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Digital Made Easy

Moonshots4dev

AI for Climate Resilience in Rural Areas

Voice Companion for farmers

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Opportunity

Osi has a basic, non-internet phone and a desire to connect

We've created the Viamo Platform for people like Osi who are early in their digital journey. This year, more than 30 million people will use our Viamo Platform for free, the way we use Google.

Daily News

Teen health dramas

Find an HIV test location

Buy fertilizer & Learn new farming practices

Access to micro financial services

Book a prenatal check

Find a new cassava buyer

Cyclone alerts

Government services

Discover new babycare products

Respond to surveys

Callers hear "Push 1 for Health, Push 2 for Agriculture, Push 3 for Education..." and select the messages they want to listen to. We also connect them to our partners to access goods and services. All this works through a simple voice call. No internet, no smartphone needed.

Global Engagement

In 2023

390 Million

Calls

24 Million

proactive users

814 Million

messages consumed

2.1 Billion

Airtime Minutes
(or >$200M donated by telcos)

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Problem

Globally, 2.7 billion people are digitally disconnected, about one third of the world's population, just like Osi

Osi is not online. She is isolated, lacking access to on-demand information, products and services. And development sector partners have difficulty engaging with her.

When her livestock falls ill, Osi can't "pull" information out of her radio or TV (should she possess them). Similarly, neither can:

Agriculture extension agents who needs help advising a farmer

Shopkeepers who need a small loan

Farmers who need to know when it will rain

Osi

Idea and Value Proposition

We empower Osi on Climate Sustainable Agriculture through Generative AI. Without a smartphone. Without Internet.

Our safe **Generative AI-powered Voice Companion** for basic, non-internet phones moves beyond the limitations of pre-recorded messages.

Osi can actively engage, ask open questions and receive personalized, real-time responses in a simple voice call — a first! We use Automatic Speech Recognition and Natural Language Processing to conversationalize it with Osi.

We're creating an interactive learning environment. We nudge Osi to ask follow-up questions and dive deeper into what she needs. This dynamic approach enables interactions in local languages, delivering information that adapts to each user's unique needs and context.

Our focus for M4D is on climate-sustainable agriculture, aiming to launch a domain-specific, safe Generative AI agent. This tool will offer personalized advice to support informed decision-making, optimize resource use, improve disease prevention, and boost crop yields, thereby securing rural livelihoods against climate adversities.

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The solution

Viamo Platform's Reach: Leveraging an established platform with **12 million subscribers** globally, ensuring the free and widespread availability of GenAI. Users only need the mobile device they have in their pocket and call 3-2-1.

Initial pilot in Zambia: Demonstrated robust user engagement and satisfaction, validating the concept and readiness for scaling. The calls on our Platform increased by **76%**.

Voice-Enabled Accessibility: Our Voice Companion caters to users with limited tech literacy, turning voice into a bridge over the digital divide, enhancing inclusivity. In Zambia, **90%** of pilot users asked at least one follow-up question within 2 days, indicating comprehension, ease of use and growing trust.

Comprehensive Information: The users receive contextualized responses to their questions in real-time in their local languages. In Zambia, more than **half of the questions** were related to social topics, including agriculture or climate.

Local Context Adaptation: Our Voice Companion features an open, modular design for easy adaptation, enabling culturally sensitive and safe information delivery. Tested in **7 languages**, we are working to expand our capabilities in automatic translations.

User-Friendly: An intuitive interface and voice commands enable effortless interactions for all genders and ages, with a focus on empowering women and girls. In the Zambia pilot, **women** are choosing to engage with the Voice Companion just as much as men.

Underpinning Technology and Data Inputs (1/2)

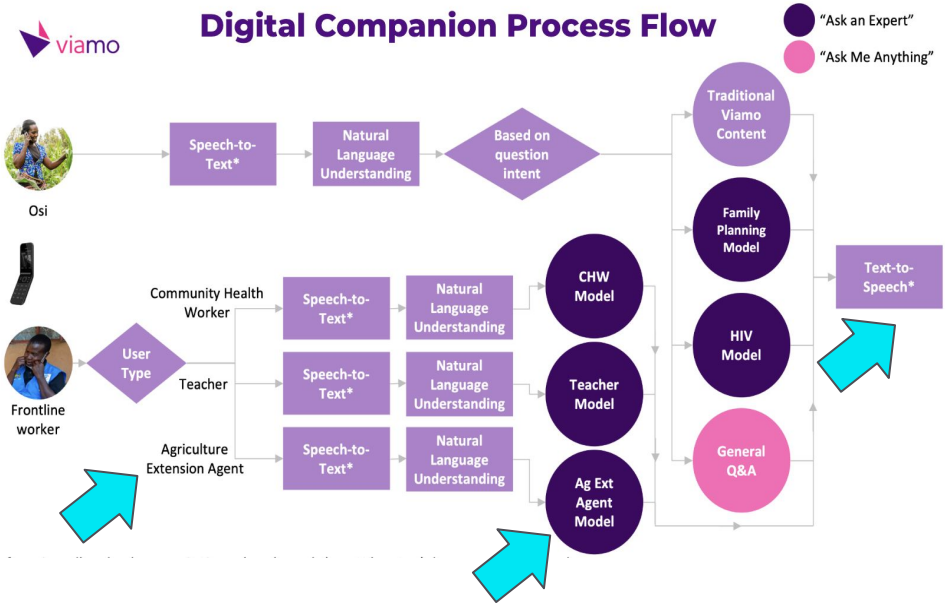
The Voice Companion will use

(1) Speech-to-Text (STT) that ensures a seamless, intuitive user experience, enabling users to engage via voice, transcending literacy barriers.

(2) Natural Language Understanding (NLU) techniques, including custom-trained transform classifier models, will perform Intent and Named Entity extraction, which in turn will prompt a response from (3), a

(3) Pre-trained Generative AI (LLM) model that we will fine-tune with annotated user queries to identify query types and extract agricultural-specific content to provide accurate and salient responses. By fine-tuning a pre-trained Q&A pipeline, it will generate responses drawn from salient country-specific agricultural information provided by M4D and local content partners. Once the system has generated a response, it is spoken back to the caller via

(4) Text-To-Speech (TTS) services, enabling users to listen and engage further via voice.



Underpinning Technology and Data Inputs (2/2)

AI training

Model Accuracy: Comprehensive training with regular updates and expert reviews to maintain accuracy and relevance.

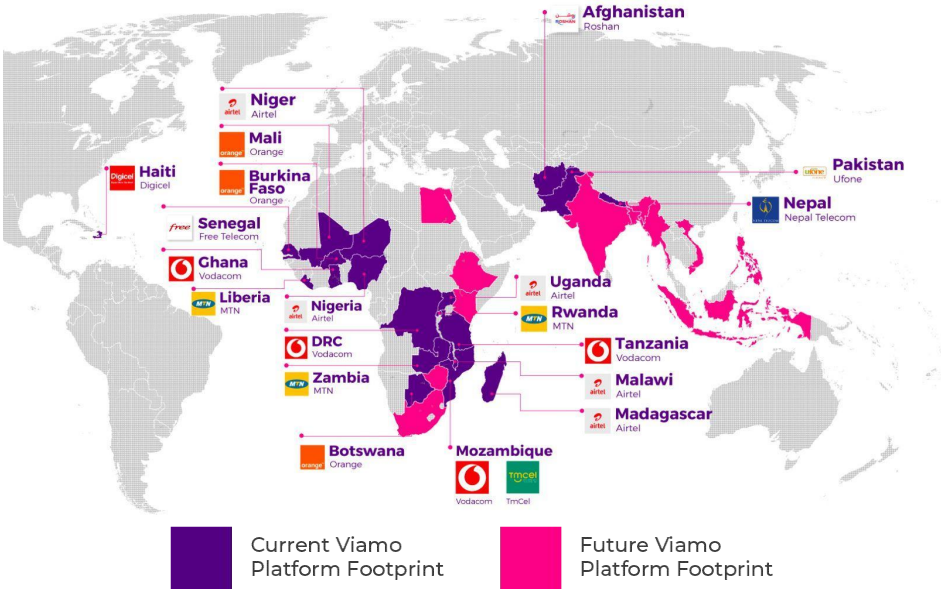
Relevance: Tailored responses sensitive to local contexts and needs, developed in collaboration with local experts.

Safety and Ethics:
Ethical training to prevent harm, with ongoing monitoring for misinformation and a commitment to data privacy and user safety.

Infrastructure

The Voice Companion will be hosted on our **Viamo Cloud infrastructure**. We will use our existing SIP and E1 servers co-located with MNOs on-premise.

The Viamo Cloud software that powers the Viamo Platform remains proprietary.



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Thank You

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