Building Not-For-Profit, Low-Cost, Cloud Computing Institutes in Dharavi, Mumbai

Over 5 years, 560 women in Indian slums will be trained and employed as cloud engineers through self-sustainable facilities.

X The Knowledge Society

EXECUTIVE SUMMARY

PROBLEM

Lack of Guidance in Nontraditional Paths

- Only **26% of Indian women are employed** in the digital economy.[1]
- In addition to the obstacles to education that come with extreme poverty, **girls aren't given constant guidance to guarantee a better job outcome**.[2]

OPPORTUNITY

Niche Technical Skills Guarantee Jobs

- The program "Reaching for the Clouds" provides a small cohort of women with an **internationally recognized AWS certification in cloud computing.**
- Women will earn **$67 a month to study** [3], guided by on-the-ground instructors and experts online.

RESULTS

136,000 Women Empowered

- **In 3 months graduates are hired** under our firm to work on projects sourced from Silicon Valley blue-chips with a **new monthly income of $833** [3].
- There is a **net positive revenue of $261k in year 1** with $25k in seed funding [3].

1. Digital Divide Across Urban Slums, NCBI
2. Importance of mentoring, NCBI
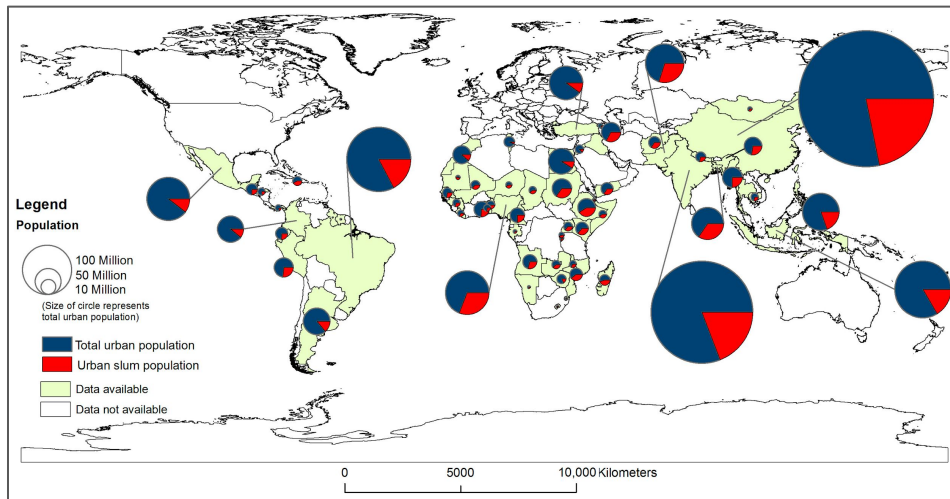3. Our Economic Forecast

Asia is one of the most progressive regions for women, yet stereotypes of what Indian women are like and look like persist [1].

TABLE OF CONTENTS

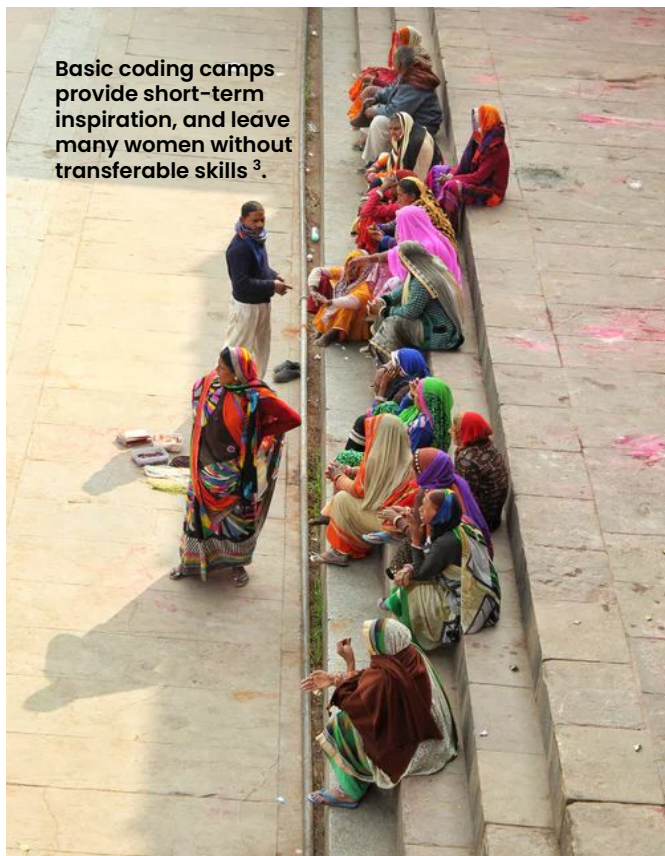# GLOBAL SLUMS ARE GROWING AND CONTAIN AN UNTAPPED TECH WORKFORCE

ALMOST EVERY GLOBAL URBAN POPULATION CONTAINS A SLUM [3]

SLUMS HAVE THE RESOURCES AND DEMAND, BUT NO TECHNICAL JOB OPPORTUNITIES.

- Globally, **internet penetration is at 59% and is projected to reach the 75%** threshold by 2025 [1].
- While the world's urban population is exponentially increasing, infrastructure in developing countries hasn't kept up, leaving people flooding to slums.
- **By 2030, 1 in 4 people will live in a slum [2].**
- Slum residents have internet access, **but do not have opportunities to learn valuable and up-to-date tech skills.**

1. The State of Broadband
2. In Depth Look at Urban Slums
3. Emerging Opportunities in Slums

MOST INITIATIVES FAIL BECAUSE THEY PRIORITIZE THE NUMBER OF STUDENTS OVER QUALITY OF EDUCATION

Basic coding camps provide short-term inspiration, and leave many women without transferable skills [3].

EVERY WOMAN FACES UNIQUE BARRIERS TO AN EDUCATION AND NEEDS PERSONALIZED SUPPORT

Personalized mentoring is a proven path to success in education, but it is not a common practice in low and middle-income countries [1].

THE RAPIDLY EVOLVING TECH ECONOMY REQUIRES CONSTANTLY UPDATED TECH SKILLS TO REMAIN EMPLOYED

NGOs fail to teach students how to be lifelong learners [1], and instead only provide **non-transferrable skills that leave women unprepared for technical jobs.**

INDUSTRY-STANDARD CODING BOOT CAMPS ARE NOT ADAPTED FOR LOW-INCOME WOMEN [3]

1. Importance of Mentoring
2. Lifelong Learning, University of Queensland
3. Coding Bootcamps in Mumbai

INDIA'S DHARAVI SLUM IS OUR IDEAL FLAGSHIP LOCATION TO EMPLOY DIGITAL SKILLS

1. LARGE POPULATION SIZE

- Over 1 million people in total. **36,000 women fit our criteria** [2].
- The population is large enough to meaningfully shift women's narratives in Dharavi.

2. HIGH LITERACY RATE

- With a **69% literacy rate** [3], it is one of the most educated slums in the world.
- This will allow for smoother communication with trainees and future foreign employers.

3. HIGH POVERTY RATE

- Characterized by poverty, deteriorated housing, and poor living conditions.
- A small initial financial input **($20k)** will **unlock access to a foreign source of high wages for thousands of women** [2].

4. CHEAP INFRASTRUCTURE

- **Rent is $0.04– $0.06 per square foot of space** [4] and its location in the heart of Mumbai offers **internet speeds up to 60 Mbps**. [5]
- Necessities are housed at an economical price.

Over 90 percent of women in India's labor force work in the informal economy [1].

1. Informal Economy, Geneva
2. Our Economic Forecast
3. Literacy Rate in Dharavi
4. Rent in Dharavi
5. Internet Speeds

This is life in Dharavi.[1]

DHARAVI IS A SYMBOL OF FAILED WELFARE POLICIES AND THE INFORMAL ECONOMY IN INDIA

The Indian Prime minister Modi's current programs to promote tech literacy and connectivity focus on rural areas rather than the urban poor [1].

94%

DHARAVI HAS THE HIGHEST PROPORTION OF FEMALE EMPLOYMENT IN THE INFORMAL ECONOMY

Unlike in other developing countries, the informal economy is responsible for the overwhelming **majority of India's annual economic growth** and as much as 90% of all employment.
In India, 94% of women are employed in the informal economy [2]

Half of Mumbai's slums are not recognized by the Indian government and are denied improvement schemes. **Our solution would not only help women with digital skills but change what Dharavi is known for.**

1. State of Dharavi, NY Times
2. Women Workers in India
3. Important Facts About Dharavi

TECHNICAL SKILL-BUILDING IS UNDERMINED BY LONG-STANDING NORMS

The largest obstacle to a young Indian woman's education is domestic responsibility [2].

After consulting with the founder of Slum Innovation Project [1] in Dharavi, a wildly successful program that trains young women to create mobile apps for social good, we identified three key reasons preventing girls in Dharavi from joining a career in the IT sector:

1

NEED FOR SHORT-TERM INCOME AND CARETAKING RESPONSIBILITY

- **33.4% of women in secondary school drop out in Mumbai.** Women above the age of 18 prioritize their families over a long-term education.

2

STRONG CULTURAL NORMS THAT BOLSTER GENDER INEQUALITY

- In India, the limited resources available tend to go to males over females. **Only 7% of working-aged women in India have jobs [3].**

3

LACK OF SUSTAINED EXPOSURE TO TECH CAREERS AND DEVICES

- 70% slum homes have TV sets, 10.4% own laptops [5].

1. Why Indian Girls Don't Get an Education
2. Slum Innovation Project
3. Indian Women Without Jobs, Economist
4. Dropout rates
5. Tech Literacy

WE CAN TRANSFORM THE LIVES OF 36,000 WOMEN AND 169,200 PEOPLE IN DHARAVI ALONE [1]

LARGEST SLUM IN THE WORLD

Dharavi is the largest slum in the world at 2.1 square kilometers and an estimated population of 1 million people [2] at the heart of Mumbai, an urban city.

INCREASED WAGES FOR WOMEN AFFECT THE ENTIRE FAMILY

We estimate **36,000 women in Dharavi are above the age of 18 and have basic technology and English skills for our program** [3]. The average family size in Mumbai is 4.7 people[4]. This means we have the potential to impact 169,200 in Dharavi alone.

1. Our Economic Forecast
2. Population of Dharavi
3. 46% female x 1,000,000 Dharavi population x 62% female literacy rate x 40% with English/tech skills x 32% Mumbai population age 18+
4. Family Size

OUR SOLUTION
"REACHING FOR THE CLOUDS"

A financially self-sustaining institute that trains and certifies Dharavi women in cloud computing skills over 10 weeks to **12x women's income** [1].

1. Our Economic Forecast

CLOUD COMPUTING SKILLS ARE EASY TO LEARN, IN HIGH DEMAND, AND PROVIDE ENTRY-LEVEL JOBS IN TECH

Cloud computing is the delivery of services--servers, storage, databases, software, analytics, etc--across the internet.

HIGH DEMAND FROM MOST TECH FIRMS

Cloud computing careers are extremely relevant given the widespread digitization of corporates around the world. **The average outsourcing portion of midsize companies went from 9.1% to 11.8% as of 2021** [2].

HIGH MARKET GROWTH RATE

The cloud computing market is **projected to grow from $264.8 billion in 2019 to $927.51 billion in 2027**, with a CAGR of 16.4% [1].

SECURE PATH TO ENTRY- LEVEL JOBS

The AWS Cloud Practitioner Certification we provide is the springboard to most cloud computing careers. This will allow students to gain an entry level job.

DYNAMIC, TRANSFERABLE SKILLS

Once our students understand the basics of cloud computing, they can **easily specialize in a specific field** with job experience, such as architects or developers [3].

1. PRNewsWire - Cloud Services Industry
2. Daxx - IT Outsourcing Trends in 2021
3. Specialization
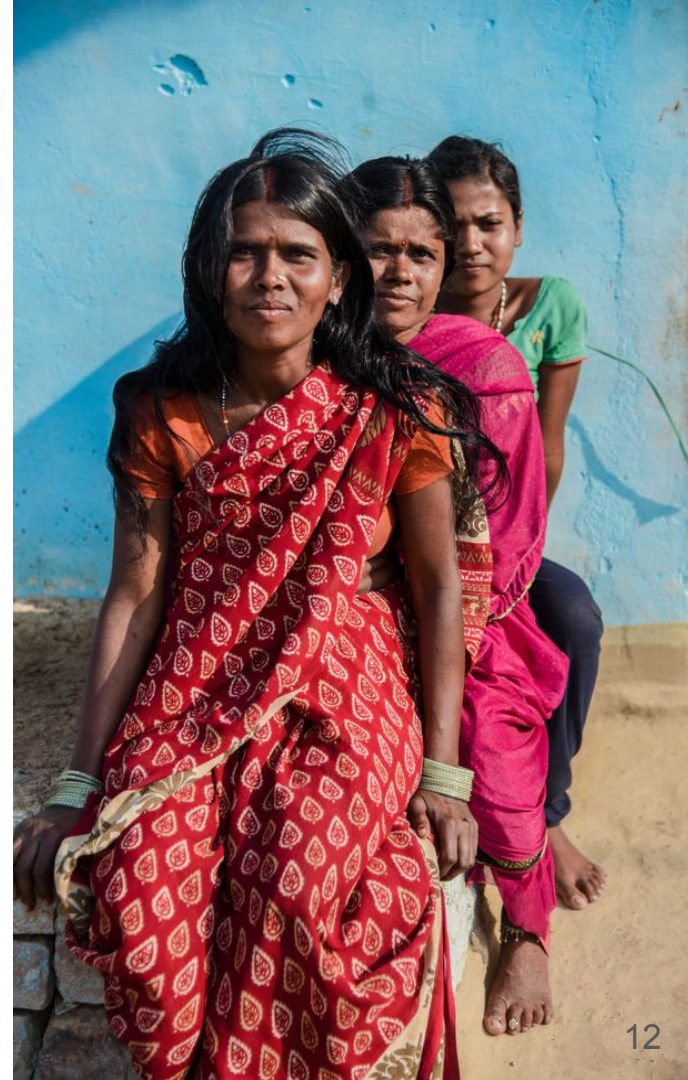
OUR 10 WEEK COURSE HAS 4 KEY COMPONENTS TO OPTIMIZE FOR REAL WORLD SUCCESS

1

AWS CLOUD COMPUTING CERTIFICATION

We will be training our students to gain an **AWS (Amazon Web Services) Cloud Practitioner Certification**, which covers the basic AWS cloud services needed to gain an entry level job. The course will cover topics like networking, security, intro to AWS, cloud computing, and more.

2

5 REAL-WORLD PROJECTS

Our course will also have a **project-based component** in which we will encourage students to build a portfolio. Students will develop five projects that solve real-world problems throughout the course, resulting in a strong profile for each student.

3

CAREER COUNSELING AND JOB PLACEMENT

We will also provide career guidance in building professional connections and a public presence. This leaves students with the option of working for a different company rather than getting absorbed into our organization.

4

PERSONALIZED GUIDANCE FROM INSTRUCTORS

Most importantly, we will emphasize personalized guidance throughout the course, ensuring that our students remain motivated and confident in their cloud computing abilities.

WE GIVE WOMEN A **+12X** INCREASE IN THEIR INCOME
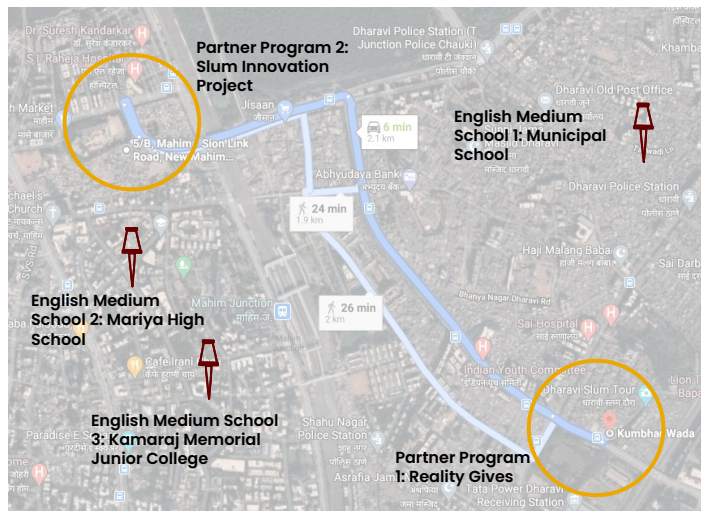

CURRENT VS. POST-COURSE INCOME

- The average yearly income in Dharavi is roughly 60,000 Rs ($800)[3].
- The average yearly (base) salary of an AWS Cloud Solutions Architect job in India is 693,000 Rs ($9,500)[4]

This is a **+11.8x increase in income**, which will not only improve the lives of our students, but also their families and community.

POTENTIAL EARNINGS IN THE FUTURE ARE ASTRONOMICAL

- The AWS course that we are utilizing in our program was the 8th highest paying tech certification in 2020, leading to average salaries of up to $131,465[2].
- his is 13.8x the expected earnings, paving the road to female independence in Dharavi, and helping to counter a patriarchal society's mindset.

14

ASPECTS TO EXECUTION

Partner Program 2: Slum Innovation Project

English Medium School 1: Municipal School

English Medium School 2: Mariya High School

English Medium School 3: Kamaraj Memorial Junior College

Partner Program 1: Reality Gives

OUR LOCATION HEADQUARTERS MUST BE SITUATED WITHIN 0.5 KM OF OUR PARTNER ORGANIZATIONS

Location 1: Reality Group Reception Centre, Shop No 17, Shahid Bhagat Singh Nagar, Opposite Eleven Heights Building, Kumbharwada Dharavi, Mumbai 400017
Location 2: 5/B, Mahim – Sion Link Road, Nayanagar, Near Raheja Hospital, Mahim (West) 400016

1. RECRUITING QUALIFIED INSTRUCTORS

A partnership with Google's outreach program will connect our nonprofit with their employees who volunteer their own time or who provide pro bono services through the **Google.org Fellowship program for up to six months full time**.

- This framework has been used by Google in the past and is a reliable way to secure instructors [1].
- Amazon's AWS course offers certified instructors online

2. SCOUTING A LOCATION

Since Dharavi is a collection of informal houses, indoor spaces to rent are not advertised online. An important step is to visit Dharavi and get a physical facility ready for use.

- **A strong physical connection with our partner organizations** (Reality Gives and Slum Innovation Project pictured on the right) will establish trust in the community and offer convenience.
- **Rent and renovate a 30-45 m² facility** [2] for 10 students, 3 instructors, and 2 administrators at a time. There will be extra room for alumni and visitors included.

3. INSTRUCTOR TRAINING AND COMMUNITY OUTREACH

A comprehensive understanding of Dharavi and the unique obstacles to education women face can only be attained after **instructors spend a month in our location beforehand.**

- Instructors will shadow partner NGOs and form relationships with local families and potential students.
- **Outreach programs at 3 local English medium schools** will give future recruits a taste of what the program encompasses.
- *Refer to slide 29 for a detailed timeline and list of expenses.*

15

Using Sama Inc. as a Blueprint

- **Sama[1]** works by funneling people from East Africa into a 10-week bootcamp to give them Data Generation and API integration skills before providing these skills as services to Silicon Valley Bluechips.

- Over the last 13 years, Sama has helped over **50,000 people** break out of poverty through their own **10 week program** while working with institutions like **Google**, **Microsoft**, **Getty Images**, and **NASA**.

Sama Works because Of its Commitment to Quality Work Product

- Acknowledging that most 10-week programs don't have as much of a social impact, we reached out to the program director Carolyne Komen who told us that the biggest reason for Sama's unprecedented success is because of their **focus on quality deliverables for the blue chips**.

- We are confident that as long as we make sure we hold ourselves to a high standard of product, we can build up our clientele to a similar level.

RAISING AWARENESS THROUGH PARTNERSHIPS, PUBLIC SESSIONS, AND POSTERS

BREAKING INTO DHARAVI

Our ideal participants are women at least 18 years of age who have basic English speaking skills, basic tech exposure, live in Dharavi, and express interest and commitment in our program. To find these women and make them aware of this opportunity, we will:

- **Reach out to senior students in English medium schools -** Examples include UM Thevar English High School and Maria High School.
- **Funnel students engaged in surrounding NGOs that teach women STEM skills** - One such partnership could be with Dharavi Diaries, whose founder, Nawneet Ranjan, has already agreed to a collaboration with us. Communicating with other organizations will also help us gain valuable guidance on how to maximize our impact in students' lives
- **Public information sessions** - Alongside flyers/posters, we will hold public events communicating the purpose and details of our program.

RECRUITING IDEAL PARTICIPANTS BY SCREENING FOR BASIC TECH + ENGLISH SKILLS AND THEIR COMMITMENT

OUR IDEAL PARTICIPANTS

Our ideal participants will demonstrate an interest in investing in their future. They will likely already have full time jobs working on the street or in a shop to support themselves or their family like in the video to the right. To still provide them an income, **we will replace their responsibilities by paying them $67/month (the average income in Dharavi - slide 28) while they are learning in our program.** This allows them to escape any financial responsibility and still have the opportunity to learn.

SCREENING PROCESS

In order to be admitted to the program, applicants must have **basic tech and english skills, be at least 18 years of age, live in Dharavi, and express interest + commitment** (conveyed through an interview). From there, a selected quantity of applicants will have an opportunity to try cloud-computing mini-courses in our facility to see if it is for them. If there experience was encouraging, they have the opportunity to commit to join the institute.

Examples of our ideal participants.

18

Resident of Dharavi Slum, Mumbai
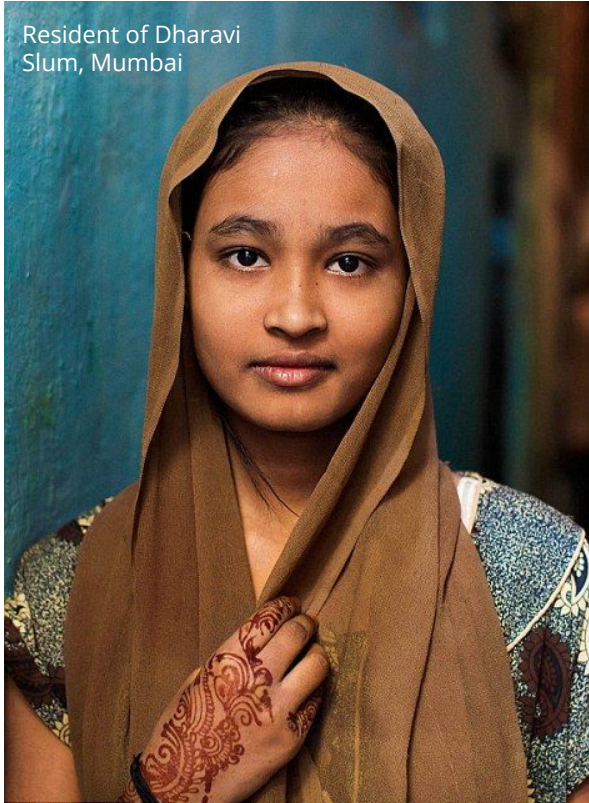
USING COMMUNITY INTEGRATION & AN ALUMNI NETWORK TO ENSURE A SEAMLESS TRANSITION FOR STUDENTS

The #1 Problem is a Lack of Community and Familial Support

According to the Annual Review of Root Causes of Gender Inequality 2015[1] Report by The Department of Economics, Northwestern University, and our own conversations with women on the ground in India, **we anticipate that a lack of community and familial support will be the largest difficulty we have to face in sourcing candidates for the program**. We plan to respond in two ways:

01. COMMUNITY INTEGRATION

By carefully crafting partnerships with NGOs and English medium schools in the area, we can effectively build a pipeline of highly qualified candidates for our program. This also gives us an opportunity to gain valuable guidance from organizations who have existed in the area for much longer.

02. ALUMNI NETWORK

Once the program has been off the ground for 1-2 years, we will have established a strong network of women from Dharavi who can act as mentors and ambassadors to raise awareness and build trust between us and the community. This will include reaching out to families and showing them a value in a program like this so that girls have as much support as possible.

SOURCING MENTORS THROUGH GOOGLE.ORG FELLOWSHIP PROGRAM

Partner with Google's Outreach Program to Source Instructors

- A partnership with Google's outreach program will connect our nonprofit with their employees who volunteer their own time or who provide pro bono services through the Google.org Fellowship program[1] for up to six months full time.
- This framework has been used by Google in the past and is a reliable way to secure instructors[2]. We plan to use AWS online certification as our curriculum, which is a highly sought after certification with live online instruction and assistance available for free. [2]

TIMELINE

1. **PRE-LAUNCH, MONTH 0**

- Spreading awareness around the program through flyers and public information sessions in local communities.
- Getting the physical facility ready for use.
- Setting up partnerships with local schools and NGOs such as Dharavi Diaries (institute that teaches girls STEM skills) and Reality Gives (institute that teaches children English), who can act as a direct pipeline for ideal participants in our program.
- Participants will go through a simple screening process to make sure they meet our selection criteria before joining the program.

2. **PILOT PROGRAM, MONTHS 1-3**

- **10 participants** are admitted into the program, where we pay them to attend an extremely personalized 10 week bootcamp
- We use Amazon's AWS Cloud Computing course with on-the-ground instructors available from Google and virtual instructors available through the Amazon course.
- Upon completion, they will have the necessary skills to get a job in the real world and be ready for us to hire immediately.

21

3. PILOT PROGRAM EMPLOYED, MONTHS 4-6

- After the first round of participants has completed the 10-week bootcamp, we hire them under our own company or help them find jobs elsewhere.
- For those that will continue working for us, we contract work from Silicon Valley bluechips who need cloud computing services.
- This establishes a stream of income from tech companies which creates enough cash flow to pay our women a liveable wage and support future students at the institute, thus making it entirely self-sufficient after the first year.

SCALE & SUCCESS, MONTHS 7+

- After the initial pilot program, we will admit increasing round of 10 participants every 6 months.
- Our estimates show that after 4 months we will have broken even, meaning the entire program runs entirely by itself.
- What's amazing is that the longer we wait, the higher our % ROI since income rises faster than costs.
- Women now have a direct pipeline to go from any ordinary citizen to a cloud computing expert - so long as they work with our partner organizations.
- By year 4 we expect to able to open 10 more schools either in Dharavi or in slums around the world.

22

SOURCING QUALITY MENTORS FOR LONG TERM SUPPORT, PERSONALIZED HELP, AND TECHNICAL TRAINING

TECHNICAL TRAINING

- Mentors will know the field inside and out - enabling them to assist on technical problems students may be having difficulty with
- Mentors will also be able to give real world guidance on discomfort students might face and adapting to a more formal job
- Because mentors will be there for the first 3 months of a woman's employment.

PERSONALIZE HELP

- Each young woman's unique circumstances are the biggest obstacles to her career success.
- In addition to financial support, instructors work with a woman's family to show tangible outcomes.
- Girls' mothers will be reminded of how their past decisions may have been different if they were given these tools.

LONG-TERM SUPPORT

- First generation learners whose parents work as taxi drivers or house cleaners aren't given the support or mindset to aim for higher-paying jobs.
- Women need a constant source of mentorship to find footing in a new career path in technology [1].
- Our instructors and program will support women through every stage; Google's partnership rotates on 6 month cycles - the same amount of time it takes to run one round of the program.

A DAY IN THE LIFE OF THE BOOTCAMP

HOW IT WORKS

- Our **10 week cycle** will have **paid, 9am - 5pm classes** in our physical facility, effectively replacing the responsibility of a full time job.
- We will teach our students cloud computing concepts (see slide 12 for more info).
- All computer and internet infrastructure will be available in our facility *only*.
- We hope to gain access to refurbished computer in collaboration with colleges, organizations, or companies but we have accounted for purchasing computers and building infrastructure at $500 per computer[1] and $75/month in Internet with free installation[2].

Our curriculum in the program will include:

- Initial **practice with basic/intermediate computer skills** (using a browser, storing files, how the internet works, etc)
- Completion of the **Amazon AWS Cloud Practitioner course**
- Building a **portfolio** of projects which can be used for future career opportunities. Many of these projects will also be **team-based**, allowing students to gain valuable collaborative skills
- Personalized **career and networking guidance** (including building a LinkedIn, portfolio, and résumé)
- Lectures and discussions will be taught mainly in **English** to make sure our women are getting as much exposure to the language as possible. This will minimize any sort of friction when working transitioning to work with western companies who use English to communicate.

WE GIVE WOMEN THE OPPORTUNITY TO WORK FOR US OR HELP THEM FIND ANOTHER JOB

Upon completion of our 10 week program, participants will have **two options** for next steps.

WORK FOR US

Here women can be employed at slightly above the industry rate to work for us contracting work from Silicon Valley. We expect we will be roughly 12x-ing their income over a period of 10 weeks, while providing mentorship and opening them up to various communities around the world. Around 83% of enterprises in 2020 integrated with the cloud, and the cloud services market will be valued at around $331.3 billion by 2022[1]. These statistics and projections support the success of our organization, providing a stable wage to our students.

FIND A JOB ELSEWHERE

Using our career services form mentors at Google and AWS Course career services, we help women get jobs at startups outside of India. If they chose to find a job elsewhere, they will be making a commitment to pay our institute back within a few years. Cloud computing jobs are plentiful. India is predicted to have around a million cloud computing jobs by 2022[2]. Further, occupations using the cloud are expected to grow by 14.7% over the next decade[3].

1. Gartner
2. Analytics Insight
3. Insights

5-YEAR OVERVIEW

Y1. ESTABLISHING THE INSTITUTE

- The program will **enroll 10 students**, 6 months at a time, twice a year to ensure a personalized approach and high-quality instruction.
- **Candidates will be screened for interest and experience** before enrolling.
- The program will be advertised at local schools and businesses while setting up partnerships with local organizations.
- The facility will be set up with **high-speed internet connection**, and other necessary infrastructure.

Y3. REEVALUATION AND CONTINUED MENTORSHIP + EXPANDING ACROSS MUMBAI

- **In order to create a more comprehensive program, changes will be made to overcome past hurdles** like talking to families and childcare responsibilities will be incorporated.
- Program graduates will continue to receive logistical and financial help as deemed necessary.
- 3 new centers will open.

Y5. NAILING OUR SERVICES

- With 10 centers in 5 years, it's important to make sure we aren't skipping out on quality because of the quantity.
- Diving into how we can make this institute as impactful as it can be, integrating into communities seamlessly, and making sure that our quality of service is well above par and without sacrificing quality for quantity.
- By now, we expect to have passed at least 560 women through our program.

Y2. OPENING NEW CENTERS IN DHARAVI

- With the experience gained in Dharavi, **new instructors will be trained with each new location's characteristics in mind**.
- In addition to access to devices and a stipend, **students will be given financial help to balance their other responsibilities** and prevent future drop-outs.
- 1 new center will open

Y4. EXPANSION ACROSS INDIA

- Because our income rises faster than our expenses, it means our organization grows in higher quantities the longer we wait. At this point we expect a
- By the fourth year we expect to be able to open **5 new centers** across the state of Maharashtra and the Indian Subcontinent.
- These centers will have the capital to be more modern, and allow us to set up knowing the hurdles we will face further down the line.

26

THE MECHANICS OF SILICON VALLEY BLUECHIP OUTSOURCING

WE MAKE OURSELVES INDEPENDENT BY OFFERING CLOUD COMPUTING SERVICES TO COMPANIES IN RETURN FOR INCOME

Under our solution, **after the first round** of the program, we hire the women who graduated our program to work as Cloud Engineers, and start **contracting work** from Silicon Valley blue chips to utilize the skills taught to these women. This means we aren't just teaching women tech skills, but giving them an **immediate application of skills** they are learning. When a company needs cloud computing services, they will reach out and contract *Reach for the Clouds* with work. One of the main reasons we chose Cloud Computing skill is because there is such a large demand in the marketplace for them. Because we are performing services for other companies, the institute **brings in revenue** from blue chips **by itself.** In effect, we only need to pay for the first year's expenses. **By then, we expect the entire operation pays for itself , and has a net positive output of $261k[3]**, allowing it to scale naturally.

WE WILL HELP OUR CLIENTS SAVE MONEY[2]

- Reduces our clients' risks of seeings spikes in billing from an improperly configured cloud infrastructure
- Saves money on training internal employees
- Helps transition companies' capital costs to cloud-based operational costs.

Revenue Generated by Employees

How much silicon valley blue chips are charged for our services (per employee)

Revenue generated per month by 10 employees

Average Rate of a Cloud Engineer in India[1]	$20/hr
40 hours a week and 50 weeks in a year (two weeks holiday)	$20 * 40 * 50 = **$40,000/yr**
Income generated by 10 employees/year	$40,000/yr * 10 = **$400,000/yr**
Income generated by 10 employees/month	$400,000 / 12 = **$33,330/month**

WOMEN WILL MAKE **12X** THEIR INCOME UPON GRADUATION

Participants in Training

Average Salary of Someone Living in Dharavi (how much we will replace)[2]	$800/yr
Compensation per participant/month	800 / 12 = **$67/month**
Number of Participants Per Round in the Program	10
Total Cost for Participants in Training/month	67 * 10 = **$670/month**

How much women get paid through our program

How much we pay the total number of women in compensation

Employees upon Graduation

Average Salary of a Cloud Engineer in India[1]	$9,500/yr
Paying employees slightly more per year to create a sense of loyalty, trust, and build a sense of community.	+$500/yr
Compensation per participant/month	$10,000 / 12 = **$833/month**
Number of Participants Per Round Graduating to Employee	10
Cost to Pay Employees (Program Graduates)/Month	$833 * 10 = **$8330/month**

28

Breaking Even in With One Cohort of 10 People and Rapid Growth over Year 1

Takeaway: **Within four months, the revenue earned by our organization will exceed the cost of running the program, rendering it self sufficient for future months.**

|	Set-Up Month	Pilot Training Program			Pilot Program Employed			Second Training Program + Pilot Program Employed			Both Programs Employed		
Month	0	1	2	3	4	5	6	7	8	9	10	11	12
Revenue	$0	$0	$0	$0	$33,330	$33,330	$33,330	$33,330	$33,330	$33,330	$66,630	$66,630	$66,630
Rent	$108	$108	$108	$108	$108	$108	$108	$108	$108	$108	$108	$108	$108
Infrastructure (electricity, Wifi, laptops)	$75	$5,075	$75	$75	$75	$75	$75	$5,150	$150	$150	$150	$150	$150
Employees	$0	$0	$0	$0	$8,330	$8,330	$8,330	$8,330	$8,330	$8,330	$16,660	$16,660	$16,660
Participants	$0	$670	$670	$670	$0	$0	$0	$670	$670	$670	$0	$0	$0
Miscellaneous (masks, posters, etc.)	$850	$650	$150	$150	$150	$150	$150	$650	$150	$150	$150	$150	$150
Capital Cushion	$0	$0	$0	$0	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Total expenses	$1,033	$6,503	$1,003	$1,003	$10,663	$10,663	$10,663	$16,908	$11,408	$11,408	$19,068	$19,068	$19,068
Net Output (Inclusive of previous months)	-$1,033	-$7,536	-$8,539	-$9,542	$13,125	$35,792	$58,459	$74,881	$96,803	$118,725	$166,287	$213,849	$261,411

Break Even

Note: We are assuming an ideal growth trajectory in which our organization gains steady clients and that all students work for us upon completion of the program.

Breaking Down Expense Calculations

Our Economic Forecast
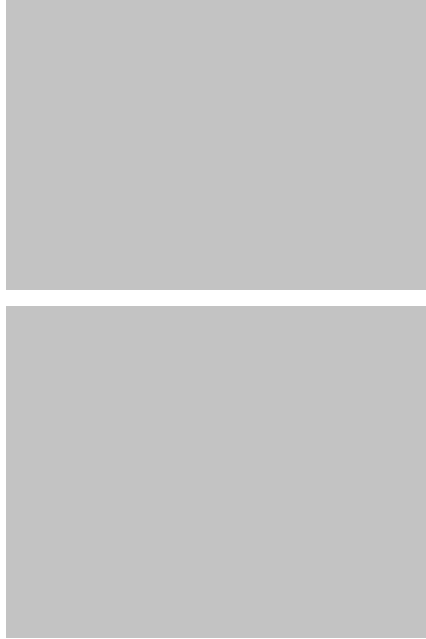
SCALABILITY

Because we have a net positive output, we are capable of rapidly scaling over time. Scaling not only means opening up the program to more people in Dharavi, but also increasing our services and even improving the physical facility. With the extra capital **we can add features like day-care and hot food** whereas normally, women would have to take care of children and pack their own food. This also means we can open up more institutes in other slums across **Mumbai**, and even expand to other major cities like the outskirts of **Delhi**, **Hyderabad**, **Kolkata**, **Karnataka**, **and across India.**

EXPANDING INTERNATIONALLY

Our solution is extremely versatile and can drive an impact in other locations as well. We've identified 5 other cities internationally that would be ideal for expansion once the institute of Dharavi proves as a successful proof of continent.

- Favelas of Rio, Brazil
- Dakar, Senegal
- Hanoi, Vietnam
- Dhaka, Bangladesh
- Abuja, Nigeria

SOLUTION VALIDATION FROM A PROFESSIONAL; OPTIMIZE FOR IMPACT NOT BIG NUMBERS

Nawneet Ranjan on our Idea:
"it is very much relevant and we need many more centers like this"

Takeaway: Optimize for Impact not Big Numbers

Nawneet Ranjan is the **founder** of the **Slum and Rural Innovation Project**, which teaches girls in Dharavi STEM concepts and problem solving skills. Mr. Ranjan also created a film called Dharavi Diary, documenting a group of girls learning to develop mobile applications for the community. We had a call with him to gain his perspective about the demand, feasibility, and implementation of our project. Here are our big takeaways:

- He emphasized that **in order to drive true impact, we need to focus on the quality of the program rather than impressive statistics like the quantity of students taught.**
- Personalized on the ground engagement is vital to sustain womens' progress.
    - It is easy to get discouraged with difficult material and a lack of support/assistance from family members.
- To tackle this, **we won't only teach them technical material, but also mindsets to build confidence** and serve them for the rest of their lives.

VALIDATION FROM PROFESSIONALS WHO WORK ON THE GROUND IN DHARAVI

Charlotte is currently a director at Reality Gives who works on-the-ground in Dharavi with students of the program. We asked her what she thought about our idea. Here's what she said:

"Something like this would be really quite amazing. People would be keen enough to do it. We could get the support quite readily.There would certainly be interest. Opportunities like this don't come around often. An opportunity like this would be amazing."

- Charlotte Watkins, Fundraising and Marketing Director at Reality Gives

DHARAVI WOMEN WANT TO ENROLL IN OUR PROGRAM

Meet Karthika!

Karthika is an Alumni of the Reality Gives English and Technology Program. Because of Reality Gives, she has completed an undergraduate degree and is now on her way to getting her masters degree while being a computer teacher at RG. We asked her if she would consider joining our program. Here's what she said:

"*Absolutely, I will love to do this! I will do everything I can to join. Other girls will definitely be interested. Girls who go through the program will be 100% happy. This will give them freedom. It will give them a safe space*"

- Karthika, Alumni and Teacher at Reality Gives

STRENGTHS VS ASSUMPTIONS

- **Highly Versatile + Scalable**

  Our solution can be applied to a wide range of geographies because it has a low number of requirements to function,. This adaptability makes it easy to scale, especially among urban slums in India.

- **Revenue grows faster than costs**

  Our solution is structured such that income rises faster than costs[1] letting us scale fast and making the program naturally good at expanding + inclined to help as many people as possible.

- **Low Risk + High Reward**

  Because of our solutions ability to sustain itself, we only need the 4 months initial capital before it begins the program lives, grow, and funds itself.

- **Contingent on Contracting Work**

  In order for our solution to sustain itself, we need to be able to convince companies to contract us as reliable and trustworthy clients. Starting off, we imagine this will be difficult because we don't have a reputation in the market.

- **Requires dedicated instructors**

  The role of a mentor involves living in slum conditions, and providing personalized assistance to multiple students, helping them build a career out of a fast paced course, which we imagine can be rather demanding.

- **Lack of data specific to Dharavi**

  Because there is a lack of data regarding the slum of Dharavi specifically, we apply Mumbai's demographic statistics to the population of Dharavi to calculate certain numbers like the number of women who are above the age of 18.

OUR PROGRAM IS UNIQUE FOR ITS FOCUS ON LONG TERM IMPACT

"If you give a woman a fish, you feed her for a day. If you teach a woman to fish, you feed her for a lifetime"

According to a report by Unite for Sight, the three largest reasons NGOs are ineffective are unsustainability, lack of competency, and inconsistency. Our focus on the long term success is what sets us apart from most other social organizations. We accomplish this goal through quality training, personalized assistance, and a financially sustainable model.

STEPS TO SUCCESS

Financial Sustainability

The structure of this organization allows it to fund itself after its inception, allowing it to impact Dharavi long after five years of UN engagement.

The profits made by the program will contribute to expansion over time, exponentially increasing impact.

Personalized Assistance

In a society where women aren't normally given the same opportunities as men, sustained engagement and encouragement is vital to ensure the success of our students. Our small class sizes will help women get the one-on-one attention they need as they learn new technical skills.

We take women from the start to the finish. Our students will come into the program with extremely basic tech skills, and we will consistently assist students through every small step in the learning and career finding process.

Quality Training

Our instructors from the Google Fellowship program are well experienced in the workplace - not only providing technical skills, but also valuable lessons in networking and collaboration.

In addition to qualified instructors, we are also following a highly credible and respected AWS course. There are numerous resources available online to supplement our course as well.

The project-based aspect of our class combined with the English lectures and career guidance will make our students qualified to work in any professional setting if they choose. The skills our students will gain through training will open new professional doors.

DRIVING AN IMPROVED QUALITY OF LIFE, MORE WOMEN IN TECH, AND FIGHTING AGAINST A PATRIARCHAL SOCIETY.

Through our sustained guidance and mentorship, we will drive a deep impact in the lives of our students, tackling overarching societal issues as a result.

Improved Quality of Life

The salaries we provide will impact not only our students, but also their families. If we put 560 women through our program in the first five year and each woman had an average of 4.7 family members they are directly supporting, this fundamentally modernizes and uplifts the lives of 2632 people.

Increased Amount of Women in Tech

A direct consequence of our organization will be more women in tech. The global IT sector is largely male dominated; this inequality is amplified in Dharavi. Our solution directly challenges this inequality by publicly demonstrating that women can be successful in the tech field and advocating for girls in STEM.

Empowering Women and Fighting against a Patriarchal Society

Dharavi is an area imbued by patriarchal values, often preventing women from gaining opportunities and fulfilling their potential. Our program will empower women to surpass the obstacles placed by gender and socioeconomic inequality. Beyond the individual students we impact, we are also driving a resounding message that women in Dharavi have the strength to succeed.

FREQUENTLY ASKED QUESTIONS

How can we ensure that Reaching for the Clouds will gain a sufficient amount of clients to make an income?

In addition to the overall benefits our clients will find in outsourcing their cloud management to us (see slide 29), we will gain clients because of the increasing government and corporate policies being put in place to stimulate the Impact Sourcing industry (according to a Rockefeller Foundation report[1]). The Impact sourcing industry incorporates all organizations that mainly hire underprivileged workers to provide services to other companies. This industry was estimated to be worth around $55.4 billion in 2020, consisting of roughly 17% of the Business Process Outsourcing market. Further, a study by the Everest Group[2] states that Impact Sourcing companies provide quality and costs at parity with traditional BPO companies.

Is it possible for a women with minimal tech exposure to learn advanced cloud computing concepts?

Yes. As proven by Sama (see slide 18), participants lacking initial IT skills are able to grasp industry level concepts in a period as short as ten weeks. In order to achieve such growth, we are integrating projects and in depth lectures that teach our students from the ground up.

1. Rockefeller Foundation report
2. Everest Group

OUR TEAM

To our friends at the United Nations,

We are immensely grateful for the opportunity to take on this an endeavor. Having now gone one for 1.5 months, the skills we have learned are invaluable. Thank you.
We hope you can share our vision for the future of women in Dharavi, Mumbai and look forward at the potential of working with you.

Best,
Tasha, Aashvi, Shivam, Satvik