00:00:00:00 - 00:00:17:20

Vanessa Goas

Welcome to "Data…for What?!," the Development Gateway podcast. I'm your host, Vanessa Goas. And in this series, we'll explore combating climate change with data. In each episode will delve into the pressing issues shaping our world by examining the critical role of data and technology in understanding and addressing the urgent challenge of climate change.

00:00:19:14 - 00:00:28:00

Vanessa Goas

In this episode, we're looking at climate action efforts that prioritize contextually appropriate collaborations to create solutions mitigating the effects of climate change.

00:00:28:00 - 00:00:34:05

Vanessa Goas

for this conversation, I'm stepping back from hosting, and my colleague Charlene, big roommate is leading the conversation.

00:00:34:11 - 00:00:35:18

Vanessa Goas

Over to you, Charlene.

00:00:36:13 - 00:00:37:15

Charlene Migwe-Kagume

Thanks, Vanessa.

00:00:37:21 - 00:00:40:21

Charlene Migwe-Kagume

my name is Shelley McGuire. I am based in Nairobi

00:00:41:00 - 00:00:41:16

Charlene Migwe-Kagume

and I'm from

00:00:41:16 - 00:00:42:17

Charlene Migwe-Kagume

Development Gateway

00:00:42:17 - 00:00:44:01

Charlene Migwe-Kagume

where I, Accenture.

00:00:44:04 - 00:00:47:01

Charlene Migwe-Kagume

And today we're joined by Lillian to go.

00:00:47:01 - 00:00:53:02

Charlene Migwe-Kagume

We call her Leo, who's at the local development research Institute. And I hand it over to her to introduce herself.

00:00:53:02 - 00:00:56:13

Leonida Mutuku

Thanks, Shelly. Thanks, Vanessa, for having me on this podcast.

00:00:56:16 - 00:01:01:05

Leonida Mutuku

I lead the AI practice at the Local Development Research Institute.

00:01:01:05 - 00:01:13:08

Leonida Mutuku

as Shelly has mentioned, and maybe I'll just briefly give a brief overview of LDA right before we get started. So LDA is an action oriented think tank based in Nairobi, Kenya,

00:01:13:11 - 00:01:19:09

Leonida Mutuku

and we support African countries in their efforts to end extreme poverty, hunger and poverty

00:01:19:12 - 00:01:21:11

Leonida Mutuku

using data and technology.

00:01:21:14 - 00:01:27:14

Charlene Migwe-Kagume

Thanks, Theo. And yeah, today's topic is pretty exciting. It's something that we discussed in the past before, something we're both

00:01:27:17 - 00:01:30:03

Charlene Migwe-Kagume

passionate about. And it's speaking about,

00:01:30:03 - 00:01:33:02

Charlene Migwe-Kagume

context specific, as Vanessa mentioned, climate action,

00:01:33:05 - 00:01:35:04

Charlene Migwe-Kagume

and thinking about how it's essential to

00:01:35:04 - 00:01:36:20

Charlene Migwe-Kagume

combat climate change in a way

00:01:36:23 - 00:01:41:09

Charlene Migwe-Kagume

that protects and supports those individuals and communities most impacted by,

00:01:41:09 - 00:01:42:03

Charlene Migwe-Kagume

climate change

00:01:42:06 - 00:01:44:13

Charlene Migwe-Kagume

and LDA, Leo, and your team

00:01:44:16 - 00:01:45:21

Charlene Migwe-Kagume

you've been working for,

00:01:45:21 - 00:01:47:06

Charlene Migwe-Kagume

a while on,

00:01:47:09 - 00:01:48:20

Charlene Migwe-Kagume

an early warning system

00:01:48:20 - 00:01:51:01

Charlene Migwe-Kagume

that adopts more of an AI tool,

00:01:51:01 - 00:01:52:06

Charlene Migwe-Kagume

really targeted at farmers.

00:01:52:06 - 00:01:53:11

Charlene Migwe-Kagume

So we're excited to,

00:01:53:11 - 00:01:56:16

Charlene Migwe-Kagume

dive deeper into the conversation and learn more about what you're doing.

00:01:56:19 - 00:01:59:10

Charlene Migwe-Kagume

I think what excites me the most about the work that you're doing is

00:01:59:13 - 00:02:03:18

Charlene Migwe-Kagume

it's really building something from the ground up, building it with communities.

00:02:03:21 - 00:02:05:17

Charlene Migwe-Kagume

and maybe you could tell us a little bit about

00:02:05:20 - 00:02:08:21

Charlene Migwe-Kagume

your work at LDA right before we get into it and the role

00:02:08:21 - 00:02:10:21

Charlene Migwe-Kagume

contextualization, plays in it,

00:02:11:03 - 00:02:22:15

Leonida Mutuku

as I mentioned earlier, I lead our, accountable and inclusive practice. And as part of this, we support the development of standards and norms for accountable

00:02:22:18 - 00:02:25:07

Leonida Mutuku

and inclusive implementation of the public sector.

00:02:25:07 - 00:02:27:17

Leonida Mutuku

So a key focus area is really,

00:02:27:17 - 00:02:29:19

Leonida Mutuku

public sector adoption of AI.

00:02:29:22 - 00:02:35:16

Leonida Mutuku

but as much of that we also conduct research on AI innovations for development,

00:02:35:16 - 00:02:38:07

Leonida Mutuku

in our context in Africa, but also,

00:02:38:07 - 00:02:42:03

Leonida Mutuku

supporting the use of evidence informed policy,

00:02:42:03 - 00:02:51:09

Leonida Mutuku

specifically on how we can think about the enabling environment, human capital required and domestic financing that,

00:02:51:09 - 00:02:54:23

Leonida Mutuku

governments can consider so that we support,

00:02:54:23 - 00:02:56:15

Leonida Mutuku

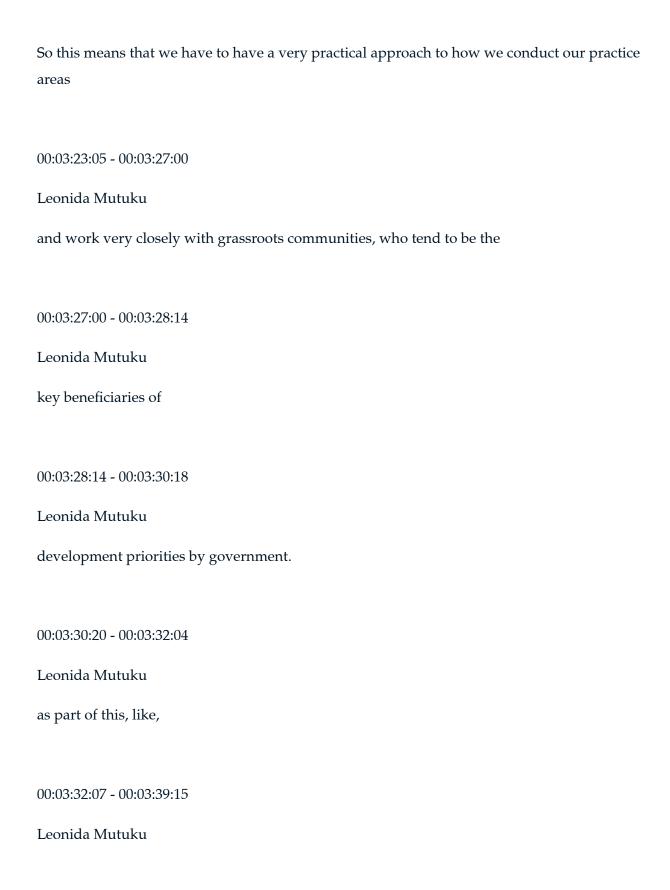ethical adoption of AI.

00:02:56:17 - 00:02:58:13

Leonida Mutuku

in terms of contextualization,

00:02:58:13 - 00:03:01:19

Leonida Mutuku

we tend to call ourselves, system orchestrators,

00:03:01:19 - 00:03:06:16

Leonida Mutuku

in the sense that we work with local communities and deploy technology,

00:03:06:16 - 00:03:10:09

Leonida Mutuku

within these communities, but also use that work

00:03:10:10 - 00:03:12:17

Leonida Mutuku

to collect evidence that informs,

00:03:12:17 - 00:03:16:20

Leonida Mutuku

policymaking. And so we advocate for better policies based on that evidence.

00:03:16:20 - 00:03:23:02

Leonida Mutuku

So this means that we have to have a very practical approach to how we conduct our practice areas

00:03:23:05 - 00:03:27:00

Leonida Mutuku

and work very closely with grassroots communities, who tend to be the

00:03:27:00 - 00:03:28:14

Leonida Mutuku

key beneficiaries of

00:03:28:14 - 00:03:30:18

Leonida Mutuku

development priorities by government.

00:03:30:20 - 00:03:32:04

Leonida Mutuku

as part of this, like,

00:03:32:07 - 00:03:39:15

Leonida Mutuku

even across Africa, we work with local researchers and governments. So we don't assume that we are the only experts in this space.

00:03:39:18 - 00:03:40:05

Leonida Mutuku

And,

00:03:40:05 - 00:03:43:14

Leonida Mutuku

we work with them to ensure our research and implementation,

00:03:43:14 - 00:03:47:11

Leonida Mutuku

is very contextual and has a real chance of positive impact.

00:03:47:13 - 00:03:52:17

Leonida Mutuku

so different researchers in the different countries who are could help us navigate the nuances

00:03:52:17 - 00:03:57:19

Leonida Mutuku

and make thoughtful considerations for the inclusive solutions

00:03:57:19 - 00:03:58:09

Leonida Mutuku

that

00:03:58:09 - 00:03:58:17

Leonida Mutuku

meet

00:03:58:17 - 00:03:59:18

Leonida Mutuku

the needs of each of,

00:03:59:18 - 00:04:01:18

Leonida Mutuku

these contexts that you're working with.

00:04:01:22 - 00:04:08:20

Leonida Mutuku

Shalini, you mentioned about our AI and the warning system which we are building for smallholder agriculture in Kenya.

00:04:08:20 - 00:04:11:15

Leonida Mutuku

So for us, we've taken a very participatory approach

00:04:11:17 - 00:04:15:19

Leonida Mutuku

and work very closely with those from our communities to design the AI,

00:04:16:00 - 00:04:24:07

Leonida Mutuku

collect data from these farms with farmers, and to ensure that we include indigenous knowledge from the farmers.

00:04:24:07 - 00:04:26:03

Leonida Mutuku

As we are developing the AI.

00:04:26:08 - 00:04:29:01

Leonida Mutuku

So we collect feedback from these farmers,

00:04:29:01 - 00:04:30:20

Leonida Mutuku

each season to maintain trust.

00:04:30:21 - 00:04:43:12

Leonida Mutuku

And of course, as we progress along, I will share more about our methodology and our approach and how, we use this data to contextualize, the AI we are building.

00:04:43:13 - 00:04:46:22

Charlene Migwe-Kagume

the what the two Palmer did really well is practical approach.

00:04:46:22 - 00:04:48:01

Charlene Migwe-Kagume

and thinking through,

00:04:48:03 - 00:04:52:21

Charlene Migwe-Kagume

the nuances and working with local communities and of course see indigenous knowledge, which is interesting to see.

00:04:52:23 - 00:04:53:11

Charlene Migwe-Kagume

similar

00:04:53:11 - 00:04:54:08

Charlene Migwe-Kagume

strategy we've seen,

00:04:54:08 - 00:04:57:07

Charlene Migwe-Kagume

I would say over the past 20 years speaking through,

00:04:57:07 - 00:05:02:15

Charlene Migwe-Kagume

the implementations we've done with governments, with development partners, with different communities themselves.

00:05:02:15 - 00:05:05:00

Charlene Migwe-Kagume

context does play an important role in our work.

00:05:05:02 - 00:05:09:04

Charlene Migwe-Kagume

the most frustrating part is have seen this come up quite a bit in climate,

00:05:09:04 - 00:05:13:09

Charlene Migwe-Kagume

work and climate implementation that's been happening in the past few years

00:05:13:09 - 00:05:14:09

Charlene Migwe-Kagume

where we're seeing a lot of

00:05:14:09 - 00:05:15:04

Charlene Migwe-Kagume

serious

00:05:15:04 - 00:05:18:09

Charlene Migwe-Kagume

engagement that's needed with local communities.

00:05:18:19 - 00:05:20:22

Charlene Migwe-Kagume

So I think we could dig a bit deeper into

00:05:21:00 - 00:05:25:16

Charlene Migwe-Kagume

big one, which is, I think, at the beginning of every project, which is trust and gathering data.

00:05:25:22 - 00:05:28:15

Charlene Migwe-Kagume

there's a need for a representative and inclusive data,

00:05:28:19 - 00:05:29:15

Charlene Migwe-Kagume

particularly for

00:05:29:15 - 00:05:33:04

Charlene Migwe-Kagume

platforms such as yourself, to train early warning systems.

00:05:33:08 - 00:05:34:12

Charlene Migwe-Kagume

in Kenya we have

00:05:34:14 - 00:05:37:06

Charlene Migwe-Kagume

key planting seasons, right? We have March in September,

00:05:37:08 - 00:05:39:14

Charlene Migwe-Kagume

and this that's it. If you give a farmer,

00:05:39:16 - 00:05:41:16

Charlene Migwe-Kagume

the wrong information. During those seasons.

00:05:41:16 - 00:05:44:05

Charlene Migwe-Kagume

the hit really hard for, for a number of months.

00:05:44:08 - 00:05:45:19

Charlene Migwe-Kagume

So having and knowing

00:05:45:19 - 00:05:48:20

Charlene Migwe-Kagume

the importance some of this information systems play a role in

00:05:48:20 - 00:05:50:04

Charlene Migwe-Kagume

in farmer livelihoods

00:05:50:07 - 00:05:55:06

Charlene Migwe-Kagume

and ensuring that the data that feeds the systems are representative and inclusive.

00:05:55:09 - 00:06:01:01

Charlene Migwe-Kagume

what are some of the lessons you've learned in how best to gather this data from local farmers and any other data producers?

00:06:01:03 - 00:06:04:03

Leonida Mutuku

giving a little bit of background to this work, we're doing,

00:06:04:05 - 00:06:09:07

Leonida Mutuku

we've been, I would say building and testing this early warning system for about two years now.

00:06:09:09 - 00:06:10:16

Leonida Mutuku

and as you know,

00:06:10:16 - 00:06:13:08

Leonida Mutuku

data collection exercises can be quite,

00:06:13:08 - 00:06:19:21

Leonida Mutuku

extractive in nature. So for us, we've had to figure out how to center trust in the process.

00:06:19:23 - 00:06:30:00

Leonida Mutuku

And to build this AI, we are required to use data from satellite images, but also ground truth data from the farms that we monitor.

00:06:30:00 - 00:06:32:22

Leonida Mutuku

building trust begins with how we even collect the data.

00:06:33:00 - 00:06:43:18

Leonida Mutuku

and each zone, we work with a small group of champion farmers to help us monitor the farms. So we are not necessarily the ones on the ground collecting data, but working hand in hand with these farmers

00:06:43:19 - 00:06:45:09

Leonida Mutuku

and champion farmers.

00:06:45:09 - 00:06:53:11

Leonida Mutuku

We tend to describe them as trusted members of communities. So these are local leaders in most cases

00:06:53:13 - 00:06:54:06

Leonida Mutuku

and

00:06:54:06 - 00:06:56:01

Leonida Mutuku

early adopters of technology.

00:06:56:01 - 00:06:57:12

Leonida Mutuku

And I always have to remind people.

00:06:57:12 - 00:06:57:23

Charlene Migwe-Kagume

That.

00:06:58:01 - 00:06:59:17

Leonida Mutuku

Technology is not so much

00:06:59:17 - 00:07:07:01

Leonida Mutuku

just the use of smartphones or laptops or what have you. But even in the agriculture context, thinking about,

00:07:07:01 - 00:07:16:02

Leonida Mutuku

technology in the form of new seed varieties, which are in this case, climate smart varieties that are drought resistant or early maturing,

00:07:16:03 - 00:07:22:19

Leonida Mutuku

to help them adapt to climate change. And then, many of these champion farmers are also from our networks.

00:07:22:19 - 00:07:23:13

Leonida Mutuku

So

00:07:23:13 - 00:07:24:12

Leonida Mutuku

as I mentioned earlier,

00:07:24:16 - 00:07:25:06

Leonida Mutuku

we've been,

00:07:25:06 - 00:07:26:06

Leonida Mutuku

running our drive

00:07:26:06 - 00:07:32:12

Leonida Mutuku

for ten years soon and for seven of those years have been working very closely with farmer communities.

00:07:32:12 - 00:07:39:07

Leonida Mutuku

So picked these champion farmers from those networks where we've, engaged with them repeatedly and built trust.

00:07:39:07 - 00:07:42:14

Leonida Mutuku

But, well, we are moving into new locations,

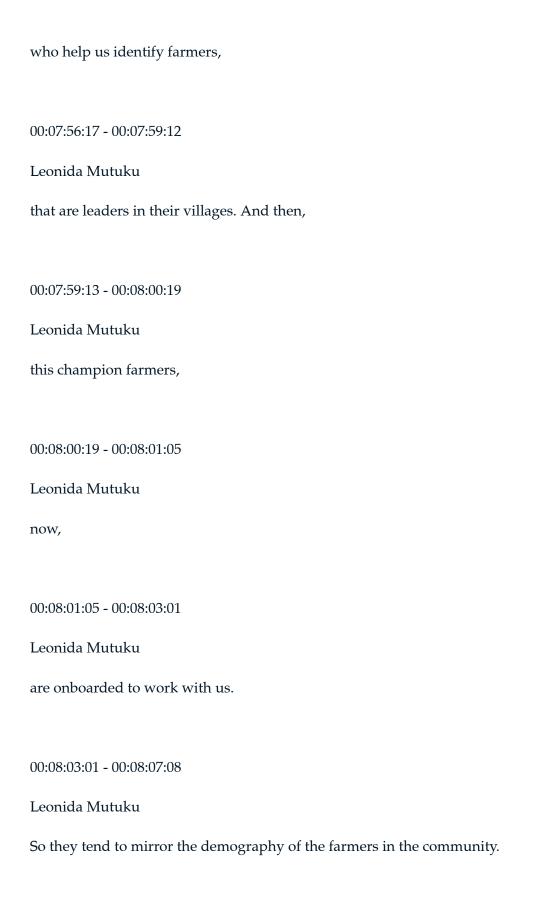00:07:42:16 - 00:07:45:09

Leonida Mutuku

like counties we haven't worked in before.

00:07:45:09 - 00:07:54:11

Leonida Mutuku

we work with the local government offices in charge of agriculture. So, for example, in Kenya, these are called the ward agriculture officers

00:07:54:11 - 00:07:56:17

Leonida Mutuku

who help us identify farmers,

00:07:56:17 - 00:07:59:12

Leonida Mutuku

that are leaders in their villages. And then,

00:07:59:13 - 00:08:00:19

Leonida Mutuku

this champion farmers,

00:08:00:19 - 00:08:01:05

Leonida Mutuku

now,

00:08:01:05 - 00:08:03:01

Leonida Mutuku

are onboarded to work with us.

00:08:03:01 - 00:08:07:08

Leonida Mutuku

So they tend to mirror the demography of the farmers in the community.

00:08:07:08 - 00:08:09:07

Leonida Mutuku

So in our case,

00:08:09:07 - 00:08:10:17

Leonida Mutuku

they range in age from

00:08:10:17 - 00:08:20:04

Leonida Mutuku

18 years to 65 years. And both male and female. And because most smallholder farmers are female, also, most of our champion farmers are female.

00:08:20:06 - 00:08:24:09

Leonida Mutuku

one thing about context is that, you know, you want,

00:08:24:11 - 00:08:30:15

Leonida Mutuku

some households are run by male, people or some farms are, run by men.

00:08:30:15 - 00:08:36:05

Leonida Mutuku

So at that point they might be more comfortable engaging with their male counterparts.

00:08:36:05 - 00:08:40:03

Leonida Mutuku

and the same applies for where the farms are run by. But women.

00:08:40:03 - 00:08:53:12

Leonida Mutuku

And so for this farmers, we, provide them with their smartphone data bundles and train them how to collect data, but most importantly, how to seek consent from farmers. Each week they visit the farm.

00:08:53:14 - 00:09:00:05

Leonida Mutuku

So both the champion farmers and the farmers know that they can withdraw consent to participate at any time.

00:09:00:05 - 00:09:04:03

Leonida Mutuku

And as we are doing the training, we also walk them through,

00:09:04:03 - 00:09:05:03

Leonida Mutuku

how

00:09:05:03 - 00:09:13:07

Leonida Mutuku

the data they collect will be used to train the AI models. So you can imagine how hard of a task this is trying to

00:09:13:10 - 00:09:17:08

Leonida Mutuku

find in local language terms like what AI is like in Swahili.

00:09:17:08 - 00:09:22:08

Leonida Mutuku

We've had to use a word like, Achille Banda, which,

00:09:22:10 - 00:09:24:03

Leonida Mutuku

direct translation would mean like,

00:09:24:03 - 00:09:42:21

Leonida Mutuku

a fake brain or an artificial brain. just to explain what AI is. And then the final thing is how we incentivize the farmers to participate originally would give them some demo seeds that they could test out in their farms, especially of these climate smart varieties.

00:09:42:23 - 00:09:46:14

Leonida Mutuku

But of late, based on listening to feedback from farmers,

00:09:46:14 - 00:09:50:17

Leonida Mutuku

we actually do practical agronomist sessions

00:09:50:19 - 00:10:03:23

Leonida Mutuku

where the farmers also learn how to better, produce their crop without just waiting for the AI. So every so often we are deep in the farms, interacting with the farmers. So for us, technology building is not just the

00:10:04:01 - 00:10:09:21

Leonida Mutuku

data collection and the model building, but also that continuous, sustained engagement with the farmers.

00:10:09:23 - 00:10:17:08

Charlene Migwe-Kagume

it's exciting to see your multi-stakeholder approach where you're talking to both government and then more a representative set of farmers.

00:10:17:11 - 00:10:20:02

Charlene Migwe-Kagume

and I've learned what AI is in Kiswahili for the first time.

00:10:20:04 - 00:10:26:08

Charlene Migwe-Kagume

and thinking about the value to, to the farmers, I think I have just a follow up question on that.

00:10:26:08 - 00:10:28:03

Charlene Migwe-Kagume

In terms of the champion farmers,

00:10:28:05 - 00:10:32:08

Charlene Migwe-Kagume

how do you ensure sustained engagement and trust with them?

00:10:32:11 - 00:10:35:02

Charlene Migwe-Kagume

beyond the duration of the project or during the project,

00:10:35:05 - 00:10:39:23

Leonida Mutuku

the first thing that we do and I think is the least important is that,

00:10:39:23 - 00:10:47:15

Leonida Mutuku

given that these farmers actually do have day jobs, which is farming, and they have to take time out of their day jobs to engage with us.

00:10:47:15 - 00:10:48:20

Leonida Mutuku

we do paid them,

00:10:48:20 - 00:10:53:10

Leonida Mutuku

fee for the time they take out of their daily activities to help us collect data.

00:10:53:14 - 00:11:01:08

Leonida Mutuku

we have a small contract with them and a nominal fee that we pay them just to, to appreciate them for the time they've taken out of their day to day.

00:11:01:12 - 00:11:07:13

Leonida Mutuku

But no beyond the data collection, because each season we do tend to work with different farmers.

00:11:07:16 - 00:11:13:22

Leonida Mutuku

we've found that the just that sustained engagement through agronomy advisory,

00:11:14:00 - 00:11:19:08

Leonida Mutuku

and inviting them to attend hands on sessions in what we run,

00:11:19:10 - 00:11:27:16

Leonida Mutuku

every so often called farmer field schools, which are now like just hands on demos at, local agriculture.

00:11:27:16 - 00:11:32:19

Leonida Mutuku

training centers in the counties. So farmers basically visit them and,

00:11:32:19 - 00:11:38:20

Leonida Mutuku

learn hands on, like from planting to harvesting, what to expect of different varieties. So,

00:11:38:22 - 00:11:40:09

Leonida Mutuku

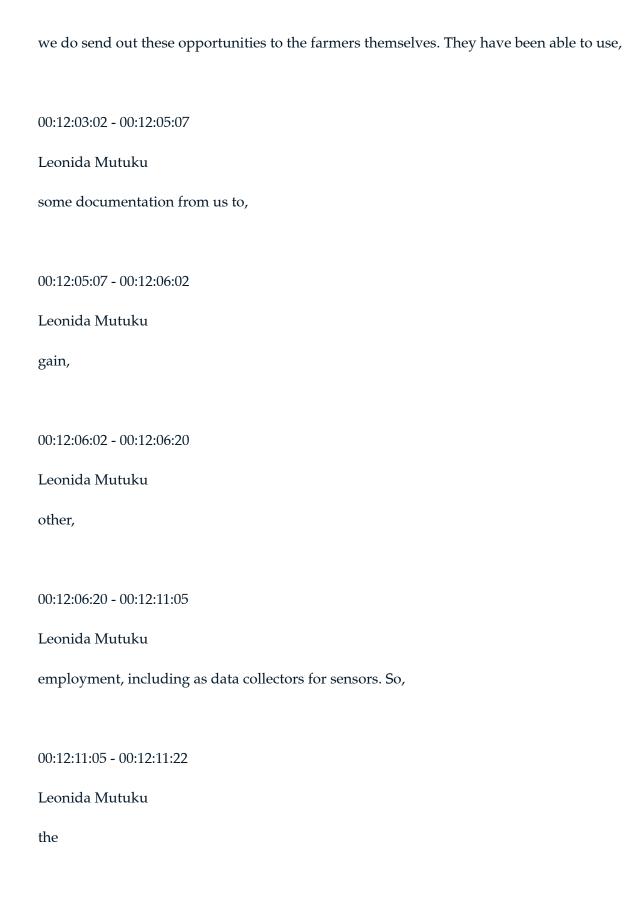we find that that's

00:11:40:09 - 00:11:55:08

Leonida Mutuku

sustained engagement on the, from a practical standpoint, it's very helpful to keep them as champions for work. But finally, we tend to have many opportunities with different partners who want to work with these farmers.

00:11:55:08 - 00:11:56:14

Leonida Mutuku

And and so,

00:11:56:16 - 00:12:03:00

Leonida Mutuku

we do send out these opportunities to the farmers themselves. They have been able to use,

00:12:03:02 - 00:12:05:07

Leonida Mutuku

some documentation from us to,

00:12:05:07 - 00:12:06:02

Leonida Mutuku

gain,

00:12:06:02 - 00:12:06:20

Leonida Mutuku

other,

00:12:06:20 - 00:12:11:05

Leonida Mutuku

employment, including as data collectors for sensors. So,

00:12:11:05 - 00:12:11:22

Leonida Mutuku

the

00:12:11:22 - 00:12:14:06

Leonida Mutuku

benefit for them goes beyond just,

00:12:14:06 - 00:12:18:12

Leonida Mutuku

collecting data for this period of time to like a sustained network over time.

00:12:18:14 - 00:12:23:01

Leonida Mutuku

And farmers regularly also have access to the AI for free,

00:12:23:01 - 00:12:30:09

Leonida Mutuku

given that they have contributed to building it so we don't charge them to access the recommendations and the advisory coming out of it.

00:12:30:13 - 00:12:31:17

Charlene Migwe-Kagume

Oh, awesome.

00:12:31:19 - 00:12:34:03

Charlene Migwe-Kagume

a development given we've been thinking about,

00:12:34:03 - 00:12:37:19

Charlene Migwe-Kagume

how do we move from the extractive nature of a number of,

00:12:37:19 - 00:12:40:13

Charlene Migwe-Kagume

past and existing data initiatives,

00:12:40:15 - 00:12:47:11

Charlene Migwe-Kagume

to make sure that, the value that's derived from this data initiatives also trickle down to the,

00:12:47:11 - 00:12:48:17

Charlene Migwe-Kagume

providers of the data.

00:12:48:23 - 00:12:52:03

Charlene Migwe-Kagume

you've highlighted really well on how do you package value

00:12:52:06 - 00:12:54:09

Charlene Migwe-Kagume

the stakeholders who support

00:12:54:12 - 00:12:56:03

Charlene Migwe-Kagume

the ecosystem in providing,

00:12:56:03 - 00:12:56:22

Charlene Migwe-Kagume

that data?

00:12:57:02 - 00:12:58:19

Charlene Migwe-Kagume

now thinking more about,

00:12:58:19 - 00:13:00:00

Charlene Migwe-Kagume

Co-designing,

00:13:00:00 - 00:13:01:04

Charlene Migwe-Kagume

which has been

00:13:01:04 - 00:13:06:11

Charlene Migwe-Kagume

acquired since I started in the sector that has been used in a lot of our digital rollouts.

00:13:06:13 - 00:13:12:11

Charlene Migwe-Kagume

a do we think about we have the custom assessment, landscaping methodology. In short, we call it

00:13:12:14 - 00:13:19:12

Charlene Migwe-Kagume

where we carry out assessments to understand the the full ecosystem that will allow for data digital.

00:13:19:12 - 00:13:31:00

Charlene Migwe-Kagume

platforms or initiatives to really have the most impact. So thinking about the different stakeholders, thinking about already existing platforms, thinking about capacity, infrastructure,

00:13:31:00 - 00:13:36:04

Charlene Migwe-Kagume

and then we use that do findings of course, now to situate some of the initiatives that we've done in the past.

00:13:36:06 - 00:13:38:00

Charlene Migwe-Kagume

But I think LDA, right

00:13:38:00 - 00:13:45:03

Charlene Migwe-Kagume

you have done quite a bit of co-designing work, and I'd be interested to know, what do you think of co-design in practice as in terms of building,

00:13:45:03 - 00:13:48:00

Charlene Migwe-Kagume

the ground up and what are the best practices you've learned,

00:13:48:00 - 00:13:49:04

Charlene Migwe-Kagume

about co-design

00:13:49:06 - 00:13:52:13

Leonida Mutuku

for us, what we have discovered is that,

00:13:52:13 - 00:14:02:05

Leonida Mutuku

co-design is not a, checkbox exercise. It's even, matters a lot to the success and failure of of our, data collection

00:14:02:05 - 00:14:06:02

Leonida Mutuku

and the ultimate models that you build from this data, we collect.

00:14:06:08 - 00:14:11:18

Leonida Mutuku

starters, before we collect data at the beginning of each planting season,

00:14:11:21 - 00:14:15:08

Leonida Mutuku

we tend to have what you call the onboarding trainings.

00:14:15:11 - 00:14:16:19

Leonida Mutuku

So beyond just,

00:14:16:19 - 00:14:19:15

Leonida Mutuku

teaching the farmers how to utilize

00:14:19:15 - 00:14:23:02

Leonida Mutuku

our forms and our technology to collect data,

00:14:23:02 - 00:14:26:07

Leonida Mutuku

to train the models, the other thing that we do is have,

00:14:26:10 - 00:14:27:22

Leonida Mutuku

very open

00:14:27:22 - 00:14:29:05

Leonida Mutuku

focus group discussion.

00:14:29:05 - 00:14:34:02

Leonida Mutuku

If you me, when we get to understand like what have been their practices,

00:14:34:02 - 00:14:35:14

Leonida Mutuku

in the farms

00:14:35:16 - 00:14:38:19

Leonida Mutuku

over the last few seasons, like what are they observing?

00:14:38:19 - 00:14:40:01

Leonida Mutuku

are their challenges?

00:14:40:01 - 00:14:45:17

Leonida Mutuku

how are they using technologies? Do they have solutions similar to the ones we are trying to provide?

00:14:45:17 - 00:14:48:09

Leonida Mutuku

is offering just in time advisory,

00:14:48:09 - 00:14:50:19

Leonida Mutuku

for farmers as they are planting

00:14:50:19 - 00:14:55:16

Leonida Mutuku

and from there we learn like, okay, here there's shortcomings, let's say, with the messages that they're getting

00:14:55:16 - 00:14:58:20

Leonida Mutuku

from the government, which tends to be very,

00:14:58:20 - 00:15:00:03

Leonida Mutuku

macro focused

00:15:00:05 - 00:15:02:18

Leonida Mutuku

in terms of planting and agriculture that,

00:15:02:20 - 00:15:12:13

Leonida Mutuku

different ecological zones have different microclimates. So that's the kind of messaging they're getting is not useful. So I'll give the example of,

00:15:12:13 - 00:15:21:12

Leonida Mutuku

Campbell County, which we work in. There's, you know, Upper Campbell and Lower Campbell that are the rainier parts of Campbell. They the drier parts of Campbell.

00:15:21:12 - 00:15:22:19

Leonida Mutuku

So if you just see,

00:15:22:19 - 00:15:32:07

Leonida Mutuku

you can start planting in on March 15th in Campbell County, it takes away from vaccine. so understanding those challenges they have with current

00:15:32:07 - 00:15:42:04

Leonida Mutuku

advisor is really important. Understanding their use of technology, understanding how they operate in the farms and what they're planting. And,

00:15:42:04 - 00:15:45:09

Leonida Mutuku

what's going on in the community is really important for us.

00:15:45:10 - 00:15:52:16

Leonida Mutuku

so that sometimes they finally go back to the drawing board and have to redesign the way we are going to collect data

00:15:52:18 - 00:15:56:14

Leonida Mutuku

just to account for what we have learned from that onboarding session.

00:15:56:16 - 00:16:06:13

Leonida Mutuku

Then the second thing that we do is that as part of data collection, as I mentioned, we really want to include indigenous knowledge in the design of the AI.

00:16:06:16 - 00:16:08:05

Leonida Mutuku

So we ask farmers,

00:16:08:05 - 00:16:28:05

Leonida Mutuku

before they finish up form that, from, from our farm to leave us a voice notes, if they'd like, with their own observations on what is happening on their farms. So this voice notes tend to be in English, Kiswahili or the local language. And we we listen to every voice notes that is left to us and

00:16:28:05 - 00:16:30:05

Leonida Mutuku

label it for intent.

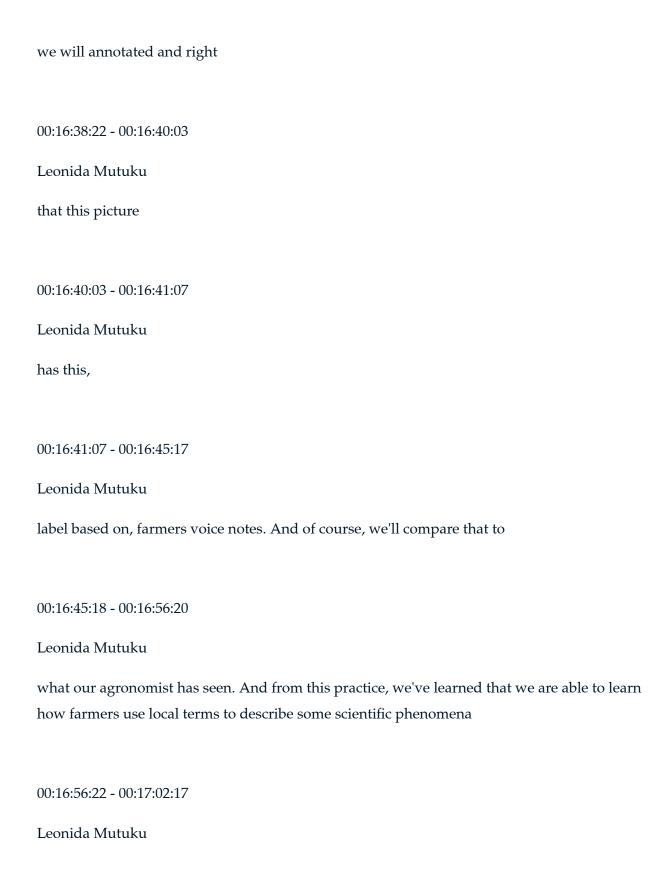00:16:30:05 - 00:16:35:14

Leonida Mutuku

So if the farm is describing that the I think that fall armyworm has,

00:16:35:14 - 00:16:37:01

Leonida Mutuku

invaded a specific farm,

00:16:37:01 - 00:16:38:20

Leonida Mutuku

we will annotated and right

00:16:38:22 - 00:16:40:03

Leonida Mutuku

that this picture

00:16:40:03 - 00:16:41:07

Leonida Mutuku

has this,

00:16:41:07 - 00:16:45:17

Leonida Mutuku

label based on, farmers voice notes. And of course, we'll compare that to

00:16:45:18 - 00:16:56:20

Leonida Mutuku

what our agronomist has seen. And from this practice, we've learned that we are able to learn how farmers use local terms to describe some scientific phenomena

00:16:56:22 - 00:17:02:17

Leonida Mutuku

which has been really helpful because we don't just want to predict whether a crop is healthy or not,

00:17:02:19 - 00:17:06:10

Leonida Mutuku

or whether there's a disease outbreak or a pest infestation,

00:17:06:11 - 00:17:09:22

Leonida Mutuku

or the likelihood of a seasonal crop failure.

00:17:09:23 - 00:17:10:10

Leonida Mutuku

We ask

00:17:10:10 - 00:17:15:23

Leonida Mutuku

ourselves the question, okay, what next? So we have done these predictions. Our models are doing well,

00:17:16:01 - 00:17:17:03

Leonida Mutuku

but the only way

00:17:17:05 - 00:17:33:04

Leonida Mutuku

our AI is useful to farmers is if we provide the right advisory for those predictions. So most of the advisory that's there is on Pest agricultural practices, from a national research

00:17:33:04 - 00:17:35:11

Leonida Mutuku

agency for agricultural control.

00:17:35:11 - 00:17:40:14

Leonida Mutuku

But these are not always fit for purpose. They are just more very standard and

00:17:40:14 - 00:17:43:03

Leonida Mutuku

are in formal scientific lingo.

00:17:43:03 - 00:17:47:04

Leonida Mutuku

But when farmers are engaging with us, they are asking us a specific question

00:17:47:06 - 00:17:55:20

Leonida Mutuku

So good agricultural practices or the standard acronym advisory would help that they need something more personalized, more targeted.

00:17:55:21 - 00:17:57:03

Leonida Mutuku

So just learning,

00:17:57:03 - 00:17:58:15

Leonida Mutuku

picking out key words

00:17:58:15 - 00:17:59:08

Leonida Mutuku

and

00:17:59:08 - 00:18:02:11

Leonida Mutuku

figuring out how to provide advisory,

00:18:02:11 - 00:18:05:17

Leonida Mutuku

in local language really has been the next level

00:18:05:20 - 00:18:06:15

Leonida Mutuku

for us to,

00:18:06:15 - 00:18:13:02

Leonida Mutuku

co-design and use farmer's input to get the right messaging back to them.

00:18:13:14 - 00:18:14:23

Charlene Migwe-Kagume

Thanks, Leo. Yeah, I think that makes sense

00:18:15:01 - 00:18:17:01

Charlene Migwe-Kagume

And you've touched an interesting point on

00:18:17:01 - 00:18:19:02

Charlene Migwe-Kagume

fit for purpose and we've seen

00:18:19:02 - 00:18:22:16

Charlene Migwe-Kagume

I really play an important role in ensuring

00:18:22:18 - 00:18:26:00

Charlene Migwe-Kagume

that people get the right information when they need it,

00:18:26:03 - 00:18:27:01

Charlene Migwe-Kagume

from big pools

00:18:27:01 - 00:18:28:01

Charlene Migwe-Kagume

of data sets

00:18:28:08 - 00:18:30:07

Charlene Migwe-Kagume

there are sometimes assumptions that

00:18:30:07 - 00:18:32:10

Charlene Migwe-Kagume

farmers will not use

00:18:32:10 - 00:18:37:14

Charlene Migwe-Kagume

on certain social media platforms or don't have smartphones. It is we are using a conflicting,

00:18:37:14 - 00:18:39:15

Charlene Migwe-Kagume

reality on the ground. Are you seeing,

00:18:39:15 - 00:18:45:10

Charlene Migwe-Kagume

farmers are able to use platforms such as WhatsApp or social media platforms, just trying to understand

00:18:45:10 - 00:18:50:19

Charlene Migwe-Kagume

when it's all said and done, what would be the output of using some of the models that you've developed for the farmer?

00:18:50:21 - 00:18:52:11

Leonida Mutuku

that's a really good question.

00:18:52:11 - 00:19:00:04

Leonida Mutuku

maybe just to before I answer that. So right now, what I, what I can do is we can predict,

00:19:00:04 - 00:19:13:01

Leonida Mutuku

guilt with reasonable accuracy given the date of planting and, and that year coordinates of a farm, we can predict, whether there's a pest infestation or,

00:19:13:01 - 00:19:17:19

Leonida Mutuku

a disease outbreak or whether the plant has a nutrition deficiency.

00:19:17:21 - 00:19:20:19

Leonida Mutuku

And then the final thing we can do is also predict,

00:19:20:21 - 00:19:30:12

Leonida Mutuku

area under cultivation and whether a farm has one crop or it's inter cropped. So, I mean, just that at face value, those are just,

00:19:30:12 - 00:19:33:00

Leonida Mutuku

probabilities. And, you know,

00:19:33:00 - 00:19:42:03

Leonida Mutuku

that would be the output of the model. So how this then translates into advisory is that for each like if we have reasonable

00:19:42:03 - 00:19:46:04

Leonida Mutuku

or sufficient probability to believe that a specific

00:19:46:04 - 00:19:48:17

Leonida Mutuku

issue is happening in the farm, then,

00:19:48:17 - 00:19:53:20

Leonida Mutuku

somebody needs to be provided with just in time information on,

00:19:53:20 - 00:19:54:14

Leonida Mutuku

what to do.

00:19:54:14 - 00:20:02:18

Leonida Mutuku

So if we have identified that, for instance, that is halo blight on the beans that a farmer has planted,

00:20:02:18 - 00:20:06:08

Leonida Mutuku

then the next thing you will be to like, how do you treat handle blight?

00:20:06:08 - 00:20:09:01

Leonida Mutuku

and then how do you apply? It really is

00:20:09:01 - 00:20:10:06

Leonida Mutuku

how we

00:20:10:06 - 00:20:19:00

Leonida Mutuku

know the child and method of delivery of this advisory to the farmers is the core of, of the work we are doing.

00:20:19:00 - 00:20:21:22

Leonida Mutuku

because building models ultimately, see, is just,

00:20:21:22 - 00:20:24:23

Leonida Mutuku

something a small part of a bigger play.

00:20:24:23 - 00:20:29:08

Leonida Mutuku

And so how we are thinking about this is in a number of ways,

00:20:29:08 - 00:20:31:04

Leonida Mutuku

the first thing we did is we,

00:20:31:04 - 00:20:35:06

Leonida Mutuku

did a survey amongst the farmers in our community, the ones

00:20:35:08 - 00:20:39:16

Leonida Mutuku

who are, champion farmers, but also the farmers whose farms we are monitoring.

00:20:39:16 - 00:20:42:11

Leonida Mutuku

And we realize, surprisingly, that,

00:20:42:11 - 00:20:44:12

Leonida Mutuku

smartphone penetration is 5050.

00:20:44:14 - 00:20:49:17

Leonida Mutuku

So basically we have about 50% of the farmers across the board,

00:20:49:17 - 00:20:51:09

Leonida Mutuku

with access to a smartphone

00:20:51:10 - 00:20:52:01

Leonida Mutuku

and

00:20:52:01 - 00:20:53:19

Leonida Mutuku

can use apps like WhatsApp.

00:20:53:19 - 00:20:59:09

Leonida Mutuku

Then the other 50% tend to have what you call feature phones that just have the general

00:20:59:09 - 00:21:04:07

Leonida Mutuku

messaging capabilities and and sharing. You know this from local language when it comes easy.

00:21:05:04 - 00:21:06:12

Leonida Mutuku

phones that,

00:21:06:12 - 00:21:10:20

Leonida Mutuku

don't have too much going on for them. Just good for texting and calling.

00:21:10:20 - 00:21:12:01

Leonida Mutuku

And so,

00:21:12:01 - 00:21:16:03

Leonida Mutuku

that was really important for us because we were not sure we wanted to build

00:21:16:03 - 00:21:18:23

Leonida Mutuku

for smartphones, but we wanted to build for,

00:21:18:23 - 00:21:22:06

Leonida Mutuku

feature phones. But then that comes the next question, like,

00:21:22:06 - 00:21:25:07

Leonida Mutuku

if I'm trying to tell you that you need to use

00:21:26:00 - 00:21:26:11

Leonida Mutuku

of,

00:21:26:11 - 00:21:27:16

Leonida Mutuku

pesticide

00:21:27:16 - 00:21:28:18

Leonida Mutuku

with these

00:21:28:18 - 00:21:30:14

Leonida Mutuku

active ingredient,

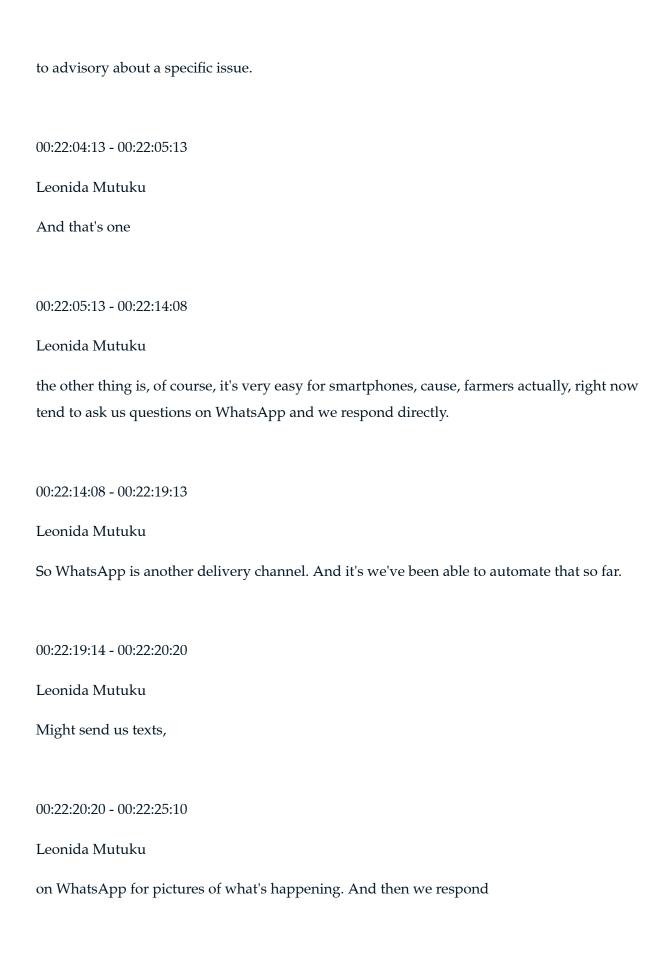00:21:30:14 - 00:21:31:12

Leonida Mutuku

to

00:21:31:12 - 00:21:32:14

Leonida Mutuku

mitigate,

00:21:32:14 - 00:21:33:20

Leonida Mutuku

a pest infestation.

00:21:33:22 - 00:21:36:13

Leonida Mutuku

from an image that just sounds really overwhelming

00:21:36:13 - 00:21:47:06

Leonida Mutuku

and might not be the best use of. Yeah, space for farmers. So here we decided that actually, most of our local language is are meant to be spoken.

00:21:47:06 - 00:21:51:02

Leonida Mutuku

So we need to start building a small language model,

00:21:51:02 - 00:21:52:15

Leonida Mutuku

that can,

00:21:52:15 - 00:21:55:08

Leonida Mutuku

move that text that would like to give farmers

00:21:55:08 - 00:21:56:03

Leonida Mutuku

to speech.

00:21:56:03 - 00:21:58:20

Leonida Mutuku

So what farmers can listen to is the,

00:21:58:20 - 00:22:01:21

Leonida Mutuku

tell us is decode and listen,

00:22:01:21 - 00:22:04:13

Leonida Mutuku

to advisory about a specific issue.

00:22:04:13 - 00:22:05:13

Leonida Mutuku

And that's one

00:22:05:13 - 00:22:14:08

Leonida Mutuku

the other thing is, of course, it's very easy for smartphones, cause, farmers actually, right now tend to ask us questions on WhatsApp and we respond directly.

00:22:14:08 - 00:22:19:13

Leonida Mutuku

So WhatsApp is another delivery channel. And it's we've been able to automate that so far.

00:22:19:14 - 00:22:20:20

Leonida Mutuku

Might send us texts,

00:22:20:20 - 00:22:25:10

Leonida Mutuku

on WhatsApp for pictures of what's happening. And then we respond

00:22:25:10 - 00:22:29:10

Leonida Mutuku

immediately based on how to identify that image.

00:22:29:10 - 00:22:32:18

Leonida Mutuku

And then the third channel. And here is where

00:22:32:18 - 00:22:36:04

Leonida Mutuku

we will never let go of some of these old school practices,

00:22:36:04 - 00:22:39:07

Leonida Mutuku

is using the champion farmers as intermediaries.

00:22:39:09 - 00:22:41:14

Leonida Mutuku

champion farmers, most of them have smartphones.

00:22:41:20 - 00:22:47:13

Leonida Mutuku

as we've learned over time, to not just engage with them as friends or as leaders,

00:22:47:13 - 00:22:49:08

Leonida Mutuku

they actually go to them with

00:22:49:10 - 00:22:50:22

Leonida Mutuku

agronomic questions

00:22:50:22 - 00:22:53:12

Leonida Mutuku

which the champion farmers fought to us.

00:22:53:14 - 00:23:00:15

Leonida Mutuku

So using them as an intermediary, then we believe that they can pass on the advice back to the farmer

00:23:00:15 - 00:23:03:17

Leonida Mutuku

without the farmer themselves having to have a smartphone.

00:23:03:23 - 00:23:09:13

Leonida Mutuku

that two of the different ways were intimidating. So the hardest part of this really is now building that

00:23:09:15 - 00:23:12:14

Leonida Mutuku

language model that will enable a farmer,

00:23:12:16 - 00:23:15:18

Leonida Mutuku

pick up their phone and listen to advisory

00:23:15:18 - 00:23:16:01

Leonida Mutuku

from,

00:23:16:01 - 00:23:20:05

Leonida Mutuku

text to speech, because this needs us to collect language data.

00:23:20:05 - 00:23:24:18

Leonida Mutuku

And so the agronomy sessions that you have been having with farmers, we've

00:23:24:18 - 00:23:25:15

Leonida Mutuku

asked them

00:23:25:17 - 00:23:27:18

Leonida Mutuku

for their consent to record that

00:23:27:18 - 00:23:34:10

Leonida Mutuku

so that you can use that as a form of collecting agriculture specific language data to build these models.

00:23:34:10 - 00:23:38:06

Leonida Mutuku

And we're hoping to see how that looks like in future.

00:23:38:18 - 00:23:53:15

Charlene Migwe-Kagume

Yeah. And I think you've highlighted important points on the delivery. I think we could we could have the best models, but if it's not enough, that the farmers would like to have it and it's not as timely, particularly we think about climate change.

00:23:53:15 - 00:23:56:06

Charlene Migwe-Kagume

and farmers timely data

00:23:56:06 - 00:23:58:13

Charlene Migwe-Kagume

at the top of the, the needs of a farmer.

00:23:58:13 - 00:23:59:01

Charlene Migwe-Kagume

Right.

00:23:59:09 - 00:24:02:14

Charlene Migwe-Kagume

a number of things that you've highlighted and, and thinking through,

00:24:02:14 - 00:24:09:02

Charlene Migwe-Kagume

delivery of some of these data co-design and it's something that more broadly, could we we've seen

00:24:09:02 - 00:24:10:19

Charlene Migwe-Kagume

because if you don't do Co-designing.

00:24:10:19 - 00:24:11:09

Charlene Migwe-Kagume

Well,

00:24:11:09 - 00:24:13:11

Charlene Migwe-Kagume

a lot of really good well built data,

00:24:13:11 - 00:24:15:14

Charlene Migwe-Kagume

digital systems like do

00:24:15:14 - 00:24:17:01

Charlene Migwe-Kagume

don't really serve their purpose.

00:24:17:01 - 00:24:18:16

Charlene Migwe-Kagume

but the challenge is,

00:24:18:16 - 00:24:23:20

Charlene Migwe-Kagume

how do you make sure you give sufficient time for this? So I'll give you an example of

00:24:23:20 - 00:24:29:07

Charlene Migwe-Kagume

we have a project called Alive in Ethiopia that's been funded by the Bill Melinda Gates Foundation,

00:24:29:07 - 00:24:31:04

Charlene Migwe-Kagume

that's looking at interoperability

00:24:31:04 - 00:24:34:14

Charlene Migwe-Kagume

and looking at already existing government systems.

00:24:34:14 - 00:24:36:05

Charlene Migwe-Kagume

How do you ensure

00:24:36:05 - 00:24:38:06

Charlene Migwe-Kagume

data is shared and, you know, abilities are

00:24:38:06 - 00:24:38:20

Charlene Migwe-Kagume

a big,

00:24:38:20 - 00:24:42:00

Charlene Migwe-Kagume

part of the digital public infrastructure discussion.

00:24:42:04 - 00:24:44:21

Charlene Migwe-Kagume

because development works a lot with governments,

00:24:44:21 - 00:24:47:12

Charlene Migwe-Kagume

we've seen having to bring different government,

00:24:47:12 - 00:24:48:12

Charlene Migwe-Kagume

departments,

00:24:48:12 - 00:24:49:20

Charlene Migwe-Kagume

personalities together

00:24:49:20 - 00:24:53:02

Charlene Migwe-Kagume

to really think through what are the data standards that will make this happen?

00:24:53:04 - 00:24:58:04

Charlene Migwe-Kagume

that's a form of co-design, right? Like, how do you make sure the underlying infrastructure

00:24:58:04 - 00:25:08:10

Charlene Migwe-Kagume

or the supporting factors are in place for the digital system to work? So co-design cuts across all of it. And I think you've brought up a good part of co-designing also the delivery,

00:25:08:10 - 00:25:09:02

Charlene Migwe-Kagume

of the work.

00:25:09:09 - 00:25:10:22

Charlene Migwe-Kagume

just to summarize what we've seen,

00:25:10:22 - 00:25:13:16

Charlene Migwe-Kagume

we've discussed a lot of discussed ensuring that

00:25:13:16 - 00:25:22:06

Charlene Migwe-Kagume

the solutions are fit for purpose. We've discussed around how do we create value and move from the extractive form of

00:25:22:06 - 00:25:27:13

Charlene Migwe-Kagume

data initiatives to build trust and build sustainable solutions that allow for consistent

00:25:27:13 - 00:25:36:05

Charlene Migwe-Kagume

data governance? And we also looked at like how you could design some of the outputs to make sure that at the end of the day, you're not building models for the sake of it,

00:25:36:05 - 00:25:41:04

Charlene Migwe-Kagume

but you have the end user in mind, which means you're fitting the systems into context.

00:25:41:06 - 00:25:47:23

Charlene Migwe-Kagume

But to summarize that, what what have you find works best not just in this system, but overall.
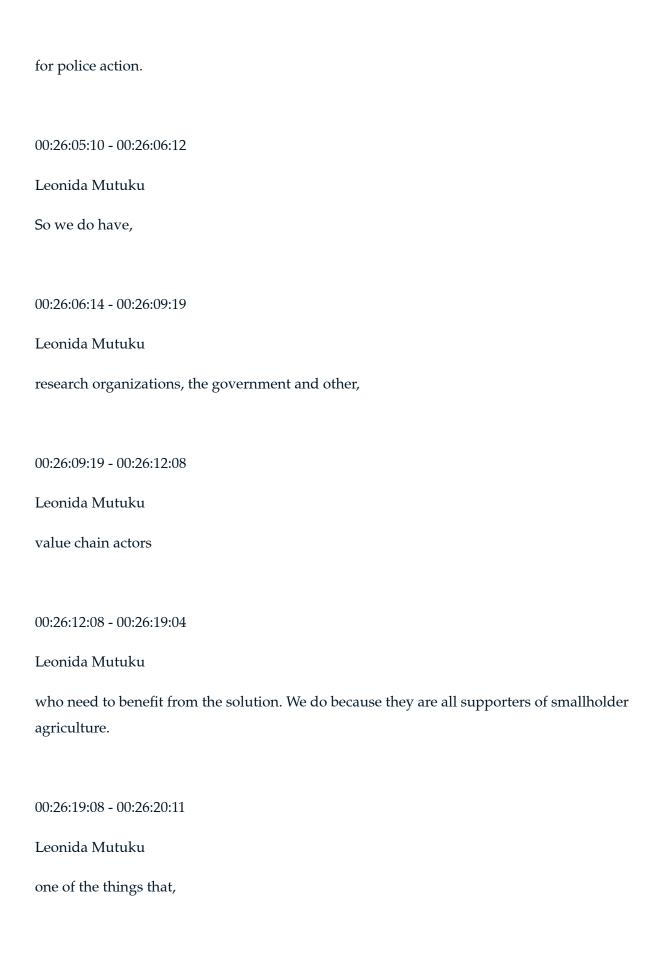
00:25:48:02 - 00:26:04:00

Leonida Mutuku

I think that's really been good. summary of the lessons like, we're sharing here. And I realize that a lot of the conversation really has been how we are working with the farmer communities. But you remember I mentioned that part of the work we're doing, we are also doing it

00:26:04:02 - 00:26:05:10

Leonida Mutuku

for police action.

00:26:05:10 - 00:26:06:12

Leonida Mutuku

So we do have,

00:26:06:14 - 00:26:09:19

Leonida Mutuku

research organizations, the government and other,

00:26:09:19 - 00:26:12:08

Leonida Mutuku

value chain actors

00:26:12:08 - 00:26:19:04

Leonida Mutuku

who need to benefit from the solution. We do because they are all supporters of smallholder agriculture.

00:26:19:08 - 00:26:20:11

Leonida Mutuku

one of the things that,

00:26:20:11 - 00:26:22:03

Leonida Mutuku

I wanted to first like,

00:26:22:03 - 00:26:24:17

Leonida Mutuku

to wrap up that train of thought is that,

00:26:24:17 - 00:26:26:09

Leonida Mutuku

for us, we have seen that,

00:26:26:11 - 00:26:29:11

Leonida Mutuku

you need community, of course, buying into the solution.

00:26:29:17 - 00:26:32:15

Leonida Mutuku

So I always like to provide this example of

00:26:32:17 - 00:26:36:03

Leonida Mutuku

when I think about, like, opening a bank or,

00:26:36:03 - 00:26:44:14

Leonida Mutuku

lending fund. it's very easy to give out money that you just, like, identify someone. They want a loan, you give them cash.

00:26:44:14 - 00:26:50:17

Leonida Mutuku

but the business really is in collecting repayments, like, that's where the hard work is.

00:26:50:17 - 00:26:56:23

Leonida Mutuku

And so similarly for our use cases, it's really easy to build assumptions, collect data, build models,

00:26:57:01 - 00:27:03:03

Leonida Mutuku

which for all intents and purposes, based on our expertise, we think is useful for communities.

00:27:03:05 - 00:27:03:22

Leonida Mutuku

But,

00:27:03:22 - 00:27:07:02

Leonida Mutuku

uptake and deployment would need a very thoughtful approach,

00:27:07:02 - 00:27:09:21

Leonida Mutuku

one that sometimes by farmers, but also this other

00:27:09:21 - 00:27:12:04

Leonida Mutuku

value chain actors who support them.

00:27:12:06 - 00:27:38:10

Leonida Mutuku

So for us, what we have seen is beyond like, some of the things you had mentioned earlier, channel of delivery, is it in a language or a tool and in a manner that works for the farmer, but also thinking more broadly about the ecosystem that supports the survival of of this initiative? And for us, one of the things we have found that works well in other,

00:27:38:10 - 00:27:45:04

Leonida Mutuku

work that you are burrowing for, for early warning system is building, community of practice around our work.

00:27:45:06 - 00:27:58:21

Leonida Mutuku

So our work has been graciously funded by James Ford program. And as part of that, of course, we do need to open source some of the work. And so given that data collection,

00:27:58:23 - 00:28:13:01

Leonida Mutuku

data curation is a very extractive process. We want to be careful to ensure that the data we collect can be reused, and that not all of us are going back to the same format, collect the same data to do our own different things.

00:28:13:01 - 00:28:18:21

Leonida Mutuku

So for us to ensure that there is no duplication of efforts, we are packaging

00:28:18:21 - 00:28:29:05

Leonida Mutuku

some of the data, of course, anonymized, as open source data, for other people to build upon that. So that's like really a contribution to the Commons.

00:28:29:07 - 00:28:37:06

Leonida Mutuku

But the other thing that we are thinking of doing is opening up, infrastructure capture in the sense that we have such diverse,

00:28:37:06 - 00:28:39:03

Leonida Mutuku

data on farmers.

00:28:39:05 - 00:29:01:04

Leonida Mutuku

And based on this, we we can't create standards from our profiles that like, you know, capture, different farmers with similar similarities and use this to, to help inform other people who are building for use cases in the agriculture sector. So I think creating these layers of,

00:29:01:04 - 00:29:10:12

Leonida Mutuku

digital public goods in the form of APIs or ways they can plug into our system openly, but also open sourcing.

00:29:10:12 - 00:29:16:19

Leonida Mutuku

Some of the data we are collecting, I think, is one of the ways that we have we create appetite for the data

00:29:16:22 - 00:29:33:13

Leonida Mutuku

and interest around a community that can contribute. And in other contexts, if we are like a researcher from Uganda, if you follow the same process, then you know, you also publish your data and we can, work together that way.

00:29:33:15 - 00:29:34:21

Leonida Mutuku

The other thing is,

00:29:34:21 - 00:29:35:23

Leonida Mutuku

for us,

00:29:35:23 - 00:29:42:16

Leonida Mutuku

Policy Institute shows keep on insisting that they don't have access to the requisite data to make

00:29:42:16 - 00:29:44:00

Leonida Mutuku

informed decisions.

00:29:44:00 - 00:29:52:02

Leonida Mutuku

for development of the agriculture sector. So we are also, building a dashboard interface so that,

00:29:52:02 - 00:30:07:02

Leonida Mutuku

policy actors, including the government and international organizations that support farming communities can tap into but also other people who want to create new value for smallholder farmers, such as the private sector.

00:30:07:02 - 00:30:28:10

Leonida Mutuku

Banks and other actors can utilize these platforms to better understand what smallholder farming communities need. Entity solutions to them. So I think that is how we are thinking of sustainability for this project. So it's not just from my facing, but also creating value down the agriculture value chain,

00:30:28:10 - 00:30:29:13

Leonida Mutuku

through other

00:30:29:13 - 00:30:32:12

Leonida Mutuku

intersections with, with different actors.

00:30:32:22 - 00:30:36:08

Charlene Migwe-Kagume

I think that's a really great way to end this podcast, because

00:30:36:08 - 00:30:38:07

Charlene Migwe-Kagume

institutions such as,

00:30:38:07 - 00:30:41:17

Charlene Migwe-Kagume

Algérie and DG, I think we are best placed to

00:30:41:17 - 00:30:46:08

Charlene Migwe-Kagume

provide this digital public goods that can support the full ecosystem,

00:30:46:08 - 00:30:47:18

Charlene Migwe-Kagume

particularly because we are,

00:30:47:18 - 00:30:49:04

Charlene Migwe-Kagume

donor funded and,

00:30:49:04 - 00:30:52:12

Charlene Migwe-Kagume

our work is really to share learnings and some of this community of practice.

00:30:52:16 - 00:30:53:17

Charlene Migwe-Kagume

you've mentioned

00:30:53:17 - 00:30:59:03

Charlene Migwe-Kagume

first, your data and digital solutions are tailored to specific needs, and always with the final person

00:30:59:03 - 00:31:01:14

Charlene Migwe-Kagume

using the systems in mind, as you've said, in terms of the it would put.

00:31:01:14 - 00:31:02:03

Charlene Migwe-Kagume

But,

00:31:02:03 - 00:31:04:06

Charlene Migwe-Kagume

recognizing and and this is something that

00:31:04:06 - 00:31:04:22

Charlene Migwe-Kagume

we are trying to

00:31:05:02 - 00:31:07:19

Charlene Migwe-Kagume

build out of a region and recognizing,

00:31:07:19 - 00:31:10:18

Charlene Migwe-Kagume

digital development is at an inflection point where

00:31:10:18 - 00:31:11:21

Charlene Migwe-Kagume

institutions

00:31:11:21 - 00:31:15:09

Charlene Migwe-Kagume

can achieve more technology than ever before. But we have,

00:31:15:09 - 00:31:20:00

Charlene Migwe-Kagume

issues of trust that, that we've never seen before in terms of misinformation,

00:31:20:03 - 00:31:21:07

Charlene Migwe-Kagume

disinformation.

00:31:21:11 - 00:31:24:05

Charlene Migwe-Kagume

And so how do we ensure as institutions

00:31:24:05 - 00:31:25:04

Charlene Migwe-Kagume

be able to

00:31:25:07 - 00:31:29:11

Charlene Migwe-Kagume

publish digital public goods and also particular public data

00:31:29:13 - 00:31:30:22

Charlene Migwe-Kagume

that can be useful,

00:31:30:22 - 00:31:32:04

Charlene Migwe-Kagume

the sector as a whole,

00:31:32:04 - 00:31:35:10

Charlene Migwe-Kagume

and be used by other institutions that are doing the same kind of work,

00:31:35:12 - 00:31:37:19

Charlene Migwe-Kagume

we are excited to see the potential. Good

00:31:37:19 - 00:31:40:02

Charlene Migwe-Kagume

from solutions such as ourselves that are

00:31:40:02 - 00:31:41:02

Charlene Migwe-Kagume

developed

00:31:41:02 - 00:31:41:21

Charlene Migwe-Kagume

with

00:31:41:21 - 00:31:44:04

Charlene Migwe-Kagume

farmers, with the end users

00:31:48:22 - 00:31:52:12

Leonida Mutuku

thank you so much for having me. It's also been a fantastic,

00:31:52:12 - 00:31:57:22

Leonida Mutuku

opportunity to learn more about teachers work in this space. I think there's so much synergy,

00:31:58:00 - 00:32:06:04

Leonida Mutuku

especially when we think about climate actions and how to support local communities. So I really look forward to, working together,

00:32:06:04 - 00:32:09:16

Leonida Mutuku

to actually these projects, of course, sharing outputs,

00:32:09:16 - 00:32:11:12

Leonida Mutuku

but also just, you know,

00:32:11:12 - 00:32:15:12

Leonida Mutuku

being in this circle of amazing, people working in the development space.

00:32:15:12 - 00:32:17:09

Leonida Mutuku

So thank you so much for having me.

00:32:17:11 - 00:32:19:19

Leonida Mutuku

and yeah, really enjoyed our conversation.

00:32:25:17 - 00:32:40:09

Vanessa Goas

Thank you for listening and a special thanks to our guests. This episode was produced and edited by Analisa Goodmann. Our theme music was created by Mark Hatcher. Learn more about Development Gateway: An IREX Venture on our website at developmentgateway.org or through our social media.