**What is the geographical reach of your project?\*** Global One Country One Region

*A global reach is one in which those that directly participate and benefit from your programs are in multiple regions. A regional reach involves work across several countries that are part of the same single global region. A national reach that is specific to a country will focus work in one country only.*

One country.

**Project Summary:\*  
  
*Please make sure to include the purpose and goal(s) of your proposed project***

​​We propose a novel solution to address connectivity in rural Maharashtra, India, affecting the delivery of public health programs for thousands of individuals residing in remote villages in the interior regions. We use portable internet devices combined with software tools deployed via a custom Android application improve the ability to collect data and monitor ongoing public health programs in rural Maharashtra, India, for programs run by a nonprofit, spanning 100 villages over 16 blocks in the Jalgaon District.

Aadhar Sanstha is helping pregnant women in the tribal areas of Maharashtra and Madhya Pradesh border by working in collaboration with the government ANM nurses and Asha workers (local non-profit) who are locals of the villages and sending their own field workers on a daily and monthly basis to each and every pregnant woman's house inside the villages to keep track of their well-being and guide them through their pregnancy process by advising them what food they should eat, what medication they should take in order to keep their health well. However, these workers spend 25+ mins taking over 17 pages of handwritten notes per house, per worker, in order to collect data, because they don’t have digital means to do it, and the remote areas inhabited by indigenous local tribes have no internet connectivity. This poses a number of issues in documenting and insights delivery.

Our work aims to develop digital infrastructure and tools to automate data collection to minimize the manual effort required for data entry making their data more accessible to all NGO members and eliminating the 100+ hours each week their tech team spends manually entering data into excel sheets due to a lack of connectivity. It also improves the time-to-action on public health interventions through monitoring and alerts that ​preempt maternal health issues. The offline suite of tools deployed with a set of portable internet devices will accomplish the following goals:

* Track and store their data on local Android smartphones, uploading to the cloud, and optimizing storage where network coverage is available, triggering instantaneous data analysis.
* Deliver a mobile app that contains all the forms they’re filling manually with the future ability to voice-automate data collection.
* Deliver forms in both Marathi and English to make it easier for the workers to understand and increase compliance in data collection.

All the forms in each app will have the option of storing the submitted data offline and sending the data to their excel sheet as soon as the user arrives in an area with network coverage for the portable internet devices, as there is no network connection at all in the villages, where these workers will fill the data. Our team has already been onsite and engaged with the nonprofit workers and local population so we are well aware of their current challenges with regards to connectivity. We are reducing the time-to-action on the insights from worker data collection from weeks to hours!

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**Please describe your plan to connect the selected community to the Internet and how it will ensure financial sustainability beyond the grant period.\***

Aadhar Sanstha is an NGO dedicated to serving tribal villages situated along the Maharashtra and Madhya Pradesh border, where internet connectivity is virtually nonexistent. These remote areas harbor a significant population in need, particularly concerning access to medical assistance, notably for pregnant women who frequently require urgent care during deliveries. The absence of reliable network access poses a serious risk to the well-being of women in these communities, jeopardizing their safety and health during childbirth due to inadequate access to transportation and essential medical information for healthcare providers.Following our comprehensive field assessment, we identified the pressing need for improved connectivity as a vital solution to address these challenges effectively. Establishing reliable internet infrastructure would not only facilitate timely communication and coordination with healthcare professionals but also empower villagers to access vital resources and support networks, ensuring better outcomes during critical situations.The proposed infrastructure initiative aims to bridge this digital divide, even beyond the grant period, enabling seamless connectivity that connects villagers with essential services and enables them to stay in touch with their families and friends, thereby fostering stronger community resilience and well-being.

**Describe the current level of engagement of the community benefitting from this project and the role it will play in the project's development.\***

Our team visited the villages that Aadhar Sanstha has been assisting for quite some time. Currently they are mainly focused on helping the pregnant women in the villages as it is common there to have a child at the age of 17 or 18. Since the age of pregnancies is so young there and the literacy rate is very low, extra care needs to be taken in order to keep the mother and the child safe before and after birth. That is what Aadhar Sanstha mainly focuses on for the community in these areas by visiting these women regularly, keeping track of their pregnancy, their well-being, their child’s well-being, arranging vaccination drives, awareness events, etc. Right now, they are doing all this offline as there is absolutely no network connectivity of any kind in these villages. “Connecting the Unconnected” will help them a long way to manage the data they collect from these women in order to keep track of their health. The portable devices we intend to install will be useful in the longer run as people will be able to connect with the appropriate authorities during emergencies like doctors & nurses, field workers (people from the NGO), ASHA workers, etc. They might also be able to find transport for themselves during critical times. It will also make the life of the people from the NGO easier as internet connectivity would mean easy access to all the health data of these women which will be very helpful during critical times like deliveries.

**Please describe the current average cost of connectivity (how much 1 GB costs or average cost per speed by the local service provider/mobile operator) and average speed of connectivity in the community where the proposed project will be implemented.\***

​Currently, 1 GB of data costs about 3 rupees assuming a user agrees to an annual plan of INR 3,699 with Reliance Jio that has the most competitive plans in the Indian market. The lowest cost plans in the area are INR 149 (exclusive of taxes) per month that allows users 1.5GB of data per day.

**Describe what equipment you intend to use to deploy your community network.\***

**The equipment we propose entails providing portable devices equipped with internet connectivity to members of the community. These devices function much like smartphones, offering features such as calling, texting, and access to various external applications. Their primary function is to streamline data collection processes within the community, automating the gathering of vital information. While there isn't a long-term solution to internet connectivity by naively scaling these devices, the infrastructure we develop reduces time-to-action on key maternal and child health issues by multiple days! Our deliverable includes monitoring infrastructure with built-in alerts, reducing the manual effort required for data entry and enhancing accessibility for all NGO members. Moreover, these devices serve as a crucial link between community members and essential authorities, including NGO field workers, ANM nurses, ASHA workers, doctors, and families. This connectivity is particularly critical during childbirth, emergencies, or instances of illness, ensuring swift access to necessary support and services when needed most.**

.Indicators and Measurements Section

**What specific indicators will you track and measure along the way?**

**We will survey for individual differences pre and post treatment using the following indicators:**

1. **No of households connected to the internet**
2. **No. of households with a smartphone**
3. **No. of target users served by each field worker in a day**
4. **Volume of smartphone usage during the periods of field work**
5. **Volume of data collected per user through digital means**
6. **Time spent on daily survey activities**
7. **Time spent on daily patient care activities at centers**
8. **Number of patient visits and health issues uncovered during pregnancy**
9. **Female Pregnancies and Mortality rates**

**Please select at least 1 indicator (maximum of 3) and provide your target number and data collection method for each.**

**Select Indicator 1:\*** Number of households connected to the Internet

**Indicator 1 - Target:\*** Distributing the portable devices to all the households of the villages

**Indicator 1 - Data Collection Method:\* Survey based data, App usage data  
  
*How and at which frequency will you collect data for this indicator (please describe which data collection method(s) you will use: e.g. focus group, interview, survey, participant list, form, observation, etc and ensure that this is in line with what you've put in your proposal)***

Our approach involves integrating data collection applications into portable devices, featuring specifically designed forms for gathering essential information. These apps will not only streamline the data collection process but also facilitate monitoring of their usage. Additionally, we plan to develop specialized survey apps for field workers to gather information on various aspects, including internet usage and household details, such as connectivity status. These surveys will also track the volume of smartphone usage during fieldwork on an hourly basis, number of target users served by field workers per day, time spent on daily survey activities, time spent on daily patient care and activities and quantify the data collected through digital devices. This transition from physical forms to digital surveys will enhance efficiency and accuracy, enabling the NGO to comprehensively monitor and manage households across the villages. We will supplement our survey data with a small set of focus group interviews subject to field worker availability, in order to validate our assumptions and ensure we have a robust causal estimate of the outcomes..

Select Indicator 2: (Optional) Number of individuals or groups in newly connected communities using the internet Other

Indicator 2 - Target Keeping track of the individual users that we have connected to the community.

Indicator 2 - Data Collection Method  
  
*How and at which frequency will you collect data for this indicator (please describe which data collection method(s) you will use: e.g. focus group, interview, survey, participant list, form, observation, etc and ensure that this is in line with what you've put in your proposal)*

Individuals that interact with the field workers will be able to access the internet through the portable devices they carry along. This is a temporary, but important availability of information for them on a periodic basis. However, in addition to weekly visits by NGO field workers to the villages, we plan to provide some community centers with some of the same devices to enable local internet usage.Through existing training programs to enter data into forms, these internet-connected systems will enable us to continuously track various metrics such as the number of pregnant women, mortality rates, and specific data related to pregnancies, including gestational weeks and the health status of both mother and child post-birth. The aim is that through this, the NGO will maintain a comprehensive database of all users. This systematic approach ensures meticulous tracking of each individual's activity, facilitating personalized assistance for those encountering difficulties or challenges with the infrastructure.

Select Indicator 3: (Optional) Number of households connected to the Internet Decrease in average cost of connectivity per person per month due to project Increase in average connectivity speed due to project Number of individuals or groups in newly connected communities using the internet Other

With 12 internet connectivity devices, and each worker visiting at least 8 households per day, conservatively, we anticipate connecting at least 100 households to the internet through their program of delivering public health services.​ Our approach involves integrating data collection applications into portable devices, featuring specifically designed forms for gathering essential information. These apps will not only streamline the data collection process but also facilitate monitoring of their usage. Additionally, we plan to develop specialized survey apps for field workers to gather information on various aspects, including internet usage and household details, such as connectivity status. These surveys will also track the volume of smartphone usage during fieldwork, number of target users served by field workers, time spent on daily survey activities, time spent on daily patient care and activities and quantify the data collected through digital means. This transition from offline forms to digital surveys will enhance efficiency and accuracy, enabling the NGO to comprehensively monitor and manage households across multiple villages.

Indicator 3 - Target:

Indicator 3 - Data Collection Method  
  
*How and at which frequency will you collect data for this indicator (please describe which data collection method(s) you will use: e.g. focus group, interview, survey, participant list, form, observation, etc and ensure that this is in line with what you've put in your proposal)*

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### Funding Information

**Do you have other funds secured or requested for this project?\*** Yes No

**Are you currently receiving or have you in the past received any other funding from the** [**Internet Society**](https://www.internetsociety.org/) **or** [**Internet Society Foundation?**](https://www.isocfoundation.org/)**\*** Yes No

### Survey Questions

*The following two questions will not influence your application approval or rejection.*

* **Have you read the following Community Network resources?\***[**Community Network Do-It-Yourself Toolkit**](https://www.internetsociety.org/resources/community-network-diy-toolkit/)
* [**Community Network Readiness Assessment Handbook**](https://www.internetsociety.org/resources/doc/2022/community-network-readiness-assessment-handbook)

Awards for the SimPPL project (https://simppl.org) fiscally sponsored by One Fact Foundation (OFF) that is one of One Fact Foundation's flagship projects that it fiscally sponsors; Dr. Swapneel Mehta (Research Lead at OFF also founded SimPPL) and Dr. Jaan Altosaar is CEO of OFF.

MIT Delta V - co-lead Dr. Swapneel Mehta, upto USD 20,000 (2024)

MIT PKG IDEAS Innovation Challenge - co-lead Dr. Swapneel Mehta (2024)

Goethe Institut AI2Amplify Award - co-lead Dr. Swapneel Mehta

Google Research exploreCSR Award - co-PI Dr. Swapneel Mehta - USD 32,000 (2023)

Patient Rights Advocate Inc. Award - PI Dr. Jaan Altosaar USD 100,000 (2023)

Mozilla / USAID Responsible Computing Grant India - USD 25,000 (2024)

NYC Media Lab AI and Local News Challenge - USD 7500 (2023)

Belfer Fellowship to Dr. Swapneel Mehta - USD 40,000

<https://cloud.google.com/blog/topics/public-sector/new-google-research-innovators-tackle-wide-range-challenges>

https://www.goethe.de/prj/aia/en/program/wt/aig.html

https://misinfocon.com/introducing-arbiter-auditing-the-spread-of-news-in-online-information-ecosystems-5ba39af5789c

https://www.wikicred.org (search for arbiter)

<https://engineering.nyu.edu/news/nyc-media-lab-announces-inaugural-cohort-ai-local-news-challenge>

<https://www.adl.org/belfer-fellows>

<https://solve.mit.edu/challenges/pkg-ideas-2024/solutions> (Sakhi)