# WHATSAPP FOR BUSINESS FOR AGRICULTURE

Use Cases for Serving Smallholder Farmers Across Africa

**April 2021** 





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WhatsApp is a faster and more convenient way to communicate. It's much better than a mere call. For example, if you have a problem you can take a picture and send it directly so that others can see and give advice accordingly.

Simon, 34, Farmer, Makueni County\*

\*Source: Dalberg Design session with Mediae, July 2020

The WhatsApp Business API is a fast, secure, reliable way for medium to large businesses and organizations to reach customers and communities all over the world.

Lieze Langford, Business Manager, Turn.io

WhatsApp for Business is very promising in its ability to address agriculture crises of all types via citizen reporting combined with machine learning to use data analytics to address issues quickly and effectively.

David Hughes, University of Pennsylvania / PlantVillage

# FROM FARMERS & PARTNERS

# SHARED INSIGHTS

WhatsApp for Business allows us to serve 1000's of farmers at a time with videos, trainings, and information.

Martin Aketch, Product Manager, iShamba

**AGRIFIN** 

# TABLE OF CONTENTS

BACKGROUND
 CONTEXT
 CONTEXT
 THE SANDBOX
 HINI-CASE STUDIES
 KEY LEARNINGS









# AGRIFIN

### We work with +14m farmers & over 150 partners across Africa

Mercy Corps' AgriFin is funded by the Mastercard Foundation and Bill and Melinda Gates Foundation to help organizations design, test and scale digitally-enabled services for Africa's smallholder farmers. • Objective to develop services that increase farmer income, productivity and resilience, with 50% outreach to women. • Work with private & public sector scale partners such as banks, mobile network operators, agribusinesses, technology innovators

- and governments.
- logistics supporting data-driven partnerships.



• We help our partners develop bundles of digitally-enabled services, including smart farming, financial services, market access and



# **CASE STUDY PURPOSE**

This case study is about organizations pioneering WhatsApp for Business API (WA4B) use cases for Agriculture in Africa. It provides a roadmap for organizations interested in using WA4B to accelerate services for farmers at scale.

### 

- In December 2019, Mercy Corps AgriFin and Turn.io launched the WhatsApp for Business (WA4B) Sandbox for AgriFin portfolio partners in Africa
- The goal was to offer the first low-risk ability to prototype WA4B agriculture solutions, paving the way for longer-term technology for impact adoption for the agriculture sector and smallholder farmers

### **OBJECTIVES & APPROACH**

- emerging markets
- adoption in agriculture

### **KEY PARTNERS**





### 

- Research was conducted in October/November 2020 by AgriFin:
  - Virtual interviews of all partners and the AgriFin team
  - Participation in integration discussions
  - Desk research to identify and analyze WA4B market, features and uses

• This case study is intended for organizations considering WA4B to scale digital services to farmers & other users in

• The goal is to offer actionable insights and potential

roadmaps for sandboxes and applications to accelerate

• This case is based on our learnings from **the last year of** implementing WA4B in a novel space



### **1.BACKGROUND**

### WHAT YOU WILL LEARN



WhatsApp for Business (WA4B) API is for organizations who want to automate and scale interactions with their teams and customers. It is not a trivial undertaking but offers:

- Fully interactive, rich media learning journeys and services
- Services can be integrated and enhanced with Artificial Intelligence (AI), Machine **Learning (ML),** and/ or 1:1 customer care
- WA4B is scalable and cost-effective when compared to other communications channels and should be used as a compliment and replacement to optimize channel communications
- WA4B is a new and different user interface, that can be challenging to even proficient WhatsApp users-user adoption is a challenge that will require a commitment to training, support, and awareness building



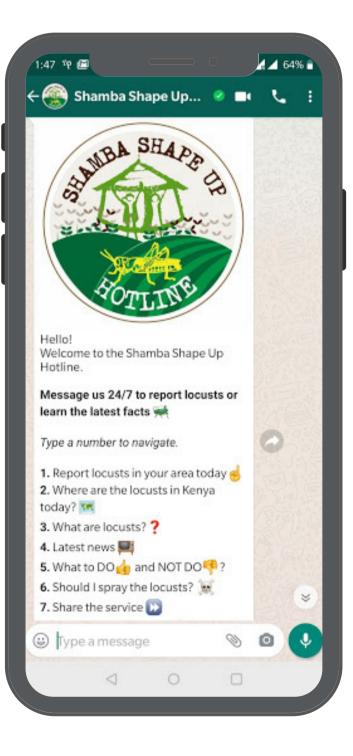
The dual emergencies - COVID-19 pandemic and the Desert Locust outbreak in East Africa drove an urgency for AgriFin partners to rapidly move towards digital channel, catalyzing interest in testing and deploying viable WA4B models.



WA4B is a hugely promising platform to drive digital services for smallholder farmers. However, successful roll-out of solutions in the social impact space mainly revolve around user education in health, with limited, to no examples in smallholder agriculture until relatively recently. WA4B application adoption cycle for both organizations and end-users is nascent in agriculture, with a small number of pioneer organizations iterating, testing, and preparing for scale rapidly. This document reviews early uses cases, but cannot yet suggest proven models.



Sandboxes that allow low-risk prototyping can be the key catalyst to help organizations bridge from test to adoption and scale.







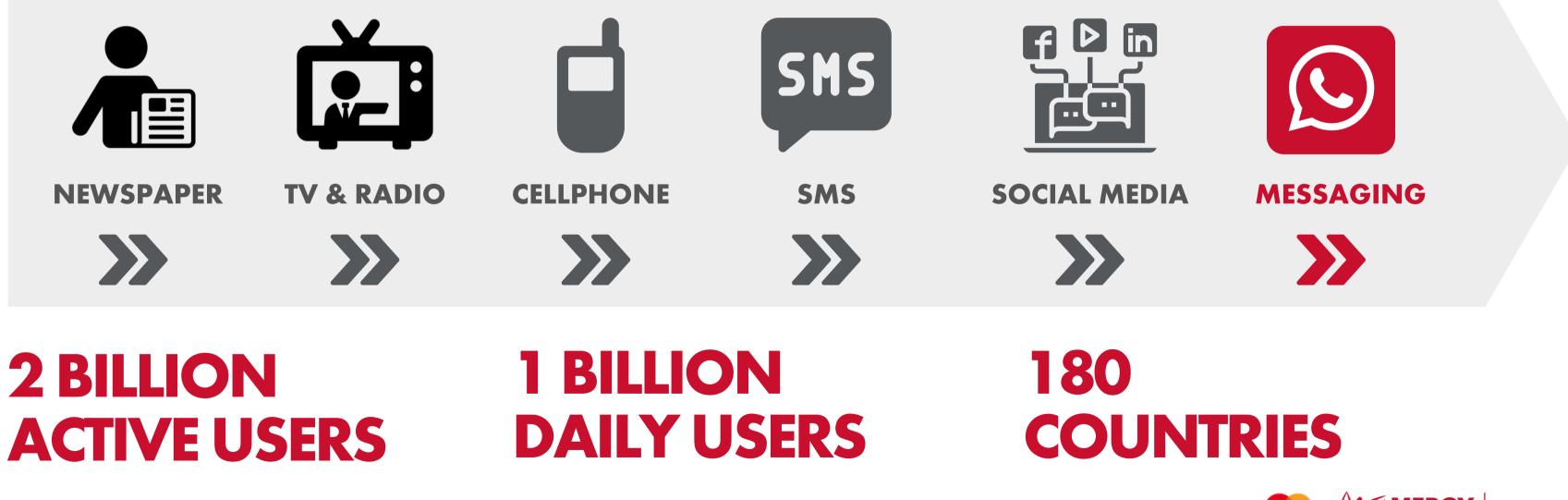




#### **2. CONTEXT**

### WHATSAPP IS IGNITING **COMMUNICATION GLOBALLY**

Messaging has changed communication around the world. WhatsApp is the most widely used messaging platform in the world with extensive reach in Africa, driving new opportunities as a communication channel









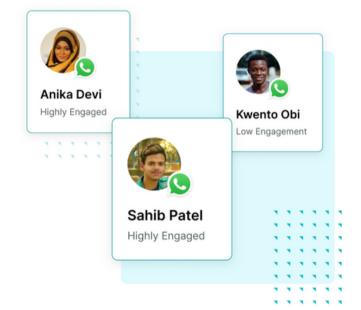
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### WHY DOES WA4B HAVE SO MUCH POTENTIAL?

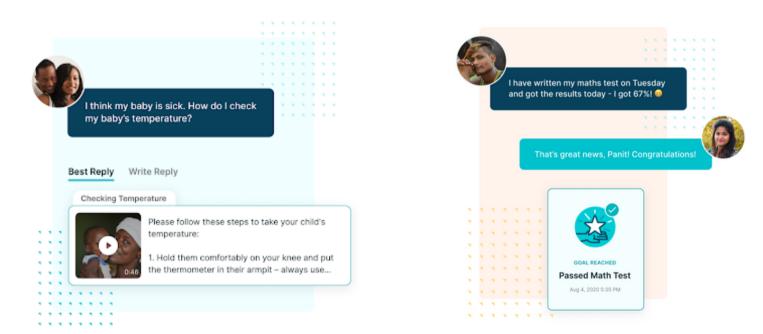
WA4B is a tool for organizations to have guided, personal conversations with their teams and users to drive discussions to improve lives at scale\*

**Connect** to the largest, encrypted chat audiences globally. **Engage** with millions with automated responses and artificial intelligence.

Use evidence-based insights to guide your conversations.







\* images courtesy Turn.io. Please note this as a singular use case of a W4AB aggregator.

Set goals and track the impact of your conversations with millions.





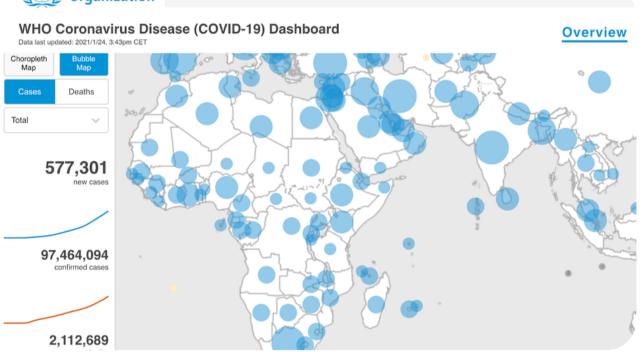
#### **2. CONTEXT**

### WA4B SUCCESSFULLY DEPLOYED IN AFRICA **TO DRIVE CHANGE**



- MomConnect, launched as an SMS messaging service, but by 2017, the sheer number of users made it difficult to manage and it had prohibitive messaging costs of Rand 1-million each month.
- To solve this, Turn.io was developed to use WhatsApp to manage conversations with mothers.
- By the end of 2018 showed a rise in monthly engaged mothers on MomConnect from 0.6% on SMS to 14.9% (5,000 to over 55,000) users actively engaged in conversations about their health via WhatsApp.





- communities rapidly.

• In early 2020 as COVID-19 quickly became a pandemic, the team at Turn.io and Praekelt realised that governments would need a secure mechanism to get safe, real-time information out to

• In March, Praekelt.org (using Turn.io) developed a WhatsApp-based COVID-19 information platform for South Africa's national health department, reaching almost a million users in just days. • In partnership with WHO, Whatsapp, Facebook, and Amazon Web Services, Turn was able to expand and automate this service to create the WHO Whatsapp Health alert within a week and rapidly made it available in 20 languages across Africa to provide up to date COVID-19 information.

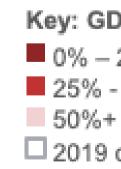


### WHY IS WA4B SO IMPORTANT FOR **SMALLHOLDER FARMERS (SHFS) IN AFRICA?**

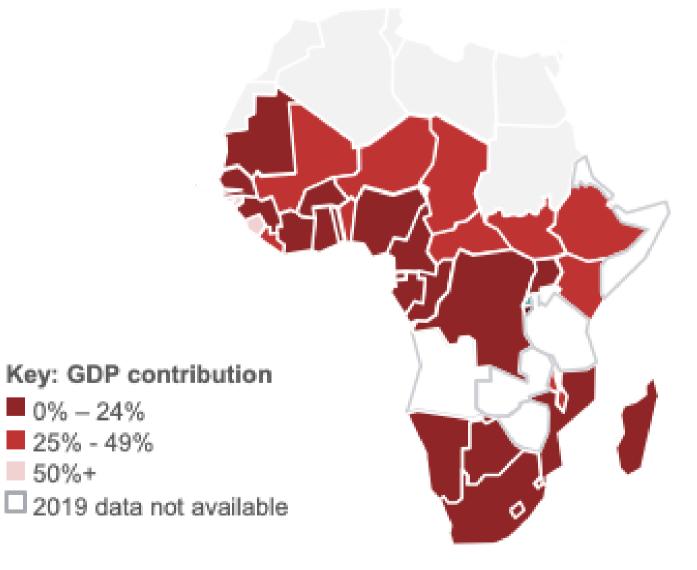
The need for digital transformation for Africa's smallholder farmers, combined with the reach of WhatsApp and its success in other sectors, drove AgriFin's determination to test its potential impact in agriculture by creating the first WA4B Agriculture Sandbox.

Agriculture is the backbone of most developing economies (LIMICs) and a major source of food, income, and employment for 500 million smallholder households globally (GSMA 2020).

- Smallholder farmers manage about **80% of the world's cropland** and produce about 60% of global agricultural output
- In Sub Saharan Africa (SSA), smallholders account for 54% of the labor force, and in many locations between 25–49% of GDP
- SHFs face significant challenges that limit their agricultural productivity and earning potential
- These challenges revolve around access to markets, finance, infrastructure as well as services to improve productivity
- Digital solutions have the potential to revolutionize the sector, offering new services and capabilities to SHF that can be scaled quickly and cost-effectively.
- Driving productivity, particularly of women, can ensure that Africa can feed its future generations and realize its agricultural potential.











### **2. CONTEXT**

# WHAT ARE W4AB'S KEY FEATURES?

WhatsApp for Business (API) (W4AB) allows organizations to leverage WhatsApp's reach to enhance communications with teams & users, allowing them to drive user journeys and change behavior at scale.

<ul> <li>Requires a Business Service Provider (BSP) with platform as an intermediary.</li> <li>Highly scalable, requires technical expertise for complex integrations</li> <li>Requires a Facebook Business Account</li> <li>Various charges by BSP for hosting &amp; integration</li> <li>Facebook fees for some outbound messaging</li> </ul>	<ul> <li>Cost-effective scaling to 1000's of simultaneous conversations</li> <li>Can be integrated with Artificial Intelligence (AI), Machine Learning (ML), CRMs</li> <li>Easy modification of menu structures/content by nontechnical staff</li> <li>Management/customer care dashboard, access to all user data (Vary by BSP)lom</li> <li>Uses automation to drive use conversations, which can be enhanced with AI and ML</li> <li>Asynchronous and real-time customer care (chat)</li> </ul>	<ul> <li>Start service by adding phone # and providing command ex. Hello OR click through HTML link</li> <li>Menu-driven, fully interactive, rich media learning journeys and services.</li> <li>Uses automation to drive conversations, enhanced with AI and ML</li> <li>Asynchronous and real-time customer care (chat)</li> </ul>







### WHATSAPP APPLICATION FAMILY COMPARISON

WA4B is designed for enterprise applications, which can be complex to integrate but easy to manage with the right BSP Platform. This table compares various Whatsapp options and their features. This case study focuses solely on WA4B.

FEATURES	WHATSAPP	WHATSAPP BUSINESS	WF
Target User	Consumer	Small businesses with local audiences	Smal
Registration	User downloads app, adds phone and confirms by SMS	Business acquires SIM card and downloads app to to sign and get started.	Requ up. R
Costs	Free	Free	BSP
User Communications	<ul> <li>Two way and group communication</li> <li>Rich media: text, audio, video</li> <li>Low bandwidth requirements</li> <li>Voice and video calls</li> </ul>	<ul> <li>Branded &amp; managed two-way and groups</li> <li>256 person limit in groups</li> <li>Voice and video calls</li> <li>Push notifications</li> </ul>	<ul> <li>Brain</li> <li>Ur</li> <li>Nc</li> <li>As</li> <li>Put</li> </ul>
Automation	None	Basic – quick replies for frequently asked questions	Auto
Management Features	None	<ul><li>Storefront management</li><li>Communication Tracking</li></ul>	<ul> <li>Dr</li> <li>Ac</li> <li>Mo</li> <li>mo</li> </ul>

\* API (application programming interface) is a computing interface the defines interactions between multiple software intermediaries (systems). It defines the calls and requests that can be made between the systems and formats to be used.



#### HATSAPP FOR BUSINESS API (W4AB)

all-Med-Large enterprises, with global audiences

uires Business Service Provider will assist in integration and set-Requires FB business account.

hosting and integration, outbound messages

Branded menu driven

Inlimited users

lo video or audio calls

Asynchronous & real time customer care

Push notifications

omation to reply at scale API\* integration with with AI, ML, CRM

Drive complex user journeys

Access to user data interactions

Nenu structures that are adaptable by non technical team nembers







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### WHAT IS THE AGRIFIN WHATSAPP FOR BUSINESS SANDBOX?

#### CONCEPT



AgriFin observed emerging use cases of WA4B in education and health sectors and was driven to replicate these models in Agriculture. The concept was **to offer partners a low-risk opportunity to test how WA4B could be deployed** to expand digital communication services and support for their teams and smallholder farmers

#### **PLATFORM**



Today, there are **over 65 BSPs offering a range of industry vertical solutions**. **Turn.io** was chosen based on their experience in scaling solutions, specifically with MomConnect, platform ease of use, and as the only provider focused on social impact.

#### **SANDBOX DESIGN**



Together, AgriFin and Turn.io **designed a 6 (now 12) month program for key AgriFin partners to participate in learning and rapid prototyping experience with the outcome being a minimum viable product** to release and test with their users. There was not cost, only a commitment to commercial and technical teams participation.

#### **GOALS**



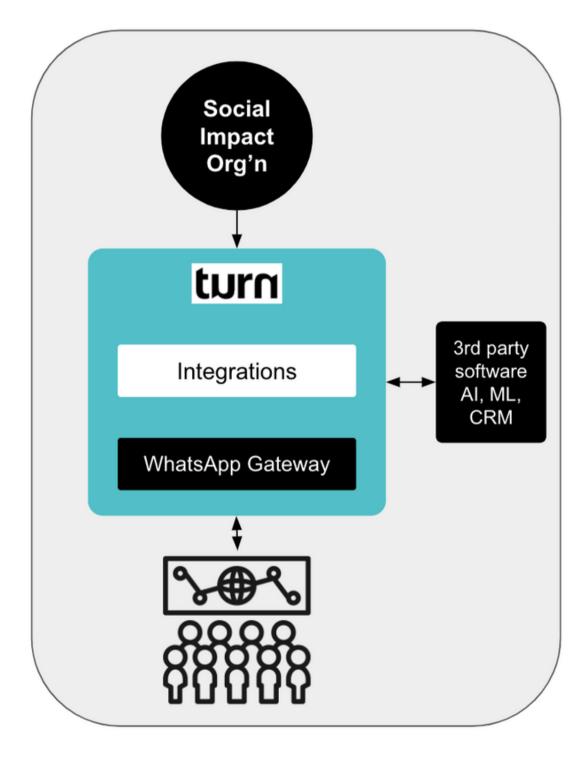
AgriFin goals for the Sandbox program were to enable the first of a kind Agriculture Sandbox, attract and engage committed partners, identify and experiment with early use agriculture cases, document and share learnings and catalyze use of WA4B for scale-up in Africa for smallholder farmers.





# **ABOUT TURN.IO**

- **Turn.io** is a public benefit corporation offering a software as a service (SAAS) connecting impact organizations to their users via large-scale messaging platforms
- Turn.io enables organizations to implement, manage and prioritize the most actionable conversations for human + Artificial Intelligence coaches to drive user journeys and improve lives at scale.
- Turn's has deep experience in scaling social impact solutions, most recently implementing WHO's Covid hotline on 20+ African countries within weeks.
- Turn.io negotiated a unique structure for social enterprises based on monthly active users (MAUs) and a waiver of the monthly aggregator fee.









# SANDBOX ACTORS

**Participants** 

PULA ignitia



Arifu 🛛 🖉 FarmDrive

Ethiopian Arta

CoAmana





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**BSP Host, Trainer,** Accelerator & Tech Integrations

### turn





# **TURN.IO'S ROLE & PRICING STRUCTURE**

### ROLE

- Onboard organization on the WA4B platform
- Provide guided, hands-on training and a peer to peer learning
- Develop integrations as requested/funded
- Provide ongoing technical support

### **SANBOX PRICING STRUCTURE\***

ITEM	DESCRIPTION	UNIT	COST CATEGORIES
Onboarding	5 day remote training + administrative onboarding	One time fee	Per Partner
Support	Bi-weekly check-ins /technical support	One time fee	Per Partner
User License Fees	<50,000 Monthly Active Users >50,000 Monthly Active Users	Monthly	Flat Fee Per Partner
Data Storage and Protection	Turn Cloud Customized outsourced cloud	Monthly Monthly based on usage	Free Quoted on request
Integration	Custom system integration	One time fee	Quote on request
Messaging	Outbound message, responding within 24 hours	Per Message	FREE
(Priced by Facebook)	Outbound message sent outside 24 hours	Templated Per Message	\$0.0576 for less than 250k/ message/ month

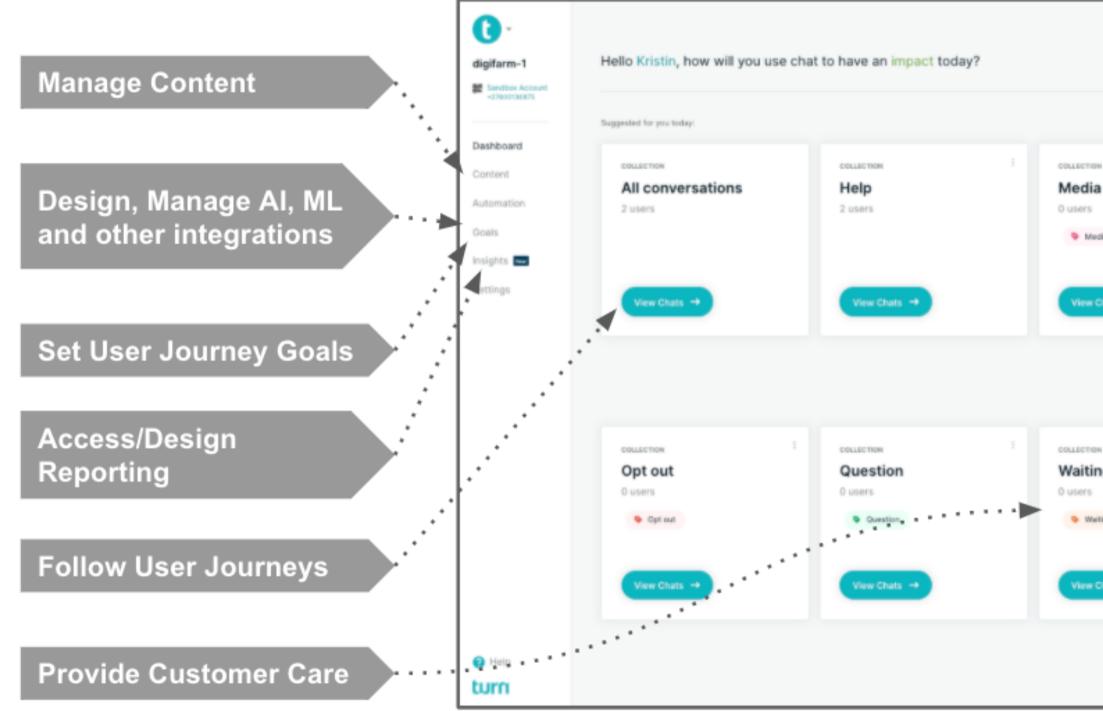






#### **3. THE SANDBOX**

# **TURN.IO MANAGEMENT WA4B DASHBOARD**



	Q Search messages 🛛 🍓 *
attachments	New Collection 2 users
hats 🔿	View Chats →
ing for reply	+ Add Collection









# **THE SANDBOX PROCESS**

The Sandbox, guided by Turn.io, was designed to *accelerate WA4B adoption* via intense training, peer-to-peer learning and technical support

QUALIFY & ONBOARD	<ul> <li>MCAF identify and qualify partners from</li> <li>Turn onboards partners with Facebook but</li> <li>Turn.io turns up WA4B account and acquire</li> </ul>
LEARN & PROTOTYPE	<ul> <li>5-day commercial, operations, technical</li> <li>Introduction to platform end-user, admin</li> <li>Introduction to technical implementation</li> <li>Prototype development and sharing on d</li> </ul>
LAUNCH & ITERATE	<ul> <li>Integrate with internal partner systems (if</li> <li>Partner launches solution to its users</li> <li>Turn hosts bi-weekly sessions for feedbace</li> <li>Partner and AgriFin monitor progress and</li> </ul>
TRACK & SHARE LEARNING	<ul> <li>Partner assesses use case fit and busines</li> <li>Assess Sandbox learnings for future coho</li> <li>Share successes, challenges and future of</li> </ul>

the AgriFin portfolio ousiness verification, WA4B account uires Facebook approval.

intensive training with peer learning features, and sample use cases and APIs day five

if needed) with Turn.io support

ick/support nd make adjustments with Turn.io

ess model orts opportunities





## **PARTICIPATING ORGANIZATIONS**

A wide range of partners were selected, starting in December 2019. Many have launched a prototype and are planning to expand integrations and content.

### **EXPLORING**











### LAUNCHED





# POTENTIAL USE CASES WERE IDENTIFIED





Rich media training and chat bots education for farming/livestock



Buyer and seller matching



Farmer credit and loans, applications, education, support



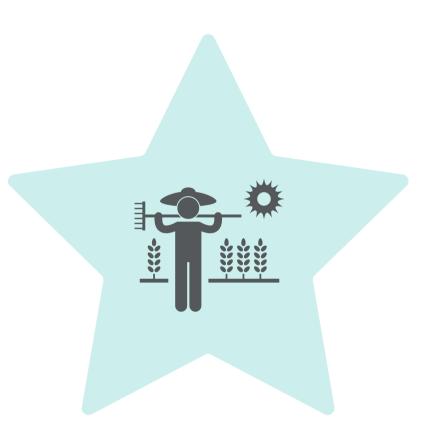
Agriculture micro insurance, in season monitoring and support



Access to vouchers for inputs and other services

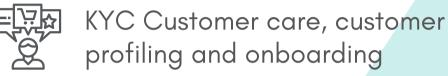


Weather data and forecasting for farmers and organizations



Digital channels building capacity, productivity and resiliency of African smallholder farmers

### **ORGANIZATIONS**





Pests/disease reporting for emergency response and mitigation



Cooperative leadership management training and support



Youth farmer leaders training education and support



Manage field teams

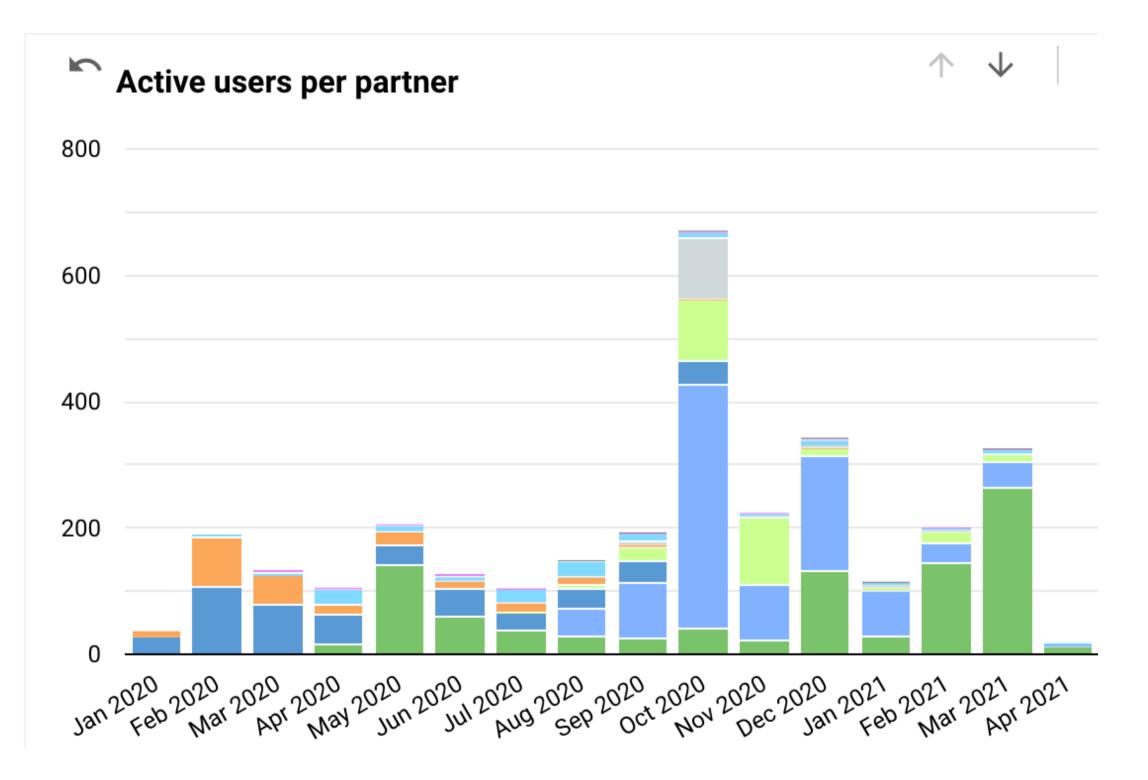


Agriculture and livestock support, field expert support





## **REACH TO DATE - APRIL 2021**





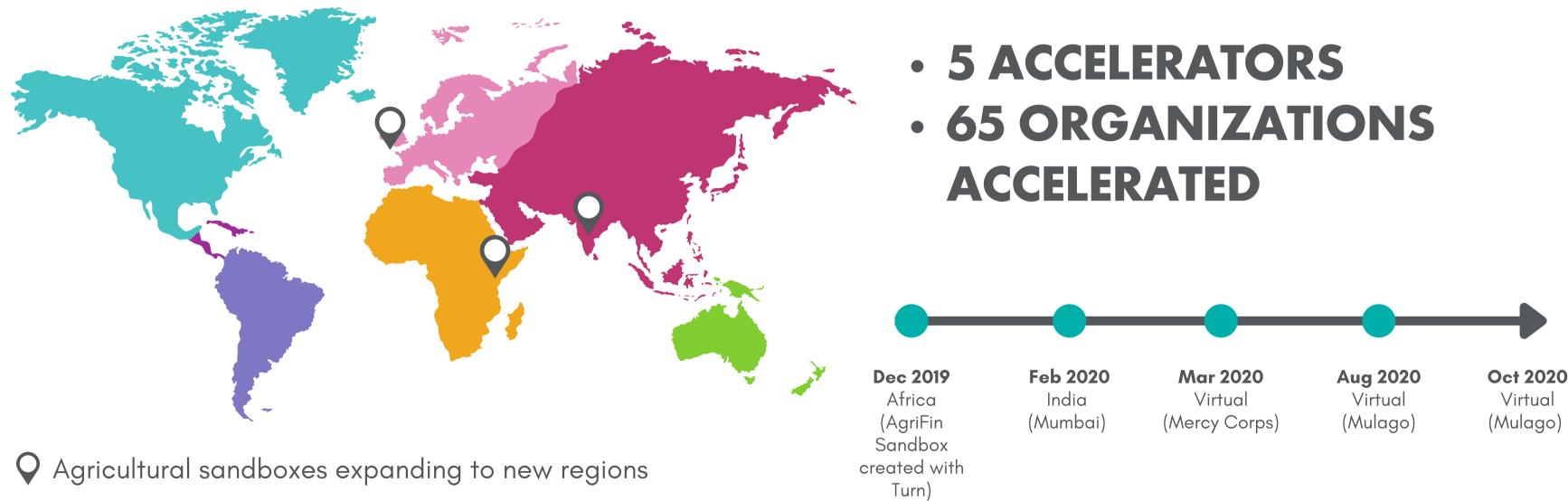
### TOTAL MESSAGES 57,709





# **IMPACT TO DATE**

The first of its kind Turn.io/AgriFin Sandbox, has been extended into 2021 and it has inspired Turn.io to launch in India, London and virtually to expand opportunities to accelerate agriculture applications globally.







# 4. MINICASE STUDIES







# LEARNING FROM EARLY WA4B ADOPTERS

The following section goes into mini-case studies of a few WA4B partner implementations: what they designed, what WA4B enhanced and replaced, what worked, what didn't work and their view of the future.

PARTNER	MEDIAE	ARIFU	PULA	ΑΤΑ
USE CASE	Direct Farmer Support & Hotline Emergency Citizen Reporting	Enhanced Information Service for Organizations – – Ag, Insurance, Financial Services	Farmer Education Services for Companies who use their insurance service	Emergency Citizen Reporting
LINK	Test iShamba's content <b>here</b>	Test Arifu content <u>here</u>	Not yet re-launched	Test ATA's content <u>here</u>
COUNTRY	Kenya	Nigeria (launch) Kenya, others planned	Nigeria, others planned	Ethiopia
KEY INNOV.	Machine Learning with Plant Village	Dual Use Line, Value Add Info. Award for Covid Recovery Service	Client Value Add for Insurance	Machine Learning with Plant Village. Field Force engagement

### **Each of these** organizations:

- Participated in the Sandbox
- Defined 1 or more use
- cases
- Launched and identified a viable service
- Plans an expansion of services





FARMERS

**OCATION** 

PARTNERS

• Κ**ΓΝΥΔ** 

• ETHIOPIA

• PENN STATE

PLANT VILLAGE

## MEDIAE SHAMBA SHAPE-UP/ISHAMBA HOTLINE

TARGET POPULATION: ABOUT

Mediae is a Kenyan company addressing the informational needs of East Africans through sustainable media productions that are entertaining, educative and help improve livelihoods. Mediae produces Shamba Shape Up, a TV show that reaches 6 million Kenyans with farming news and techniques and partnering with iShamba Limited to provide interactive support to 470,000 registered farmers with SMS USSD and a call center.

#### **USE CASE: ISHAMBA HOTLINE**

**Initial Plan:** Mediae planned to use WA4B to onboard farmers, however, this wasn't a good match for the platform. They then decided to use it as a training and information tool for iShamba registered farmers.

**Pivot to Focus on Emergency Reporting**: In January 2020, desert locusts invaded Kenya, causing an agriculture and food security emergency. Mediae, Turn.io and Penn State University deployed a new WhatsApp hotline where farmers could learn about Locusts, report sightings (yes or no), send photos for verification to Penn State and PlantVillage to review, process and alert Kenyan authorities to implement management techniques including spraying.

**Add-on COVID Awareness:** The COVID-19 pandemic added a second emergency greatly affecting farmers and the agriculture value chain. The Locust hotline was adapted to include COVID messaging as part of its main menu which showed the flexibility to adapt to the needs to the moment.

**Future**: After fielding the app for 6 months, Mediae plans to expand the iShamba hotline for farmers and the Locust hotline for additional pest emergencies.







## LOCUST EMERGENCY HOTLINE: CITIZEN REPORTING

SMS

3

The hotline was rapidly designed by Mediae and PlantVillage to respond to the historic locust threat to allow farmer education and reporting. Photos and information submitted was analyzed by PlantVillage using Machine Learning and other data sources to report to FAO/WFP/Government representatives for action.

#### **IMPLEMENTATION**

Locust educational materials and situational data were uploaded regularly.



#### **AWARENESS**

Mediae generated awareness via its weekly Shamba Shape Up TV show and SMS/Calls from iShamba registered farmer program.

#### <u>FARMER</u> ENGAGEMENT

Partner channels inform via TV & Radio on how to manage Desert Locusts, their latest whereabouts & encourage citizens to report their presence or absence

#### INFORMATION ANALYSIS & REDISTRIBUTION

Farmer data is then cleaned, verified & aggregated to create migration maps for our partners to redistribute across all channels and inform mitigation efforts



### DISTRIBUTE DESERT

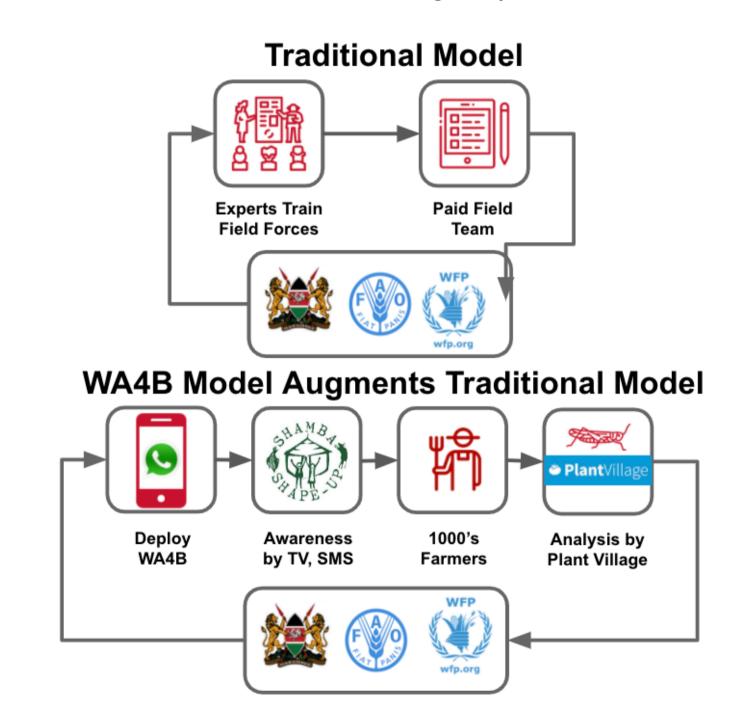
Farmers then access that information and use the interactive channels to report any presence or absence of Desert Locusts





### **CHALLENGES AND LEARNINGS**

A new approach to reporting was required to augment the traditional, logistics-heavy method. The locust invasion came at the same time COVID-19 emergency caused restricted movement. Timely, remote data acquisition was critical.



### **LEARNINGS**

- advertising.
- moved territories
- worm as an example.

### **CHALLENGES**

- Low acquisition and usage (348 MAU/9490 messages
- media)
- complex reporting requirements may have inhibited adoption.

• Existing WA4B line was adapted for locust education and data capture, swiftly and easily. Machine learning integration (not fully implemented) enabled data collected and processing at scale. COVID menu added in less than one day.

• Generating awareness to acquire active users requires investment in time, training,

• **Rapid replication** proved when implemented for Ethiopia in 5 languages, as locusts

• Importantly, this capability can be deployed for year-round emergencies – fall army

• Awareness building is key, however outbound messages are expensive at \$.05/unit and need to be approved by Facebook so alternative methods need to be used (SMS,

• WA4B has a new user interface which requires different behavior. This combined with

• Lack of smartphones in locust infected areas also may have inhibited use.





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### WHAT'S NEXT: EVOLVE SHAMBA SHAPE-UP HOTLINE

"WhatsApp for Business will allow us to serve 1000's of farmers at a time with videos, trainings and information" -- Martin Aketch, iShamba Product Manager

### 6 MILLION VIEWERS 470,000 REGISTERED FARMERS

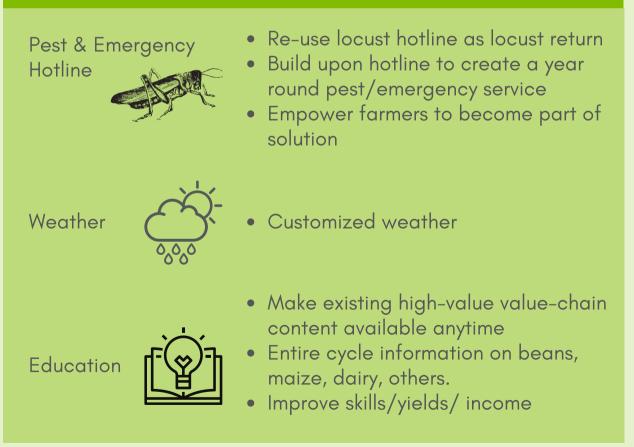




### BUILD WA4B SHAMBA SHAPE-UP HOTLINE TO INTERACT, EDUCATE & SUPPORT



### USE CASE CONTENT

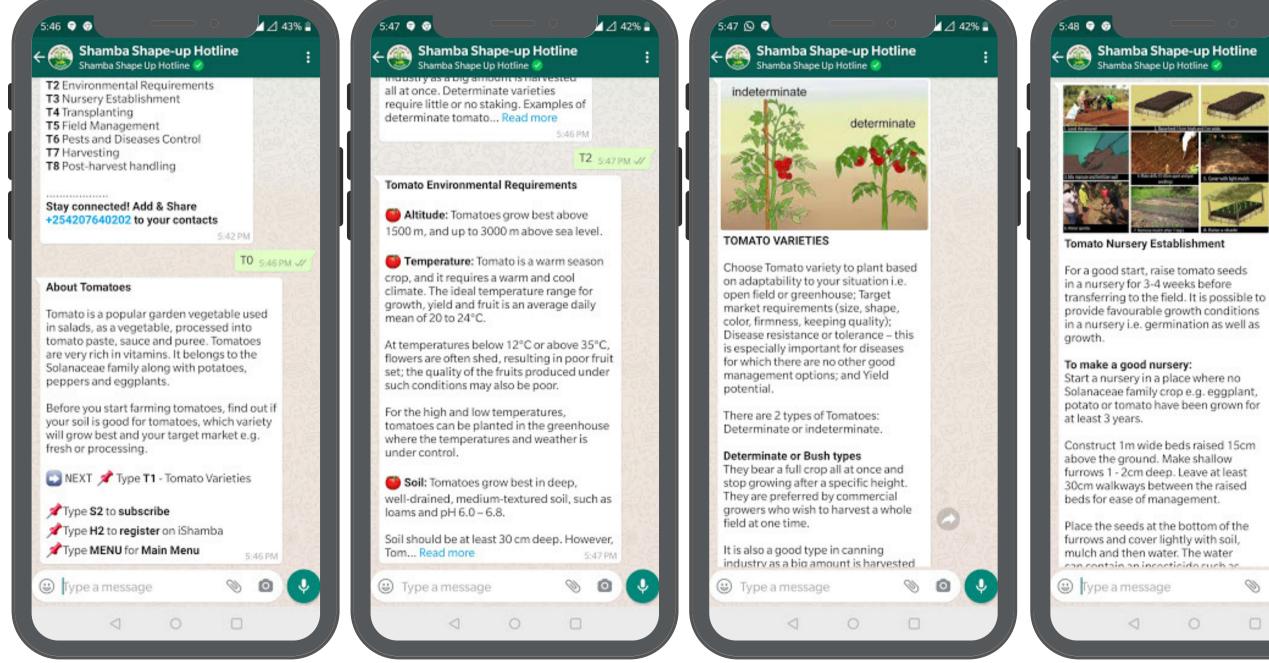






### SHAMBA SHAPE-UP HOTLINE'S NEWEST MENU ADDITION

Mediae is just launched a wide range of education content from planning to planting to harvesting and post harvest loss.



#### 42%

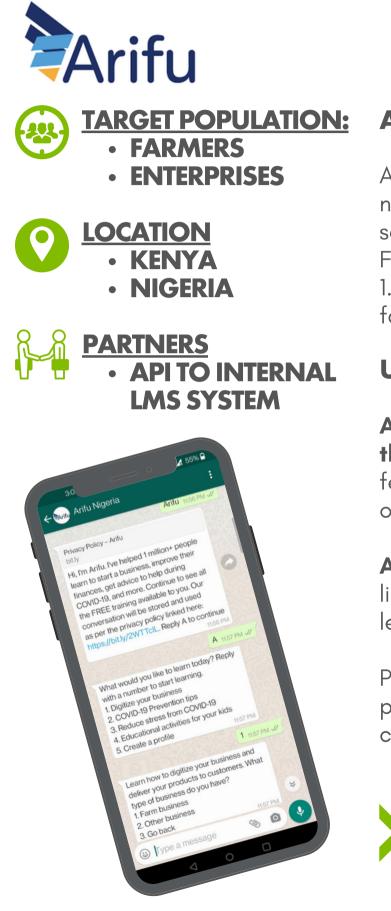
0

J

42% 5:48 9 0 ← 🎡 Shamba Shape-up Hotline Shamba Shape Up Hotline 😪 Tomato Transplanting Plant on a cloudy day or in late afternoon when it is cool. Planting when it is very hot will put seedlings under a lot of stress. When planting out Tomato seedlings from nursery, pull them up with a lump of soil. It will stop roots drying out. Dig planting holes about 15cm deep spaced 60 x 60cm apart. If you had not broadcasted manure during land preparation, put 1-2 handfuls of well-rotted manure & 10g (1 bottle-top) of a Phosphate fertiliser such as TSP, MAVUNO PLANTING fertilizer (about 80kg per acre) in the hole Mix them well & plant 1 seedling/ hole. Drench the hole with a mixture of insecticide eq ACCENT & fungicide eq PEARL to stop soil-borne insect pests Type a message Ø 0







#### ABOUT

Arifu is an East African social enterprise making it possible for the world's least served people to access the information they need from the organizations they trust on any mobile phone be it a feature phone or a smartphone. Arifu provides an end to end solution, including content design to create contextualized chat-bot learning experiences, delivery over SMS, Whatsapp, Facebook Messenger or Telegram, and performance analytics to measure impact. Since launching in 2013, Arifu has reached over 1.4m million learners in Kenya, Nigeria, Uganda, Rwanda, Tanzania and Zambia, of which an estimated 85% are smallholder farmers.

#### **USE CASE: WHATSAPP LINE**

Arifu added WhatsApp as a channel to offer learners and partners a faster, richer learning experience on a platform that is already widely used among it's target audiences. Given the limitation of personal Whatsapp lines and groups, Arifu felt the best way to reach mass learners was to sign up for the Whatsapp Business API. This decision was quickly validated when organizations such as WHO used Whatsapp to disseminate COVID-19 information globally.

**Arifu officially launched WA4B in Nigeria on 9/9/20.** On the Arifu WhatsApp channel, learners access Arifu's growing content library of skills training and product information through a chatbot experience, enhanced with images and videos. Current learning content includes good agriculture practices for several value chains, business, finance and COVID-19 support.

Partner costs include monthly active user fee, push messaging fees and the cost of integration, done by a 3rd party business API partner. Line costs vary. To lower the cost, clients can use a dual-use shared line. Arifu is expanding it's Whatsapp bot to new countries, starting with Kenya. They are looking for partnerships





### **ARIFU: WHAT'S NEXT**

Arifu has recently won a grant challenge that supports expanding its WA4B program significantly, with the goal of providing COVID-19 economic recovery services., that will launch starting November 2020





**JOB SEEKING TOOLS** 



**COVID-19 HEALTH** INFORMATION



**DIGITAL SKILLS TRAINING** 



**UPDATES ON REGULATIONS AND RECOVERY/SUPPORT SERVICES** 



**FINANCIAL RESILIENCY AND** LIVELIHOOD ADAPTATION









# PULA

- TARGET POPULATION:
  - FARMERS
  - ENTERPRISES
  - GOVERNMENT
- KENYA MALAWI
  - NIGERIA · ZAMBIA

▶ API TO INTERNAL LMS SYSTEM



#### ABOUT

Pula Advisors is radically restructuring the landscape of agricultural insurance to help insure the previously unbanked, uninsured and untapped market of the world's 500 million small farmers. Located in Nairobi, Kenya, Pula provides farmers with insurance bundled with inputs (such as seeds and fertilizer) and farmer advisory services to help increase their yields and boost (and protect) their income.

#### **USE CASE: PULA FARMING ACADEMY**

Pula's customers are financial/governmental institutions and their core business is insurance for smallholder farmers (SHF). Pula provides insurance that is bundled with loan and input products that are designed for SHFs. Pula originally developed content for farmer education as a value added service for their B2B customers, Content was (and continues to be) delivered to farmers via USSD. Pula studied the farmers they served and found WhatsApp usage to be 25% in Malawi, 25% in Zambia, 20% in Nigeria and 33% in Kenya. This data drove them to consider WA4B as a new channel to deliver richer enhanced content to improve learning outcomes. Additionally, WA4B could deliver this content at the equivalent or lower cost than USSD. Working with the Kenya Agronomy Academy, Pula developed enriched content and a program called Farming Academy. Originally they used another BSP, but moved to Turn.io due to the Sandbox opportunity and Turn.io's platforms ease of use.

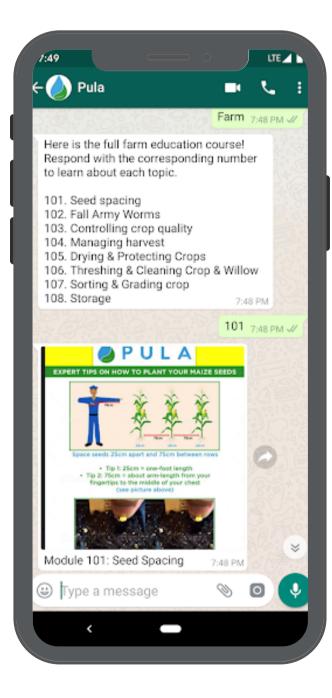
Pula launched the test platform in Q2 2020 in Kenya, Malawi and Zambia with an engagement rate of 11–14% for outbound messages. Due to a strategic re-alignment, this project was put on hold and will be restarted with expanded features in 2021.

Pula's new channel has not yet been released for viewing.



### **PULA FARMING ACADEMY**

A selection of farmer trainings on planting, harvesting, checking crop quality for sales, and exploring pests (fall army worm) to learn how to identify and manage the infestation.





- 🕢 Pula Wha	itsapp
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	-
Thank you for rep problems. What o like on your farm	does the fall am
Randomly pick 5 many fall armyw less than 10 B) r	orms do you see
Pula Farming Exp farm with pestici you must spray e or late afternoon actively feeds at respond with "1"	de. For the pest arly in the morn 4:00-7:00pm be
How to apply per 1. Put on protect applying the pest gloves, boots and 2. Always use a of the pesticides. 3. Spray using the the plact and the	ive wears when icides, these ind d mask. clean pump and e cone-shaped i
Type a mess	sage









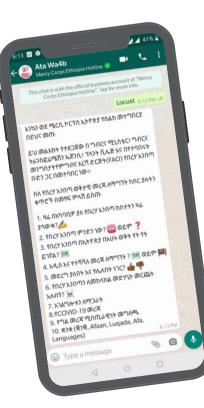
Ethiopian ATA Agricultural Transformation Agency የኢትዮጵያ ግብርና ትራንስፎርሜሽን ኤጀንሲ



### TARGET POPULATION: FARMERS

- EXTENSION AGENTS
- LOCATION
   FTHIOPIA

PARTNERS
 MERCY CORPS
 PLANT VILLAGE



#### ABOUT

The Ethiopian Agricultural Transformation Agency(ATA), a government agency, is tasked with identifying systemic bottlenecks and challenges within the Ethiopian agriculture sector. The ATA has developed and launched the 8028 Farmers Hotline, a toll-free Interactive Voice Response/Short Message Service (IVR/SMS) system, the service aims to streamline tailored agronomic best practice extension information to smallholder farmers.

#### **USE CASE: LOCUST HOTLINE**

In early 2020, desert locusts were projected to pose an agricultural and food security crisis in Ethiopia. With the additional threat of Covid –19, it was imperative for Ethiopia to respond to the locust crises using technologies that could allow remote reporting. ATA proposed to the Ministry of Agriculture to employ their farmers hotline, IVR system and pulling from AgriFin's learnings in Kenya, a WA4B reporting capability in partnership with Plant Village.

The Ministry agreed, and tasked ATA to develop and host the WA4B locust hotline. ATA partnered with Mercy Corps Ethiopia, who registered the line and replicated the content from Plant Village, developed for Mediae in Kenya. The content was translated into 5 local languages, Amharic, Afan Oromo, Wolitigna, Sidaminia, and Tigrigna. A Covid-19 information line was added as well.

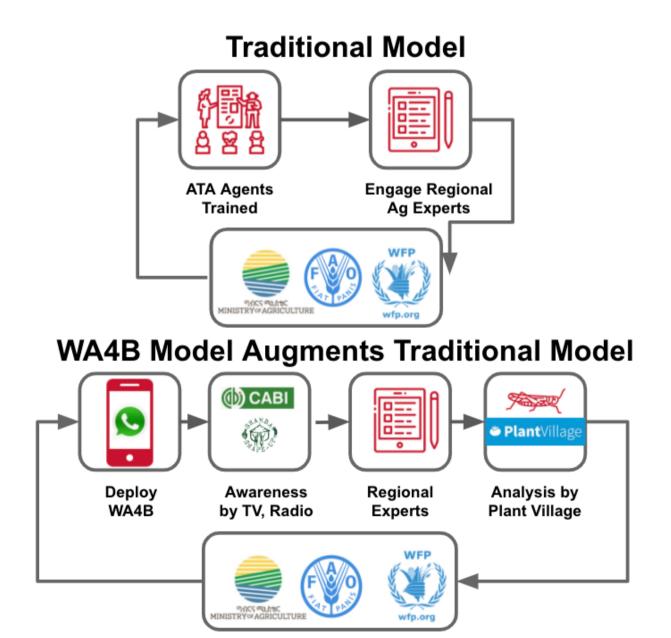
Training was held in the most impacted region at the zone and district level to agriculture experts and experienced, reliable 8028 farmer users. Additional training is rolling out now.





### **ATA LEARNINGS & CHALLENGES**

In Ethiopia, the locust invasion came not only at the time of COVID-19, but also during regional instability. It was imperative to use remote technologies. While farmers low penetration of smartphones, the ATA has regional teams that have both access to the internet and smartphones for regional/local reporting.



### **LEARNINGS**

- used to translate and deploy the WA4B in 5 local languages.
- time period.

### **CHALLENGES**

- partner.



• Partnership, to deliver content, deploy the WA4B can be used to deploy an impactful service quickly. In this case, existing content from Shamba Shape-up and Cabi were translated for radio and TV awareness. WA4B content from Mediae and PlantVillage was

• Engagement levels are higher with supported, trained agents and teams than end users. 948 MAUs with 18,682 Messages, nearly double the use of Shamba Shape-up, in a short

• WA4B (API) must be approved by Facebook. Government Agencies aren't allowed accounts so Mercy Corps stepped up to become the locally approved implementing

• Lack of smartphones and access to internet across Ethiopia drove the team to employ ATA agents as the the data collectors. While this may seem an issue, it turned out that managing the rollout with support and training drove higher engagement.





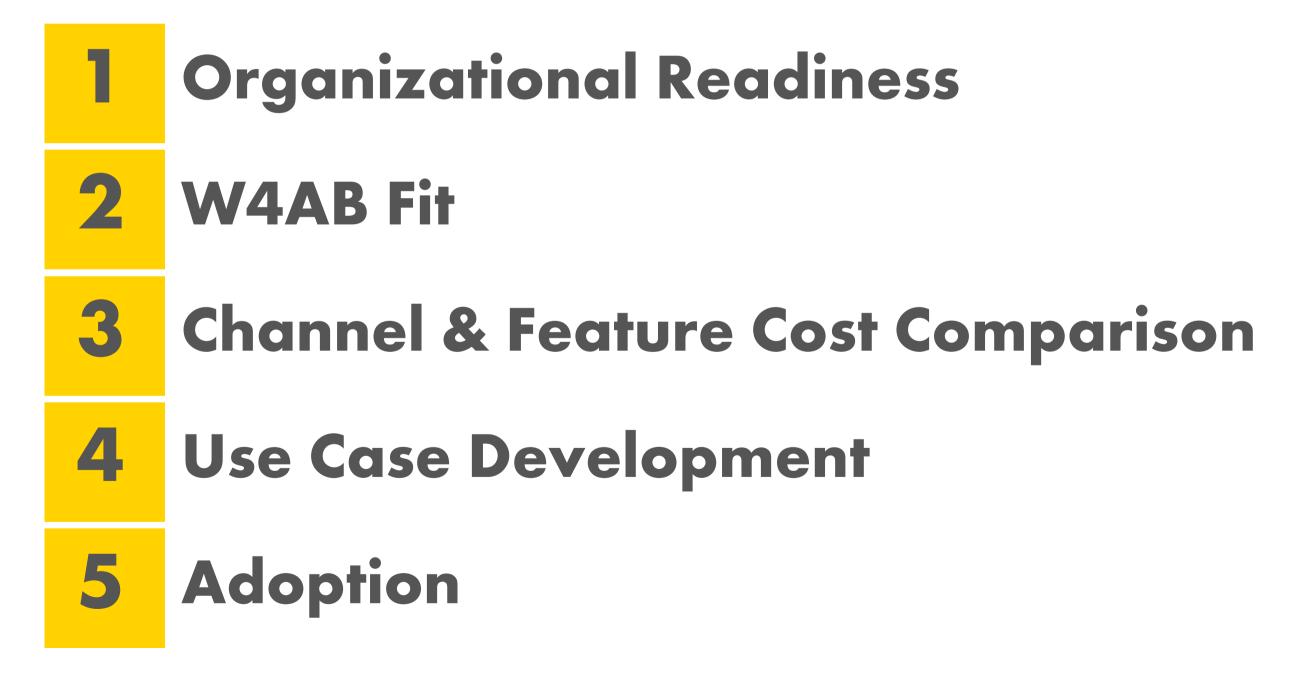
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### LEARNINGS FROM THE SANDBOX EXPERIENCE

Early WA4B use cases indicate that **WA4B has the potential to scale solutions for SHFs.** What are the early learnings that can inform agriculture / finance organizations on their considerations?





## **1.ORGANIZATIONAL READINESS**

Taking on both the Sandbox and/or WA4B requires commitment from the implementing organization. Here are insights that have allowed both the current and next-generation Sandbox participants to trial and launch applications. Of course, it's early, so we're still watching for what will succeed.



- Project
   Sponsorship
- Assignment of Resources
- Long term vision

- Communications strategy fit
- Target users
- Promotion
- Training & Support

- Cross-functional team engagement
- Product
- Marketing
- Engineering
- Partners

Balance cost coverage with other forms of revenue generation
Path to scale

- MVP Launch
- User feedback
- Product Evolution
- Pivot possibilities





### **2. W4B FIT**

WA4B is not a standalone solution. WA4B is geared to smartphone users, and farmers are still early in the adoption curve for smartphones and new digital services. WA4B can be combined with other channels to optimize communications to a users based on their communications needs/style and digital capacity. The table below compares key features of WA4B against other common channels.

Channel // Factor Potential	Internal Extension Teams Using W4B	Direct Training	Call Cente	r SMS	Social Media	W4B	TV/Radio
Scale	Low - Medium	Low - Medium	Low	Medium - High	Medium – High	High	Very High
1:1 Engagement	High	Medium - High	High	Low	High	High	Very Low
Cost/ Engagement	High	Medium - High	High	Medium	Medium – High	Low	N/A
AI/ML or other User Journey	Low	Low	Low	Medium	Low	High	Medium
Data/ Measurement	High	Low	Low	Medium	Medium	High	Low





### **3. CHANNEL & FEATURE COST COMPARISON**

For the right applications targeted at digitally savvy smartphone users. WA4B offers the best performance. Note these examples are for illustrative purposes only.

CHANNEL	ASSUMPTIONS	DAILY REACH	MONTHLY COST
Call Center	5 reps 20 calls/day	100	\$2,500
SMS	SMSs outbound to 10,000	10k	\$500/rep \$1,500
WhatsApp	10,000 users/day Unlimited interactions	10k	(\$.005/unit) \$500

#### **FEATURES**

Personal support

Info Limited Interaction Learning Journeys

Rich Info Interaction Unlimited Learning Journeys

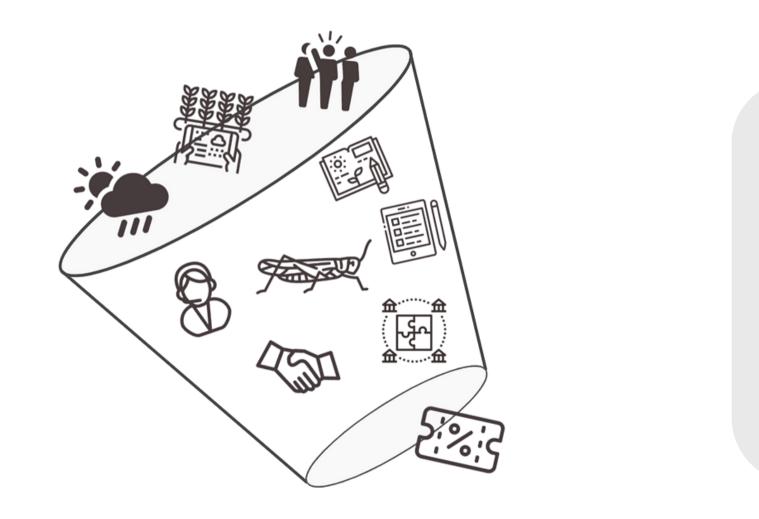






### **4. USE CASE DEVELOPMENT**

Of the use cases that graduated from the Sandbox, simplicity was key. Once the Minimum Viable Product (MVP) was launched, user feedback and new opportunities are driving more complex feature roadmaps. In some instances, design experts were brought in to assist in the initial process.





### **IDEATION**

### **SCREENING**



### PROTOTYPING







## **5. USER ADOPTION AND ACTIVE USE**

It is still too soon in the WA4B adoption cycle to identify best practices for adoption. However, early indicators can be gleaned from the Locust Hotline which was implemented in two different countries and to very different users.

<b>EXAMPLE ORG</b>	MEDIAE/ISHAMBA	ΑΤΑ
Situation	Prepared country wide for reporting by citizens. Locusts entered in North where there is low digital and TV reach.	Focused on one reg where locust were t worst, used Ag expe to collect data.
Implementation	TV and SMS Targeting Farmers & Citizens Nationwide	Training Regional Ex Limited TV & Radio
Active User Timeline	April - Dec	Aug - Dec
Active Users*	379	650
Messages	9,425	21,148

\*Active Users = unique users during this time period.

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While it's hard to compare these cases due to widely differing environmental conditions, **two conclusions may be drawn:** 

(1) Training, support, and recurring organizational awareness did drive increased adoption

(2) This tool to address a fairly complex pest situation may be better targeted as an extension agent augmentation rather than as a public-facing mass citizen reporting tool.





# **CONCLUSIONS & NEXT STEPS**

- Employing WhatsApp for Business in the social impact space in agriculture is new, with **use cases** nascent yet rapidly emerging.
- Pioneers have shown the potential of the solution in responding to a multitude of use cases, though work remains to fully match the potential of WhatsApp for Business with agricultural realities.
- AgriFin will continue to invest in the WhatsApp for Business Sandbox in 2021 to widen both the bespoke solutions offered whilst working towards our vision of an open content platform for agriculture.
- This case study showcases what we have learned over the last year of working in this rapidly changing field; as the year progresses, we expect to publish follow-up pieces to this case study highlighting the evolution of our work.
- If you are interested in learning more about AgriFin's work with WhatsApp for Business or our work in general, or are interested in collaborating, please reach out to us.



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