# LivingGoods

# The Community Health Innovation Network
## Expanding the pipeline of groundbreaking ideas to transform community health

## About the Innovation Network

**The Bill & Melinda Gates Foundation** is supporting Living Goods to lead the Community Health Innovations Network (Innovation Network). Its goal is to promote creative solutions and expand the pipeline of groundbreaking ideas that can enable community health care to more seamlessly integrate with health facilities, while extending high-quality diagnostic technologies to effectively reach clients at the community level. Through this 36-month-long initiative (September 2017 to September 2020), the Innovation Network will identify, inform, and test high-potential technologies that are more efficient and practical to explore through a community health setting than in a lab. It is exploring a wide range of initiatives that integrate traditional public health interventions with technology, including diagnostic software and hardware.

### Our Partners

Led by Living Goods, the Innovation Network is an ambitious collaboration with both **government partners** and other leading organizations, including **Medic Mobile**, the longstanding mobile tech partner that co-developed the **Smart Health App** used by Community Health Workers in our networks. Medic Mobile is providing technical expertise and staff resources through the Innovation Network to adapt the Smart Health platform to capture data around these new initiatives and providing support to enable other tech partners to plug into the open-source Smart Health technology platform.

## Current Innovations and Focus

The goals of the Innovation Network are to leverage emerging technologies such as **non-invasive diagnostics**, **smartphone-enabled testing**, and **biometrics**, which demonstrate immense potential to transform healthcare delivery in the real world, in real time.

Established as a new unit within Living Goods, the network is testing innovations through our Bomachoge Chache sub-county branch office, located in Kisii, Kenya. It is being driven by a group of about **170 Community Health Workers** and the nearly **140,000 clients** they serve—to run a number of different test initiatives. These include:

**Designing a Closed Loop System for Referrals from Community to Facility.** We are finding ways to improve client experience and care by 'closing the loop' from community referral to facility-based care, including community-level follow up; tracking referral completion rates; and facilitating flexible referrals for ICCM, pregnancies and newborns.
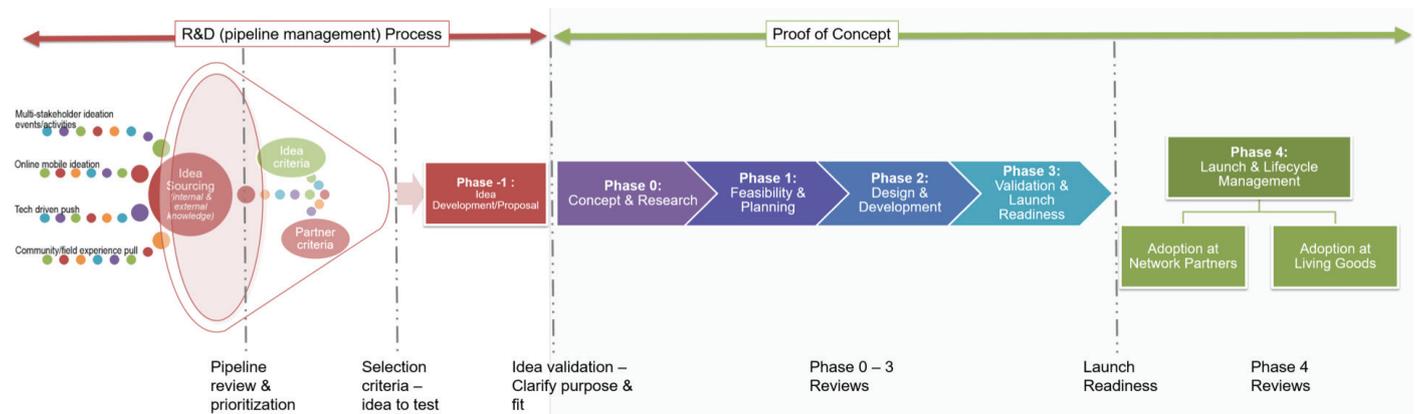
**Developing a Closed Loop for HIV Self-Testing:** CHWs in Kenya currently provide counselling on healthy living for people with HIV, identify and refer at-risk pregnancies and newborns, provide counselling on HIV prevention, and distribute condoms. We will design, build out, and test workflows that will also facilitate HIV self-testing, referrals, notifications, and ongoing care at the community level.

**Predictive Algorithms:** We will leverage the large amount of data that CHWs generate through our Smart Health App to create algorithms that will enable us to better prioritize and focus a CHW's time towards the households most in-need. We are working to leverage our existing GPS data to track CHW work patterns and use that data to optimize coverage, ensuring that households are being visited regularly, so no gaps in coverage exist.

**Growth Monitoring:** We will research, evaluate, and help inform new technologies that will enable smartphone-based tools for easy growth monitoring by CHWs. This will automatically generate CHW tasks for monitoring the child's growth and generate referral recommendations for at-risk cases.

# Innovation and Testing Process Overview



## Our Vision

By the end of the three-year investment, the Innovation Network will have taken a colossal stride towards our end vision of spreading impactful, sustainable community health across the developing world. We will have robustly evaluated six transformative initiatives that will:

- **Have proven that cutting-edge tech and diagnostics tools can work to improve health outcomes at the community level** if designed and tested with real-world challenges, contexts, data and testing subjects' needs in mind. We are ensuring that these tools are developed with the end user and context in mind, so that they're well-positioned to meet community needs and can be quickly scaled globally to support patients at the community level.

- **Create the first real-world, community-based testing ground** where a rich ecosystem of partners, tech companies, product developers, and government stakeholders can advance their learning and move their technologies and products forward by plugging into and leveraging the robust network, expertise, tools, and resources we've established.

- **Leverage technology to establish the vital link between CHWs and health facilities**—ensuring an effective, well-coordinated continuum of care for patients that allows for the layering on of cutting-edge diagnostic technologies and emerging innovations, including HIV self-testing.

- **Uniquely shape the future of community health by leveraging the latest developments in technology** diagnostics and hardware to increase the accuracy, efficiency, and impact of community health workers (CHWs)—dramatically strengthening and expanding their ability to deliver critical health care, more efficiently diagnose and refer patients to level 1+ health facilities, and play a role in managing chronic illness in coordination with primary care providers.

- **Surface key learnings and create a framework for similar networks** in other regions by documenting what it takes to conduct rapid diagnostic research and development (R&D) at the community level, and to establish streamlined pathways to scale for promising innovations.

- **Widely share the findings of the R&D initiatives** to ensure that successful innovations are used to strengthen other CHW networks throughout the developing world.

## Our Call to Action

We are looking to create the first real-world, community-based testing ground where a rich ecosystem of partners, tech companies, product developers, and government stakeholders can advance their learning and move their technologies and products forward by plugging into and leveraging the robust network, expertise, tools, and resources we've established. Contact us for more information.

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