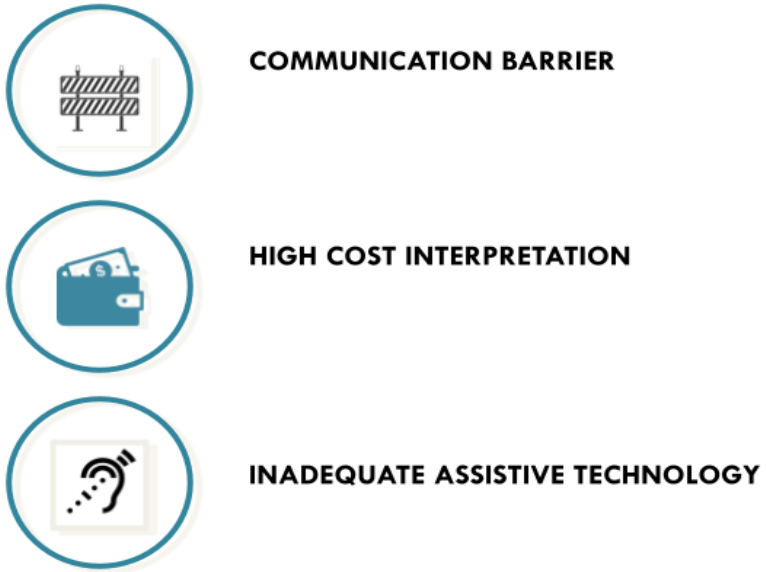
- Japan SDGs Innovation Challenge for UNDP Accelerator Labs -

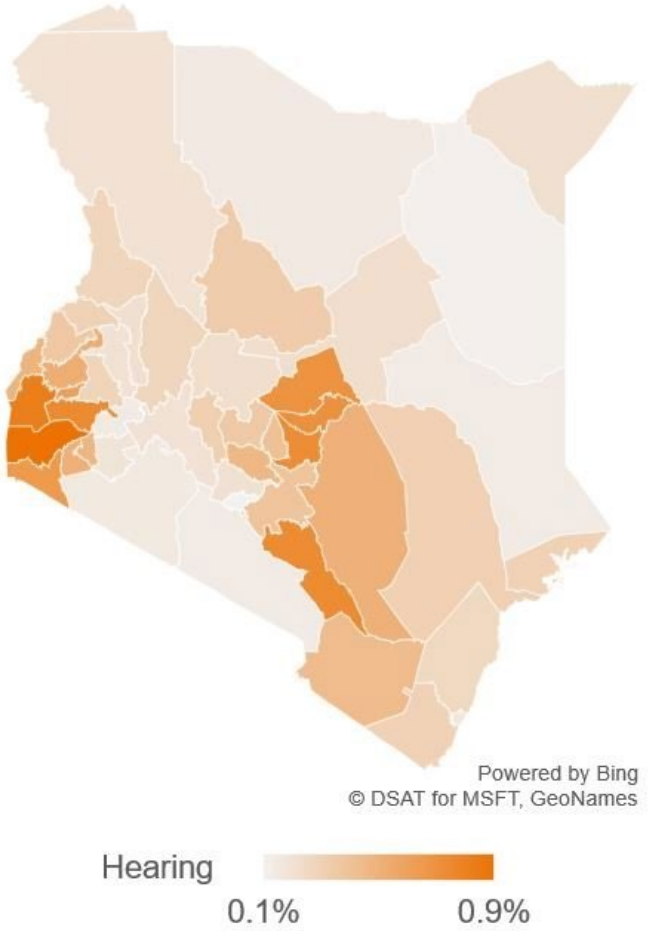
Identified SDGs issues and expertise/technologies expected from Japanese private sector partners

UNDP Accelerator Lab Kenya

Background on identified SDGs issue

- People with Disabilities (PWDs), including the deaf, are disproportionately impacted by systematic and structural inequalities (SDG 10)
- According to the 2019 census, 2.2% (0.9 million people) of Kenyans live with some form of disability. Kenya has approximately more than 150,000 people with deaf and hearing-related disabilities.
- The deaf face barriers in accessing information and efficient service delivery due to:





Source: Development Initiatives based on KNBS

Background of the project

- UNDP Accelerator Lab in partnership with UNICEF, provided technical and financial support to a youth-led tech start-up called Veezaviz, to develop a working prototype for the sign language translation using machine learning through the 2019/20 Generation Unlimited Youth Challenge.
- Veezaviz have developed an AI-based software that recognizes Kenyan Sign Language (KSL) and translates to text and speech in real-time via mobile phone or PC.
- The technology is being deployed among a network of 100+ members of the deaf community in Nairobi in collaboration with educational institutions for the deaf.

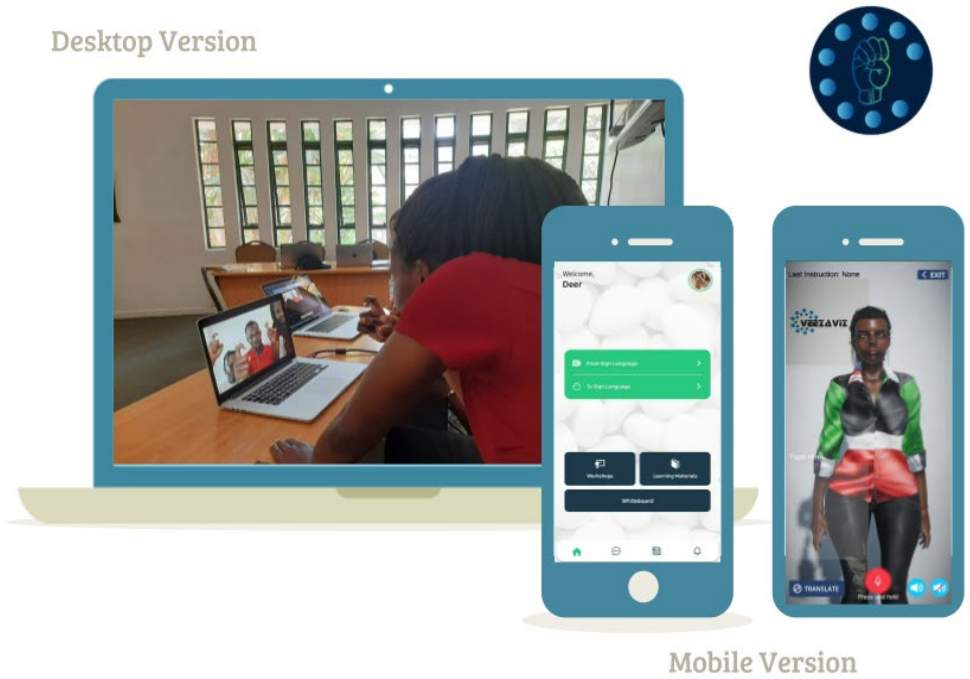
Veezaviz: 'Google Translate meets Shazam but for sign language interpretation'

Planned/on-going solutions

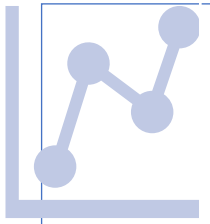
- The technology has 2 features:
  - Machine learning based sign language interpreter
  - 3D Avatar tool to capture voice/ text and generate an animated sign language response
- The new value expected is:
  - Building more of the sign language dataset infrastructure
  - Enhancing the virtual 3D avatar tool and interface for smoother animation and translation for deaf users
- The Accelerator Lab plans to work closely with Veezaviz to deliver on this.

Expertise/technologies expected from Japanese partners

- Animation technology to improve the 3D Avatar interface for smoother voice/ text to sign language translation
- AI, specifically Natural Language Processing (NLP), to enhance speech recognition to convert voice/ text to sign language

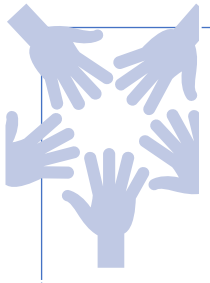


Resources the Accelerator Lab can provide

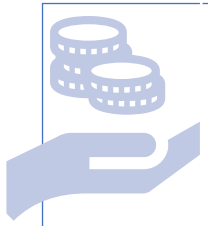


Data collection, analysis, and insight gathering

Developing hypotheses and designing experiments



Facilitating partnerships & market linkages with relevant stakeholders



Coordinating any procurement activities

Amplifying learnings through relevant platforms & channels at national, regional & global levels

Stakeholders of the project

- Key decision makers are:
  - UNDP Accelerator Lab
  - Veezaviz
- Existing collaboration agreements are in place for a network of 100+ sign language interpreters and deaf persons in Nairobi & Mombasa

Direct stakeholders	Indirect stakeholders	Remote stakeholders
• UNDP Accelerator Lab • Veezaviz • Sign language interpreters • The deaf community	• NGOs working with persons with disabilities (PWDs) • Colleges/ schools for the deaf in Nairobi • UNICEF	• National Council for Persons with Disabilities (NCPWD) • Ministry of Education

Expected outcomes and follow-up activities to the project