भारतीय
जन स्वास्थ्य
प्रतिष्ठान

**PUBLIC
HEALTH
FOUNDATION
of INDIA**

Public Health Foundation of India (PHFI)
Knowledge | Action | Impact | Equity

Working Towards A Healthier India

Affordable Health Technologies Developed by PHFI: An Overview

MITH.AI
Mass Modular Integrated Transformational Health with Artificial Intelligence

Innovative C3 (Comprehensive, Convergent, Customised) Primary Health Care @ Home Platform

contact: s.munuswamy@phfi.org

Contents

PATENT PENDING No 339685 — 1 Hand Held Device

PATENT PENDING No 339689 339691 339692 — Box Inside

PATENT PENDING No 339686 339687 — 8 Temp Controlled Boxes

PATENT PENDING No 339671 339672 339680

PATENT PENDING No 339681 339682 339683 — 36 Samples / Box

PATENT PENDING No 339684 — 500-800 Vaccine Dose/ Box

1000-1500 Med Dose/ Box

Inputs (140)
Disease (75)
Disability (15)
Nutrition (10)
WASH (15)
Socio De Eco (25)

Outputs (850^)
Risk Profile (^)
Social Benefits (150)
Health Promotion (500)
Prophylactic Medicines (30)
First Line Treatment (100)

Telemedicine (^)
Facility Referral (^)
Livelihood Guidance (100)
Requirement Prediction (^)
Service Optimization (^)

Outcomes
@ Home Comprehensive Real Time Universal Primary Health Care: For normal people: Screening, grading, providing health promotion information; For high risk or at disease people: surveillance screening, conducting point of need diagnostics tests, collecting samples for further diagnostics' tests, providing prophylactic or first level of treatment, follow up care post treatment, connecting to facilities for secondary/ tertiary care.

Specific Conditions/ micro services Include: Maternal Health: Pregnancy Risk Assessment; Pregnancy Counselling; Antenatal Care; Post Natal Care; Iron and Folic Acid Supplementation; Child Health: Newborn care; Infant care; Under 5 years care (IMCI); Vitamin Supplementation; Immunization/ vaccination services; Family Planning and Contraception guidance; First Aid, Injury and Wound Management; Adolescent Health Care — Anemia Screening, Fe Supplementation; Hygiene Counselling; School Health care; Deworming Seasonal; Communicable disease management: vector borne conditions; tuberculosis; neglected tropical diseases — Screening, sample collection, management; Non-Communicable disease management; Mental Health Management; ENT and Dental management; Healthy lifestyle promotion; Oral Hygiene screening and promotion; Syndromic (IDSP) surveillance; Promotion of medicinal herbs for health life.
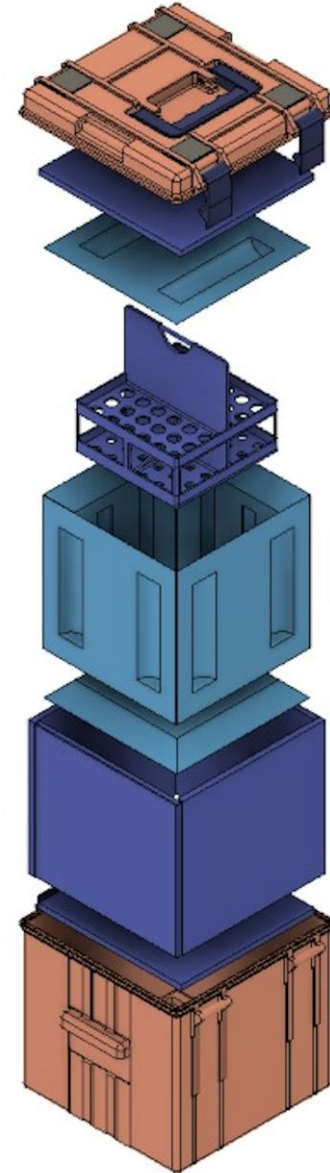
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Mass Modular Integrated Transformational Health with Artificial Intelligence

hi rapid lab

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Not to Scale

2

Box Inside & Outside

Temperature controlled storage box (for vaccines etc.) for maintaining 2-8degrees

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Innovative Complete Primary Health Care @ Home Platform/ Package

contact: s.munuswamy@phfi.org

Step 1: Health Facility to nearest road head on pick up based drone port

Step 2: Last mile drone delivery to remote hard to reach village - payload recieved by health worker

VLOS/ EVLOS
with 10-15 Kg
Multi -Payload
Multi - Temperature
Controlled Boxes

Sky Bridge: Last mile delivery of medicines and vaccines

DREAM - H

Samples 36

Medicines 1250   Vaccines 850

PATENT
No
339673
339674
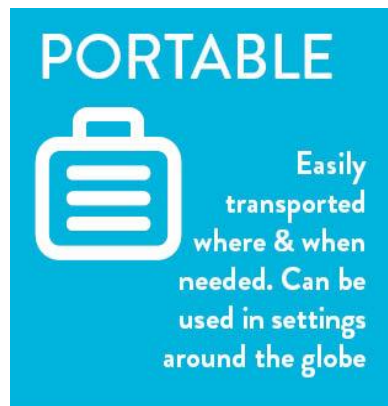339675
PENDING

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SKY BRIDGE

Point of Care Technology: Wi-Fi -enabled integrated Primary healthcare delivery device that works with an android device

Swasthya Sahayak

- Wi-Fi -enabled integrated Primary healthcare delivery device that works with an android device

- Equipped with various applications to provide all the required services and multiple diagnostic tests

- Intended for use by the frontline health workers in resource limited settings to facilitate their job without additionally burdening them

- Conforms to NDHB guidelines

PORTABLE — Easily transported where & when needed. Can be used in settings around the globe

EASY — Easy-to-use devices permit more staff to perform diagnostic testing

FAST — Shorter time to test results helps expedite clinical decision-making

ACCURATE — Lab-quality tests; no service or special environmentals are required

Tests Available on Swasthya Sahayak (SS)

- Blood Pressure
- Body Temperature
- Pulse oximetry
- Urine Protein
- Urine Sugar
- Blood Glucose
- Hemoglobin

- Malaria
- Pregnancy
- Hepatitis B
- Typhoid
- Dengue
- Syphilis
- HIV

How does SS address an unmet need?

- Mere availability of health facilities may not necessarily convert to improved utilization rates
- Poor availability & access leads to high OOP and ultimately poor outcomes
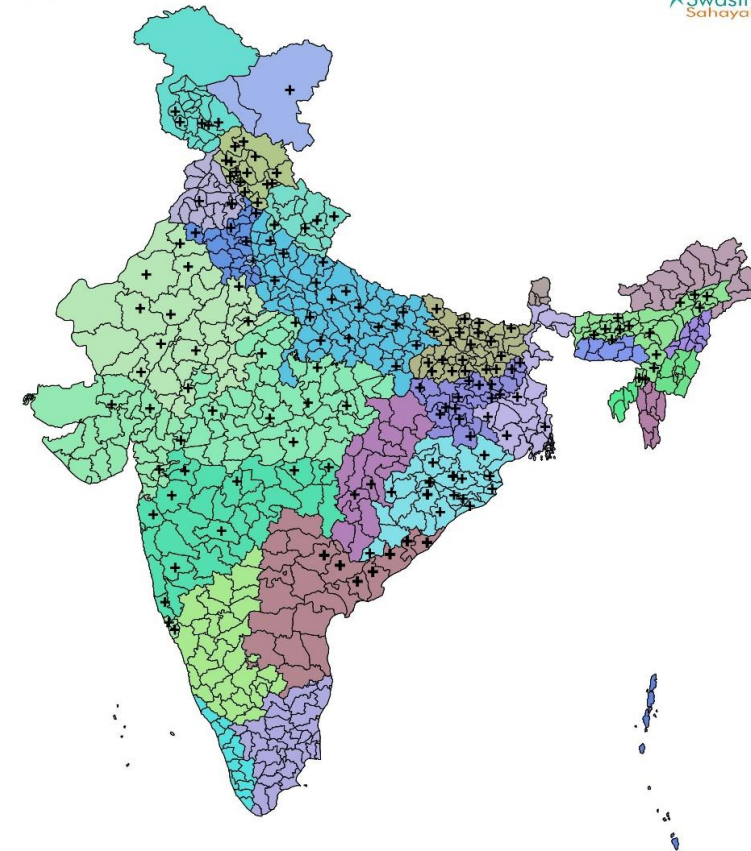
Swasthya Sahayak Pro

- ECG (12 lead)
- HbA1c
- Lipid Profile
- Kidney Function Test
- Urine creatinine, micro albumin
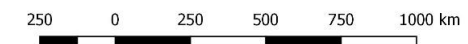- In addition to all tests in SS Basic

Specifically designed to focus on next level of care
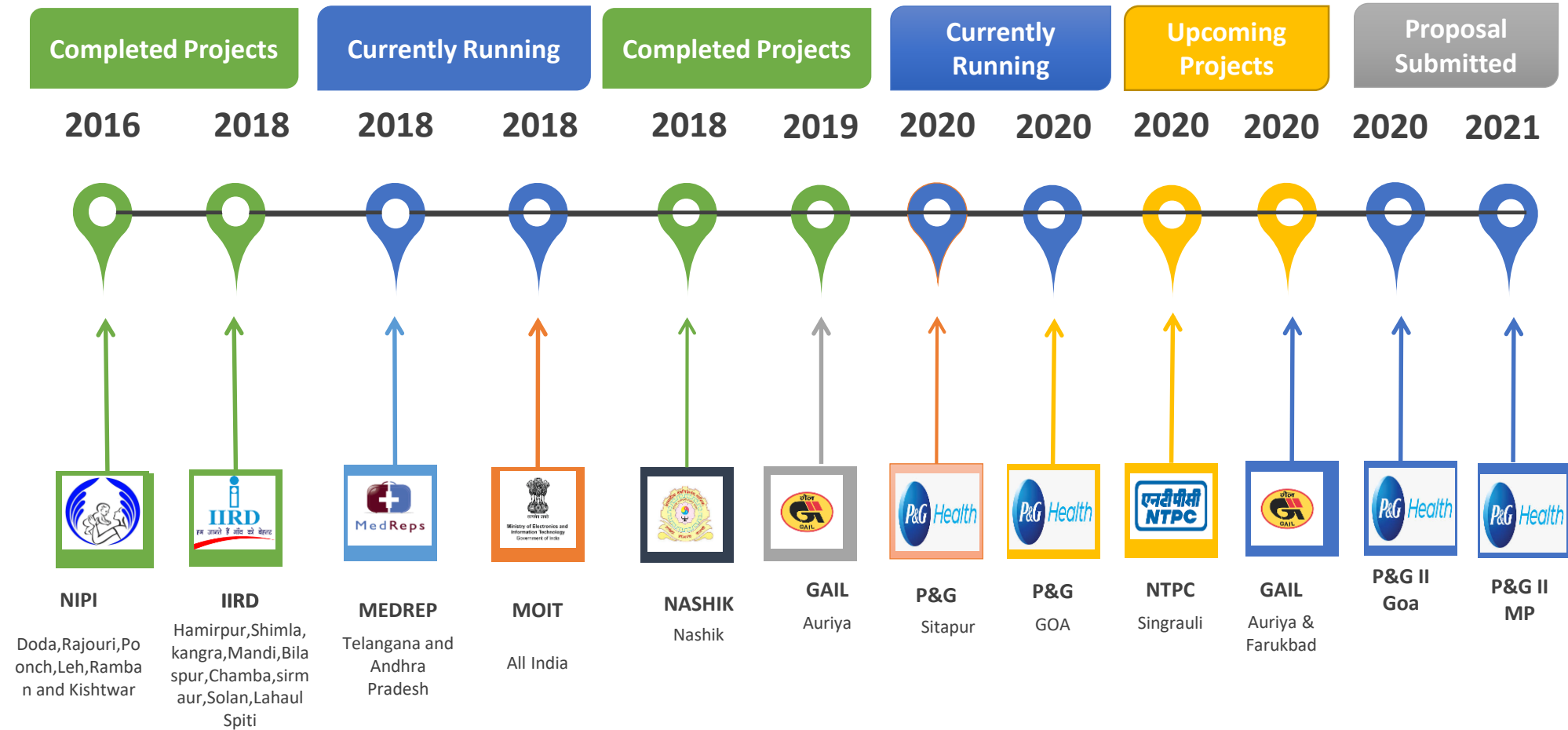
Swasthya Sahayak Deployments

- Impacted, more than 6500 villages

- Provided service to more than 10,00,000 beneficiaries

- More than 1100 happy users

- Conducted 1,50,000 tests

# Project name	State	Total No of user	Total Village coverage	Total no of Diagnostics	Total no of patients registers
Total		1135	6734	76065	170640

250   0   250   500   750   1000 km

Swashya Sahayak Journey-2014-2021

Completed Projects		Currently Running		Completed Projects		Currently Running		Upcoming Projects		Proposal Submitted	
2016	2018	2018	2018	2018	2019	2020	2020	2020	2020	2020	2021

NIPI
Doda,Rajouri,Po onch,Leh,Ramba n and Kishtwar

IIRD
Hamirpur,Shimla, kangra,Mandi,Bila spur,Chamba,sirm aur,Solan,Lahaul Spiti

MEDREP
Telangana and Andhra Pradesh

MOIT
All India

NASHIK
Nashik

GAIL
Auriya

P&G
Sitapur

P&G
GOA

NTPC
Singrauli

GAIL
Auriya & Farukbad

P&G II Goa

P&G II MP

Swashya Sahayak Training

Accolades

Our Solution being presented to **Sh. Narendra Modi,** Hon. Prime Minister of India at Global Call to Action Meet, 2015

Our Project being launched by Hon Union Minister for Women & Child Development **Ms. Smriti Irani** & Hon CM **Dr. Pramod Sawant** in Goa Feb 2020

Digisahayam – An Assisted Telemedicine Solution

Digisahayam

Digisahayam is an initiative that aims to improve access to quality healthcare through bridge personnel trained in providing assisted tele-medicine solutions

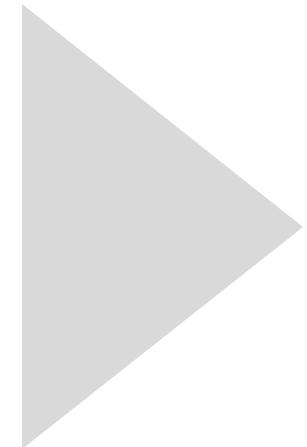| Barriers in telemedicine today	Our Solution
Literacy, language or technological barriers among patients	Trained healthcare workers connect, convey findings, facilitate doctor-patient interactions and also prevent wasteful visits
Lack of good clinical history, physical examination findings and laboratory parameters for physicians	Trained healthcare workers collect history, perform physical examination and carry out lab investigations before initiating tele-consultation, thereby saving time and improving quality of care
Multiple innovations –no inter-operable system single platform	The PHFI telemedicine platform embeds electronic health records, PoC diagnostics, in-built e-CDSS & numerous state-of-the-art digital health technologies

Upscaling skills of health workers in providing assisted telemedicine

Improving quality of care through point of care diagnostics and electronic clinical decision support systems

Real time monitoring and feedback mechanisms that assure quality standards

1 **2** **3** **4** **5**

Improving access to primary and tertiary care through trained personnel

Reducing the need of follow up visits to health facilities

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Digital Health Technologies

M-Power
Electronic Clinical Decision Support System

Eko Steth
Digital Stethoscope

Swasthya Sahayak
Point-of-Care Diagnostic Device
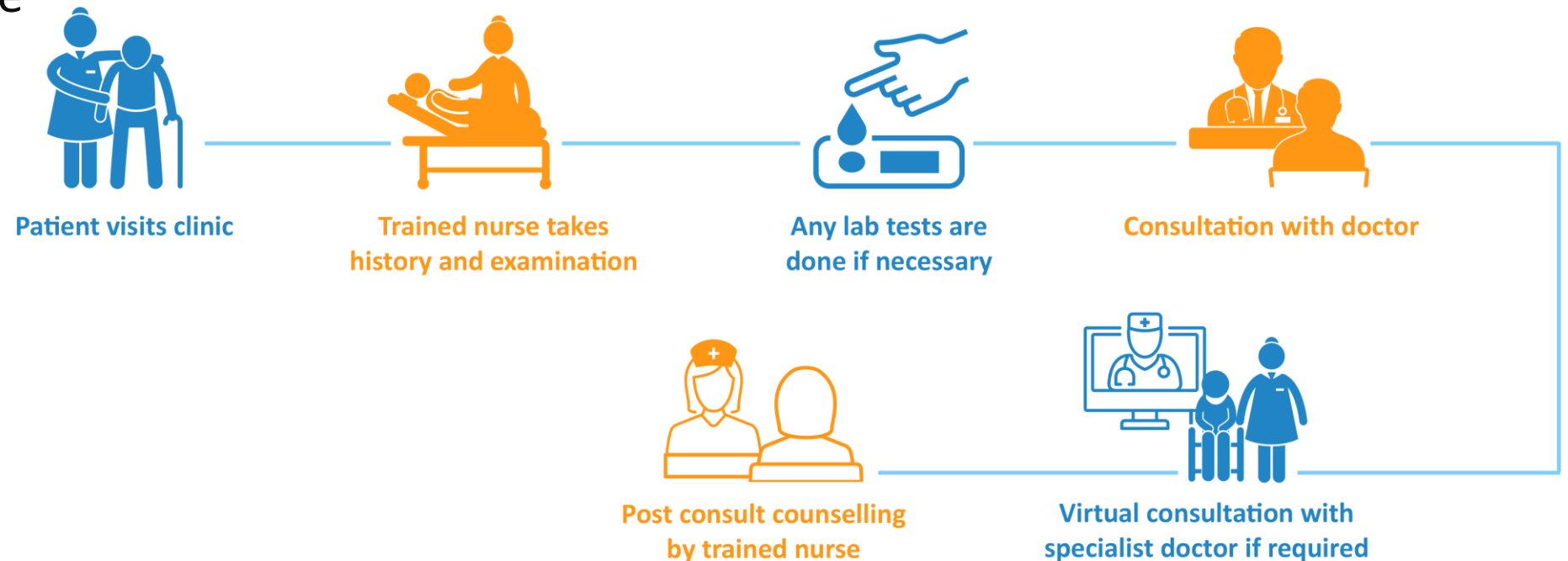
Minnray
Paired remotely controlled HD camera

KardioScreen
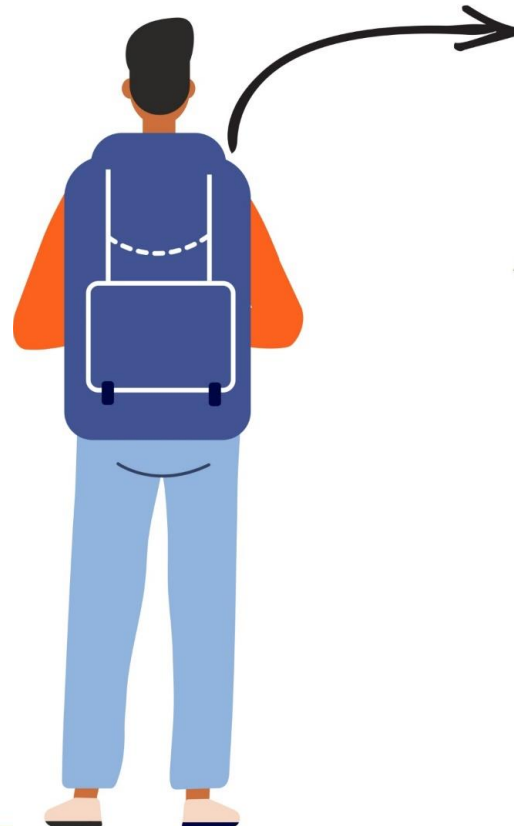FDA approved Cloud-based 6-12 lead portable ECG

Designated Telemedicine Centre (TMC)

- The TMC is run by a trained nurse and lab-technician that provide assisted tele-medicine solutions under the supervision of a project quality assurance officer

- General physician, specialist as well as super-specialist tele-consultations are made available

Patient visits clinic

Trained nurse takes history and examination

Any lab tests are done if necessary

Consultation with doctor

Post consult counselling by trained nurse

Virtual consultation with specialist doctor if required

On-foot Telemedicine Assistance

Telemedicine Assistant – for small populations with less than 1000 or 1/1000 population

Backpack will contain:

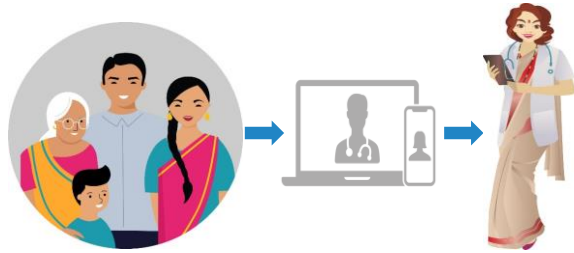Weighing machine

Tablet

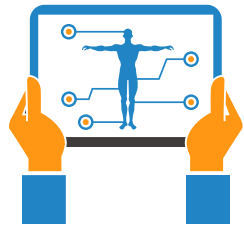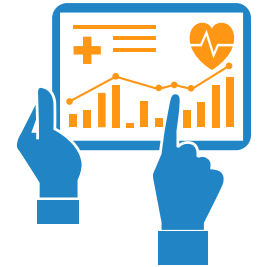Swasthya Sahayak

Measuring Tape

Digital Stethoscope

Kardio Screen

Potential Impact

Bridge the **gaps** between **community, technology and digital healthcare** through **trained personnel**

Continuity of **care** and **longitudinal health data** through use of **inbuilt electronic health records**

Create an **innovative model** for **health service delivery** that enhances **sustainability, accessibility** & **affordability of care**

Reduce **indirect healthcare costs** related to **travel** and **loss of daily wages**

Thank You