to most strategic businesses and markets for Haiti. In addition, it highlighted the importance of transversal skills that can help remote workers move into higher positions in the value-chain adding to their skill sets and increasing their employability for the future. In addition, businesses and social networks were identified as valuable for integration of developing countries into world markets. Haiti in particular benefits from close affinity with North American culture and presence of a large diaspora population in the North American markets. This can play an important role in minimizing frictions and barriers to online outsourcing - if for no other reason than reliance on familiarity to grease the wheels of transactions and help employers overcome uncertainty about workers. Hence across the literature review, the size and existing networks of the diaspora were given considerable weight.

2. Methods

Research on Demand for Digital Services spanned a five month period and used phased qualitative approach shown below to narrow the broad research scope. Phase 1, or Landscape Analysis, consisted of a *Sector Analysis* to prioritize high growth sectors, informed by a *Literature Review* and *Key Informant Interviews* to develop a baseline understanding of digital data macro trends in overseas markets and regulatory challenges in Haiti. The Landscape Analysis was used to refine the research instruments and sampling strategies. Phase 2, Qualitative Research, consisted of *Employer Interviews*, *Surveys*, and additional *Desk Research*. The detailed description of each method is provided in the next section.



2.1. Landscape Assessment

The first phase of research focused on developing a sketch of macro trends in the digital economy, digital data labor markets, and near-term sector needs for digital skills in North America. The research also explored where the largest demand opportunities exist across diverse sectors and geographic markets, and what skillsets are the most pertinent to these opportunities. The intent was to add focus for the qualitative market research (Phase 2) and determine a strategic sampling plan based on in-demand skillsets in high-growth sectors. Three key methods were employed:

i. Literature Review

Desk research was conducted to inform the qualitative research plan. Conducted in tandem with Key Informant Interviews, the preliminary set of documents were identified through recommendations of key stakeholders and experts. The key themes investigated include: digital labor markets, sector wise skill needs, haitian diaspora geographic location, online outsourcing and crowd platforms, and policy related to remote, international microwork. The research team also conducted additional desk research during and after the key informant interviews to supplement and validate insights surfaced, and to identify additional themes that warranted attention. Please refer to the bibliography at the end of this research paper for a complete list of documents reviewed.

ii. Key Informant Interviews

The literature review was complemented by ten Key Informant Interviews with six digital service providers, two thought leaders, one government investment agency, and one Chamber of Commerce. A detailed list of key informants is shown in the appendix (p __). Key Informant Interviews were conducted as semi-structured interviews to assist in mapping sectors related to the digital data value chain and to add nuance to the literature review. The interviews revealed current digital outsourcing practices overseas, network nodes within the industries, and barriers and/or motivators for remote work recruitment and employment. Simple and thoughtful questions and prompts were used to guide and frame the conversation. Interviews spanned up to forty-five minutes and were conducted in-context where possible, or over Skype as needed.

iii. Sector Analysis + Sampling

Building off of the literature review and key informant interviews, a Sector Analysis was conducted to introduce constraints on the research focus and develop a sampling plan considering sectors poised for growth and geographic markets. Sectors were assessed based on three criteria: i) the state of digitization; ii) digital data employment rates, and; iii) rates of disruption. A geographic constraint was also introduced by examining local markets based on: i) the size of the local digital data economy, and; ii) the presence of Haitian Diaspora. The sector list was cross-referenced with employers in at least three identified geographic markets as listed in *Figure 2.2*. The analysis directly informed the study's sampling plan, which targeted companies within the identified sectors, located in the identified geographic markets. Specifically, the study sought to identify and interview members of the Haitian diaspora in leadership positions in the following departments - (1) Human Resources (HR) including Chief HR officers, HR managers, recruiters, (2) Management including HR line managers, (3) Strategic planning including C-Suite or Board Level Representatives, strategy officers, or country directors. The study relied heavily on referrals from respondents and used snowball sampling to connect with interested participants as an indicator of demand for microwork and outsourcing to Haiti. Additional outreach strategies included referrals from the Ayitic team, linkedin research, and connections to American Haitian professional networks in North America.

Figure 2.2: Sampling Plan - Geographical Markets

Geographic Markets	Employment Market for Data Expertise	Haitian Diaspora Population	Language (French)	Target Number of Respondents
New York - Northern New Jersey - Long Island Metropolitan Statistical Area	x	x		4-5
Miami - Fort Lauderdale - West Palm Beach, FL Metropolitan Statistical Area		x		4-5
Quebec specifically Montreal Census Metropolitan Area		x	x	4-5
Greater Toronto		x		2-3
Paris			x	2-3

Figure 2.3: Sampling Plan - Sectors

Sectors	Highly Digitized	Hiring Data Expertise Positions (Percentage)	Target Number of Respondents
Media, Entertainment, and Information	x	67%	4-5
Financial Services and Investors	x	62%	4-5
Information and Communication Technology	x	54%	4-5
Professional Services	x	30%	2-3
Healthcare		36%	2-3

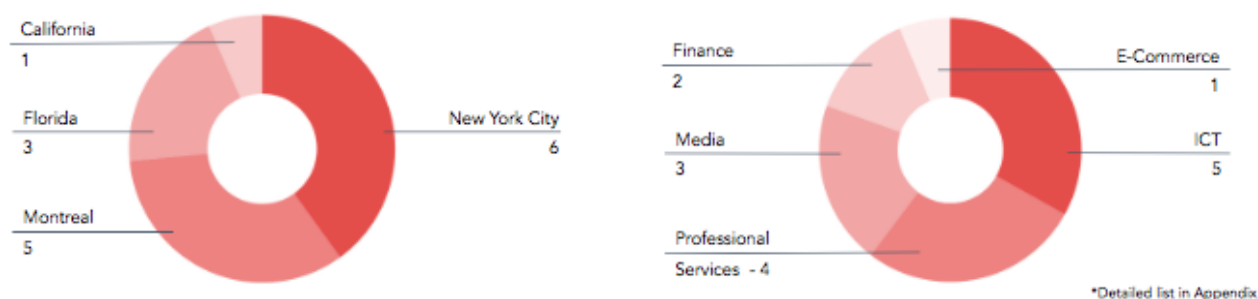
2.2. Qualitative Research

The second phase of research focused on ascertaining market linkages, barriers to entry for remote work, employer outsourcing practices, and skills opportunities in the digital economy. This included an investigation into current behaviors and employer motivations for remote outsourcing, including the nature of transactions between employers and remote workers, along with channels and platforms utilized for recruitment. The research team also investigated the barriers to hiring remote foreign workers - ranging from cultural, social, regulatory, and behavioral barriers - and challenges faced by the businesses in relation to hiring and managing remote employees. This information was used to develop in-demand job profiles, and attributes and competencies that are critical to near-term employability and long-term career mobility.

i. Employer Interviews

Interviews were conducted with employers in at least three of the geographic markets identified in the *Landscape Assessment* with high Haitian diaspora populations: New York, NY, Montreal, QC, Miami, FL, and Fort Lauderdale, FL. Efforts were also directed towards businesses in Paris and Toronto but due to a lack of interest, efforts were redirected to the three major geographical markets identified above. Contextual inquiry interviews were conducted at the respondent's place of business where possible to generate an understanding of current practices around digital data processing and recruitment. Specifically, the interviews investigated gender dynamics that affect employee performance and employer behaviors, perceived employer gaps in skills and talent, and opportunities and constraints for employment around digital data processing. The interview guide used techniques such as laddering to identify the root source of challenges, and contextual narrative inquiry to gain insights into the lived experiences of respondents, taking their environments into account.

Figure 2.4: Respondent Profile of Employer Interviews



ii. Skill Assessment Survey

A skill assessment survey (online / paper) was disseminated to help assess the current market to identify gaps in skills and services, capacity of the market to absorb new workers and identify opportunities for skill development tailored to both overseas and local markets. The response rate was low despite the dissemination through major channels that emerged through research such as National Alliance for the Advancement of Haitian Professionals (NAAHP) and other professional networks. To compensate for the low response rate, follow-up interviews with employers and desk research was used to develop specifics on necessary tasks and associated competencies needed for specific job profiles.

iii. Document Review - Regulatory Barriers and Best Practices

The study further investigated regulatory barriers surfaced through the employer interviews through a review of pertinent legislation and policy documents. Innovative solutions and best practices to help surpass the identified regulatory challenges were gathered from analogous case research.

2.3. Analysis

A framework based on the 'Developing a Curriculum' (DACUM) model was developed to translate job profiles into skills competency areas for the skill-building curriculum. DACUM involves only the first step in a full vocational training curriculum development process.

Instead of job observation, DACUM uses guided discussion with expert workers to identify detailed tasks and duties associated with a job profile. The three major assumptions underlying DACUM are as follows: 1) Expert workers can describe and define their job more accurately than anyone else; 2) An effective way to define a job/occupation is to precisely describe the tasks that expert worker perform, and; 3) In order to be performed correctly, all tasks demand the use of certain knowledge, skills, tools, and positive work behavior.

i. Need Analysis

Job Opportunity Classification - In the first step, the occupational landscape was mapped to identify in-demand occupational categories and jobs.

Occupational Category	Sector	Job
Common themes that emerged through clustering the identified jobs.	Identified from the sampling plan.	A job is defined containing a gro

Job Opportunity Analysis - Three criteria were used to analyze and rank job opportunities against the project goals and considerations towards overall program sustainability: Upward Growth and Low Volatility of the sector, and Contracting Arrangements for each job. Each criterion was assigned a weight (multiplying factor) based on the level of importance. Each job profile was then scored using the following equation:

$$\text{Job Score} = (\text{Upward Growth Score} \times .33) + (\text{Low Volatility Score} \times .17) + (\text{Contracting Score} \times .5)$$

Figure 2.5: Job Opportunity Analysis Criteria

	Upward Growth	Low Volatility	Contracting
Definition	Ability of skills to lead to positions in high-growth sectors for longer-term upward mobility from microwork employment	Skills pertinent to sectors with lower risk to unexpected changes in industry due to technology disruption or automation.	Skills and opportunities suitable for long term service agreements to help provide stability and steady flow of jobs for the beneficiaries.
Indicators	<p>Growth of the Industry - Industries hiring big data expertise [WANTED Analytics]</p> <p>Hiring per industry - Percentage of Growth of open positions by occupational categories [WANTED Analytics]</p> <p>Average Income - of projected career tracks [PayScale]</p>	<p>Vulnerability due to disruption - Likelihood of changes in industry structure due to technology disruptions and digital trends [Harvard Business Review Analytic Survey]</p> <p>Vulnerability due to automation - Likelihood of disruption in hiring trends due risks of job</p>	<p>Stability of Contracting - Degree of stability and duration of agreement due to project basis versus annual service agreements [Interviews]</p>

		being automated [Benedict and Osborne, Oxford University 2013]	
Weight	.33	.17	.50

ii. **Task Indexing** - The second step was further broken down into two parts. The first part involved analyzing the jobs and identifying individual tasks and duties with the help of expert workers combined with desk research on tasks mentioned in online marketplaces. The second part involved describing tasks in performance terms using verbs, objects, and qualifiers. These elements can then be distilled as verbs denote a worker's action (e.g. maintain, change), objects denote thing acted upon by worker (e.g. car, oil), and qualifiers indicate the context of action described with clarifying words (e.g. motor, personal). For example: "Maintain personal car" or "change motor oil."

Job Profile	Duty	Tasks
Identified job from Step 1 (Need Analysis)	A duty is a cluster of related tasks (6-20 per duty).	Tasks are specific and meaningful units of work.

iii. **Task Verification** - The third step involved conducting follow up interviews with expert workers to obtain feedback on tasks by rating both importance and frequency. Where possible, employers or managers were interviewed to triangulate inputs from interviews with expert workers, and understand employer expectations about the job.

Job Profile	Importance	Frequency
Identified job from Step 1 (Need Analysis)	How important the task is. Whether the task should be included in introductory training programs.	How frequently the task is performed.

In addition to determination of importance and frequency, priority tasks were selected for training and curriculum development based on the feedback from the employers and/or managers.

iv. **Occupational Enablers** - The tasks associated with high scoring jobs were then analyzed for occupational enablers including knowledge, desired behavior, and tools and equipment required. General knowledge looks at minimum education requirements, vocational skills desired by the employer, language proficiency requirements, and computer skills. Desired behavior include soft skills and personal attributes. And, tools and equipment relate to the supplies and materials required for the tasks.

Job	Knowledge	Behavior	Tools and Equipment
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Identified job from Step 1 (Need Analysis)	Vocational Skills Educational Attainment Language Requirements On-the-job Training	Soft Skills Personal Attributes	Supplies Materials
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v. **Skills Competency Areas** - Skills required for each duty were elaborated. Related skills were clustered to form competency profiles. A competency hierarchy was also defined based on verbs used in task statements and overall complexity or difficulty.

2.4. Research Constraints and Assumptions

The research design was developed around the key assumption that members of the Haitian diaspora could act as champions of the initiative, being more likely to invest in remote outsourcing to Haiti. The sampling plan relied heavily on targeting employers within the Haitian diaspora community. While successful in generating interest, this approach didn't necessarily result in interviews with direct employers or key decision makers. Many participants were able to speak to tasks currently outsourced or potential microwork opportunities, but were not able to speak on their employer's behalf.

Although larger companies were targeted, such as Morgan Stanley and Uber, many were unable to participate on behalf of their company or unable to gain approval from their employers. There was also limited responses from the employers within the healthcare sector due to the limitation of HIPAA law, and companies based in Toronto and Paris due to limited warm connections.

The research plan had initially included a skill gap survey but due to low response rates, this was replaced with follow up interviews with employers and desk research to get detailed information on job profiles and associated tasks. Due to limited scope and resources, a group discussion could not be held with multiple expert workers and employers. Another round of consultation with expert works including management review should be conducted by curriculum developer.

3. Results

For the development of a skills-building curriculum and long-term program viability, the qualitative research was distilled into two main focus areas: Job Opportunities and Competency Areas, and Programmatic Considerations. The first section involves translating the job opportunities surfaced through the interviews into competency areas required. A framework to analyze and prioritize opportunities was developed based on DACUM¹³ and a job scoring system as discussed in the methods section on p __. The second area focuses on the programmatic considerations, specifically as it relates to fostering remote work for curriculum graduates. It highlights the barriers to remote work, competitive advantages that will work in favor of Haiti, current employer hiring practices, and the role that the Haitian Diaspora can play in facilitating access to the global market.

Section 3.1 - Job Opportunities and Competency Areas

This section is comprised of a series of successive analytic steps to translate the identified job opportunities into competency areas for curriculum development:

- *Needs Analysis* - job opportunities were clustered into broader occupational groups. jobs were ranks against project goals based on three criteria - upward growth of sector, low volatility of sector, and contracting arrangements.
- *Job Analysis* - duties and tasks pertinent to each identified job opportunity were listed.
- *Task Verification* - tasks were rated and prioritized based on importance and frequency.
- *Occupational Enablers* - indicates the occupation enablers including specific knowledge, vocational skills, desired behavior, and tools and equipments required for each high ranking jobs.
- *Competency Areas* - identifies the broad professional knowledge, skills, and attitudes derived from tasks and skills required to complete those tasks.
- *Transversal Skills* - lists the skills that are not specifically related to a particular job but can be used in a wide variety of situations and work setting by the remote workers.

Section 3.2 - Programmatic Considerations

This section is comprised of barriers and drivers that affect the employer's decision to solicit services from a foreign provider, and employer perceptions on Haiti that will inform the design and development of a small to medium size enterprise (SME) that will connect graduates from the cohort with employment opportunities :

- a. *Employer Perspectives* - the key factors that affect the nature of transaction between the employers and remote workers. This includes:
 - Current Practices - highlights the existing practices and employer motivations for remote outsourcing, including the nature of transactions between employers and remote workers.
 - Barriers to Outsourcing in Haiti - indicates the obstacles that the enterprise would have to overcome to successfully promote employability of the remote workers in the global market.
 - Competitive Advantages to Haiti - identifies the factors that increase the willingness of the employers to outsource to Haiti.

Female Participation - examines the barriers to female participation in digital job opportunities and lays out the best practices that can help overcome the barriers.

Outreach and Recruitment - highlights the opportunities that the diaspora can have in facilitating the access to digital job markets and best practices for recruitment

¹³ DACUM is the acronym for the ‘Developing a Curriculum’ model as mentioned on p __. DACUM involves only the first step in a full vocational training curriculum development process. Instead of job observation, DACUM uses guided discussion with expert workers to identify detailed tasks and duties associated with a job profile

3.1 Job Profiles and Competency Areas

3.1.a Needs Analysis

Classification

In total, twelve job opportunities were surfaced in conversation with fifteen employers across the five identified sectors: i) Media, entertainment and information ii) Information and Communication Technology (ICT), iii) Financial services and Investors, iv) Professional Services, and v) Healthcare.

The job opportunities were mapped into five occupation groups from Burning Glass Technologies' Digital Skills Gap study (2015), which developed the groups using artificial intelligence based on job postings from nearly 40,000 job boards, employer sites, and other sources.¹⁴ In the Media, entertainment, and information Sector, 'social media tools & search engine analysis' emerged as the predominant occupation group. The 'productivity software' group spanned across sectors, emphasizing the need for proficiency in tools like spreadsheets and word processing programs in a majority of the jobs. The other three occupation groups that emerged are more advanced in complexity - 'accounting', 'customer relationship management', and 'computer and network support'. All three are sector-specific and require knowledge of some advanced software.

Occupation Group	Sector	Job
Social Media Tools & Search Engine Analysis	Media, entertainment and information	SEO Clerk
	Media, entertainment and information	Online Ads Monitor
	Media, entertainment and information + Consumer (E-Commerce)	Keyword Search
	Media, entertainment and information + ICT	Testing
Software Productivity	All Sectors	Virtual Assistant
	ICT +Financial Services & Investors + Professional Services	Data Extraction
	Financial Services & Investors + Professional Services + E-Commerce	Market Research
Accounting	Financial Services & Investors	Financial Statement Spreading
Customer Relationship Management	ICT	Data Entry
	Healthcare	Medical Billing
Computer and Network Support (Security)	ICT	Web Security
	ICT	Email Security

¹⁴ Burning Glass Technologies, *Crunched by the Numbers: The Digital Skills Gap in the Workforce*, (Capital One and Burning Glass, March 2015).

Analysis

An analysis was conducted to determine which job opportunities should be prioritized for the curriculum development. Job profiles were scored using three criteria deemed necessary for program sustainability: projected sector growth, low sector volatility, and longer-term contractual arrangements. Metrics used and weighting is explained in the methods chapter on p __.

The top-ranked job opportunities are: (1) Web and Email Security, (2) Data Entry, (3) Medical Billing, (4) Financial Statement Spreading, and; (5) Market Research. These job opportunities primarily fall under ICT, Financial Services & Investors, and Professional Services which not only show the most upward growth and stability but also can provide steady revenue flows through annual contract arrangements. Also, the companies targeted would be large enterprises with global presence, providing the opportunity to have a 24/7 work cycle and the ability to optimize the SME space. While medical billing under Healthcare can provide steady contracts and with upward growth, automation of CRM indicates that the opportunity is highly volatile. The scoring system reveals that despite a low level of volatility, the job opportunities under the Media, entertainment, and information sector have limited upward growth and contract arrangements do not provide a steady flow of income.

The following table compares different job profiles across the three criteria established for ranking.

Occupational Categories	Sectors	Job	Upward Growth	Volatility	Contract Arrangements	Score
Social Media and Search Engine	Media, entertainment and information	SEO Clerk	1.67	8.50	1.70	2.81
	Media, entertainment and information	Online Ads Monitor	1.67	8.50	1.00	2.47
	Consumer (E-Commerce) Media, entertainment and information	KeyWord Search	1.67	8.50	1.00	2.47
	Media, entertainment and information, ICT	Testing	2.33	4.00	2.00	2.44
Productivity Software	E-Commerce	Virtual Assistant	2.67	3.50	5.50	4.22
	Financial Services & Investors Professional Services, ICT	Data Extraction	4.33	4.00	5.00	4.61
	Financial Services & Investors	Market Research	4.67	5.50	6.00	5.47
Accounting	Financial Services & Investors	Financial Statement Spreading	3.67	4.00	10.00	6.89
Customer Relationship Management	Financial Services & Investors Professional Services, ICT	Data Entry	5.67	5.30	9.00	7.28
	Healthcare	Medical Billing	4.67	2.50	10.00	6.97
Computer and	ICT	Web Security	6.33	7.00	10.00	8.28

Network Support	ICT	Email Security	6.33	7.00	10.00	8.28
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3.1.b Job Analysis

After classifying the job opportunities by occupational group and sector, each job opportunity's duties and tasks were indexed. The duties and tasks were identified through employers' experiences and standard operating procedures. Each task was explained using appropriate verbs (first person, active, and singular), qualifiers (words used to clarify the statement), and objects (the things acted upon by the worker). Given the time constraints of the interviews, emphasis was made to identify the priority tasks. Further details were added through desk research and verified in the next step through follow up consultation with the employers. The tasks listed below represent the priority tasks for the top five ranked jobs (as determined through the needs analysis above), a full list of tasks and job opportunities can be found in the appendix on p ____).

Many of the identified duties and associated tasks require the ability to use spreadsheets for data entry, retrieve information through interfacing with customers or scanning public databases, and follow protocols established by the employer. While market research and data entry require basic digital skills, other job opportunities require a mix of technical expertise in an occupation such as accounting, Email and DNS or medical coding along with the above mentioned skills. All tasks are industry-specific and require specialized training to get familiar with the systems established by the employer.

Job	Duties	Tasks
Productivity Software		
Market Research	Search, obtain information, and data entry	<ul style="list-style-type: none">– Open the provided spreadsheet.– Conduct internet research to find the price and other information on the products listed.– Enter the data into spreadsheet.
		<ul style="list-style-type: none">– Conduct local market research on ground to find the price and other information on the products listed.*
<i>* Respondents expressed that Haitian Diaspora members are constantly looking for people who can collect and validate information in the field, due to the difficulty verifying information found online. This could include restaurant and product pricing, among others.</i>		
Accounting		
Financial Statement Spreading	Spreading of Financial Statement	<ul style="list-style-type: none">- Review the item in the financial statement and note if the statement is combined or consolidated- Indicate on each page the currency and if the figures are actual or are in thousands or millions- Enter the auditor’s name and type of opinion: unqualified, qualified, adverse or disclaimer of option
Customer Relationship Management		
Data Entry	Fill Insurance Applications	<ul style="list-style-type: none">- Call Customers- Fill 6-7 pages of applications including information on name, address, car model, acclimation, existing protection, mortgage, and payment system.
	Respond to email applications	<ul style="list-style-type: none">- Review applications for error- Respond with templates provided by the company
	Review online application	<ul style="list-style-type: none">- Review applications for error- Respond with templates provided by the company
Medical Billing	Process Medical Bills	<ul style="list-style-type: none">- Verify health insurance- Calculate copayments, coinsurances, and deductibles- Speak with patients about their balances

Computer and Network Support		
Email Security	Sales	<ul style="list-style-type: none"> - Receive the call from potential customer - Explain them different services offered by AppRiver - Ask them what service they want to purchase
	Support Onboarding	<ul style="list-style-type: none"> - Go to the customer file - Set up accounts on the desired server - Create or identify existing domain where email needs to be delivered - Create MX Record and ask the customer to enter it in their domain
	Filter Emails	<ul style="list-style-type: none"> - Filter emails based on given criterias - Quarantine spam emails - Deliver other emails to the domain
	Troubleshoot / technical support	<ul style="list-style-type: none"> - Attend customer call for troubleshooting - Help client based on different scenarios - example configure DNS incase email isn't reaching the account
	Migration	<ul style="list-style-type: none"> - Call the client and inform them of the new upgrades in exchange - Set up a time to support the migration to new exchange - Call client at the set time and help

3.1.c. Task Verification

To prioritize specific tasks, employers rated the importance, frequency, and difficulty (complexity) of jobs as they relate to each task subset. This revealed employer expectations and perceived level of importance of the job to the core business. **Importance** was rated between medium and high, **medium** indicates that the job is important for the company but is not the core part of their service and **high** indicates that the job is core part of business service. Jobs of low importance were not prioritized as they are usually not outsourced, given the necessary investment employers must make towards specialized training which makes outsourcing low priority work cost prohibitive. The **frequency (contract basis)** was indicated as either project basis, working hours, or ongoing (24/7). **'Project basis'** work is commissioned on an 'as-needed basis', where work is allocated by number of hours or days. **'Working hours'** is defined as a contract arrangement wherein remote workers are engaged during the typical working hours of the business, usually eight hours a day. **'Ongoing (24/7)'** indicates that the job is positioned for the global market where demand for remote workers is around the clock, or 24 hours a day, 7 days a week. Difficulty was measured between low and medium complexity based on the skill level expected of the worker.

A majority of the identified tasks are high priority and require either an eight hour shift or a twenty-four hour cycle broken into three eight hour shifts. An 'ongoing (24/7)' contract basis is more desirable from a program sustainability perspective, since project-basis jobs do not provide an ongoing flow of work. For example, a focus on Email Security which requires ongoing contracting would help optimize the SME for more competitive pricing. But it will require remote workers with more advanced skills as tasks have higher difficulty level - medium complexity. Market research and data entry, being of low to medium complexity, offer a starting place for most of the remote workers.

Job	Importance	Frequency (Contract Basis)	Difficulty
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Productivity Software			
Market Research	Medium	Project Basis	Low to Medium Complexity
Accounting			
Financial Statement Spreading	High	Working Hours	Medium Complexity
Customer Relationship Management			
Data Entry	High	Working Hours	Low to Medium Complexity
Medical Billing	High	Working Hours	Medium Complexity
Computer and Network Support			
Email Security	High	24x7	Medium Complexity

3.1.d. Occupational Enablers

After indexing and verifying tasks, occupational enablers were identified for each job. Occupational enablers indicate the knowledge and skills, personal attributes and behaviors, and tools a person needs to know when successfully performing tasks and duties. It is important to note that the majority of employers demand only a high school diploma or equivalent as the basic education but require vocational training in skills required for duties and tasks specific to their job opportunity.

A majority of tasks require basic proficiency in Microsoft Word and Excel, with more specialized opportunities requiring knowledge of field-based expertise in accounting, medical coding, or email/DNS. All job opportunities require professional level competency in either English or French, indicating a strong need for the language to be core part of the curriculum. Most businesses provide thorough training on its protocols, scenarios, or systems. Almost all job opportunities require the worker to communicate effectively and positively, and place emphasis on accuracy, time management, and integrity. Presence of high-speed, reliable internet connection and computer is a basic need, with some job opportunities requiring a phone line.

	Market Research	Financial Statement Spreading	Data Entry	Medical Billing	Email Security
Vocational Skill	Basic knowledge of microsoft excel and word	Basic knowledge of accounting and credit as well as softwares like quickbooks	Basic knowledge of microsoft excel	Basic knowledge of Microsoft Word and Microsoft Excel. Knowledge on medical coding for healthcare agencies or a Certified Professional Coder (CPC) certificate	Basic knowledge of email and Domain Name Server (DNS) Awareness of cyber security threats
Education + Language	High School Diploma English/French professional level competency	High School Diploma English/French professional level competency	High School Diploma English/French professional level competency	High School Diploma English/French professional level competency	High School Diploma English/French professional level competency

Training		Question based training provided by the company on the scope and task	Provided by the company on the protocols but no training on accounting.	Provided by the company on the data entry system and application field	Provided by the company on the system used and application fields	Provided by the company on different scenarios
Desired Behavior		Detail Oriented - Pay attention to details and instruction Problem Solving - Ability to find solutions to difficult or complex issues Critical Thinking - Ability to objectively analyze and evaluate an issue and form a judgment	Integrity - Keep's one word Time Management - Ability to deliver work on time Collaborate - Ability to work effectively with the team Communicate - Ability to communicate effectively with the client and team	Detail Oriented - Pay attention to details and instruction Accuracy - Enter information correctly Communication - Communicate effectively with the customer and the team	Positivity - Maintains a positive attitude Collaborate - Ability to work effectively with the team	Punctuality - Show up on time and deliver work on time Integrity - Keep's one word Communication - Communicate effectively with the customer and the team
Tools and Equip - ment	Computer	x	x	x	x	x
	Internet Service	x	x	x	x	x
	Phone Line		x	x		x

3.1.e. Competency Areas

Competency areas required for the demand opportunities were determined by clustering the transversal skills required for each job. Transversal skills are skills that are applicable to many jobs. The skills were ranked based on the number of occurrences across the identified job opportunities to indicate the adaptability and perceived importance of different skills. For example, the ability to use cloud based applications for managing workflows and remote collaboration was a skill expressed in every interview, which then received the highest score. Some transversal skills were then clustered together based on the DigiComp Area they pertained to and the ability to be taught in a course together. The competency areas that emerged from the clustering of related skills can be broadly classified into five areas¹⁵ - inter-personal skills, critical and innovative thinking, informational literacy, language skills, intrapersonal skills - in addition to specialized knowledge areas such as security, accounting, CRM, and medical billing. The table below shows the priority skills associated with each identified competency area. Appendix E shows how the skills required for different tasks were clustered for each job to identify the competency areas. A detailed description of the skills is provided after the table below. The table below provides the description of each competency area with the related Digi Comp Area:

Competency Area	DigiComp Area	Description
Inter-personal Skills	2: Communication and Collaboration	Understanding how to communicate and collaborate with team members for work

¹⁵ Four of the five competency areas are based on the domains identified under 'transversal competencies' by UNESCO IBE 2013. Language Skills and specialized knowledge can fall under the sixth domain called 'others' but were given their own categories because of their pertinence to the demand research.

Critical and Innovative Thinking	5. Problem solving	Understanding of tactics to use when encountered with problem and analyze information without errors
Information Literacy	1. Information and data literacy	Understanding how to query, locate, and enter, and extract information using a wide range of strategies
Language Skills		Understanding baseline language requirements for the demands
Intrapersonal Skills	N/A	Understanding how to cultivate behavior that increases productivity and quality of work
Specialization 1: Security	N/A	Understanding of cyber threat and knowledge of DNS.
Specialization 2: Accounting	N/A	Understanding credit and basic accounting
Specialization 3: CRM	N/A	Basic understanding of CRM softwares
Specialization 4: Medical Coding	N/A	Understanding of universal medical alphanumeric codes.

i. Transversal Skills

Transversal skills refer to cognitive, non-cognitive and specific and technical skills which enable an employee to not only perform the tasks required for their role but also apply those skills to jobs beyond their current occupation. It is important to note that job seekers can secure entry-level positions in the digital economy with basic transversal skills and, by building their knowledge, skills, and experience, move into positions higher up the value chain. The detailed description of each of the identified transversal skills that were used to develop the competency areas, is provided below.

Interpersonal Skills

Interpersonal skills, also known as people skills, are related to the way workers communicate and interact with people. The two top areas identified under interpersonal skills were workflow management and communication. Workflow management refers to use of cloud based applications for managing workflows and remote collaboration while communication refers to written and spoken form at a professional level in a clear and concise manner.

Workflow Management

The success or failure of remote work processes rely greatly on workflow management. Workflow management consists of developing plans that define the process of getting from Task A to Task B, while recognizing the points where additional information and resources might be required to mitigate the risk of getting delayed. Employers expressed the need for the remote workers to understand how cloud based applications can be used for managing workflows and remote collaboration in order to accomplish daily goals and deliver a quality product.

- **Project management and communication software proficiency (1)** - Outsourcing tasks comes with added complexities of managing workflows and processes across geographic borders. The ability to use video conferencing and productivity softwares to collaborate, manage workflows, and communicate remotely was ranked as the highest skill. Employers and managers often extend their license to project management softwares (Asana, Dropbox, Box, Hubspot) and communication softwares (Skype, Uberconference, Zoom) to contracted remote workers to streamline workflows. Without the knowledge of remote tools, the coordination of workflows will between workers and the client would be prohibitively difficult.

Communication

Communicating effectively with team managers and potentially customers was seen by employers as critical to sharing information and building relationships in a virtual workplace. It helps avoid conflict and misunderstandings and makes a workplace more productive and

respectful. Under communication, three skills were most frequently expressed as important - reporting, writing emails, and talking to people.

- **Reporting (4)** - pertains to the ability to write short, sharp, concise documents as per the situation or problem. Most microtasks involve reporting back to managers at the end of the day or a particular task.
- **Writing emails (6)** - is linked to the ability to write effectively and clearly. In a remote setting, ineffective emails often lead to multiple exchanges asking for clarifications and providing corrections. The ability to frame questions regarding work using positive language and providing the right information to avoid multiple emails was seen as an important skill.
- **Talking to People (7)** - relates to the ability to communicate effectively and positively over the phone as well as project a personable character and talk confidently.

Critical and Innovative Thinking

To be successful in digital jobs, remote workers also need a habitual way of thinking that is important for effective functioning and completion of tasks. More importantly, the ability to explore situations and generate alternatives when stuck with a problem was often repeated across the interviews as a baseline expectation. This includes the use of critical thinking, problem solving, and close attention to details to complete the tasks per expectations of the client and avoid road blocks.

- **Critical Thinking and Problem Solving (2)** - They refer to the ability to use judgement and make decisions when encountered with information and/or problem. Employers value remote workers who can find the best course of action to take in a given situation. The process includes identifying problem and deciding whether to ask for more input or seek a different solution. It is important for the worker to do this in a positive and proactive manner, without display of strong emotions or opinions.
- **Detail Oriented (3)** - The ability to pay attention to detail and understand causes instead of just the effects, and work effectively to minimize errors. The success to deliver a good quality product out of the microtasks often rely on the ability of the remote worker to focus on a highly repetitive action and follow a set of fixed instructions. It also related to the ability to verify the correctness or error in an individual part or procedure.

Information Literacy

Most digital data related microtasks require the ability to identify, find, evaluate, and manage information that is either provided by the employer in an unstructured format or required to be retrieved from publicly available databases. Several skills were identified as baseline for the workers to develop informational skills.

- **Productivity Softwares (5)** - tops the informational skills with the base ability to create spreadsheets and enter data in a spreadsheet, type and process information in a word document, and present information in a suitable format in powerpoint.
- **Data Extraction (7)** - or retrieve data out of data sources and public databases for further data processing or data storage.
- **Data Entry (8)** - Ability to accurately enter data extracted through queries. Also requires proficiency in certain productivity softwares such as customer relationship management softwares for managing customer data.

Language Skills

Language demand is primarily for English proficiency. Employers demand professional level proficiency - ability to speak and write. There is some demand for French and Spanish but these are specific to certain projects. Demand for Kreyol as a secondary language applies when working as a researcher or customer representative with Haitian Diaspora. Employers often expressed the need for a worker to be able to use humor in English / French to avoid conflicts and build relations with managers and/or customers.

Intrapersonal Skills

Three worker behaviors were frequently expressed as the top desire of the employers - enthusiasm and attitude, professionalism, and personal integrity.

- **Enthusiasm** - Employers and managers expressed the desire for workers to have positive thinking and an enthusiastic approach to work. It also relates to the ability to maintain positive relationships with team members and have an attitude that enables effective collaboration.
- **Professionalism** - Valued highly due to concerns (fear) about outsourced workers lacking a degree of professionalism such as: writing emails, timeliness, communication with team members and supervisors.
- **Personal Integrity** - The ability to self manage, manage time and prioritize wisely. Employers desire workers to be honest and be able to maintain confidentiality.

ii. Specialized Skills

In addition to transversal skills, several specialized skills were identified because of their growing demand as stated by the employers and verified through desktop research. Often the courses in specialized areas are led together by industry and education providers and continues to be a growing area within the technical and vocational education and training (TVET) sector. The identified specialized skills refer to occupation specific digital skills that can be offered to women students who are either returning to workforce or meet minimum criteria of education or are more digitally literate.

Security

Security tops the specialized skills and requires the ability to configure email services. This includes managing a DNS server, configuring mail exchanger records, and basic awareness of cyber threat.

Accounting

Accounting refers to the ability to read combined or consolidated financial statements, understand the difference between credit and debit, and know how to use quickbooks.

CRM

CRM refers to the basic understanding of customer relationship management and the ability to use CRM apps. This includes handling customer databases and keeping track of billing and other interactions with customers.

Medical Coding

Medical Coding is a certification that validates proficiency in the correct application of different diagnosis codes used for coding and billing for medical claims in an inpatient hospital or facility.

3.2 Programmatic Considerations

Outlined below are important considerations respect to employer perspectives, gender perspectives, and the role of the Haitian diaspora to inform the design of the SME. To ensure that the structure of the SME aligns with employer preferences, careful consideration is given towards the employer experience and practices. Because the program aspires to address the gender gap in the digital labor market and fortify Haitian Diaspora connections abroad, findings in regards to the gender and the Haitian diaspora are

A line of questioning aimed at understanding barriers to female participation from the employer perspective.

3.2.a. Employer Perspectives

The research drew on knowledge from key actors in the identified sectors to understand employers' existing practices, barriers, and motivations for remote outsourcing. This includes the nature of transactions between employers and remote workers, along with channels and platforms utilized for recruitment. The outcome of these considerations yield strategic opportunities for how an SME can better connect with employers factoring in outreach channels and messaging, how they can better train, and how they can better collaborate factoring in management structures and contracting arrangements.

i. Current Practices

Employers typically go through three distinct steps when outsourcing work, beginning with hiring and assessing a service provider, training the selected service provider, and collaborating and managing the service provider.



Hiring and Assessment

Employers usually connect with Service Providers through referrals. Interviews are typically used by employers to screen and assess potential service providers with a focus on work culture, systems and processes. Aside from interviewing project managers, some employers also like to interview each remote worker as part of their due diligence. Employers look at previous work experience and attrition rate of workers to establish credibility. Once selected, performance is assessed through the number of revisions required, communication protocols, risk management, and timeliness of delivery.

Training Practices

Employers typically conduct specialized training for the specific work being outsourced. Four different types of training emerged from the research:

- Training Modules - Self-paced online modules which teach the worker specific techniques required to complete the job.
- Instruction Based - Step-by-step instructions related to processes for completing the job.
- Question Based - Demos and training through video conferencing followed by a round of questions.
- Induction Program - In-person training of 2-3 trainers who then train the other people.

Collaboration & Project Management Practices

Employers typically communicate with a manager to negotiate the annual service agreement and scope work and quality metrics. The responsibility of further breaking the work into microtasks and training and/or briefing the remote workers usually lies with the manager. Sometimes there is direct communication between the manager at the employer side and the remote workers through the use of cloud based softwares and video-conferencing apps. Workflow management is done through project management apps used by the employer.

ii. Barriers to Outsourcing in Haiti

While microwork is a subset of a growing online outsourcing industry, employers are often cautious of risks associated with a geographic location and quality of labor. Based on interviews with employers and existing service providers in Haiti, the research team identified several barriers that deter employers from soliciting services from microwork enterprises, specifically in Haiti. Consideration was given to

provide a holistic perspective while accounting for social, regulatory, cultural, and gender barriers. Aside from perception and infrastructure related issues, the work culture divide, and regulatory challenges were described as common challenges associated with outsourcing across geographic locations or industries.

Perception of Instability

A perception of instability was identified as one of the largest barriers towards choosing Haiti as an outsourcing location. The assurance of a backup network or a system to insulate workers from potential disruptions would make investment in outsourcing in Haiti less risky for employers.

- Political turmoil, vulnerability to natural disasters, and infrastructure deficits associated with the country are seen as obstacles to doing business with Haiti.
- Most employers did not have confidence that a Haitian-based service provider would be able to mitigate potential disruptions and sustain business operations within this context.
- Inflation due to natural disasters and influx of foreign aid since 2010 have increased the cost of labor, making Haiti an expensive destination for outsourcing as compared to more competitively priced labor markets in Asia.

Infrastructure Deficits

Employers - especially of Haitian diaspora - are skeptical of outsourcing to Haiti due to unreliable telecoms and infrastructure.

- Unpredictable power and travel times due to traffic congestion are seen as infrastructural obstacles, affecting the ability to work efficiently and on time.
- Unreliable internet prevents file sharing through File Transfer Protocol (FTP). Employers assume there would be limitations on the amount of data that can be downloaded and uploaded in Haiti, preventing heavy file and folder transfers.

Work Culture Divide

Most respondents reported challenges related to communication as a main barrier to outsourcing. This would be especially true in English-speaking North American markets. Employers need assurance that staff familiar with “North American” work culture will act as liaisons between remote workers and the client teams to project manage, avoid miscommunications, and ensure timeliness.

- Cultural differences can also lead to miscommunications, such as the acceptance of tasks without a thorough understanding of the requirements or acceptance of timelines that the remote workers can’t meet.
- An inability of the remote worker to ask the right questions at the right time was pinpointed as a challenge.

Regulatory Barriers

Generally speaking, Haiti is business friendly with a fairly flexible labor market. Service Level Agreements (SLAs) were identified as a way to alleviate challenges arising from regulatory barriers - which are most commonly related to data security. SLAs can be used to describe the security measures that will be required by the employer to prevent network security breach and databases, ensuring all preventive measures were taken in the event of an accident. Below are pertinent laws that constrain outsourcing.

- Health Insurance Portability and Accountability Act (HIPAA) - HIPPA requires “protected health information” to remain on US Servers, preventing remote outsourcing abroad for health related tasks.
- Gramm-Leach-Bliley Act (GLBA) - GLBA requires financial institutions to explain their information-sharing practices to their customer and safeguard sensitive data. It limits the sale of private financial information. Lack of similar in Haiti might be a barrier to sharing this information and related task online.
- Payment Card Industry Data Security Standard (PCI DSS) - PCI DSS is an information security standard for organizations that handles branded credit cards from the major credit card schemes. Lack of PCI Compliance in Haiti can make credit card information less secure.

Regulatory challenges for Haitian service providers are mostly related to domestic taxation, incentives, and labor laws:

- ICT employers in Haiti currently don’t have distinct labor laws or brackets and must comply to entertainment and hospitality industry labor laws.
- A new amendment will allow nighttime work to occur without overtime pay (previously 1.5x regardless of length of shift) which will ease the burden for ICT service providers required to work on client time zones.

- Service Providers are unable to adhere to the Haitian holiday calendar due to the client country’s holiday schedule which is not legal.
- It was stated that government incentives like income tax exemption, easy fund repatriation, and duty-free import for office expenses are not seen as guaranteed due to administrative change and political turmoil.

iii. Competitive Advantages of Haiti

Though Haiti will need to overcome many challenges before it can be recognized as a nearshore outsourcing destination, there are several demand drivers that work in favor of Haiti supported by strategic investments being made in the country to support the development of a BPO industry. The most compelling market drivers in Haiti over the other outsourcing destinations are low labor cost and proximity to North American markets. Employers expressed the ease of flying to Haiti for training and quality assessment purposes.

Labor Cost

Lower wages (\$350 average annual per capita income) and low cost of doing business is one of the biggest drivers for choosing Haiti as a destination. Employers expressed that “business always comes first” and driving costs down without affecting the quality of work and getting it done efficiently and quickly would definitely be the biggest factor in choosing Haiti as a destination.

Proximity

Employers expressed that proximity of Haiti to American and Canadian markets gives them easy access to visit the service provider and makes training in-person and assessment easier. Also, differences in time zones of clients and providers involve substantial costs of coordinating global outsourcing. Haiti benefits from time zone overlap with North America, allowing both sides to conduct more of their work interactively rather than as a highly structured process. This overlap also facilitates communications and helps foster warm relationships.

Language

Due to its multi-lingual capability - French, English, and Spanish - Haiti is a strong candidate for online services. Haiti is the only French speaking nation in the nearshore region. Clients value professional and responsive communication skills the most in remote workers, and language becomes important while communicating, negotiating, and working with team managers from the client side.

Government Incentives

More awareness of the franchises and subsidies offered by the government has potential to attract more investments. While the government is hosting events and making efforts to attract investments to development of business parks, high political unrest often delays the progress and pause investments. There is also unsurety around the subsidies or franchises offered by the government due to constant change in the government leadership.

Social Impact

Many employers are interested in the social impact marketing angle of impact sourcing. Haitian Diaspora members have a vested interest in the development of Haiti and impact sourcing can address some systemic issues, like ‘brain drain’.

Advancing Connectivity

Haiti’s ICT recent infrastructure advancements have demonstrated promising future. Digicel and Natcom have become home internet providers, laying new fibre optic cables to expand their internet networks in the major cities. They also provide E1 (a digital transmission link with a total transmit and receive rate of 2.048 Mbps) connectivity at competitive rates.

Labor Force

Haiti has one of the largest populations of any Caribbean nation, it’s growth rate of 40.6% (CIA Factbook) assures a steady supply of workers. Haitians are perceived as hard working and as informants expressed - ‘hungry for work.’ High rate of unemployment drives the workers to do a job with eagerness and properly, and work hard to keep their jobs. Haitian people are also perceived as independent thinkers, innovative, resilient and happy. They are seen as solution focused rather than process focused.

Cultural Affinity

Haitians are perceived to have better understanding of US and Canadian culture due to geographical proximity, higher probability of travel, and familial connections or chanced encounters with US and Canadian residents. Haitians

3.2.b | Female Participation

Barriers to Participation

Many employers acknowledged and attributed the gender gap in their respective industries to systemic issues outside of their control, such as access to advanced education, that constrain the number of women entering the labor market. Employers did not consider employer hiring practices or preference to be a contributing factor. Across Haiti, US and Canada, nearly all employers felt the lack of female participation was most visible where advanced skills such as coding are required, but less so at lower-skill positions. A majority of respondents expressed a desire to bridge the divide through actively recruiting more women, or were already employing a majority of women. In these efforts, many employers articulated challenges recruiting women qualified for higher-skill positions, and attributed the small female talent pool to lower access to STEM education for girls, particularly in Haiti where strict gender roles and expectations create steep barriers. This could be indicative of an implicit bias that women are not able to manage work and life. This is supported by an OECD study ‘*Going Digital: The future of Work for Women*’ that indicates that although the gender gap is relatively small when it comes to general ICT skills and the use of software at work, there is a large gap in specialized ICT skills (about 1 woman for every 5.5 men) that are rooted in STEM - quantitative and mathematics- related competencies. The study emphasizes the need to remove gender bias in curricula and parental attitudes as well as raising student and family awareness about the opportunities associated with an ICT related field of study.¹⁶ In Haiti, some local service providers speculated that certain restrictive cultural and social barriers contribute to the gap such as the ability to travel freely to the workplace and the ability to manage work plans while balancing the responsibilities at home.

Additionally, the notion that systemic educational issues constrain the supply of female talent and contribute to gender imbalance in the workplace is supported by studies on Gender Parity in the workplace. One such example is the World Economic Forum (WEF) study on the *Future of Jobs*, which demonstrated that the growth of emerging work opportunities in computer, technology and engineering-related fields is currently outpacing the rate at which women are entering such jobs. The study concludes that this issue creates a risk of decreasing gender parity in the workplace, and puts women at risk for missing opportunities in high growth sectors, and aggravates the hiring process for companies due to a more restricted talent pool.¹⁷ It should be considered, however, that the qualitative research findings are based on self-reported information and secondary desk research. As the WEF “*Future of Jobs*” Study reports, despite overwhelming claims of support for gender parity at the workplace, on average only 25 percent of the companies surveyed actively targeted female talent. For the Information and Communication Technology industry, only 16 percent of companies said they were actively recruiting women. Validation of the qualitative findings through triangulation with interviews with women in the workplace, or a probe into volume of female job seekers in possession of specific skillsets could be an area of further investigation.

Employers such as Kreyol Essence and Avasant expressed that their own organizations as well as other emerging in-country ventures are making concerted efforts to engage more women both in Haiti and the US to boost applications. They stated that they actively seek out female workers due to superior soft skills including communication, punctuality, and commitment to work. In addition, some of the local service providers in Haiti are also actively working to foster female participation in the ICT industry.

Best Practices

We looked at best practices for impact sourcing and microwork outsourcing organizations. Examples in the Philippines were the most prominent as many employers currently outsourcing entry-level tasks referred to it as an example where a majority of entry level digital jobs have greater female participation than men. The investigation revealed that provision of safe and accessible public access facilities combined with a peer network or support community helps overcome barriers faced by women. According to the WEF Gender Gap 2016 report, the Philippines is Asia’s best performing country and leads the East Asian and the Pacific region in closing gender disparity. While there is still a large gender gap that exists between male and female labor force participation, several actions came to forefront that are actively working to close the gap. Below, we have listed two cases - Telecenters and Women’s Digital Literacy Campaign.

Telecenters, Philippines:

‘Telecenters’ is a support network of computer centers involved in empowering the marginalized and remote communities around the world. The portal provided by telecenters in Philippines gives access to training resources for telecentre managers and operators, as well as for trainer of telecentre staff. They also provide resources for women’s use of telecentres and basic IT skills. In addition, there are several

¹⁶ Policy Brief on the future of work - Going Digital: The future of Work for Women, (OECD 2017) <https://www.oecd.org/employment/Going-Digital-the-Future-of-Work-for-Women.pdf>

¹⁷ World Economic Forum, *The Future of Jobs: Employment, Skills, and Workforce Strategy for the Fourth Industrial Revolution*. World Economic Forum, 2016), 15-16. http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf

community-centered initiatives with Telecenters that are leading the movement towards closing the gender gap. One of them includes the Community e-centres (CeC) roadmap, an initiative supported by Canadian International Development Research Centre (IDRC), telecentre.org, and the Development Academy of the Philippines (DAP). The objectives of the roadmap include providing connectivity to all municipalities as well as development and access to content that is relevant to the needs of the target customers, especially the vulnerable groups.¹⁸

Women's Digital Literacy Campaign, Philippines:

Women's Digital Literacy Campaign trained over one million unskilled women to use computers and modern ICT applications to improve their livelihoods. The initiative was launched by ITU in partnership with the Philippine-based NGO telecentre.org Foundation. By following a model of 'train the trainer,' the campaign leveraged the combined reach of telecentre.org Foundation's global network of 100,000 telecentres worldwide and ITU's 193 Member States and more than 700 members from the private sector and academia to deliver training in ICT. The training enabled women to set up online businesses, or use broadband services, to enhance their ongoing livelihood and economic activity.¹⁹

3.2.c | Outreach and Recruitment

Role of Haitian Diaspora

Business and social networks are valuable mechanisms for economic integration of developing countries into global markets. Ethnicity and diaspora-based connections are prominent forms of these networks.²⁰ This study was premised off the hypothesis that the Haitian diaspora network can create a sustained stream of microwork opportunities for cohort graduates. But interviews with current service providers in Haiti revealed that the diaspora is not currently playing an active role in facilitating access to overseas markets, and many believed it would be difficult for the Haitian diaspora alone to provide sufficient work opportunities for a potential SME. Since the majority of Haitians emigrated as of 2000 (the Haitian diaspora population in the US has tripled from 225,000 in 1990 to 676,000 as of 2015, there has not been a long period to establish themselves in business or other institutions.²¹ As of 2010, only 3.5% of Haitian expatriates were classified as self-employed, and those who are tend to pursue small-scale, micro-enterprises or informal economic activities where there no formal records.²² Such entrepreneurs tend to focus solely on Haitian markets, which affects potential for growth, wealth creation, and staff size. Such enterprises typically fall within the industries of "money transfers, travel agencies, and food preparation" and of "bakeries, shipping, restaurants, translation services, music shops, and small grocery stores."²³ With the few Haitian enterprises that do exist with scaling potential, they tend to be newer, early stage ventures where - unless built into the business model - the risk of outsourcing is not financially viable.

The more well-established of the Haitian expatriate community who emigrated in the 1970's tend to be professionals or technicians, especially in the fields of medicine or engineering, who tend to be focused on earning wages and climbing professional occupational ladders. This is largely due to the Duvalier regime's persecution of the middle- and upper-class 'aristocracy' who were seen as political threats to the regime's rule at the time.²⁴ While there are a number of Haitian American networks and business associations in the United States and Canada, a need to support and further develop the network through events and incentives was expressed. For example, the National Alliance for the Advancement of Haitian Professionals (NAAHP) has a following of 819 on LinkedIn, and attracts about 500 to its annual conference.

While it seems viable that members of the Haitian diaspora in leadership positions with direct employers can play a role in initial contract placement, the limited magnitude of these opportunities should be accounted for and considered against the volume of cohort graduates.

Additionally, the Haitian diaspora was cited as a large potential source of funding. Clinton Global Initiative's Haiti Chapter was referenced as a successful example of a way the Haitian diaspora can be cultivated.

¹⁸ Maria Teresa, Towards Socio-Economic Development Through Community e-Centres, (Telecentre magazine, June 2008) <http://telecentre.eletsonline.com/2012/04/towards-socio-economic-development-through-community-e-centres/>

¹⁹ ICTS for a sustainable World - Goal 5. Gender, (International Telecommunication Union, 2017) <http://www.itu.int/en/sustainable-world/Pages/goal5.aspx>

²⁰ James Rauch, Business and Social Networks in International Trade, (Journal of Economic Literature, 2001), 39:4, 1177-1203.

²¹ Data from U.S. Census Bureau 2010 and 2015 American Community Surveys (ACS), and 1980, 1990, and 2000 Decennial Census.

²² Katherine Fang, The Importance of the Diaspora's Investment in Haiti, (The Yale Review of International Studies, June 2015), <http://yris.yira.org/essays/1534>

²³ *ibid.*

²⁴ Tatiana Wah, "Engaging the Haitian Diaspora." Cairo Review of Global Affairs, 2013. <<<http://cgscd.columbia.edu/files/2013/07/ENGAGING-THE-HAITIAN-DIASPORA.pdf>>

Domestic Opportunities

Association Haïtienne pour le Développement des Technologies de l'Information et de la Communication (AHTIC), the ICT association of Haiti, has been working with Avasant Foundation and Center for Facilitation of Investment in Haiti (CFI) to develop a cohesive strategy to attract digital work opportunities to Haiti. The member companies include Digicel and Natcom (Haiti's largest service providers with about 30 agents each) as well as Cetemoh, ACCESS, BPOSS among other local service providers. Interviews with the members revealed the need for skilled workers among local service providers in-country, as well as Haitian service providers located abroad but with back-office operations in Haiti, specifically when they are scaling their services. The SME could effectively funnel program graduates into a network of existing service provider organizations.

Additionally,

Best Practices

Recruitment strategies

Interviews with employers revealed couple of strategic recruitment strategies that the SME can implement to lead to potential clients. The include:

- Sales force - Having US-based sales team (Part time or full time sales person) paid based on the business brought in were considered as a successful way of getting business. SME initiative should consider a full time sales representative for the program.
- Ambassador or Referrals - Most service providers stated that they get their work through word of mouth and referrals from existing companies. Haitian Diaspora can be incentivized to provide referrals. For example, Digicel has an incentive program that pays people who provide references.
- Conferences and events: They are looked as a way to connect with companies in USA and Canada. The common listed ones were - Call Center Week organized by CFI in Las Vegas and Outsource to Latin and Caribbean Region (OLAC). Others included - Empowering beyond by Avasant, Nearshore Nexus by Nearshore Americas, Invest in Haiti Forum by Inter-American Development Bank (IDB). In addition, training and certification sessions such as one organized by International Customer Management Institute (ICMI) is also seen as a possible avenue for making contact with potential client companies by some local service providers.
- Media - They are some blogs and publications that focus on nearshore markets as alternatives for outsourcing work from North American markets. Example include Nearshore Americas and the Haitian Times. Nearshore Americas is media company focused on analyzing and pursuing offshore business-process partnerships with the aim to inspire greater understanding and engagement with Latin American and the Caribbean. The Haitian Times is a digital news corporation that delivers Haitian news in US, Canada, Haiti, and Dominican Republic. It could be another effective channels to reach out to potential employers within the Haitian Diaspora. In addition, IDB runs Connect Americas - a social network platform for businesses in Americas. There might be potential opportunities to build a Caribbean network on the platform.

Contract Placement and Partnerships - Haitian Diaspora in management positions at large US and Canadian organizations can assist with initial contract placement. Initial contracts are critical, since location choices of outsourced work usually stay constant due to switching costs. Haitian Diaspora is also interested in working in Haiti can bring contracts and investments to Haiti as partnering organization. They can facilitate knowledge transfer and alleviate negative perceptions of Haiti.

4. Conclusions and Recommendations

Digital job opportunities, skills and competencies are constantly in flux. As such, it is critical to consider trends, opportunities, and challenges likely to emerge over the next five to ten years. Many aspects of the future digital economy will be shaped by automation and changes in workplace culture along with the prevalence of big data analytics. These developments will likely have implications on the nature of microwork and essential digital skills and competencies required for equal access to work opportunities in the digital economy. With this in mind, the research team provides the following recommendations in support of the development of a skills-building curriculum targeted toward Haitian female youth, and strategies for an SME to facilitate remote work opportunities with overseas employers.

Job Opportunities

In order to thrive in a rapidly changing environment fueled by automation and globalization, impact sourcing initiatives should consider pursuing opportunities with demonstrated upward growth, low volatility, and ability to supply a steady source of income. While the automation of many microwork tasks may be inevitable in some markets, many companies prefer not to invest in automation as it can be quite expensive and prefer to outsource such work. As indicated in the Results section above, the highest ranking job profiles against the above criteria are as follows:

1. Email and Web Security

The proliferation of mobile devices, the growth of cloud-based services, and the intensification of cybercriminal attacks, has led to growth of products and services for securing networks. Email and web security are critical to a comprehensive security strategy, and many large IT shops present in both Anglo and French markets are considering outsourcing these services to remote service providers. The work requires basic knowledge of email and DNS, interpersonal skills related to managing workflows and communication, critical and innovative thinking, and knowledge of navigating customer relationship management software.

2. Data Entry

A vast amount of data, both structured and unstructured, is being generated by businesses at an unprecedented rate. There is a need to either organize unstructured data to form databases or enter data into a computer program for processing. While the actual work varies based on the type of industry, the work revolves around keying in information and finding errors as one enters the information. It requires information literacy and software proficiency, especially Microsoft excel, interpersonal skills related to managing workflows and communication, and critical and innovative thinking.

3. Financial Statement Spreading

Financial statement spreading is the most common way to efficiently relay risk to an organization's decision makers. It involves recreating financial statements on spreadsheets and using percentages to forecast future financial statements. The spreads can be done on vendor software or an internally designed spreadsheet template. The work involves extraction of relevant data and integration of the data into spreadsheets templates and/or platforms. It requires knowledge of QuickBooks and accounting, information literacy, interpersonal skills related to managing workflows, and critical and innovative thinking.

4. Market Research

Market Research is an ongoing need of businesses that want to derive value from big data to improve their services and products. This varies from simple extraction and gathering of data through internet research to scanning publicly available databases provided by the employer.²⁵ It requires information literacy such as data entry, extracting information and analysis and knowledge of productivity softwares specifically microsoft excel, critical and innovative thinking, and interpersonal skills related to managing workflows and communication.

5. Medical Billing

The healthcare industry continues to grow as the North American population ages and the volume and variety of tests, treatments, and procedures increases with demand. Medical billing emerged as a high-demand occupation, where health care services are translated into a

²⁵ A common need amongst Haitian Diaspora respondents is the ability to extract or verify information in Haiti that might not be available online, such as retail addresses and product pricing.

billing claim Medical billing is the process of submitting and following-up on claims with health insurance companies in order to receive payment for services rendered by healthcare providers.. Medical billers need to be able to read and understand medical codes.

Competency Areas

The intention of the technical training program for female youth to be developed as part of the Ayitic Goes Global Initiative will help participants enhance their employability and access to better work opportunities. It was the intention of this research to determine job opportunities off which to base the training program's curriculum. Using a framework based off of DACUM, job opportunities were translated into competency areas and skills for the curriculum to focus on. While clear jobs opportunities and skills needs emerged, it is recommended that the curriculum be designed around core transversal skills, while offering specialized tracks with optional courses in the last round of training. The core transversal skills will enable participants to access job and educational opportunities following their employment, and provide resilience in a dynamic job market. The specialized skills can allow participants to build skills to enhance their employability in a niche sector. Given the higher level of complexity, the specialized skills could also be part of training that takes place within the SME organization. Language skills aside from Kreyol were deemed important, and can be imparted using simulations and workplace-based exercises. The competency areas hence can be divided into core and specialized as follows:

1. Core Competency Areas - Transversal Skills

- Interpersonal skills - It relates to the understanding of how to relate to people including the use of cloud based applications for managing workflows and remote collaboration as well as communication in written and spoken form at a professional level in a clear and concise manner. It is important for remote workers to be familiar with videoconferencing applications such as Skype and Zoom and project management apps such as Asana and Slack. Under communication, the remote workers need to know how to write professional emails and prepare written report to be submitted to managers end of day. In some opportunities, the remote workers also need to know how to talk to customers.
- Critical and innovative thinking - It relates to the understanding of tactics to use when encountered with problem and analyze information without errors. Specifically, the remote workers need to know how to seek a different solution when stuck with a problem in a positive and proactive manner, without display of strong emotions or opinions. In addition, the remote worker needs pay attention to detail, verify correctness or error in individual part or procedure of the task assigned to her.
- Information literacy -It relates to the understanding how to query, locate, and enter, and extract information using a wide range of strategies. At the baseline, the remote workers need to know how to use spreadsheets including data entry and manipulating tables. For more advanced jobs, they require the ability to retrieve data out of data sources and public databases for further data processing.
- Language skills - It relates to the understanding how to use language in a professional environment. Most job opportunities require professional level proficiency in English with the exception of companies that are specifically looking for employees in French market, such as App River. It is important that the language skills are taught through workplace simulation. The remote workers should understand how to use humor to mitigate tensions with potential customers and/or managers. Knowledge in French, Spanish and Haitian Creole should only be seen as an additional competitive advantage.
- Intrapersonal skills - It related to the understanding how to cultivate behavior that increases productivity and quality of work. The remote workers need the ability to maintain positive relationships and have an enthusiastic approach to work. Their attitude and work should be professional specifically: writing emails, timeliness, and communication with team members and supervisors. The remote workers should be honest and be able to maintain confidentiality.

2. Specialized Competency Areas

- Security - The remote workers need to be aware of of cyber threat and have knowledge of email configuration including how to manage a DNS server and configure mail exchanger records. The opportunity provides more upward growth for remote workers who can combine communication skills (reporting and talking to clients) with email and DNS knowledge.
- Accounting - The remote workers need basic understanding credit and basic accounting. In addition, they need to know how to extract information to spread financial statements and enter data into the spreadsheet templates provided by the employer.
- Customer Relationship Management - This related to the basic understanding of CRM softwares. Opportunities that relate to billing, invoicing, or handling data related with customers, require the remote worker to handle databases in CRM applications.
- Medical Coding - It relates to the understanding of universal medical alphanumeric codes. For the purpose of medical billing, it is important for the remote worker to be able to enter and validate different diagnosis codes used for coding and billing for medical claims in an inpatient hospital or facility.

Programmatic Considerations

Clients place great importance on the risk associated with the destination of an outsourcing service provider. Haiti is associated with high risk due to widespread perceptions around instability related to political volatility, natural disasters, and infrastructure deficits. Impact sourcing initiatives that pursue microwork opportunities will need to be well structured and well managed to overcome the perceptions and risks associated with Haiti as a destination. The Ayitic Goes Global Initiative has plans to establish an SME that will offer program graduates connectivity, mentorship, and infrastructure required to perform said services. Consideration must be taken to overcome the aforementioned barriers by providing project management, handling contracting, and offering a one-stop solution for foreign companies interested in hiring remote services from program trainees in Haiti. Specifically, the research team proposes additional factors to be taken into consideration while setting up the initiative based on the analysis of the barriers and drivers.

Factors for Mitigating Outsourcing Risks

Company Profiles Outreach

For the outreach component, the first factor to consider while selecting potential clients is the risk tolerance. Aside from industry which has been detailed above, the below indicators predicate risk tolerance to outsourcing, specifically to Haiti:

Size - Small businesses are less likely to assume outsourcing risks in general as there is smaller room for error, even more so in Haiti. It would be more effective to target larger IT shops or companies that already have Service Level Agreements with Fortune 500 companies and are interested in parceling some of the business processes into microtasks for outsourcing.

Stage - Early stage start ups or other companies are less likely to assume outsourcing risks unless initially built into the business model of the company. It is more effective to target more established companies that are looking for ways to cut costs or digitize their systems or processes.

Haitian Diaspora Leadership - Companies with Haitian Diaspora leadership are more likely to assume risk associated with outsourcing to their home country. Connecting with companies through kinship networks by developing partnerships with Haitian Diaspora at Managerial levels who are motivated to “give back” is an effective outreach strategy. For example, Kreyol Essence expressed interest in engaging a virtual assistant that would be contracted on a quarterly basis, working full time for the company, based on their past experience of successfully engaging a Haitian in a similar role. Another manager interviewed at AppRiver expressed interest in being able to extend microtasks under the company to Haiti and be involved in developing training courses to enable the engagement. It should be noted that this is a much smaller market, and is not a determining factor about whether a company is interested in impact sourcing to Haiti.

Geographic Location - Respondents also mentioned that companies that have presence in both Caribbean and North American markets would be more interested in outsourcing due to cultural similarities.

Messaging

Impact sourcing is a readily understood term, and according to similar organizations interviewed, messaging the initiative as such is likely to pique initial interest and provide the ‘foot in the door’. This is likely to be an effective outreach strategy, particularly for companies without Haitian diaspora in leadership roles. But it should be considered that this will not be reason enough for companies to commit to closing sales. This is where articulating the competitive advantages associated with Haiti are likely to be effective in helping companies overcome perceptions associated with the country. Additionally, discussing the ongoing infrastructure investments and other parallel ventures taking root in Haiti are likely to boost employer confidence.

Project Manager

Presence of a project manager to handle contracting, facilitate training, conduct quality control, and help translate across languages and work cultures will be vital to the ability of remote workers to win contracts. The person will be responsible for finding and hiring workers as per the requirement of the tasks, act as an intermediary between the employers and workers, and perform quality control for clients.

Workplace Culture and Support

Low attrition rates and positive work culture boosts trust with employers. Lower attrition rates can be attained through training, having access to consistent and steady work and reliable pay, and other incentives for high quality work such as incentive-based pay (based on completion of tasks). Such incentives can not only boost satisfaction and morale by providing the worker with agency but also productivity.

Having ongoing mentorship and support will be critical to boost satisfaction and ensure ongoing learning. The initiative should also consider asking women successfully placed in positions to mentor new participants for future cohorts. Given the program is focused on women, the working conditions should take into consideration women's specific needs and constraints, such as workplace safety, work time flexibility, mobility constraints and other cultural and social barriers.

Competitive Pricing

As cost is such a determining factor to the feasibility of outsourcing for a company, competitive pricing will provide an advantage over other outsourcing destinations. Haitian labor rates - currently about \$5/day - will make competitive pricing relatively easy in the Caribbean, but will be less competitive to Southeast Asian labor markets, predominantly the Philippines. This will be difficult to attain due to the relative high cost of living in Haiti which is still grappling with high inflation rates from post-Earthquake reconstruction, especially Port au Prince. It can also place limitations on the ability of the implementers to promote healthy work environment including workers welfare, additional training, and incentives to keep workers motivated.

Risk Management System

Having redundant systems in place and quick response times in case of failure due to process or infrastructural issues will be critical to avoid negative reputation. A governance framework outlining inventoried risk domain, respective risks, and controls can be established in service-level agreements.

Remote Communication System

A communication system that overcomes cultural differences in semantics can help to identify misunderstandings early on and address them in a timely and efficient manner. Communication protocols on priorities and information requirements can be established at the onset of a service agreement.

24/7 Access

Ability to reach out to remote workers around the clock. Availability of tools and access to work staff for asking questions, chatting, and calling will help employers feel at ease. Running on a 24-hour cycle also enables the service provider to optimize the space and meet the expense of setting a brick and mortar delivery center.

Service level agreements (SLA)

It is an important tool to establish levels of performance of the contracted services and set expectations regarding communication protocols and risk management. A SLA is a legal binding covenant between the outsourcing company and its client. The client and the service provider should work together during the SLA contract negotiation to eliminate any misunderstanding about the process and method of support as well as management and reporting methods.

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Network readiness index 2015, World Economic Forum; OECD; Magna Global; Forrester; Euromonitor; Strategy Analytics; McKinsey Global Institute analysis

Appendix

A. List of Key Informant Interviewees

Name	Location	Segment
Kim Sassine, French Haitian Chamber of Commerce and Industry in Haiti	Haiti	Business Association
Kirk Laughlin, Nearshore Americas	United States	Thought Leader + Media
Michael Verch, AHTIC and Caribbean Contact Center	Haiti	Service Provider
Dimitri Zakharov, Impact Enterprises	Haiti	Service Provider
Radley Joseph, The Centre for Facilitation of Investment	Haiti	Government
Pierre R. Denis, Digicel	Haiti	Service Provider
Thierry Hyppolite, Contact Center Plus	Haiti	Service Provider
Holden Pierre-Louis, BPOSS	Haiti	Service Provider
Duquesne Fednard, Cetemoh	Haiti	Service Provider + Training Institute
Chitra Rajeshwari, Avasant Foundation	United States	Foundation

B. List of Employer Interviews Respondents

Name	Location	Sector
1. Randy Rayess, VenturePact	New York City	Information and Communication Technology
2. Baruch Herzfeld, Zeno Radio	New York City	Media, Entertainment, and Information
3. Sebastien Vaval, Axxiom	Montreal	Financial Services and Investors
4. Jean Edwidge Luxama, CGI	Montreal	Information and Communication Technology
5. Peter Ryan, Ryan Strategic Advisory + Conduit Global	Montreal	Professional Services
6. Frantz Saintellemy, Groupe 373	Montreal	Information and Communication Technology
7. Anglade BMO (Bank)	Montreal	Information and Communication Technology
8. Gary Pierre-Pierre, The Haitian Times	New York City	Media, Entertainment, and Information
9. Charles Reginald Plaisimond	New York City	Professional Services
10. Mike Arbrouet, AppRiver	Florida	Information and Communication Technology
11. Joshua Vital, Bank of America	New York City	Financial Services and Investors
12. Stephane B. Jean - Baptiste, Kreyol Essence	Miami, Florida	Consumer (E-Commerce)

13. Nishant Verma, Avasant LLC	California	Professional Services
14. Vickens Moscova, Moscova Enterprises	New York City	Media, Entertainment, and Information
15. Jean M. Pierre, Haitian American Research Company	Fort Lauderdale	Professional Services

C. Table of Task Index

Job	Duty	Task
<u>1. Social Media Tools & Search Engine Analysis</u>		
SEO Clerk	Promote websites and facebook accounts	<ul style="list-style-type: none"> – Adding facebook likes (x number) – Submit website links to directory submissions (x number) – Promoting websites through postings on platforms such as Quora answers
	Boost social media activity	<ul style="list-style-type: none"> - Visit provided blogs - Choose a post at random - Leave short and relevant comments - Share on twitter using @[accountname] - or other social media platforms as specified
	Google +1 Keyword	<ul style="list-style-type: none"> – Visit provided links to access assigned domain and keywords – Perform google queries for keywords displayed – Query previously displayed domains that appear within the first three result pages of the search – Google+1 the domain and paste in the organization’s Google + profile URL
Online Ads Monitor	Monitor Ads	<ul style="list-style-type: none"> – Activate Adblocker – Open provided websites – Open provided screenshot to locate ads on the provided webpage – Check ad against provided criteria to determine acceptability/suitability of ad – Provide additional feedback in form of 1-2 comments
Keyword Search	Searching for Keywords	<ul style="list-style-type: none"> – Click provided links to visit an e-commerce website – Enter the provided term and extract all keywords use with the term as per given instructions. For example, enter ‘castor oil’ on the Amazon website and extract all keywords used with castor oil. – Enter the keywords in an excel sheet. – Submit excel sheet.
Testing	Testing apps	<ul style="list-style-type: none"> – Click provided links to install apps – Download and install apps – Record screen while spending five minutes exploring the app, completing a checklist of tasks. – Submit video

	Downloading and installing apps	<ul style="list-style-type: none">– Click provided links to install apps from Google Play / Apple Store– Download and install apps– Open the app, explore for set period of time– Rate the app & keep installed for at least [x] days
	Website Tester	<ul style="list-style-type: none">– Visit a provided website link– Test any five pages of own choice on a cellphone device– Record screen while spending five minutes exploring a website and completing a checklist of tasks.– Submit video
<u>2. Productivity Software</u>		
Virtual Assistant	Receipt Data Entry	<ul style="list-style-type: none">- Scan receipts into an app- Check for accuracy of receipt translation- Transcribe receipts in case software does not correctly translate- Notify client upon completion of task
Data Extraction	Data Extraction + Processing	<ul style="list-style-type: none">- Enter the list of names with contact details provided by the client in a spreadsheet.- Fill the missing information, if any, through the search of public records and/or databases provided by the client. Missing information can include contact number, addresses, interest in buying or filling real estate
	Data Extraction + Entry	<ul style="list-style-type: none">- Input property deal terms such as amount of rent, expiration term of lease, any particularities or notes of a lease
Market Research	Search, obtain information, and data entry	<ul style="list-style-type: none">– Open the provided spreadsheet.– Conduct internet research to find the price and other information on the products listed.– Enter the data into spreadsheet.
		<ul style="list-style-type: none">– Conduct local market research on ground to find the price and other information on the products listed.*
<i>* Respondents expressed that Haitian Diaspora members are constantly looking for people who can collect and validate information in the field, due to the difficulty verifying information found online. This could include restaurant and product pricing, among others.</i>		
<u>3. Accounting</u>		
<u>Financial Statement Spreading</u>	Spreading of Financial Statement	<ul style="list-style-type: none">- Review the item in the financial statement and note if the statement is combined or consolidated- Indicate on each page the currency and if the figures are actual or are in thousands or millions- Enter the auditor’s name and type of opinion: unqualified, qualified, adverse or disclaimer of option
4. Customer Relationship Management		
<u>Data Entry</u>	Spreading of Financial Statement	<ul style="list-style-type: none">- Review the item in the financial statement and note if the statement is combined or consolidated- Indicate on each page the currency and if the figures are actual or are in thousands or millions- Enter the auditor’s name and type of opinion: unqualified, qualified, adverse or disclaimer of option
<u>Medical Billing</u>	Process Medical Bills	<ul style="list-style-type: none">- Verify health insurance- Calculate copayments, coinsurances, and deductibles- Speak with patients about their balances

5. Computer and Network Support		
Email Security	Sales	<ul style="list-style-type: none"> - Receive the call from potential customer - Explain them different services offered by AppRiver - Ask them what service they want to purchase
	Support Onboarding	<ul style="list-style-type: none"> - Go to the customer file - Set up accounts on the desired server - Create or identify existing domain where email needs to be delivered - Create MX Record and ask the customer to enter it in their domain
	Filter Emails	<ul style="list-style-type: none"> - Filter emails based on given criterias - Quarantine spam emails - Deliver other emails to the domain
	Troubleshoot / technical support	<ul style="list-style-type: none"> - Attend customer call for troubleshooting - Help client based on different scenarios - example configure DNS incase email isn't reaching the account
	Migration	<ul style="list-style-type: none"> - Call the client and inform them of the new upgrades in exchange - Set up a time to support the migration to new exchange - Call client at the set time and help

D. Table of Task Verification

Job	Duties	Importance	Frequency (Contract)	Difficulty
<u>1. Social Media Tools & Search Engine Analysis</u>				
SEO Clerk	Promote websites and facebook accounts	Medium	Project Basis	Low to Medium Complexity
	Boost social media activity	Medium	Project Basis	
	Google +1 Keyword	Medium	Project Basis	
Online Ads Monitor	Monitor Ads	Medium	Project Basis	Low Complexity
Keyword Search	Searching for Keywords	Medium	Project Basis	Low Complexity
Testing	Testing apps	Medium	Project Basis	Low Complexity
	Downloading and installing apps	Medium	Project Basis	
	Website Tester	Medium	Project Basis	
<u>Virtual Assistant</u>	Receipt Data Entry	Medium	Working Hours	Low to Medium Complexity
<u>Data Extraction</u>	Data Extraction + Processing	Medium	Project Basis	Low to Medium Complexity
	Data Extraction + Entry	Medium	Project Basis	
<u>Market Research</u>	Search, obtain information, and data entry	Medium	Project Basis	Low to Medium Complexity
<u>3. Accounting</u>				
<u>Financial Statement Spreading</u>	Spreading of Financial Statement	High	Working Hours	Medium Complexity
<u>4. Customer Relationship Management</u>				
Data Entry	Spreading of Financial Statement	High	Working Hours	Low to Medium Complexity
Medical Billing	Process Medical Bills	High	Working Hours	Medium Complexity

<u>5. Computer and Network Support</u>				
Email Security	Sales	High	24x7	Medium Complexity
	Support Onboarding	High	24x7	
	Filter Emails	High	24x7	
	Troubleshoot / technical support	High	24x7	
	Migration	High	24x7	

E. Cluster of Skills

Competency Areas	Email Security	Market Research	Financial Statement Spreading	Data Entry	Medical Billing
Core Competency Areas					
Interpersonal Skills - Managing Workflows	Project management + communication software proficiency	Project management + communication software proficiency	Project management + communication software proficiency	Project management + communication software proficiency	Project management + communication software proficiency
Interpersonal Skills - Communication	Talking to People	Talking to People	-	Talking to People	-
	Writing Emails	Writing Emails	-	Writing Emails	-
	-	-	-	Transcription	-
	-	-	-	Reporting	Reporting
Critical and Innovative Thinking	Critical Thinking	Critical Thinking	Critical Thinking	Critical Thinking	Critical Thinking
	Problem Solving	Problem Solving	Problem Solving	Problem Solving	Problem Solving
	Attention to details	Attention to details	Attention to details	Attention to details	Attention to details
Information Literacy	-	Productivity Softwares	-	Productivity Softwares	Productivity Softwares
	-	Data Entry	Data Entry	Data Entry	-
	-	Extracting Information + Analysis	Extracting Information + Analysis	-	-
Specialized Knowledge Areas					
Specialized Knowledge 1	Email and DNS	-	-	-	-
Specialized Knowledge 2	-	-	Quickbooks / Credit / Accounting	-	-

Specialized Knowledge 3	Navigating Customer Relationship Management Software	-	-	Navigating Customer Relationship Management Software	Navigating Customer Relationship Management Software
Specialized Knowledge 4	-	-	-	-	Medical Coding or Certified Coder Certificate