




"Do you recognize this icon? What does it say to you?" – A workshop exercise to redesign the Uliza-WI chatbot's weather forecast visualization.

## Beyond the Buzzword: Making Co-Creation Real in Climate Services



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Sometimes, a word becomes so common in our field that it starts to lose its meaning. *Citizen science*, *deep learning*, *co-creation*. These terms get repeated so often that they risk becoming little more than crowd-pleasing buzzwords. But in developing digital tools for smallholder farmers facing the increasing pressures of climate change, we believe *co-creation* is not optional – it is essential.

This belief guided us during a recent field workshop in Northern Ghana, where [Mónica Estébanez Camarena](#) and I, representing the [Weather Impact](#) team, worked to test and refine [Uliza-WI](#), a digital chatbot designed to provide localized weather and agronomic information directly to smallholder farmers.

### Co-Creation on the Ground

From April 2 to 4, 2025, we spent three days around Tamale, working side-by-side with [Extension Officers \(EOs\)](#) and over 50 [smallholder farmers](#) in the districts of Tolon, Savelugu, and Kumbungu. The goal? To move beyond prototypes and involve future users directly in shaping a tool that is truly usable, relevant, and effective.

[Uliza-WI Chatbot](#), developed by Weather Impact, is part of the EU-funded [SAFE4ALL Africa](#) initiative. The chatbot runs on Telegram and aims to bridge the last-mile gap in climate services by providing personalized weather and agricultural advice. Read more about the Chatbot in our recent [article](#).

### Learning from Extension Officers

The workshop began by engaging Ghanaian extension officers from the Ministry of Agriculture, who form the backbone of rural agricultural support. Officially, each extension officer is responsible for around 500 farmers. In reality, in this part of the country, they each serve over 2,000 – often without adequate transportation or digital resources to provide continuous and efficient support.

They shared insights on the limitations of current weather information (often too generic, not location-specific, and overly text-heavy – an issue for illiterate farmers), the difficulties of engaging farmers effectively, and the common lack of context in farmers' questions, which makes providing precise support more difficult. All this makes introducing digital tools particularly challenging, especially without dedicated guidance and follow-up.

## What Farmers Taught Us

Over the following days, Mónica and I visited several communities, gathering groups of farmers under the shade of trees in the sweltering 40 °C heat. In three-hour sessions, we introduced Uliza-WI, helped them access it on their phones, listened to their feedback, and observed how they perceived and interacted with the tool.

We asked questions on their interpretation of each button on the menu, the information displayed, and how they would explain something like the weather forecast to others. Our aim was to ensure that the information we disseminate is understandable for our primary audience: smallholder farmers. As we quickly learned that although we had initially designed a tool *for* farmers, it was only now, redesigning it *with* them that the real work truly began.

The workshops revealed some practical barriers: difficulties installing Telegram, switching between different phone interfaces, and interpreting messages in written English. It became clear that two-hour training sessions are not enough to overcome these challenges, and for most participants to confidently use the tool on their own. Thankfully, instead of being a one-off interaction, we've established WhatsApp support groups to ensure continuous engagement. These allow us to collect farmers' daily challenges, support requests, and feedback on both existing and newly introduced chatbot features.



The participants of the workshop in the community of Nakpanzoo.

While our initial reaction after the sessions was slight discouragement, it quickly gave way to energy and motivation. We had just engaged in something inherently challenging but absolutely pivotal for creating a tool that stands a real chance of lasting beyond the project and making a tangible impact. Opportunities for true co-creation like this are rare, and we can only be grateful, even though they reveal how much work still lies ahead to make **Uliza-WI** truly fit for farmers' needs.

## Designing for clarity and Accessibility

In **co-design sessions**, farmers helped reshape Uliza-WI's weather forecast visualizations: **icons instead of numbers, colors instead of text**, and **temperature comparisons** like "how today feels" instead of raw degrees. These changes will soon be implemented to improve clarity and accessibility for users with limited literacy or digital experience.

One participant said:

*"The forecast should work even if you've never seen a weather app"*

That is exactly the standard we aim for.

Our field experience reinforced a key truth: digital tools must meet users *where they are*. That means accounting for low smartphone memory, unstable connectivity, and the fact that many farmers are more familiar with WhatsApp than Telegram.

We are now exploring **push-based notifications** (like daily weather updates), **offline functionalities**, and reducing reliance on manual inputs or complex commands.



Peer-to-peer support also proved to be a valuable way to help farmers get acquainted with new digital tools like the Uliza-WI chatbot.

*"Command not supported—press back to home"* was a message we heard too often. It has since been replaced by an automatic return to the main menu.

## A Living Tool

Uliza-WI is not a finished product—it is a living tool, shaped by the people who will use it. Thanks to the [University for Development Studies](#) in Tamale, and the 36 extension officers and 56 farmers who participated, we now have a far clearer picture of what is needed—and what is possible.

Over the next three years, the chatbot will continue to be piloted and improved in **Ghana, Kenya, and Zimbabwe**. And as we move forward, we hold onto this core lesson:

Co-creation is not a checkbox. It is the foundation for building technology that works, *not just in theory, but in the field*.

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*This article was co-written by [Mónica Estébanez Camarena](#) and me, [Lorenzo Ocelli](#). Thank you for the reading!*

#collaboration #agriculture #chatbot



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