



*The graduate school  
of global affairs  
at Tufts University*

**Digital Planet**  
Where Digital Innovation Meets the World

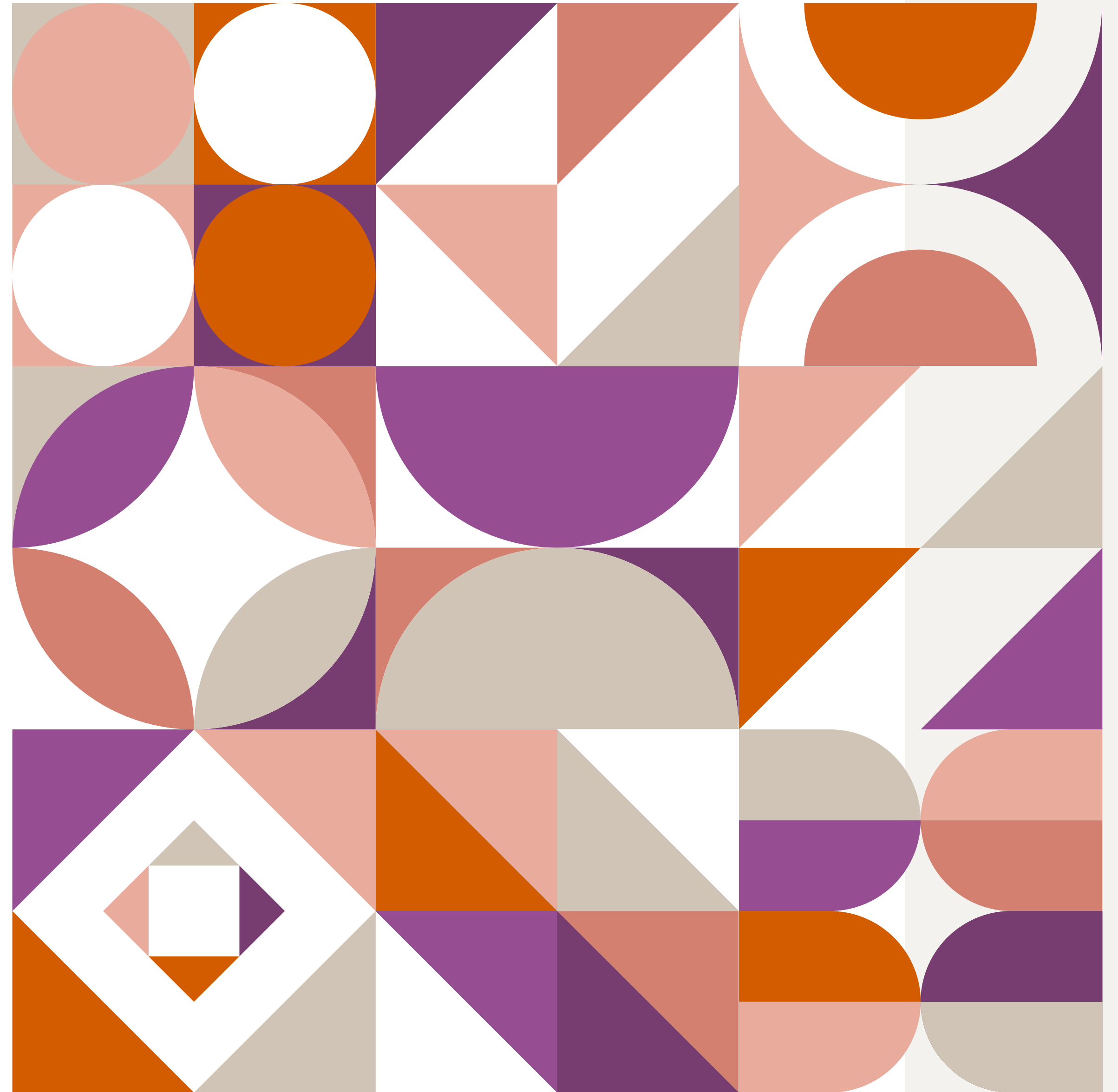


**IDEA 2030**  
IMAGINING A DIGITAL ECONOMY FOR ALL

# BEYOND ACCESS: HARNESSING DIGITAL TECHNOLOGIES FOR EDUCATION AND UPSKILLING

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the Mastercard Center for Inclusive Growth



## ABOUT

### Digital Planet

Digital Planet, an interdisciplinary research initiative of The Fletcher School's Institute for Business in the Global Context, is dedicated to understanding the impact of digital innovations on the world and providing actionable insights for policymakers, businesses, investors, and innovators.

### Institute for Business in the Global Context

The Institute for Business in the Global Context (IBGC) connects the world of business to the world. It is the hub for international business at The Fletcher School, the oldest graduate school of international affairs in the United States. The Institute takes an interdisciplinary approach, preparing global leaders who can cross borders of many kinds and integrate business skills with an understanding of the geopolitical, legal, financial, security, macroeconomic, humanitarian, and environmental impacts on business. The Institute is organized around four core activity areas: education, research, dialogue, and a lab. Our degree programs—Master of International Business (MIB) and Master of Global Business Administration (GBA)—and leadership development programs are at the heart of our educational mission. These offerings, coupled with original research in multiple areas—inclusive growth, digitalization, innovation and economic development at scale, sovereign wealth, and global capital flows, among others—facilitate a vibrant

dialogue on contemporary global issues through conferences, symposia, and speaker events. The lab creates opportunities for student teams to take knowledge into the field, affecting change through entrepreneurial startups and consulting projects. The Institute also houses the Council on Emerging Market Enterprises, a think tank comprising distinguished practitioner-scholar experts who collaborate with the Institute and The Fletcher School on a variety of initiatives, such as research programs, symposia, and conferences.

### The Fletcher School at Tufts University

The Fletcher School of Law and Diplomacy at Tufts University is the oldest graduate school of international affairs in the United States, working to solve the world's most pressing problems through a collaborative, cross-disciplinary approach to research and education. Since 1933, The Fletcher School has prepared the world's leaders to become innovative problem solvers in government, business, and non-governmental organizations with strategic cross-sector networks. Through our ongoing and rigorous commitment to advancing world knowledge through research and scholarship, The Fletcher School continues to shape meaningful solutions to urgent global issues.



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## EXECUTIVE SUMMARY

The needs of the global sustainable development agenda are both broad and urgent, and innovation models are central to addressing them in a timely, efficient, and scalable manner, from promoting inclusive growth to ensuring the longevity of natural resources to addressing issues across the state of the human condition.

Inclusive businesses—including large multinational corporations (MNCs), social enterprises, and impact investors—recognize that the private sector will increasingly play a lead role in solving problems and closing global sustainability gaps. Such endeavors can cost USD 3-5 trillion annually, according to some estimates,<sup>1</sup> although the value that businesses can unlock while in the process is estimated to be in the range of USD 12-15 trillion per year.<sup>2</sup> Ideally, thus, this suggests a macro-level business case for trying to do good while doing well.

While the macro-level business case provides a tremendous amount of evidence on the private sector's role in addressing sustainable development challenges, a bottom-up perspective is also crucial to understanding how much technology can be a force for inclusion, or against it. To this end, researchers at Digital Planet placed a group of private enterprises that leverage digital technology to solve sustainable development challenges under a microscope, building a case study for each of them from a bottom-up perspective.

Through this case study approach, we hope to allow our audience to immerse themselves in an enterprise's journey, answering the question of how companies in different parts of the world are taking on sustainable development challenges and closing inclusion gaps. In addition, in each case study, we employ "*The Nine A's Framework*" to analyze an enterprise's business model. This original framework is designed to provide an outside-in evaluation of a given company's strengths and weaknesses, as well as to highlight the opportunities and challenges it faced at the time of the writing. Lastly, this compendium allows for a comparison of the enterprises' business models, revealing several common themes and learnings that business leaders and entrepreneurs should consider for future actions.

In this second edition of the case compendium, we cover three enterprises working in the education technology (ed-tech) and upskilling industry in three distinct emerging markets. Our estimates show that the three companies can collectively unlock more than **USD 10 billion** in economic value in their respective markets, helping address the following United Nations Sustainable Development Goals (SDGs), including but not limited to: SDG 1, no poverty; SDG 4, good education; SDG 5, gender equality; SDG 8, decent work and economic growth; SDG 9, industry, innovation, and infrastructure; SDG 10, reduced inequalities, and SDG 17, building partnerships for the Goals.

Below is an overview of the three enterprises in the compendium:

**Andela** leverages digital platforms and technologies to build a global talent network designed to match qualified engineers from emerging markets with high-quality roles at companies and organizations of their interest. Andela's business model is unique in that it offers training and upskilling courses to the software engineers using its platform.

**HENRY**, short for *High Earnings Not Reached Yet*, works in Latin America, training full-stack software developers to work in well-paying software and tech jobs around the world. HENRY aims to democratize access to careers in tech and close socioeconomic gaps in Latin America.

**Noon Academy** is a self-professed "social learning platform" which aims to make massive open online courses (MOOCs) fun, engaging, and self-paced.



# EXECUTIVE SUMMARY

## Emerging Insights and Implications for Action

*Looking across the three cases, some insights and learnings which emerged are:*

### 1) Developments in artificial intelligence necessitate stronger ed-tech and upskilling infrastructure

The rapid development of artificial intelligence (AI) and automation technology is projected to permanently alter the labor market. In 2021, roughly 40% of people expected their job and daily tasks to become obsolete within the next five years due to technological advances.<sup>3</sup> However, our research indicates that AI will serve to increase firm productivity, reduce production costs,<sup>4</sup> and increase wages<sup>5</sup> by complementing current jobs rather than replacing them.<sup>6</sup> But these benefits cannot be unlocked unless workers undergo additional training that leaves them adequately prepared to implement AI as part of their daily tasks. A World Economic Forum study concluded that 54% of employees would need upskilling by 2022 due to automation and AI adoption.<sup>7</sup>

As global AI adoption and implementation expands, we anticipate that the demand for AI upskilling services will rise at a comparable rate. Highly-skilled, highly-paid workers, like the future STEM professionals targeted by Andela and HENRY,<sup>8</sup> are projected to be the most

impacted by AI adoption.<sup>9</sup> Tech-focused companies like Amazon, Accenture,<sup>10</sup> Microsoft,<sup>11</sup> and Google<sup>12</sup> are already equipping their employees with the appropriate training to acquire the everchanging skills necessary to excel in AI-aided jobs.<sup>13</sup> Ed-tech startups such as Andela, HENRY, and Noon can serve as the catalysts capable of turning this digital disruption into opportunities for growth. For corporate clients, they can provide the tools necessary to train employees to use AI to its fullest extent. For jobseekers, upskilling services can provide the training needed to future proof candidates and stay ahead of the changes in skills required due to AI adoption.

### 2) Gender disparity in the technology industry could be mitigated by ed-tech learning opportunities

In 2022, women made up 29% of the tech labor force.<sup>14</sup> Gender disparity in the industry begins long before women consider a career in STEM and continues throughout their professional development. Ed-tech startups could act as disruptors to this insular, disproportionately male talent pool by increasing women's early exposure to tech, facilitating women's career mobility in the tech industry, and empowering women to acquire the skills needed to make them competitive by tech industry standards.

Firstly, women's lack of exposure to the tech field at an early age is reflected in the overwhelmingly male

participation rate in high school STEM classes and, later in life, computing degree acquisition.<sup>15</sup> In light of these inherently biased environments, the widespread adoption of ed-tech could open a channel for girls to explore tech independently. Freemium platforms like Noon have user-friendly, interactive interfaces that make academic exploration a pastime rather than a laborious task, making them particularly appealing to younger audiences.

Secondly, opportunities for women to transition into the tech industry remain scarce.<sup>16</sup> Tech companies could increase women's participation by using ed-tech to onboard young professionals. Noon and HENRY, for example, offer educational services in a format capable of complementing full-time jobs. Their flexibility concerning time and length of interaction can equip women with the skills necessary to pivot into the tech sphere later in their careers.

Lastly, women in tech often bear the brunt of sudden shifts in industry standards. For example, women are more likely than men to lose their jobs as a result of AI and automation tech adoption.<sup>17</sup> The use of ed-tech for reskilling and upskilling is therefore doubly important in regard to women's roles in the tech sector. Online educational tools empower women to adapt their skills to the reality of the present and acquire new ones to excel in the modern workplace.

## EXECUTIVE SUMMARY

### 3) Digital platforms can be helpful in bridging the demand-supply gap for tech talent

Although there is a growing number of tech professionals in developing regions like Latin America and Africa, the tech industry, especially in developed economies like the US, is finding it difficult to recruit tech talent.<sup>18</sup> Employment in the tech sector has mostly stagnated, despite the increased demand, and tech companies have started outsourcing a lot of their work to other countries.

In light of this, startups like Andela and HENRY fulfill a significant gap by leveraging digital platforms and technologies to provide fully remote, low-cost tech education in the form of courses and mentorship programs to interested individuals across the Global South. Andela's business model also works to bridge the demand-supply gap by matching tech talent with organizations.

### 4) Remote, self-paced courses make learning easier for students, and are gaining popularity

While there are challenges to remote learning, educators, school psychologists, and students alike have begun to reap the benefits of remote learning. Research shows that students are more likely to be better learners when they have more academic choices, both with respect to the content and materials, as well as extra-curricular activities.<sup>19</sup>

In fact, remote learning allows students to pursue their other interests with more freedom and flexibility, enabling them to focus better on topics and activities that interest and benefit them. Further, self-paced courses can give students more autonomy and control, improving their motivation to learn and their ability to absorb information. A study conducted during the peak of the COVID-19 pandemic showed that flexibility in learning with respect to time schedules and methods proved beneficial to many learners.<sup>20</sup>

Andela and Noon Academy, as studied here, offer remote, self-paced courses to interested students, which has been crucial for their success. Noon Academy, for instance, places student groups at the center of the learning experience, empowering them to learn from each other as well as from the professionals it recruits to teach and train the students. The Andela Learning Community offers MOOCs on a variety of topics that allow students to interact with each other, as well as mentorship programs, which allow for peer-to-peer knowledge sharing.

### 5) Ed-tech services fail to reach many who lack access to needed digital infrastructure and devices

Many potential beneficiaries of education technology cannot access services like Andela, HENRY, or Noon Academy because they do not have the tools needed to take advantage of them. Some startups like Andela

attempt to address this issue by providing direct assistance to users, in such forms as laptops or supplemental income. In the Middle East and North Africa, where internet-connected devices are widely used and readily available, online learning platforms like Noon Academy present viable solutions for remote instruction. User opinions and behaviors in this region reflect a belief that the internet will play a vital role in future modes of academic and professional education. In other areas like Latin America, ed-tech startups like HENRY are working to realize high-earning potential in workers whose uneven access to crucial technology leads to fewer desirable job opportunities. In this region, unstable governments, volatile markets, and high unemployment rates push millions into poverty, which worsened during the COVID-19 pandemic.

The pandemic accelerated digital growth, but it also exposed acute digital inequalities across the globe.<sup>21</sup> As most major economies contracted in response to COVID-19, significant wealth gaps and weak digital infrastructure stymied adoption of new technology even as many operations shifted online. The pandemic rapidly altered the workplace and the classroom, but challenges to hardware affordability, internet access, and digital literacy persist. Ed-tech services are poised to meet the growing need for online learning and remote work. But governments must first meet the needs of groups who face barriers to using them—notably women, rural residents,

## EXECUTIVE SUMMARY

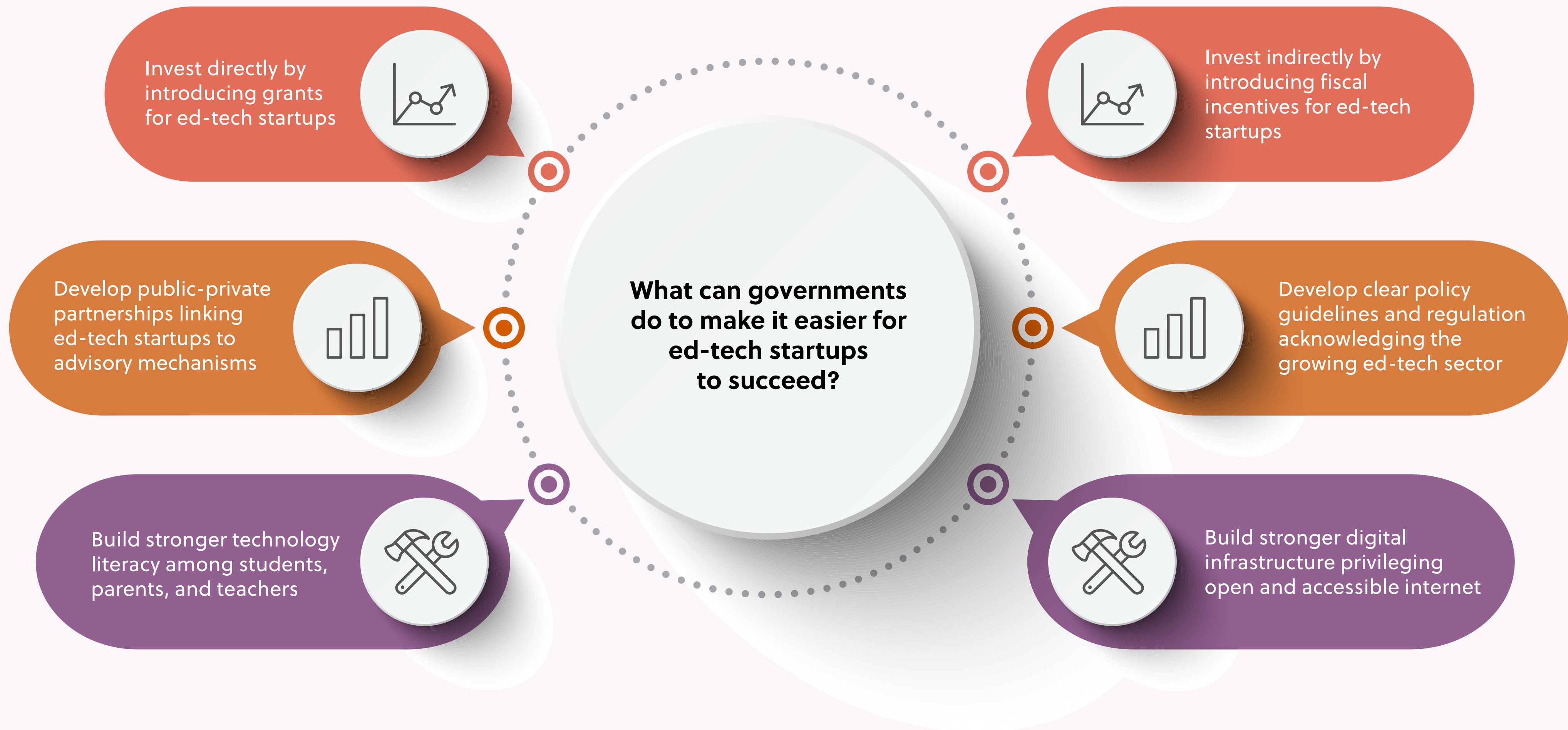
and low-income families.<sup>22</sup> To ensure equal access to education technology regardless of gender, geographic location, or socioeconomic status, lawmakers should start by investing in high-speed internet.

### 6) Education technology companies face uneven investment and complex regulatory challenges

Startups in the ed-tech and upskilling industry often operate across multiple jurisdictions, making them subject to a broad set of rules and regulations. When matching a qualified engineer to a remote role, for example, Andela must consider taxation and other regulatory requirements of its own country, the client firm's country, and the contractor's country. Such compliance challenges compound the costs and uncertainty surrounding outsourcing work, which may give investors pause when considering the profitability of Andela's business model. Similarly, investors question the increasing costs associated with consumer protection, citing tightening restrictions on data privacy<sup>23</sup> and greater customer appetite for security features.<sup>24</sup> In addition to matters of licensing and security, ed-tech entrepreneurs must also consider differing legal and cultural perceptions of intellectual property. Such discrepancies complicate companies' plans to ensure the integrity of their systems when serving customers in multiple countries.

Ed-tech startups face cultural as well as financial barriers to success. Entrepreneurs across the industry convey their struggle to establish the value of education technology, highlighting the skepticism of government officials, investors, educators, and parents as one barrier to growth. In Latin America, for example, access to capital is limited by investors who point to a lack of digitalization and adequate infrastructure in the region as the primary constraint.<sup>25</sup> Limited interest from private entities, combined with unfeasible grant criteria from government and philanthropic investors, leaves startups like HENRY with few options for funding. In the Middle East and North Africa, however, investors are betting on projections of significant ed-tech growth, with deals in the education sector jumping from 4 in 2016 to 29 in 2019.<sup>26</sup> Significant government investments in tech startups and digital infrastructure, coupled with robust startup advisory and guidance ecosystems, pave the road to success for Noon Academy and other ed-tech startups in the region.





## THE INCLUSIVE INNOVATION MODEL AND THE NINE A'S FRAMEWORK

We define the Inclusive Innovation Model as a series of viable and scalable activities that bolster a firm's competitiveness and further its strategic objectives. Such innovations can come in various forms, including but not limited to products, services, designs, processes, and business models. Inclusive innovators tend to integrate a combination of these elements and secure competitive advantage by:

- Targeting low-income or other traditionally disadvantaged communities (e.g., women, unskilled youth, minority groups) and including them in the company's value chain as consumers and as producers, entrepreneurs, or employees
- Developing approaches that sustain natural resources
- Filling institutional, contextual, and human capital gaps

### The Nine A's Framework: Innovating to Squeeze Value Out of the Business Model

For each case study, we use "*The Nine A's Framework*" to help us analyze each enterprise's business model, providing an outside-in evaluation of the company's strengths and weaknesses. The framework evaluates the four core components—the value proposition, the process, resources, and profit formula of an enterprise's business model through the following nine aspects.

For each of these nine criteria, we designate a value from five to one, where five is excellent, and one means that it needs

attention, as Figure 1 demonstrates below. Using this simple formula, we can quantify and visualize a company's strengths and weaknesses for each of the business model components across the nine aspects, which in turn help summarize the opportunities and challenges a company faces at the time of the writing.

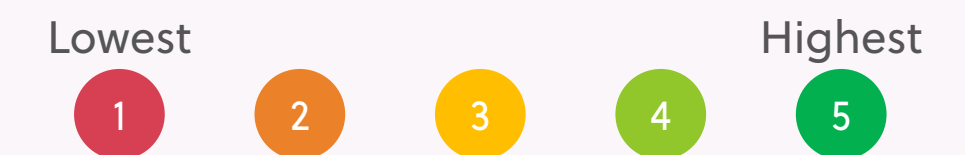
- **Advantage:** How well a company ensures that it is compelling, differentiated, and sustainable.
- **Affordability:** Increasing demand through low prices.
- **Accessibility:** Increasing the size of the addressable market while keeping costs low.
- **Appropriateness:** Increasing demand through superior customer-centric differentiation, such as design thinking, freemium pricing, and experiential products, etc.
- **Additivity:** Closing key gaps in the value chain, such as connecting unmet and unused resources, correcting information asymmetry, or completing supply chain gaps by vertically integrating, and more.
- **Adaptability:** Building in learning and pivoting to increase adoption and utilize the right resources for the right jobs.
- **Amplifiability:** Can the company look for leverage points at all stages in the decision process: Scaling up and looking for leverage points to enhance sales at all stages in the buyers' decision-making process.

- **Authority:** Whether the company has the power to change the landscape and convince other companies to conform to its practices.
- **Adjacency:** Whether the enterprise can solve an adjacent problem, a similar problem, such as using resources generated from one business to unlock value propositions in other areas.

# THE INCLUSIVE INNOVATION MODEL AND THE NINE A'S FRAMEWORK

Figure 1: *The Nine A's Framework Matrix*

VALUE DRIVERS	ADVANTAGE	AFFORDABILITY	ACCESSIBILITY	APPROPRIATENESS	ADDITIVITY	ADAPTABILITY	AMPLIFIABILITY	AUTHORITY	ADJACENCY
VALUE PROPOSITION	1	1	2	2	3	4	4	5	5
RESOURCES	1	1	2	2	3	4	4	5	5
PROCESS	1	1	2	2	3	4	4	5	5
PROFIT FORMULA	1	1	2	2	3	4	4	5	5



## CASE STUDIES



GLOBAL  
**Andela**



LATIN AMERICA  
**HENRY**



MIDDLE EAST & NORTH AFRICA  
**Noon Academy**



# Andela

Global Talent Network  
That Connects Companies  
with Engineers

Case  
Studies

Andela

Introduction

Business  
Model

Strengths and  
Weaknesses

Opportunities  
and Challenges



# INTRODUCTION



*Along with a severe shortage of qualified tech workers, there is also a high demand for qualified tech experts at both traditional software and technology companies, as well as other leading organizations like financial firms and retail companies. Andela is a global talent network that helps qualified and vetted engineers in emerging markets find long-term work with interesting companies and organizations.*

Technology's role and relevance has permeated most sectors of the global economy.<sup>27</sup> Tech's share of US GDP surged over sixfold since 1980, according to figures and estimates from PricewaterhouseCoopers (PwC).<sup>28</sup> However, employment in this sector has not increased to meet the demand.<sup>29</sup> The high demand for data scientists, software engineers, programmers, and cloud computing experts poses a challenge not only for the tech sector, but for government agencies, finance firms, and more. This issue persists even though, in countries like South Africa, Nigeria, and Egypt, tech talent has increased significantly in recent years.<sup>30</sup> Antiquated hiring practices, coupled with reluctance to embrace technological advances, have led many companies to reckon with unmet potential despite their rapid growth and despite the fact that talent abroad is readily available for employment. The problem can be summarized as a mismatch between the two following phenomena:

### Tech Worker Supply Shortage

Technology and science jobs in the United States have outnumbered qualified workers by roughly three million as of 2016, according to the Netherlands-based human resources consulting firm Randstad NV.<sup>31</sup> A report by the Los Angeles-based management consulting firm Korn Ferry forecasts a global shortage of over 85 million tech workers by 2030, representing USD 8.5 trillion in lost annual revenue.<sup>32</sup> The United States is expected to be short of 6 million workers,

while China is predicted to face a deficit of 12 million workers.<sup>33</sup>

### Burgeoning Tech Worker Hubs Abroad

Digitalization has also impacted the number of laborers interested in pursuing formal training and practice in the technology industry. Egypt, South Africa, Nigeria, Kenya, and Morocco exemplify the strong interest shown by African countries in developing tech talent. As of 2020, a report by Google estimated that 700,000 tech professionals existed in Africa, 50% of which were concentrated in the aforementioned countries.<sup>34</sup> This interest shows no signs of waning, given that online courses for self-teaching or upskilling in tech development continue to gain traction across the continent. Additionally, this new, young wave of tech developers is more diversified than its American counterpart. Though there is still a long way to go, female representation in the tech sphere is higher in African countries than in the United States.<sup>35</sup> This means that coupling the US supply shortage with the African demand shortage could lead to a more diversified tech workforce. Andela and other online talent platforms are working to make that happen.

A McKinsey study shows that online talent platforms can add USD 2.7 trillion—equivalent to 2%—to global GDP by 2025, in addition to creating 72 million jobs.<sup>36</sup> Online talent platforms

# INTRODUCTION

can increase transparency around demand for skills, enabling young people to make more informed choices.<sup>37</sup>

**Andela** was founded in 2014 to prepare job candidates to succeed, with the aim of advancing human potential in Africa by addressing the global digital skills-shortage faced by employers.<sup>38</sup> The company has since shifted its business model to increase its emphasis on bridging the gap between talent and opportunity.<sup>39</sup> While it still offers training and skill-building opportunities through the Andela Learning Community, Andela's primary focus has shifted from a three-year training program to a talent network focused on matching tech professionals with tech companies and other entities requiring technology services.

As online platforms are poised to grow in scale, they are becoming faster and more effective, crafting innovative ways for employers to engage with the labor market while simultaneously decreasing talent mismatch in STEM industries.<sup>40</sup>

The global shift to remote work has created more employment opportunities across time zones and continents, creating fresh opportunities for developers.<sup>41</sup> African countries have become sought-after by international businesses as they widen their searches for top tech talent.<sup>42</sup> Several companies offer training services, professional development training, and assistance with

placement on completion of training.<sup>43</sup> However, very few companies offer Andela's level of structure, client exposure, or longevity—the company's contracts with clients last three and a half years.<sup>44</sup> From its founding in 2014 until 2019, Andela was focused on tackling the dual problem of global tech worker shortages and unemployment in Africa through its training program. The program comprised six months of rigorous training for selected enrollees, followed by three years of immersive practical training with a real client.

In 2019, Andela chose to shift away from training developers, focusing instead on pairing experienced technology experts with companies in need of them. Andela's matching algorithm provides developers and engineers with access to numerous opportunities from a vast array of entities seeking technology services.<sup>45</sup> Andela's business model promotes inclusivity, decent work, and sustainable economic growth by connecting tech workers in developing countries with lucrative positions at large corporations and other institutions.

# BUSINESS MODEL

## Value Proposition

Andela is home to thousands of engineers who build solutions for many of the world's biggest and most respected technology companies, as well as other Fortune 500 Companies like Goldman Sachs and Kraft Heinz. These engineers are at the top of their field, and their work contributes to building and shipping products and solutions around the world, as quickly as possible. The network provides for mentorship and continuous growth, and offers participants the opportunity to solve real-world problems.

Andela has also been at the forefront of enabling remote and distributed work since 2014. It provided training for engineers to work as part of remote teams for clients in 2014, created a remote hub for African engineers in 2019, and completely transitioned to remote operations in 2021. Currently, Andela allows its engineers to work from anywhere, providing support and access whether they are working onsite or remotely. Andela's experts come from a variety of different cultures and backgrounds, and the organization works to support and foster this diversity.

Andela's value proposition is based on its vast and diverse network of tech talent, its large client base of public and private institutions, its stringent selection criteria, its emphasis on remote work, and its matching algorithm. The company is driven by its promise to match top tech talent with the best opportunities available, helping to meet global labor demand. It uses remote work to encourage outsourcing of tech jobs and utilizes the massive pools of tech talent in Asia, Africa, and Latin America to provide solutions for its clients. Andela builds on these specific advantages through its mentorship and online learning platforms, which allow it to ensure constant advancement of the talent on its roster.

Andela uses AI to match candidates with recruiters. Unlike most other organizations in the field, the company also provides guidance on issues like local employment regulations.<sup>46</sup> Further, Andela maintains a pool of developers, engineers, and other tech experts based in over 110 different countries.<sup>47</sup> As more companies are looking beyond Silicon Valley, India, and China to fill the tech talent gap, Andela is uniquely positioned to meet that demand through its international pool of tech professionals.

**Table 1: Key Facts about Andela:  
Company Overview as of October 2022**

Name of Enterprise	Andela Inc.
Headquarters	New York
Country Footprint	United States
Year Established	2014
Name of Founders	Brice Steven Nkengsa, Christina Sass, Ian Carnevale, Iyinoluwa Aboyeji, Jeremy Johnson, Nadayar Enegesi
Size of the Company	1700+ <sup>48</sup>
Product/Service	Custom computer programming and product development services <sup>49</sup>
Market Segment	Employability and upskilling
Use of Digital Technology	Connecting candidates to potential employers, training talent with desirable tech skills



# BUSINESS MODEL

## Products and Services

Andela is a New York-based startup that connects software development and engineering talent primarily in the Global South to companies primarily headquartered in the Global North. It connects developers, data scientists, data analysts, and other tech workers with business opportunities worldwide. The founders of Andela recognized the shortage of technology talent in the United States and saw an opportunity in African countries, where they had observed and worked with talented individuals.

Previously, Andela's business model placed selected participants in a long-term training program spanning six months of intensive training and over three and a half years of placement with a corporate client. Participants granted access to Andela's course were provided with basic income and critical equipment throughout the course of the training. Companies that recruited from Andela were required to pay a recruitment fee for participants.

However, Andela transitioned away from this model in 2019 due to client feedback indicating greater demand for experienced engineers. Presently, their business model centers on a talent network matching clients seeking technology services—inclusive of Fortune 500 companies, SMEs, and governmental bodies—with technology experts around the world. Individuals seeking to join Andela's network must identify their technical qualifications and undergo a rigorous test of their skills prior to gaining access to the network. Andela continues to provide ed-tech services through the Andela Learning Community, but these services are now more closely aligned with a MOOC format.



# BUSINESS MODEL

## Process

**Andela was formed in 2014. Their initial mission statement was:**

*“To advance human potential in Africa by investing in talent and ensuring that participants are job ready, while also addressing the global digital skills-shortage faced by employers.”<sup>50</sup>*

Initially, Andela identified that while there are five open jobs for every one software developer in the United States, most companies reported to finding qualified talent a major challenge.<sup>51</sup> The recruitment process of these companies is lengthy, as they take over two months, and hiring each developer is costly.<sup>52</sup>

Andela began with trying to address this labor supply gap by helping largely US-based companies hire talented, vetted employees from Africa.<sup>53</sup>

Andela aimed to fill this existing gap by:

### 1) Adopting human-centered design methods developed in consultation with key stakeholders across the value chain

Andela works with both employees and employers. Its platform provides opportunities to work with global companies, MOOC-style trainings on the Andela Learning Community, and mentorship opportunities with senior developers. Working with both employers and talent, the company effectively addresses both the demand and supply sides of the technology labor market.

### 2) Employing an end-to end process to ensure efficacy of the products and services offered:

Andela connects technology experts with remote employment opportunities worldwide. The technology and products that Andela built are deployed as follows:<sup>54</sup>

- (i) The Andela platform leverages user data and matching algorithms to make informed recommendations to developers and employers, thus efficiently connecting talent to some of the world’s most exciting organizations.
- (ii) Without lengthy contract periods or unnecessary calls with sales teams, the sales service platform

minimizes the time it takes for hiring managers and recruiters to move through the recruitment life cycle. This improves the user experience for technologists because they are matched quickly to these different roles.

(iii) In the new self-service process, qualified technologists on Andela’s platform are presented with a potential employer whose active job posting matches their profile.

(iv) Candidates can visualize their compatibility with the open position, including an overlap in skills and preferences, via a clear and comprehensible graph.

(v) The platform becomes more personalized as users provide specific feedback through various stages of the hiring process. This personalization is a key element that matches candidates to suitable roles.

# BUSINESS MODEL

## Resources

### Staff

Andela has over 1,700 staff members working in both engineering and non-engineering roles. Since the pandemic, the organization has evolved into fully remote work.<sup>55</sup>

### Investors and funding

**2014** Andela was founded by Ian Carnevale, Christina Sass, Jeremy Johnson, Nadayar Enegesi, Iyinoluwa Aboyeji, and Brice Nkengsa. In the same year, the first cohort of fellows were accepted in Nigeria.<sup>56</sup>

**2015–17** Andela completed a Series A funding round in 2015 and launched operations in Kenya,<sup>57</sup> followed by a Series B round in 2016, which allowed the startup to expand operations into Uganda.<sup>58</sup> In 2017, a Series C round funded the launch of the Andela Learning Community, a free online learning platform.

**2018** Andela launched a pan-African hub in Kigali.<sup>59</sup>

**2019** Andela closed a Series D funding round and created its first-ever remote hubs in Egypt and Ghana. The startup also pivoted its business model away from developer training, to hosting a platform to connect senior developers across Africa to employment opportunities around the world.

**2020** Andela transitioned to completely remote operations and announced plans to expand operations to all African countries.

**2021** Andela closed a Series E funding round led by SoftBank's Vision Fund, bringing the startup's total raised capital to USD 381 million since its founding in 2014.<sup>60</sup>

**2022–Present** Andela currently serves jobseekers in over 110 countries, representing over 175,000 technologists. Client engagements currently average 18 months in length.<sup>61</sup>

### Partnerships

Andela has partnered with Zapier, Gusto, InVision, Zebra, Pluralsight, Qualified, and CommonBond, all of which, except Qualified, are technology companies.<sup>62</sup>

Andela has also partnered with Google to launch the Google Africa Developer Scholarship (GADS) 2022.<sup>63</sup> Since 2017, Andela has partnered with Google to upskill developers all

over Africa in Android, Mobile Web Specialist, and Google Cloud using Pluralsight and Udacity.<sup>64</sup> Andela's partnerships have equipped over 100,000 learners across 54 African countries with new skills.<sup>65</sup> In 2022, Andela's partnership with GADS aimed to empower previous learners to broaden their technical skills through enriched courses.<sup>66</sup> Andela also began offering two new courses on using Google Cloud for machine learning and Android in Kotlin.<sup>67</sup>

## Profit Formula

For the first six months, Andela makes a small investment in each of its developers to cover some basic costs, including a minimum salary, housing, and a laptop, as well as training and mentorship programs. Following the initial six months, the startup pays its developers a competitive salary appropriate for their location. When Andela matches a candidate with a tech company, it takes a percentage off the salary paid by the employer.<sup>68</sup>

As of September 2021, following its successful Series E funding round, Andela has a post-money valuation of USD 1.5 billion.<sup>69</sup>

## STRENGTHS AND WEAKNESSES

### Value Drivers Evaluation Using the Nine A's Framework

Using the Nine A's Framework and the information presented above, we can now evaluate the core components of Andela's business model. We designated a value from one to five for each of the Nine A's elements. Using one to indicate room for improvement and five to indicate excellence, we quantify Andela's strengths and weaknesses in each component of its business model in the matrix below.



# STRENGTHS AND WEAKNESSES

Figure 2: Andela's Nine A's Evaluation

VALUE DRIVERS	ADVANTAGE	AFFORDABILITY	ACCESSIBILITY	APPROPRIATENESS	ADDITIVITY	ADAPTABILITY	AMPLIFIABILITY	AUTHORITY	ADJACENCY
VALUE PROPOSITION	●	●	●	●	●	●	●	●	●
RESOURCES	●	●	●	●	●	●	●	●	●
PROCESS	●	●	●	●	●	●	●	●	●
PROFIT FORMULA	●	●	●	●	●	●	●	●	●



## STRENGTHS AND WEAKNESSES

Andela scored very well on our **Advantage** metric across the four criteria. Being one of few organizations working in the technology sector that works towards both training and upskilling developers and other talent, as well as connecting talent with employers, places the startup in a uniquely strong position across this metric. Further, Andela's success in raising funds through not just Series A of funding, but subsequent rounds as well make us optimistic about its growth in the coming years.

Similarly, Andela scored well on the **Affordability** metric. Because of the specific gap that the startup fills by providing resources to technologists for free for the first six months, Andela scores very high (5) on the value proposition, resources, and the process metrics. Further, the costs charged to hiring organizations are also lower than they would be if these companies conducted independent recruiting processes. Thus, Andela also gets a relatively high score (4) in its profit formula metric for affordability.

Andela's services also scored high (4 across the board) in terms of **Accessibility** for both the technologists and companies, thanks to its no- to low-cost training programs.

Andela's business model offers an **Appropriate** solution to bridge the supply-demand gap for tech talent around the world. However, despite its no- to low-cost learning solutions,

the shift in Andela's business model from education and training to matching tech talent with organizations does create a gap in the ed-tech sector, giving it a lower score of 3 in this metric.

On the other hand, because of the change in its business model, Andela scores very well on our **Additivity** metric. By combining its learning solutions and courses with the function of matching tech workers with organizations, the company has helped bridge supply-demand gaps for tech workers. This unique positioning also gives Andela a high Adjacency score. Moreover, by adapting successfully to the changing market, as well as the COVID-19 pandemic, Andela also scores high on **Adaptability**.

Andela has been able to leverage innovative technological solutions to help transform the tech talent market in Africa and beyond. However, its educational services are comparable to similar services offered in African countries and globally, giving it a lower score of 3 across the board on the **Authority** metric.

Finally, regarding **Amplifiability**, Andela faces potential challenges to further expanding its business model. While the burgeoning company may be able to leverage its unique business model at present, there is a decent possibility that other organizations in the field will adopt similar business models in the future.

## OPPORTUNITIES AND CHALLENGES

Upon looking at Andela's business model and the Value Drivers Evaluation, we identified the following opportunities for growth and potential challenges Andela might consider as it continues to scale.

### Vendor Legitimacy

Vendor legitimacy is the client's perception that the vendor's actions are desirable, proper, or appropriate with respect to the norms, values, and beliefs of the client organization.<sup>70</sup> This can be a significant issue for outsourcing platforms, as clients may have cultural differences with their contractors. However, Andela's considerable financial backing across multiple funding rounds and numerous success stories are efficient means of establishing the startup as an unconventional yet cutting-edge talent platform. Publicizing the company's valuation, as well as the impressive number of businesses and workers who have used its services, enables Andela to corroborate its legitimacy to interested parties.

### Uncertainties Related to Legal Compliance

Outsourcing networks are potentially subject to the regulatory and taxation frameworks in:

- (i) the network's home country,
- (ii) the client's home country, and
- (iii) the contractor's home country.

These varying frameworks add significant uncertainty to cross-border contracts and have the potential to significantly increase transaction costs. Such increases in transaction costs may negate the benefits of outsourcing completely. Thus, Andela should factor these costs into its calculations of the benefits it can offer technologists pre-employment, as well as the commission it should charge after candidates have been matched with employers.

## OPPORTUNITIES AND CHALLENGES

### Uncertainties Related to Security and Intellectual Property

Safety and security concerns surrounding intellectual property, such as trade secrets, are compounded in situations of outsourcing. These concerns are heightened by the differing regulatory landscapes and social and cultural differences in how stakeholders view intellectual property. These issues may have a significant bearing on Andela's business.

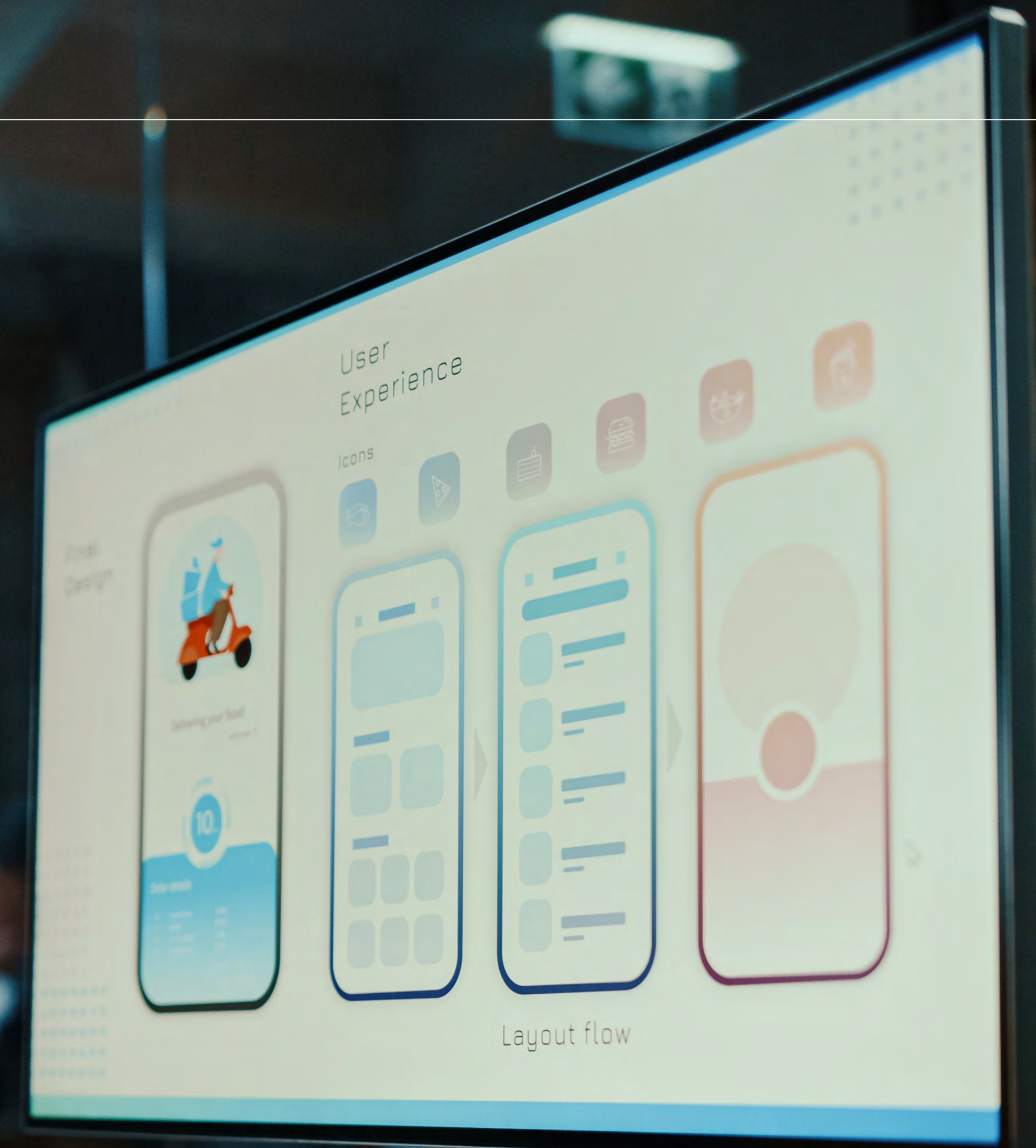
### Unqualified Resources

Difficulty in verifying the ability of tech workers—including software developers, engineers, data scientists, and more—is one of the core issues facing outsourcing platforms. This challenge potentially leads to insufficient service quality, limited responsiveness, and lack of innovation. Any candidate seeking a job through Andela must undergo examination to ensure that their competency is accurately reflected. Given the rapid changes in required tech skills, Andela should consider reinforcing its learning center to upskill its current users as swiftly and proactively as possible. This will ensure that Andela-backed workers are consistently meeting job expectations and that employers are satisfied with their performance.

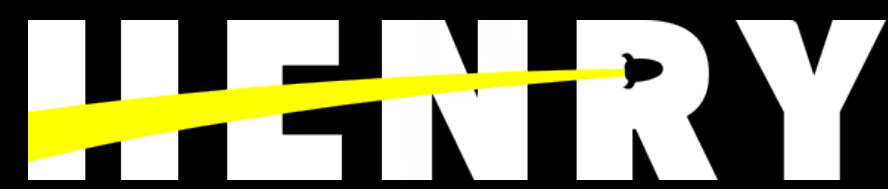


# HENRY

The Latin American Solution for Future Tech Skill Shortages



## INTRODUCTION



*HENRY, a Buenos Aires-based startup, is an online computer science education platform that trains full-stack software developers at zero upfront cost. The company's goal is clear from its name, an acronym that stands for "High Earnings Not Reached Yet." As such, the organization aims to help close the socioeconomic gap in Latin America by training its students to succeed in high-paying positions in the tech sector. HENRY hopes to democratize access to careers in tech through remote learning and a post-course financing model.*

HENRY was founded in January 2019 by siblings Martin and Luz Borchardt, alongside Manuel Barna Ferres, Federico Hernandez, and Leonardo Maglia. The team raised USD 1.8 million in seed funding in 2020 through startup accelerator Y Combinator, with Accion Venture Lab as a main investor. HENRY raised an additional USD 10 million in May 2022, through a local group of successful company founders, Pierpaolo Barbieri, Mike Santos, Matias Woloski, Martín Varsavsky, Patricio Jutard, and Ariel Arrieta. HENRY is quickly becoming a popular investment in the Latin American ed-tech market.

In an interview with our team, Martin Borchardt shared how HENRY's goal is to train 100,000 people across Latin America to succeed in high-paying tech jobs and achieve economic prosperity.<sup>71</sup> This is a formidable task in a region with historically high-income inequality. Latin America is home to 660 million inhabitants or roughly 9% of the world's population, who collectively produced an aggregate GDP of approximately USD 5.8 trillion in 2020.<sup>72, 73</sup> The onslaught of COVID-19 has inflicted considerable social and economic damage in the region, particularly as approximately 60% of the economically active engage in informal employment.<sup>74</sup> Prior to the pandemic, the region's GDP was expected to grow at a rate of 1.8% in 2020, up from the modest 0.2% growth observed in 2019. In the wake of COVID-19, however, the region's economy contracted by 6.8% in 2020.<sup>75</sup>

Despite the economic slowdown, the pandemic highlighted the transformative power of technology in Latin America and the Caribbean, accelerating digital transformation in the region. The COVID-19 pandemic has notably shifted consumer buying behavior, spurring wider use of online deliveries, telemedicine, online entertainment, remote work, and remote learning, all of which increase demand for and use of digital products.<sup>76</sup> As a natural consequence, Latin America is now home to a growing number of online learning platforms and a heightened need for qualified workers to structure, develop, and support the region's tech sector. At the same time, a widening gap remains in access to technology and relevant training given the widespread socioeconomic inequality across Latin America. HENRY has emerged as a reliable and scalable tool in the region's effort to achieve quality education, decent work, economic growth, and reduction of gender and social inequalities.

# INTRODUCTION

## Future Shortage of Expert Workers in a Booming Tech Industry

Technological progress is a key driver of aggregate economic growth and improvements in long-term standards of living, a fact that HENRY not only recognizes but also uses as a premise when structuring its classes. Due to rapid advances in technology, increased digitalization, and advances in engineering, cloud computing, and data processing, companies around the world are increasingly demanding skilled talent to perform a variety of newly created roles. However, in an increasingly tight labor market, finding expert workers is an ongoing challenge for employers worldwide. A recent report by Korn Ferry found that by 2030, more than 85 million jobs could go unfilled due to a lack of skilled talent,<sup>77</sup> which in turn could lead to an annual revenue loss of USD 8.5 trillion. The global demand for highly-skilled tech workers presents an opportunity for the labor force to boost their income potential, creating a market for startups like HENRY.

HENRY is an online education platform based in Buenos Aires, Argentina, with operations throughout Latin America. The platform was founded in January 2019 by siblings Martin and Luz Borchardt, alongside Manuel Barna Ferres, Federico Hernandez and Leonardo Maglia. Their mission is to create a

more equal society by democratizing access to high-quality education for technology careers. HENRY offers courses on data science and web development, guiding students through four-month intensive programs. What sets HENRY apart from conventional education models is its capability for remote learning, its personalized learning experience, its rigorous curriculum for those who cannot afford to spend years at college, and most popularly, its zero-up-front cost model. HENRY invests in its students by allowing anyone, no matter their economic situation, a chance to enroll by signing an income-share agreement (ISA) for up to USD 4,000, payable upon employment. Additionally, HENRY offers job placement services and interview preparation services to its students.



# INTRODUCTION

## Latin America's Ed-Tech Challenges

The technology education sector in Latin America faces significant disadvantages in its creation of the next generation of talent. But these very disadvantages can be seen as opportunities for a startup such as HENRY to become a catalyst for change and reduced inequality. The following challenges create an environment of opportunities for improvement:

### 1) Challenges persist in education in Latin America in spite of significant progress

Today, data from the Inter-American Development Bank (IDB) indicates that four out of ten Latin Americans fail to complete the requirements for their high school diplomas, dropping out of school before age twelve.<sup>78</sup> In Central American countries like Guatemala, Honduras, Mexico, Panama, El Salvador, Nicaragua, and Belize, the early dropout rate is 14 percentage points higher than in the rest of Latin America and the Caribbean. Some of the causes for high dropout rates include academic unpreparedness—

due in part to low-quality education—and financial challenges for low-income students. Moreover, students who lack access to early childhood services enter school at a disadvantage, are more likely to drop out of school, and earn lower salaries when they join the workforce, leading to myriad economic and social costs. As a result, a surplus of Latin American youth entering the labor force lack the skills necessary to find decent work and participate in an increasingly competitive, information-rich, and globalized economy.<sup>79</sup>

### 2) Latin American countries have consistently struggled with high levels of unemployment

Unstable governments, high inflation, and economic crises have consistently impacted employment rates. In the early 2000s, the unemployment rates in Colombia and Argentina were as high as 20.5% and 19.6%, respectively.<sup>80</sup> More recently, the COVID-19 pandemic set the Latin American average unemployment rate at 11.1%, resulting in 28 million people living in working poverty—an increase of 5 million during 2020. According to MercoPress, 30 million Latin Americans, almost a third of whom live in extreme poverty, are employed but do not earn enough to keep themselves and their families above poverty line.<sup>81</sup>

### 3) The ed-tech industry continues to face financial challenges

Financing is often first among the numerous hurdles that exist for startups. The Dialogue, in partnership with the Varkey Foundation, interviewed twelve Latin American education startups to illuminate their experience.<sup>82</sup> Representatives of these companies conveyed that few funding options are available and that access to capital is very limited, with only a small number of investors and philanthropic organizations interested in ed-tech. Grants from government agencies and foundations are scarce, too. In addition, access to early-stage capital is often tied to impact—an impossible requirement for many small startups given the rigor, scale, skills, and expense required to conduct a thorough impact evaluation. These startups also face difficulty in finding skilled talent. Moreover, startup representatives find that municipal and national governments lack a clear understanding of technology as a tool for education innovation. Some expressed frustration directed toward government officials who fail to see a need for ed-tech. This disconnect brings a host of repercussions and consequences, including underdeveloped regulation and policy guidelines, difficulties in creating long-term partnerships, and very slow sale cycles, among others.

# INTRODUCTION

HENRY has the potential to address Latin America's barriers to improving education, employment, income and gender equality, and innovation.

## 1) HENRY offers an unconventional method of education

HENRY is challenging the status quo within higher education by allowing students greater autonomy through remote learning, delayed payment, and classes starting every month, ensuring that continuing one's studies past high school does not have to be limited by finances. "Higher education is only for 13% of the population in Latin America," says Martin Borchardt, CEO and co-founder of HENRY. "It's very exclusive, very expensive, and has very low impact skills. So, we're giving these people an

opportunity."<sup>83</sup> HENRY has created an online computer science school that trains software developers from all backgrounds to acquire technical skills and identify employment opportunities.<sup>84</sup>

## 2) Reducing income and gender inequality

Latin America's richest 10% hold 54% of national incomes,<sup>85</sup> making it one of the most unequal regions in the world. By facilitating access to higher education for people irrespective of their background, HENRY is contributing to equal opportunity and pay parity in the region. More than 90% of HENRY students have found jobs and, among the first cohort of students, they earn on average three times more than their previous income.<sup>86</sup>

## 3) Filling gaps in unemployment, especially in light of the pandemic

The COVID-19 pandemic has caused unemployment in the region to rise from 8.1% pre-pandemic to approximately 11.1% in June 2021, further widening the income gap and creating significant barriers to education.<sup>87</sup> HENRY estimates that there are more than one million software engineering job openings in Latin America, but fewer than 100,000 professionals with the training necessary to fill those roles. HENRY takes on the role of preparing students to excel in these roles. Latin America could hold the talent to supply quality tech labor to a market currently experiencing a growing shortage.

*"With the pandemic, I felt the need to reinvent myself, as I believe many others have. It had been a while since I realized I wanted to [do] something that allowed me to work remotely and travel, and this was the ideal moment to take that leap. In January I wrote my first coding exercise. In February, I started HENRY, where I found an amazing community to be part of."*

Bruno Paveglio, a HENRY student

# BUSINESS MODEL

## Value proposition

HENRY's ultimate goal is to accelerate Latin America's transition toward a more equitable future. By seeking to address the tech talent shortage and invest in the talent of the future, HENRY is educating the developers and programmers of the next generation. Their intensive, live online classes improve upon Latin America's higher education system by making education affordable, accessible, customizable, and current. HENRY recognizes that, if Latin America's talent pool is improved, the region could become the place where businesses around the world come to seek reliable and competitive technology services. With no up-front costs, students receive access to high-quality education, interview preparation, and other career services, paying their tuition only after they find employment.

**Table 2: Key Facts about HENRY:  
Company Overview as of October 2022**

Name of Enterprise	HENRY (High Earnings Not Reached Yet)
Headquarters	Buenos Aires, Argentina
Country Footprint	Argentina, Chile, Colombia, Mexico, Uruguay
Year Established	2020
Name of Founders	Martin Borchardt, Luz Borchardt, Manuel Barna Ferrés, Federico Hernández, and Leonardo Maglia
Size of the Company	100-200 employees
Product/Service	Online web development and data science education platform
Market Segment	Adults who completed high school and have access to a computer and Wi-Fi, who are looking to become full-stack developers
Use of Digital Technology	Online learning platform and virtual meeting groups

## BUSINESS MODEL

### Products and Services

HENRY offers a course for full-stack developers, offered at either full-time (four months) or part-time (seven months), and most recently started offering a data science course (five months). The courses include portfolio building, coding bootcamp, labs, and job preparation. Perhaps the most attractive perk of HENRY's course offerings to prospective students is its zero-dollar initial cost. After helping students find a job, HENRY will charge 15% of a student's salary (if greater than USD 500 monthly) until the total amount paid by the student reaches USD 4,000.<sup>88</sup> Students are not charged until they achieve employment.

### Process

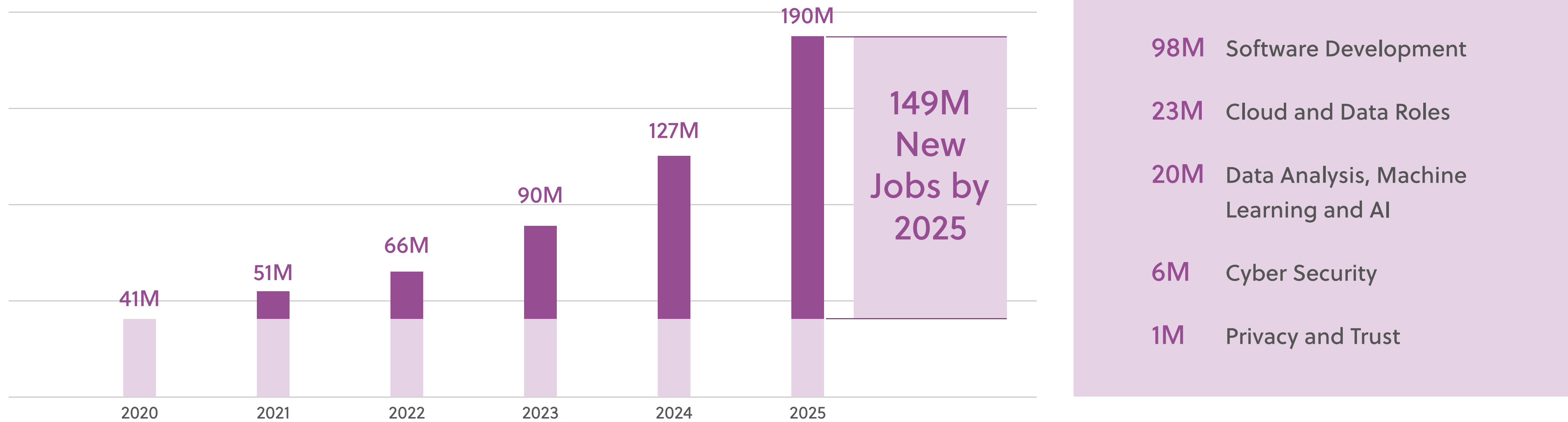
Before co-founding HENRY, Martin Borchardt founded Nubi, an international payment and remittance company. Martin has shared how while working at Nubi, he experienced firsthand the struggle of finding and retaining tech talent in Latin America because the market was so scarce. This led him to co-found HENRY alongside his sister Luz, partners Manuel Barna Ferrés, Federico Hernandez, and Leonardo Maglia. Nubi allowed Martin to see the talent shortage, and thus, HENRY was born out of market necessity.

Founded during the COVID-19 pandemic, HENRY arrived at a time when many people were newly homebound and had more time to invest in themselves. Amid rapidly rising unemployment, currency devaluation, and a severe comparative delay in access to vaccines, HENRY offered access to online education with the promise of greater opportunities to work remotely and earn significantly more working for foreign companies.



# BUSINESS MODEL

Figure 3: HENRY's Dashboard - Digital Job Capacity from 2020 - 2025

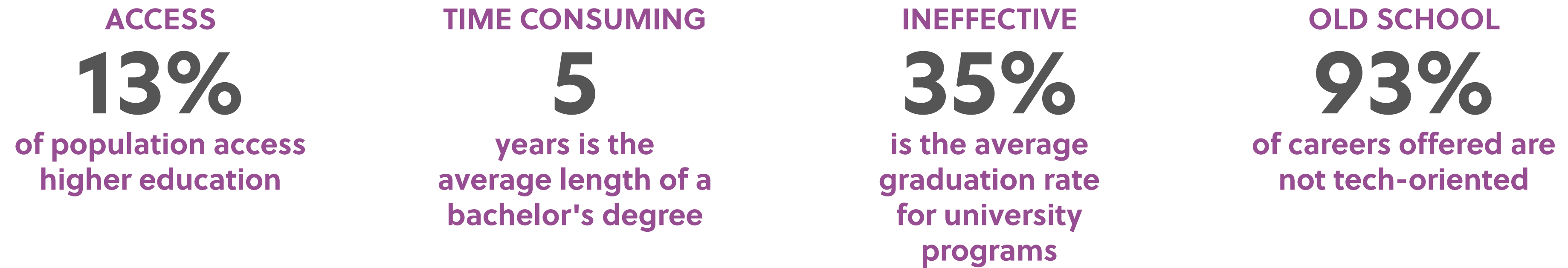


Source: Microsoft, LinkedIn & Power BI



## BUSINESS MODEL

Figure 4: Latam: Higher Education is ripe for disruption

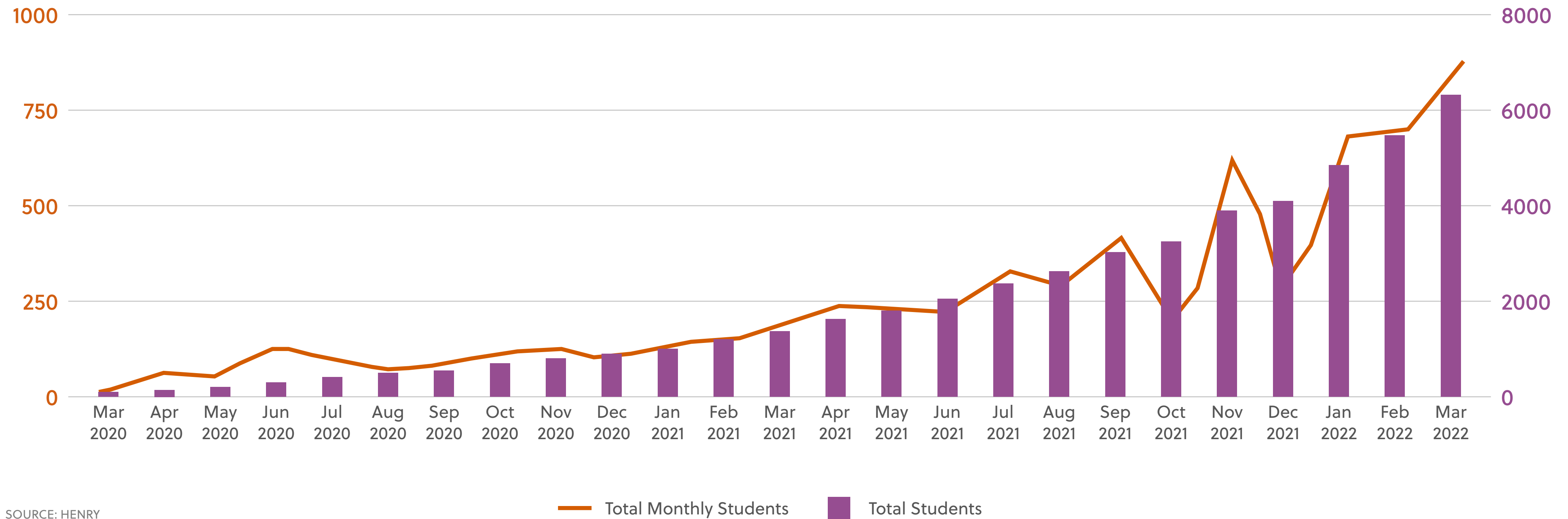


Offer Shortage	Universities (CS Degree)	Coding Bootcamps	Population <35 years old
USA	2,000	130	152 M
LATAM	500	30	350 M

Source: Banco Mundial

# BUSINESS MODEL

Figure 5: HENRY: Total Students Over Time



SOURCE: HENRY

— Total Monthly Students    ■ Total Students

## BUSINESS MODEL

HENRY currently trains students to become full-stack developers in as little as four months. The application process requires dedication: prospective students must fill out an online form, complete a 20-hour preparatory course provided by the company, and then pass the 8-hour HENRY Challenge. The company is looking for candidates who are committed to their education, and for good reason: accepted students attend the remote live course from 9 am–6 pm Monday through Friday, for four consecutive months. HENRY welcomes one new cohort of students each month. Even this apparent frequency fails to make a considerable dent in demand—HENRY receives an average of 5,000 applications per month and accepts about 3%. As of January 2022, 105 HENRY graduates were working for companies in the United States, Mexico, Colombia, and Chile. Even though HENRY was founded and piloted in Argentina, approximately 30% of HENRY students now come from Colombia.<sup>89</sup>

### In order to apply, candidates must:

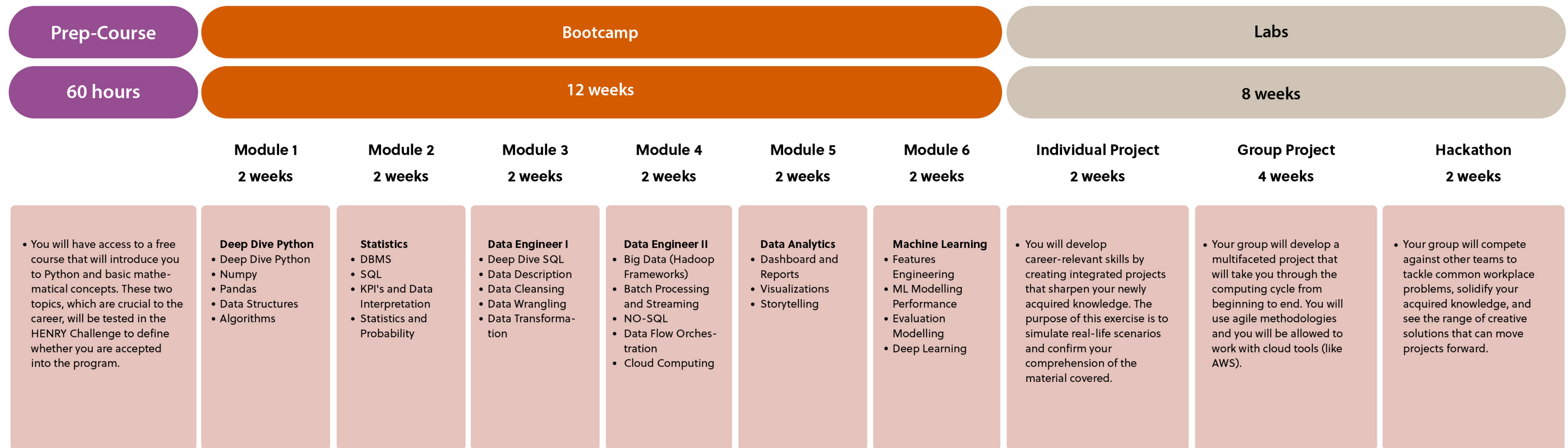
- Be 18+ years old
- Have a high school diploma
- Have access to a computer and Wi-Fi network
- Be available full-time from Monday through Friday
- Be ready to collaborate with fellow students
- Be passionate about getting a life-changing job

The course itself is intensive, features regular exams, and is divided into four parts: an intensive bootcamp, where students learn computer science basics and web development; labs, where students build real-world projects in teams; the HENRYX, a module that fosters the further development of technical and soft skills in teams; and the Job Prep, a job market preparation module.



# BUSINESS MODEL

Figure 6: Courses Offered by HENRY



Source: HENRY (translated and re-created visual from HENRY's website)

## BUSINESS MODEL

### Resources

Within two years of its founding, HENRY was accepted into the Summer 2020 cohort of Y Combinator. The famed startup accelerator has been involved in the launch of over 3,000 startups like Airbnb, DoorDash, Coinbase, Stripe, Twitch, Reddit, and Dropbox. Y Combinator invested USD 500,000 and helped raise USD 1.5 million in seed funding, led by Accion Venture Lab. In May 2022 HENRY raised USD 10 million in a Series A funding round bolstered by a group of successful company founders, including Pierpaolo Barbieri, Mike Santos, Matias Woloski, Martín Varsavsky, Patricio Jutard, and Ariel Arrieta.

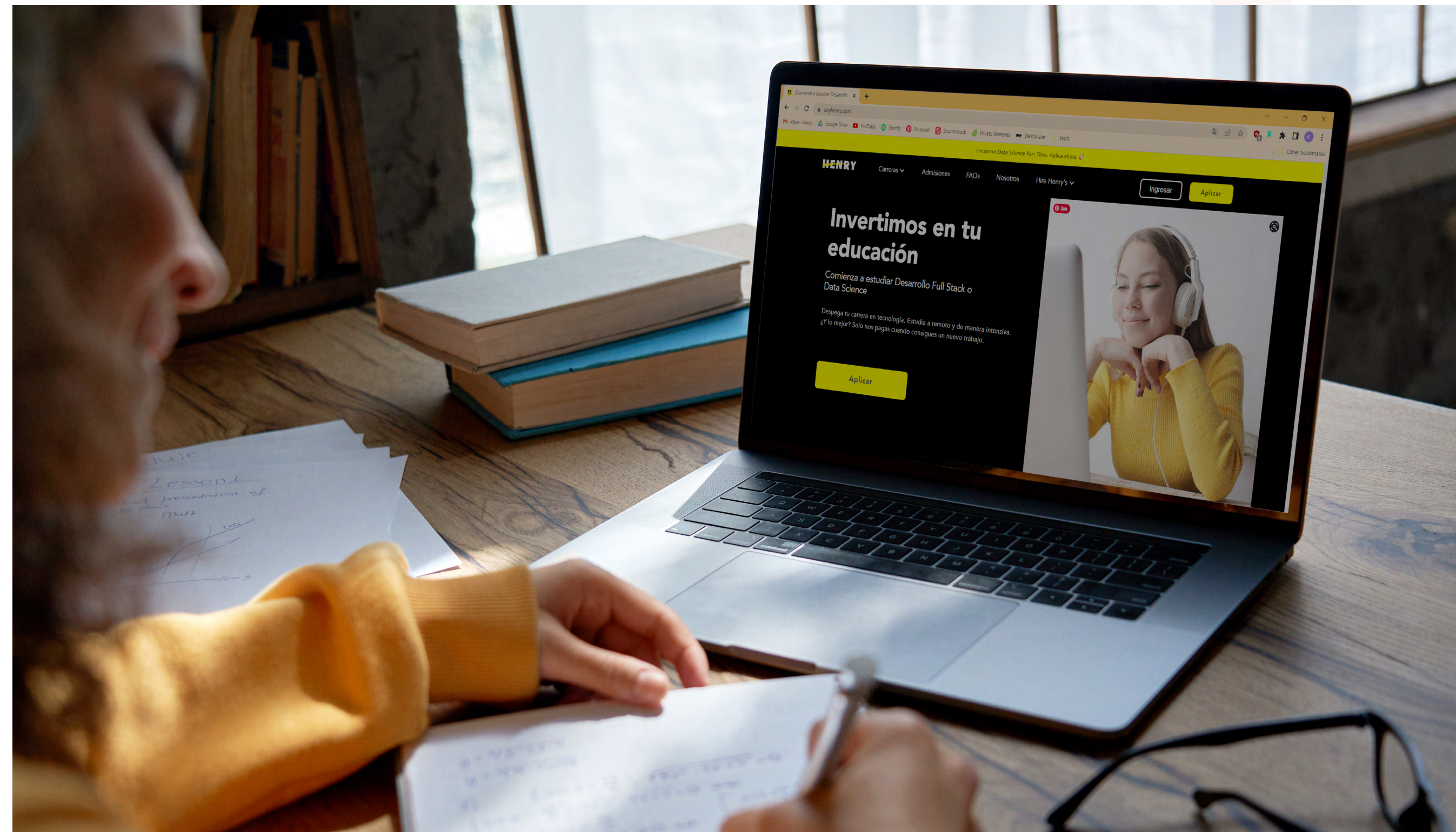
### Profit Formula

HENRY has become popular for its zero-upfront-cost model. Each student signs an ISA in which they agree to pay 15% of their income (if greater than USD 500 monthly) until an amount of USD 4,000 is reached. Over 90% of students that complete the program find a job in tech and pay HENRY an average of USD 4,000.<sup>90</sup>

## STRENGTHS AND WEAKNESSES

### Value Drivers Evaluation Using the Nine A's Framework

Using the Nine A's Framework and the information presented above, we can now evaluate the core components of HENRY's business model. We designated a value from one to five for each of the Nine A's elements. Using one to indicate room for improvement and five to indicate excellence, we quantify HENRY's strengths and weaknesses in each component of its business model in the matrix below.



# STRENGTHS AND WEAKNESSES

Figure 7: HENRY's Nine A's Evaluation

VALUE DRIVERS	ADVANTAGE	AFFORDABILITY	ACCESSIBILITY	APPROPRIATENESS	ADDITIVITY	ADAPTABILITY	AMPLIFIABILITY	AUTHORITY	ADJACENCY
VALUE PROPOSITION	●	●	●	●	●	●	●	●	●
RESOURCES	●	●	●	●	●	●	●	●	●
PROCESS	●	●	●	●	●	●	●	●	●
PROFIT FORMULA	●	●	●	●	●	●	●	●	●



## STRENGTHS AND WEAKNESSES

HENRY offers **appropriate** solutions to two key problems in Latin America: it offers people with low or no wages the opportunity to improve their lives through a more lucrative career, and it supplies growing tech businesses that lack human capital with high-quality candidates. HENRY's business model and resources are particularly well-suited to its goals.

One of HENRY's main strengths, which makes the company's proposition particularly attractive to prospective students with limited resources, is that it is **affordable**. Students pay for the course only once they are employed, and payment is capped at USD 4,000, a significantly lower rate than what competitors charge. For comparison, at time of writing Lambda School charged 17% of the student's salary for 24 months, with no cap.<sup>91</sup> Software development salaries range from USD 10,000 to USD 25,000 in Latin America, suggesting that Lambda students are responsible for a fee of USD 4,000 to 10,000.

Furthermore, HENRY's low-cost structure ensures that the business is highly **adaptable**. With little more than Zoom meetings and teaching personnel, HENRY is as lean a business as possible, allowing it to take new challenges in stride and adjust its business model accordingly. HENRY's adaptability, we find, will come in handy in the next few years

as the company surely encounters competitors in the region.

HENRY's business model could easily be **amplified** to any Spanish-speaking community in the region, provided that the startup hires sufficient teachers and support staff to launch the program and maintain business operations. However, if the demand for software developers declines in response to an oversaturated labor market, this could affect HENRY's growth and sustainability.

HENRY remains versatile when it comes to adjacency as well, as its online teaching model could be translated to other subjects and applied to different types of devices. However, **adjacent** markets might necessitate changing HENRY's target clientele and hiring teachers with expertise in other subjects, which could pose a sizable challenge to the startup's vision and profitability.

In terms of **accessibility**, HENRY's virtual platform is strong, but could be even stronger. Despite growing internet penetration in Latin America, there is still a significant portion of the population that lacks internet access, a computer, and high school-level education. These individuals are excluded from HENRY.

When it comes to **advantage**, HENRY is not too far ahead of strong competitors. Lambda School, an ed-tech giant based

in Palo Alto, has tried to expand to Asia and Europe, but it did not thrive in environments outside of the United States. Still, Lambda's success demonstrates that HENRY occupies the same market niche as many competitors who have also recognized the global potential of the ed-tech space, including in Latin America. These competitors range from fully remote such as Lambda and Microverse, to onsite, such as Holberton School, which has brick-and-mortar centers in many countries in Latin America.

At present, we observe that HENRY still lacks **additivity** in its business model, an understandable status as the startup is four years old and utilizes a lean growth approach. HENRY's business model utilizes a wide range of institutional and infrastructural factors such as computer penetration and education level, ensuring that students have the ability to access internet and possess a strong enough educational background to complete a program like HENRY. The company could provide additional value by improving school education levels through partnerships and mentorship programs.

Similarly, the relative novelty of the business may also explain why HENRY lacks **authority** in the market. We anticipate that additional time in the market and consistent quality of service will continue to strengthen HENRY's authority in the ed-tech space.



## OPPORTUNITIES AND CHALLENGES

In spite of the significant progress that HENRY has made, several challenges remain in the ed-tech market that the company should address with an eye toward the future.

Firstly, HENRY faces a common yet imminent risk: new market entrants. As a lean company without headquarters, whose costs are mainly “just software licenses, headcount, and marketing,” according to Martin, it is fairly easy for new, similar companies to form.<sup>92</sup> Apart from new entrants, HENRY should also be mindful of Microverse, Lambda School, and Trybe, the latter of which is based in Brazil. Lambda School already attempted an expansion into Asia and Europe, while Trybe raised USD 10 million to expand in early 2020.<sup>93</sup> Per Martin, however, “The market is huge though! I don’t see competitors as a threat for HENRY. We don’t accept 97% of the people that apply for HENRY. I think the one company that has the best product is the one that focuses on the student. As long as we maintain the placement rate, we will win. The challenge is how you maintain that.”<sup>94</sup> Also relevant is the fact that, so far, HENRY is the only company offering instruction fully in Spanish.

HENRY also risks competing, albeit remotely, with higher-quality courses or simply with free online content. This is why Martin treats HENRY’s content itself as a commodity—

one can find it many ways, but a student will rarely be able to self-train effectively in as little as four months. HENRY differentiates itself not only in the structure and speed of its courses, but first and foremost in its astounding employability rate, according to Martin “94% of HENRY graduates get employed. Many of them through connections we formed between HENRY and other companies.”<sup>95</sup>

Finally, we evaluated risks associated with the payback structure. HENRY students take the course for free until they find a job in the field, at which point they are responsible for paying the company up to USD 4,000. We assess that USD 4,000 is a competitive rate, as it is the cheapest in the market as compared to Lambda School (USD 4,000-10,000+), Trybe (USD 7,000), and Microverse (USD 15,000).

In conclusion, though HENRY faces some risks, they are relatively low, and the company’s benefits seem to significantly outweigh them. Just one and a half years after its inception, HENRY already boasted impressive applicant numbers, accepting just 3% of HENRY hopefuls. Martin’s team emphasizes that HENRY not only teaches students content, but also how to “learn to learn” new technologies, encouraging continuous learning post-graduation and fostering personal and professional growth.<sup>96</sup>

HENRY’s leadership is also considering the future of technology. Over the next several years, the company plans to launch artificial intelligence, cybersecurity, and cloud services courses. Geographically, HENRY is now focused on Mexico, Colombia, and Argentina. The startup hopes to expand to Brazil soon.

HENRY’s efforts to impact Latin American prosperity are 2,600 strong – that’s 600 graduates and 2,000 current students. Of these, 30% did not complete college and 70% are STEM graduates who did not find suitable jobs or were insufficiently equipped for the job market following formal education. HENRY hopes to continue giving its students the opportunity to prosper financially and acknowledges that individual economic prosperity will in turn give way to producing regional economic prosperity.

# Noon Academy

## The Social Learning Platform

Case  
Studies

Noon  
Academy

Introduction

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# INTRODUCTION



*Noon Academy is a fast-growing ed-tech company based in Saudi Arabia that aims to make quality education accessible to everyone. Since its inception in 2013 as a simple video-based platform for test preparation with a five-member team in Riyadh, Noon Academy has adapted to become a key respondent to the rising demand for technology education and upskilling.*

The Middle East and North Africa (MENA) region is home to an abundance of natural and human resources, offering a higher-than-average standard of living for many. The region, which is responsible for a considerable share of world petroleum production, comprises 20 countries and accounts for 6% of the world's population. MENA enjoys notable advantages in the manufacturing, renewable energy, and tourism sectors, in addition to its prime geographic location and increasingly educated population.<sup>97</sup>

The Kingdom of Saudi Arabia (KSA) is the largest economy in the MENA region, and currently holds the second-largest oil reserves in the world. The oil and petroleum sector account for more than 70% of the country's revenue, making it a global economic powerhouse.<sup>98</sup> The country is currently undergoing a number of reforms under its Vision 2030 program. The government has allocated considerable resources to digital transformation, heavily investing in shifting economic growth away from a dependency on oil and toward technological innovation and entrepreneurship.<sup>99</sup> Billions of dollars have been invested in high-tech infrastructure, launch funds, and a multitude of economic reforms aimed at strengthening the digital sector and easing the process of digital business.<sup>100</sup> The education sector, historically dominated by public provision, is primed to reap the benefits of a more attractive investment environment.<sup>101</sup> KSA has the largest school-age population in MENA with 6.7 million students, and government initiatives favoring

education and technology make the country ideal for ed-tech growth.

The MENA region is home to more than 600 million people, and innovation in education has the potential to transform the region, breaking entrenched cycles of poverty and inequality.<sup>102</sup> A study by HolonIQ suggests that in less than 30 years over a 271 million youths (0-24 years) will be inhabiting the MENA region.<sup>103</sup> Education technology is playing an increasingly important role in the region—especially in Saudi Arabia—both as a teaching and learning tool, and as a means of making high-quality education more accessible. The Future Gate initiative, launched in 2017 by KSA's Ministry of Education (MOE),<sup>104</sup> seeks to achieve nationwide use of education technology, aiming to integrate digital learning tools in both public and private schools.<sup>105</sup>

The ed-tech industry has been gaining prominence over the past decade as it aims to transform traditional learning methods by leveraging technology to democratize education. Today, ed-tech platforms have grown exponentially to include adaptive learning, video content, gamification, and personalized learning solutions to support a wide variety of students' needs.

Noon Academy aims to make quality education accessible to everyone. It is one of the fastest-growing ed-tech startups in the world. Currently headquartered in Riyadh, Noon is a

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Saudi-based social learning platform with over 10 million customers operating in eight countries. Noon's unique platform offers tutoring and free educational content through a 'freemium' revenue model, which allows all users free access to basic content, and charges users for live tutoring sessions and additional advanced content. The platform has attracted more than two million students and 1,500 certified tutors to date.

While the ed-tech landscape is rapidly changing, there are still numerous challenges and factors that affect a country or region's ability to adopt digital platforms and other innovations. Below, we highlight some of the key changes shaping the MENA ed-tech market, as well as some of the key challenges that Noon Academy can potentially address:

## Massive growth in population to drive online learning growth

UNESCO estimates that MENA currently has approximately 100 million school-age students.<sup>106</sup> Egypt alone was projected to add almost one million new students to its higher education system at the end of 2021.<sup>107</sup> Saudi Arabia is also experiencing an urgent need for online learning given the growing ratio of students to teachers and the paucity of quality educators. Saudi Arabia's population is relatively young, indicating growing demand for education for the foreseeable future. The lack of higher education facilities in

Saudi Arabia is also contributing to an increased demand for online learning services. In addition, the country is witnessing an uptick in women learners, many of whom seek to balance education with family obligations and other limitations by learning remotely rather than attending in-person classes. In response, both local and global online learning companies are looking to tap into the Saudi Arabian market.

## Rising demand for ed-tech translating into investment activity

MENA has been experiencing significant growth over the past decade. Across the region's leading ed-tech platforms, user numbers have increased from 500,000 to over 40 million registered users. Global ed-tech platforms such as Coursera and Udemy also have over 15 million users from the region. According to MAGNiTT's 2019 *Ed-tech Venture Investment Report*, the education sector has witnessed increased investment activity in the MENA region since 2016, with investment deals making up almost 5% of investment activity in 2019. Moreover, USD 20 million in funding was raised by MENA-based ed-tech startups, constituting roughly 3% of the total funding raised in MENA in 2019.<sup>108</sup> In 2020, investments in the education sector accounted for 3% of the USD 1 billion invested by venture capital firms.<sup>109</sup>

## Surging adoption of technologies to drive e-learning growth

Internet and smartphone penetration as well as GDP per capita across MENA affirm that innovations like affordable online learning are viable. When excluding Syria and Yemen, internet and smartphone penetration in Arab-speaking and Middle Eastern countries are over 90% and 95%, respectively.<sup>110</sup> In KSA and the United Arab Emirates (UAE), 97.7% of Millennials are online daily and 97.8% are using smartphones. Meanwhile, 75% of Egyptian millennials are online and 70% are using smartphones.<sup>111</sup> Willingness to adopt new tech products is high, as many opinion polls show that MENA youth believe that the internet will play an increasingly vital role in their education going forward. The results of these polls are reflected in user adoption and behavior. The integration of learning management systems (LMS) with smart classes across universities and schools in the Kingdom is expected to contribute to the growth of the online learning market. The implementation of advanced technology services, which can enhance the quality of learning material, is also estimated to contribute to the future growth of ed-tech industry revenues.

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## State-led initiatives to promote business and social entrepreneurship

In Saudi Arabia, more than USD 1 billion has been pledged by the country's Public Investment Fund (PIF) under the banner of the Jada fund, dedicated specifically to developing entrepreneurship within the market. Similarly, the Egyptian government has launched an investment arm, Egypt Ventures, which provides funding, office space, and mentorship for selected startups over a period of four months.<sup>112</sup> Moreover, several government initiatives are being launched to incorporate technology into daily life and promote startup culture. For example, 2019 saw a USD 8.6 million investment in Noon Academy co-led by Raed Ventures and Saudi Technology Ventures, marking the largest-ever funding round raised by a MENA ed-tech startup.<sup>113</sup> The UAE has an efficient ecosystem for startups, providing them with guidance, connection, and funding facilities. Some of the major platforms supporting fintech and startups are Fintech Hive, Intelaq, Dtec, Hub71, Flat6Labs, and Sheraa. Last year, Dubai Economy joined hands with digital marketplace noon.com to connect local startups that have its DED Trader license through its Mahali digital store. In 2019, Saudi-based Misk Innovation launched the Misk Growth Accelerator program for startups in the MENA region, in addition to a pre-accelerator program for pre-seed and seed-stage startups, Misk 500 Accelerator, in partnership with US-based 500 Startups.<sup>114</sup>

## Rising demand for international curriculum

Factors such as a growing expatriate population, high proportion of wealth and income levels, and demand for quality English-medium education from expats and locals has led to the proliferation of private schools offering international curricula.<sup>115</sup> According to Thea Myhrvold, who started Teach Me Now, a personalized tutoring portal, "the demand for education is skewed towards private education in the Middle East due to the presence of a large expat community. Even though the cost of private school is high, there's a willingness to pay for education support, which is boosting the growth rate of ed-tech firms."<sup>116</sup>

In 2020, startups in e-grocery, ed-tech, and fintech saw an increase in demand. A report from Wamda and Arabnet surveying 247 startup founders across the region found that over 47% of ed-tech startups registered a boost in revenue.<sup>117</sup>

While online learning was still finding solid ground in the region's dynamic academic space, it was thrust into the spotlight by the COVID-19 pandemic. The pandemic altered, among other things, the way education was imparted, forcing institutions to adopt and improve online learning methodologies. As remote learning protocols came into effect, parents scrambled to identify homeschooling content to productively engage their children and effectively educate them, creating a window of opportunity for several online

learning pioneers. In addition, the online learning market is anticipated to grow over the next decade as corporations increasingly rely on online certifications to develop and reinforce their employees' skills.

Online learning companies have begun collaborating with renowned institutions around the world to provide valuable certificate courses to users. The COVID-19 pandemic propelled online learning platforms into the spotlight and forced many ed-tech service providers into rapid growth; simultaneously, it compelled students, parents, and educators to adopt online learning at a much larger scale. These providers not only can help to shift the focus from traditional school-based learning toward holistic development of students, but also can make education more interactive and meaningful for younger generations. The MENA region has taken unprecedented measures to integrate digital technology into the development of new learning and teaching methods, a worthy effort given the drastically uneven access to education at a global scale.<sup>118</sup>

# BUSINESS MODEL

## Value Proposition

Noon Academy's journey started in 2013 as a simple video-based content learning platform for test preparation with a five-member team in Riyadh, Saudi Arabia. To gain more traction, in 2017, they replicated the home tutoring concept by tailoring their product offering to one-on-one demand sessions between a teacher and student. This model was later transformed into live tutoring as it was becoming difficult for the company to track new customers and students. After about six years and hundreds of data-driven experiments, Noon has managed to transform into a robust social learning platform that allows students to study with friends in groups, compete with one another, and request top tutors for live on-demand tutoring.

Noon Academy's value proposition is based on live tutoring, wherein a large number of teachers are onboarded to conduct live sessions with students—a model similar to after-school academies where students register themselves into study groups for each subject and participate in live classes. These lectures are not recorded. The company has also positioned itself as a social learning platform, where students are able to form groups among classmates, increase peer-to-peer interactions, and better understand and

learn concepts. Noon has developed a unique approach to increasing students' motivation to spend more study time on its platform, which has resulted in very high student engagement. The startup employs a more participatory approach, pulling students in by providing them with virtual, engaging classrooms featuring interactive elements such as gamification, study groups, team-based learning, and contests in addition to offering guidance on practical subjects like personal effectiveness, career counseling, and life skills.

Noon aims to change the way students approach education through active learning. With the boom in online learning platforms amid the pandemic, education became more isolated and unidirectional. A 2018 Columbia University's Teachers College study on edX and Coursera courses showed that MOOC Certificate programs have a completion rate of 15% or less.<sup>119</sup> One year later, an MIT study revealed that over the past five years, online courses recorded an astronomical average dropout rate of about 96%.<sup>120</sup>

Mohammed Aldhalaan, co-founder and CEO of Noon Academy, said that "the biggest issue in studying isn't comprehension; rather, it's boredom, and that's where Noon's unique social learning platform achieves what others can't. Noon is transforming into an open platform, where teachers around the world can start their own educational groups, allowing exceptional teachers to organically cultivate their own following and generate additional income through

excellent performance and positive reviews. This approach not only dramatically improves student motivation, but also allows exceptional teachers to teach thousands of students in one group, making high-quality education accessible and affordable to the masses."<sup>121</sup> Competitors like Khan Academy and BYJU have a permanent staff of teachers who are treated more like assets than operational burdens, but for Noon, teachers are partners and not employees.

Teachers decide if they want to conduct accelerated learning classes—for example, finishing *Qudrat's* course material in 15 days as opposed to the regular 2-month timeline. Payment can be made using different methods: via the platform using Mastercard or Visa cards, or via teacher-led payment, whereby the instructor shares a payment link and Noon takes a percentage of the payment as it travels through the platform. This percentage varies between 20% and 60%, depending on the negotiating power of the teacher. For Noon, teachers are one of the main sources of gaining traction in the market, the other being the company's own popularity. The instructors available at Noon Academy are highly qualified: some trained at overseas institutions like Harvard, INSEAD and King Edward, while others hail from local institutions such as the Lahore University of Management Sciences (LUMS) and the Institute of Business Administration (IBA) in Pakistan.

## BUSINESS MODEL

**Table 3: Key Facts About Noon Academy:  
Company Overview as of November 2022**

Name of Enterprise	Noon
Headquarters	Riyadh, Saudi Arabia
Country Footprint	KSA, Egypt, Oman, Kuwait, Jordan, India, Iraq, Pakistan
Year Established	2013
Name of Founders	Mohammed Aldhalaan, Aziz Alsaeed
Size of the Company	250+
Product/Service	Social learning education platform
Market Segment	Students who use after-school educational platforms such as home tutoring, coaching academies, or online programs
Use of Digital Technology	Google Cloud-based ecommerce platform

### Products and Services

Noon's unique platform offers tutoring and free educational content through a 'freemium' revenue model that allows all users free access to basic content, and charges users for live interactive tutoring sessions with quality tutors and more advanced content. All content and syllabi are free of charge, as the startup capitalizes on depth by charging for advanced content such as live classes featuring practice of past exams. This model is different in each country based on student segmentation and the number of educational boards present. Companies that target the after-school segment, such as BYJU and Khan Academy, employ permanent teachers who create pre-recorded lectures, whereas Noon is the only player in Pakistan that conducts live lectures. The startup's platform acts as a curated marketplace of teachers, enabling them to schedule and conduct live classes, competitions, polls, and quizzes. Teachers can create public or private groups and invite students to join them. Teachers can also assign students homework, monitor their performance, and communicate with them, using Noon's online platform.

#### Primarily, target customers are students who:

- Study on their own using online sources such as YouTube or Khan Academy
- Seek personalized, individual lessons with tutors
- Attend after-school academies
- Consume other ed-tech products and services like BYJU, Coursera, and Udemy

# BUSINESS MODEL

## Process

What sets Noon apart from its competitors is how it uses technology to optimize the learning experience. Noon began, similarly to other ed-tech providers like Khan Academy, by seeking to increase access to education via technology. After launching, however, co-founders Aziz Alsaeed and Mohammed Aldhalaan realized that technology could be leveraged to both increase access and revolutionize engagement with educational content. Thus, after changes to its mission over the course of several years, Noon settled on its current mission: apart from increasing access to education, the company now dedicates itself to making the learning experience more enjoyable and, more generally, enhancing user experience to keep students engaged and passionate about what they are learning.<sup>122</sup> Noon's use of technology is therefore two-pronged:

### **Pedagogic Connection and Educational Accessibility:**

Noon was founded on the principle of using technology to increase access to and dissemination of knowledge. In 2013, co-founders Aziz Alsaeed and Mohammed Aldhalaan saw an

opportunity to democratize education by creating a digital platform that eliminated barriers between students and teachers, as well as enabled both target audiences to connect despite time differences, educational capacities, pacing preferences, and cost. The result is a 24/7 cloud platform that enables students to connect to educational resources at their convenience. The convenience factor is one of Noon's biggest selling points, and it has enabled the startup to amass over 12 million students and 100,000 teachers in 8 countries.<sup>123</sup>

**Making Educational Engagement Entertaining:** Noon stands out from its competitors because of its unique approach to education. The company uses technology to deconstruct and redefine the acquisition of knowledge. Firstly, it uses technology to blur the lines between teacher and student: student groups are at the center of the user experience, which empowers them to learn from each other in a more relaxed environment. Secondly, it redefines knowledge acquisition by using online game formats, interactive interfaces, and other forms of edutainment as

teaching aids. The results are impressive: Noon's daily user engagement is 5 times higher than the global industry average.<sup>124</sup>

In addition to study groups, the service offers one-on-one tutoring, virtual classes, and live group-study sessions. All these options contribute to the dynamic learning process developed by Noon that rids education of boredom and monotony and motivates students to pursue education passionately.<sup>125</sup>

Thus, Noon's cloud-based service not only brings students together, but also offers a creative, fun, interactive medium for the dissemination of knowledge.



# BUSINESS MODEL

## Resources

### Technology

Noon's appeal lies in the ease of access it creates for students and teachers alike with its use of a 24/7 online platform. Its perpetual availability enables users to be in constant contact, uploading and consuming content at their leisure. This technology eases accessibility issues and fosters interconnectivity among users. Additionally, the startup's platform provides a user-friendly, interactive interface that is professional yet entertaining. Through the dashboard, users can participate in study groups, attend virtual classes and private tutoring sessions, access the database of educational content, and join live study sessions.<sup>126</sup>

### Partnerships

Noon's mission is to have 50 million learners in over 200 countries by 2023.<sup>127</sup> In order to extend its global reach, it has partnered with numerous local organizations in eight different countries.<sup>128</sup> Partners such as Telenor Pakistan, for example, allow Noon to tap into 40 million more Pakistani K-12 students who have limited educational resources.<sup>129</sup> Additionally, in Saudi Arabia, Noon is accredited by the Saudi National Centre of Assessment,<sup>130</sup> which empowers it to offer

students classes to pass the Saudi general aptitude test.<sup>131</sup> Teaming up with certification boards in multiple countries gives Noon a competitive advantage over similar platforms as it legitimizes the startup's teaching process and bolsters the platform's reputation as a reliable and effective product.

In addition to its strategic partnerships, two principal investors, Ahmad Alshammari<sup>132</sup> from STV, a Saudi-based marketing and advertising company, and Mohammed Almeshekah<sup>133</sup> from Outliers Venture Capital, an early-stage venture capital fund, have formal partnerships with the organization.

### Staff

As a multinational platform, Noon has over 250 employees in five countries (India, Pakistan, Saudi Arabia, Iraq, and Egypt).<sup>134</sup> Additionally, it holds partnerships with roughly 100 thousand teachers who are involved in the website's content to varying degrees.<sup>135</sup> Its impressive funding and rapid growth have led it to recruit experienced practitioners in a variety of fields, including but not limited to engineering, management, human resources, and design.<sup>136</sup>

### Investors

Noon has built an impressive list of investors since its founding in 2013. Three funding rounds have yielded a total of USD 21.6 million in raised capital.<sup>137</sup> The initial funding round brought Noon USD 8.9 million from eight primary investors. Noon's Pre-B funding round earned almost thrice its goal for 2021, capturing USD 13 million.<sup>138</sup> The startup closed its latest funding round in May 2022. Lead investors include Raed Ventures<sup>139</sup> and STV,<sup>140, 141</sup> followed by several other prominent investors such as 500 Global, Outliers Venture Capital, Alisamiah Investment, SVC, Abdulrahman AlJadhee, Mazen Ahmed Al-Jubeir, and Abdulla Elyas.

## BUSINESS MODEL

### Profit Formula

Noon's monetization remains unfinalized as the company continues to experiment with its revenue streams. In Pakistan and India, the platform is offered free of cost. According to company sources, Noon's model accounts for low profitability as the startup's current focus is to increase the number of users on its platform. Noon's 'freemium' model does not ask students to pay upfront for 90% of the content, as is the case for most paywall systems. The company has currently not reached profitability in most of the countries in which it operates. For example, Noon is free of cost in India and Pakistan, where the platform has recently been launched. In KSA and Egypt, the company has seen strong monetization over the past one and a half years, mostly in preparatory and secondary levels in Arabic. For KSA, Qudrat and Tahsili—two competitive entrance exams—have achieved the most success, according to company sources. Through their highly interactive offering, Noon aims to find a way to emotionally engage learners with the course materials.



## STRENGTHS AND WEAKNESSES

### Value Drivers Evaluation Using the Nine A's Framework

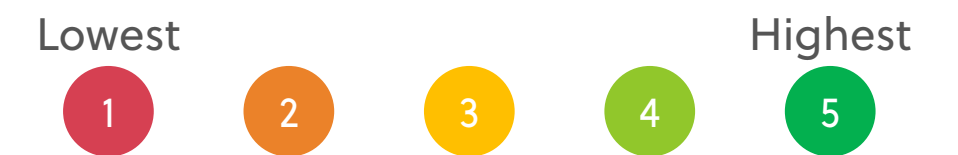
Using the Nine A's Framework and the information presented above, we can now evaluate the core components of Noon's business model. We designated a value from one to five for each of the Nine A's elements. Using one to indicate room for improvement and five to indicate excellence, we quantify Noon's strengths and weaknesses in each component of its business model in the matrix below.



# STRENGTHS AND WEAKNESSES

Figure 8: Noon's Nine A's Evaluation

VALUE DRIVERS	ADVANTAGE	AFFORDABILITY	ACCESSIBILITY	APPROPRIATENESS	ADDITIVITY	ADAPTABILITY	AMPLIFIABILITY	AUTHORITY	ADJACENCY
VALUE PROPOSITION	4	5	2	5	5	4	5	4	5
RESOURCES	5	5	2	4	4	4	5	4	4
PROCESS	5	5	3	5	5	4	5	4	5
PROFIT FORMULA	3	5	3	4	4	3	4	4	4



## STRENGTHS AND WEAKNESSES

The Saudi National Center of Assessment (Qiyas) accreditation is the principal **Advantage** that Noon has over its competitors. Noon has also found its place in the World Economic Forums' 100 Most Promising Arab Startups in 2019.<sup>142</sup> The startup is also transforming into an open platform, allowing exceptional teachers to organically cultivate their own following and generate additional income through excellent performance and positive reviews. This approach not only dramatically improves student motivation, but also allows teachers to reach thousands of students in one group, making high-quality education accessible and affordable to the masses.

Noon scored high on the **Affordability** metric as it is primarily offering educational content through a 'freemium' revenue model that allows all users free access to basic content, and charges users for live interactive tutoring sessions and other advanced content. The company recently expanded into Pakistan, where it is offering free-of-cost, live classes for all major subjects with the country's top teachers through a mobile application and website.

Regarding **Adaptability**, Noon has optimized its platform over the years to make the learning process fun and inclusive for students, which makes its offerings highly adaptable to changing user tastes. The company's mission is to radically change the way people learn as they believe studying can be boring, lonely, and hard. With millions of students across

eight different countries, Noon regularly tweaks and updates its platform to localize messaging according to study culture, in addition to sign-up experiences and copywriting. The startup has adopted a gamification approach to its educational services to ensure that users find it interactive and engaging. "We realized that what matters is no longer access to education; what matters is making it engaging and interactive," says co-founder Aldhalaan. He adds that "the new generation expects apps at bar to experience the entertainment and gaming world. It took us years of experiments and unlocked puzzles in students' behaviors to get to this conclusion. With a heavy discovery mindset, we navigated our way to win students' hearts, before winning their minds."<sup>143</sup>

With respect to **Appropriateness**, Noon has positioned itself as an opportunist in the MENA region. With the global education technology sector valued over USD 90 billion in 2020, and with expected growth of 19.9% from 2021 to 2028, the industry is becoming increasingly attractive to investors, as it has managed to survive and even thrive amid the COVID-19 pandemic.<sup>144</sup>

Noon scores well on the **Additivity** metric as it allows individual diagnosis of students' learning needs and tailors the learning experience to meet student demand. The social learning platform empowers students around the world to take advantage of on-demand tutoring sessions, virtual classes, and live study groups, without stepping foot outside of their homes.<sup>145</sup>

## STRENGTHS AND WEAKNESSES

Given current challenges facing the MENA region as a whole, Noon does decently on the **Accessibility** front, due in large part to the unfriendly landscape for digital adoption in some countries in the region, rather than a company-specific issue. According to Nafez Dakkak, CEO of the UK office of Queen Rania Foundation (QRF), there is a dearth of investors who understand the education space,<sup>146</sup> and impact investing, though increasing, is still behind in the region.<sup>147</sup>

Noon scored well on **Amplifiability** owing to its ability to scale dramatically in the last decade, with a reach of more than 12 million students in eight countries.<sup>148</sup> The ed-tech startup has expanded its operations from Saudi Arabia to India and Pakistan. However, risks arise as Noon seeks to meet various study needs in different countries, depending on the study culture, access to high speed internet, and students' mindsets.

Noon scores well on our **Authority** metric due to its visionary expansion of ed-tech services into 8 countries over the last decade, with over 12 million customers.<sup>149, 150</sup> Noon's uniqueness lies in its product's social and gamification features that enable users to enjoy a collaborative learning experience with teachers and fellow students through study groups, peer engagement, and contests.

With respect to **Adjacency**, Noon's fully interactive and fun platform has been built on the insight that the biggest barrier to learning is not comprehension, but boredom. This has allowed the company to improve its functionality and offer a wide variety of courses across different education levels in eight countries. The company is aiming to expand while targeting the specific needs of students with varying interests and learning abilities. Ahmad Alshammari, Investment Principal at STV, said that "the next generation of ed-tech companies are taking a student-centric approach. Noon Academy is one of the companies spearheading the efforts toward direct-to-student learning."<sup>151</sup>



# OPPORTUNITIES AND CHALLENGES

The Value Drivers Evaluation, analysis of Noon’s business model, and a discussion of the prevailing ed-tech challenges in the MENA region offer insight into the following opportunities for growth and potential challenges for Noon in the future:

## Ed-Tech Startups Often Have to Navigate Complex Regulatory Landscapes

In addition to licensing and operating in different countries, ed-tech companies are also facing increasing challenges related to intellectual property rights, AI ecosystems and other domestic regulatory laws such as consumer protection, data privacy, and data security laws—all of which differ in each country, adding to operating costs. Due to a continuous movement to a virtual-first approach, privacy concerns are top-of-mind for students, teachers, and institutions. In addition to vast stores of course data maintained online, students’ personal data is now on display for the entire class and institution. Students and teachers alike run the risk of encountering security issues like screen-hijacking, wherein malicious actors enter virtual classrooms to share inappropriate content.

## In Spite of Rapid Technological Advancements, the Digital Divide is Still Very Prevalent in the MENA Region

In over 50% of MENA countries, fixed broadband penetration is below 25% of households. Digital disparities in access—to the internet, electricity, and devices like computers or smartphones—have emerged as key deterrents preventing students from accessing online courses. While the shift to online learning was rapid and unplanned due to COVID-19, it highlighted the gap between those from privileged versus disadvantaged backgrounds, which translated into accessibility issues for ed-tech startups. While smartphones have become more affordable, handset affordability remains a barrier to mobile ownership, observes Jawad Abbassi, head of MENA at the GSM Association. At the same time, weak digital literacy skills in low- and middle-income countries perpetuates lower uptake of smart devices.<sup>153</sup>

## Tech-Based Startups are Still Confronting Cultural Perceptions Around the Credibility of Online Learning

“One of the challenges for ed-tech startups is changing the mindset of parents,” says Hamdi Tabbaa, co-founder and CEO of Jordan-based ed-tech Abwaab, which raised a USD 5.1 million seed round in March 2020. “Parents want their children to learn the same way they were taught, in person and with a one-size-fits-all approach. Students of this age change behavior fast, yet for parents to understand the value of tech, adaptive learning, and AI; it is a challenge and will take time to become mainstream,” he further explains.<sup>152</sup> Although online learning platforms like Noon are aimed at children, it is often the parents’ decision to sanction their use.

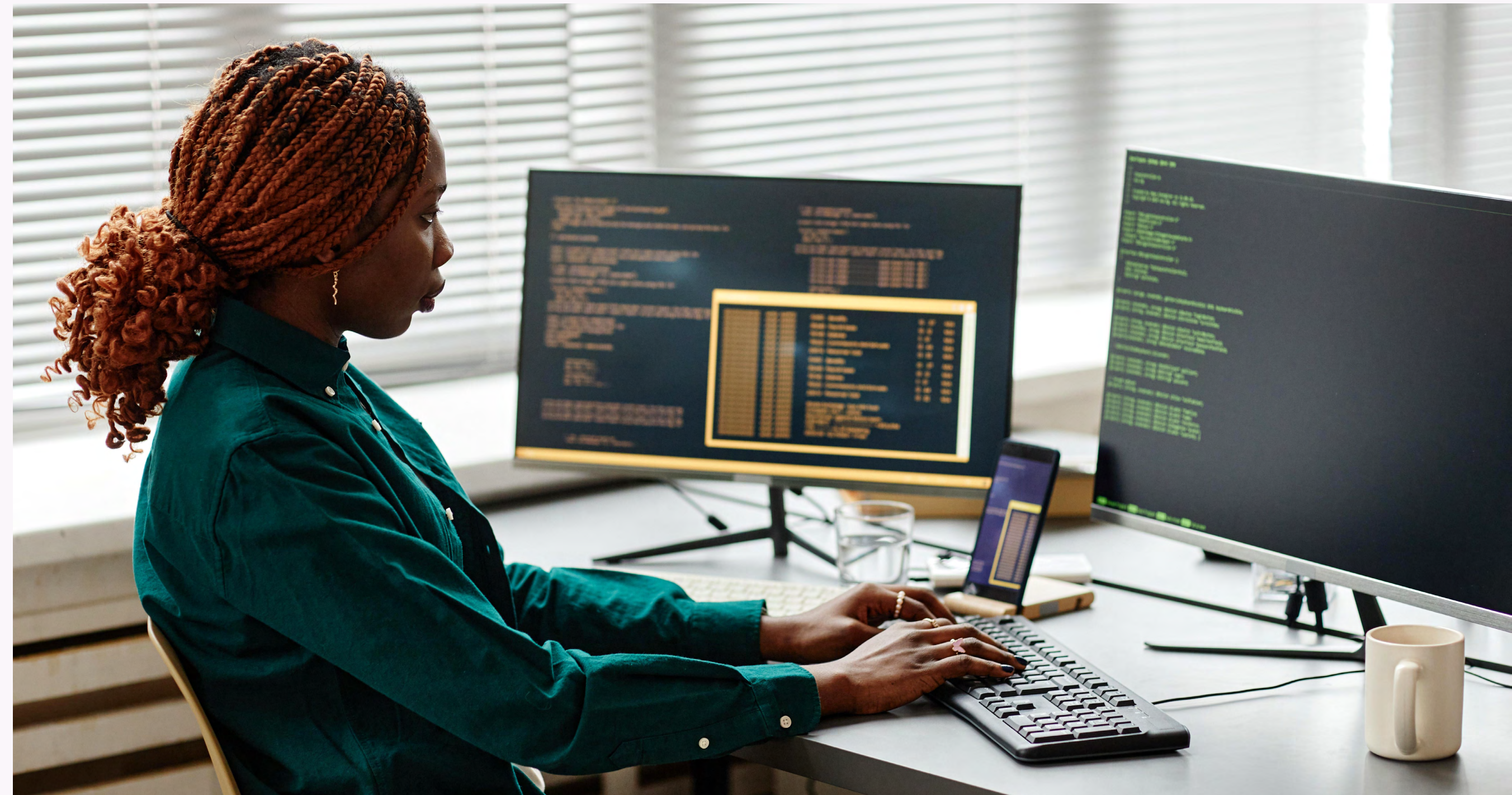
# APPENDICES

## Appendix 1: Market Value Potential for Andela

### Total Addressable Market

Andela's business model unlocks a virtuous cycle. The startup aims to elevate and amplify technology talent in untapped markets, producing economical solutions to the outsourcing needs of major institutions in need of technology services.<sup>154</sup>

Our team calculated Andela's market value potential using secondary data. We assumed that the percentage of senior staff as part of the total staff is 50%, up from the current amount of 25%. Consequently, we assumed that junior staff will constitute 50% of the total staff, up from the current amount of 25%. We also assumed that average salary for both senior and junior developers will constitute three times the local market salary, which will act as a premium for Andela staffing software and vetting services. We calculated the total number of onboarded developers using a 0.5% acceptance rate of all applications, and we further assumed a 750% increase in the total number of applications following Andela's expansion of its operations.





# APPENDICES

**Table 4: Total Addressable Market: Software engineers hired through Andela**

Total annual values for Andela	Amount
Total software developers (global)	24,500,000
Acceptance rate	0.50%
Total onboarded	122,500
% placed successfully	96%
Total developers	117,600

Senior level	
% of senior level staff	50%
Addressable market: Senior Engineers/ Developers (population)	58,800
Average Salary: Senior Developer	\$70,099
Average commission % (Andela)	67%
Total revenue per senior developer	\$46,966
Total salary: Andela Senior Developer	\$23,133
Addressable market: Senior developers (USD)	2,761,620,204

Junior Level	
% of Junior level staff	50%
Addressable market: Junior Engineers/ Developers (population)	58,800
Average Salary: Junior Developer	\$26,331
Average commission % (Andela)	67%
Total revenue per senior developer	\$17,642
Total salary: Andela Senior developer	\$8,689
Addressable market: Senior developers (USD)	1,037,336,076
<b>Total addressable market (USD)</b>	<b>3,798,956,280</b>



# APPENDICES

## Appendix 2: Market Value Potential for HENRY

### Total Addressable Market

Our internal calculations for the market value of HENRY rely on data from the World Bank, UNESCO, Forbes, ICT EYE, and Reuters. Our team assumed “home” as a proxy for the population. We further assumed that every household with a computer had access to the internet, and that all unemployed youth would be interested in pursuing a career in web development. Finally, we assumed that all graduates seek out jobs, and that 90% are successful in their respective searches.

Table 5: Total Addressable Market Potential in Latin America for software engineers and web developers

Total Annual Market Value from HENRY		Unemployment rate, Latin America	
<b>Total population, Latin America &amp; Caribbean, Spanish-speaking</b>	<b>417,095,842<sup>155</sup></b>	Unemployment rate, Latin America	11% <sup>161</sup>
Adult population (18-64 yo)	263,275,066 <sup>156</sup>	Unemployed young adult population (18-35) who hold a high school diploma, own a computer and have an internet connection, “interested”	1,922,048
Young adult population (18-35)	100,828,749 <sup>157</sup>	<b>Total addressable population Latin America</b>	<b>1,922,048</b>
<b>Latin American average high school completion rate</b>	<b>48.72%<sup>158</sup></b>	Price per head (USD)	4,000 <sup>162</sup>
Young adult population (18-35), high school completed	49,123,766	Total addressable market (USD)	7,688,192,000
<b>Internet penetration, Latin America</b>	<b>66%<sup>159</sup></b>	Employed %	90%
Average % of homes with a computer	36% <sup>160</sup>	Total addressable market, considering % of successful employment (USD)	6,919,372,000
Average number of young adults (18-35) who hold a high school diploma and own a computer	17,633,470		



## APPENDICES

### Appendix 3: Market Value Potential for Noon Academy

#### Total Addressable Market

The values calculated in the tables below are estimates, based on our team's findings from an interview with a Noon employee. To arrive at the gross merchandise value, Noon estimates their addressable market based on the number of total school-age students who are currently enrolled, which is also defined as those who are participating in education. According to UNESCO, official school ages by level of education are divided into four categories: pre-primary (ages 4-5), primary (ages 6-11), secondary (ages 12-17) and tertiary (ages 18-22). For the purpose of estimating Noon's potential market, we excluded the pre-primary category, as Noon is not targeting this age segment. After calculating the total school-age population for two of Noon's primary monetization markets—Egypt and Saudi Arabia—using approximations provided by UNESCO of net enrollment rate of each of the four categories, we estimate total participating students in schools in Egypt and Saudi Arabia. As Noon's product is based on an online platform, internet access and connectivity are especially critical to their business model's success. For regions where internet access is minimal and where electronic

devices are not affordable, like Pakistan, Noon is partnering with various leading telecom firms to distribute devices. Moreover, the company is constantly updating its technology to enable students to download course content and watch it at their convenience—even in remote areas, where internet access is unreliable.<sup>163</sup> We calculated the Total Serviceable Market (TSM) by multiplying total enrolled students with the internet penetration rates of the respective regions. Noon deems 30% of its TSM 'active users' whom it believes it would be able to serve over the next few years, given capacity limitations and external market conditions. Based on past customer data, Noon estimates that only 30% of activated users stay on their platform for more than 30 minutes. Accounting for only users who stay on the platform for more than a given time which they deem as active users, Noon further applies a 15% conversion rate to this estimated value which it believes is the proportion of students whom it can convert into paid users. By multiplying by the average transaction value in each country, we estimated the gross merchandise value, which conveys Noon's revenue for each market. Noon currently follows a salary-based model whereby it considers GMV as its revenue and categorizes teachers' remuneration under cost of goods sold. This remuneration value differs across regions and is based on teachers' popularity and student rating, demand for the course, and class size. Moreover, teachers receive a fixed base salary, and also receive bonuses based on the number of students they bring onto the platform.

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**Table 6: Market Value Potential in Egypt**

<b>Total population (2020)</b>	102,300,000
<b>School-age population</b>	
Pre-primary school	5,240,840
Primary school	13,143,232
Secondary school	10,657,574
Tertiary school	8,475,963
<b>Total school-age population</b>	<b>37,517,609</b>

<b>Enrollment level in schools</b>	
Pre-primary level	26.00%
Primary level	96.90%
Secondary level	84.60%
Tertiary level	41.03%
<b>Enrolled in schools</b>	
Pre-primary school	1,362,618
Primary school	12,735,792
Secondary school	9,016,308
Tertiary school	3,477,403
<b>Total enrolled in schools</b>	<b>26,592,121</b>

Internet penetration rate	54.50%
Total serviceable market (TSM)	14,492,706
Active users (30% of TSM)	4,347,812
% of users who spend > 30 mins on platform	30%
Activated users	1,304,344
Conversion rate	15%
Paid users	195,652
Egypt average transaction size (USD)	6
<b>Gross merchandise value (USD)</b>	<b>1,173,909</b>



# APPENDICES

**Table 7: Market Value Potential in KSA**

<b>Total population (2020)</b>	34,269,000
<b>School-age population</b>	
Pre-primary school	1,826,263
Primary school	3,424,586
Secondary school	2,842,597
Tertiary school	2,268,948
<b>Total school-age population</b>	<b>10,362,394</b>

<b>Enrollment level in schools</b>	
Pre-primary level	20.50%
Primary level	92.90%
Secondary level	96.20%
Tertiary level	70.60%
<b>Enrolled in schools</b>	
Pre-primary school	374,384
Primary school	3,181,440
Secondary school	2,734,578
Tertiary school	1,601,877
<b>Total enrolled in schools</b>	<b>7,892,280</b>

Internet penetration rate	95.70%
Total serviceable market (TSM)	7,552,911.87
Active users (30% of TSM)	2,265,874
% of users who spend > 30 mins on platform	30%
Activated users	679,762
Conversion rate	15%
Paid users	101,964
KSA average transaction size (USD)	55
<b>Gross merchandise value (USD)</b>	<b>5,608,037</b>



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