Farmer Input Support Programme

Using an SMS chatbot* to educate Zambian small-scale farmers how Weather Index Insurance works
*The Zazu chatbot is a computer program designed to simulate conversation with human users. Our chatbot uses SMS and can be accessed even when people do not have access to the internet! It’s free to learners, and when people can’t read, they can even call it and listen to it’s content.
Introduction

A majority of Africans are severely dependent on small-scale farming. Market prices are so depressed and the work is back-breaking that it leaves people stuck in an excruciatingly painful position of hand to mouth existence.

On a macro level, climate change is fast threatening this existence. From a policy perspective, more needs to be done to ensure that these small-scale farmers can improve their outcomes. Insuring crops and farming, is one of the easiest ways to hedge against the effects of climate change and ultimately, to increase financial inclusion.

For nine months, using an SMS chatbot, Zambia’s small-scale farmers were taught how to interact and access Weather Index Insurance. This is the first time such a programme has been done over a digital platform on this scale. Firstly, we wanted to test if small-scale farmers would use the chatbot to learn how Weather Index Insurance works. Secondly, we wanted to assess whether there exists a market for other financial service products.

What follows is a report on our attempt at answering those questions.
Foreword by FSD Zambia

FSD Zambia wants to make money work for Zambians, doing real things that have an impact on real people, our people. We help create trust in finance by bringing people together, cultivating understanding, stimulating innovation, and lowering costs to expand financial inclusion.

Through our valued financing partners DFID, Sida, Rufep, and Comic Relief/JOA, we engage in a wide number of ways to improve financial literacy. Zazu has been our treasured partner in helping us cultivate understanding about how finance works, and how to make sure Zambians can use it to their best results.

We started working with the Farmer Input Support Programme in 2017 so we could help improve smallholder farmer family incomes. That meant helping Ministries to get the lists of eligible farmers right in support of the Smart Zambia Institute; engaging with the Ministry of Finance and the Ministry of Agriculture to provide weather index insurance to all 1 million participating farmers; and helping rural families understand what it means to save, to borrow, to manage their money, to use mobile money services, to handle complaints and protect their money and, most importantly to them, to have insurance.

Zazu has committed itself and its resources so that anyone nationwide can use a phone, SMS ‘FISP’ to 619 and learn about these things in their own language, at their own pace. We have actively supported this, because it works. Read inside to see how many people are learning, understanding, and improving their lives.

We love Zazu.

Betty Wilkinson
Chief Executive Officer,
Financial Sector Deepening Zambia
The Government of the Republic of Zambia (GRZ) began a programme in 2002, giving smallholder farmers a limited amount of commercial maize seed and inorganic fertiliser.

This Farmer Input Supply Programme (FISP), was expanded in 2015/16 to cover groundnuts, orange maize, common beans and cottonseed. In the 2016/2017 farming season, the Zambian Government Ministry of Agriculture and Livestock, decided to include Weather Index Insurance into this subsidy given to farmers.

Of the subsidy given to a farmer, a certain percentage would be reserved to insure the farmer’s field against bad weather. This automatic insurance given to farmers meant that some of these farmers weren’t aware they were insured. There was a farmer field education on this, but many farmers still did not have enough information to understand how to engage with their insurance. Farmers needed a reliable way to learn more about how they could access the payouts, how the calculations were done, and if they were eligible for a payout.
Weather index insurance is a very exciting proposition using satellites and monitoring weather patterns by satellites in small areas. The absence of rain, or too much of it, is automatically detected and a payout scheduled for the affected farmers.

The Ministry of Agriculture and Livestock with Mayfair Insurance Zambia via their ideas and learning partner, Financial Sector Deepening Zambia (FSD Zambia) wanted to make sure that each farmer who was insured, knew how this insurance product worked.

In 2017, together with FSD Zambia Zazu had piloted the use of technology to educate people about financial concepts. In the pilot, Zazu had sought to reach 2,250 people and had ended up reaching over 16,000 people. The pilot had been conducted using USSD, and concentrated in Zambia’s Copperbelt Province. Using the lessons learnt from that pilot, Zazu was engaged by FSD Zambia, to educate smallholder farmers about Weather Index Insurance.
Quick overview of our findings

1. Insurance is relatively understood.

The discourse around working with rural villages tends to assume that families have little to no understanding about most things, let alone financial instruments like insurance. This could not be further from the truth.

People in rural areas are often leading complex lives and are juggling a variety of financial instruments at any given moment, without the formal descriptions attached to them.

This can be pooling money and lending it within the group (just like retail banking) or storing buckets of maize at the time of harvest, to be used if the next year’s crops fail (insurance).

2. People want more than just education: they want access. Equitably.

Rural consumers know the basics of insurance products, but are new, and so they are very willing to learn how new insurance products work. They want to know who ‘powers’ this product, how payment is made, and how premiums are calculated. Like any consumer in the world, they know when they are not getting a good deal. And they want a transparent, good deal. One that says and does what it means, on time, clearly.
Department for International Development (DfID) programmes across Southern Africa spend an average of £14 to reach a client. In the first pilot Zazu ran, using this chatbot, we managed to spend £7.35 to reach a user. In this iteration, we really stretched the value of a dollar.
73% of our learners completed the course in less than a day! This shows the incredible appetite by people, to learn how to make their money go further. Imagine a future in which this chatbot is continually updated with different content everyday? It could be configured to teach people about investing, health, energy etc - and people will learn!
Given Zambia’s demographics, it was particularly important to understand how gender might affect the programme’s objectives. Poor women are especially vulnerable to risks related to health, income generation, old age, and death. Women are typically the caregivers in their households and are generally responsible for managing the health risks of their family members. Coping with shocks can mean pulling children out of school or selling assets, which can perpetuate the cycle of poverty.

In many developing country contexts men control the use of larger income sources (like maize) while women control smaller income sources but have first round obligations to finance responses to emergencies. While the benefits of insurance are self-evident, there are considerable challenges with the distribution of a product that is often poorly understood (despite the existence of similar systems in the informal sector) and considered expensive. For mainstream insurance providers, the untapped market of poor women has enormous potential if these challenges can be overcome. If successfully scaled up, microinsurance would benefit the many millions of women in agriculture.

In this programme, we found out that 44% of learners were female and 56% male. This was extremely encouraging given that only 25% of registered FISP smallholder farmers are female and serves as proof that insurance is a cross cutting product that interests both men and women.

![Gender distribution chart]

When programming outreach activities, special care should therefore be made to sufficiently communicate the benefits specific to both men and women.

We were further interested in understanding the age of our learners as this information can be used by programming departments to speak to their intended audience. In this programme, the ages of the learners were spread out across the entire lifespan; from 18 to 80 years old.
Finally, we looked at their land size. As well as being used as a proxy for wealth, land size could be used to organise lead farmers in a particular area. A lead farmer might be the focal point for a programme, and is entrusted to spread further information to other farmers in their vicinity, serving as a local office. We discovered that the average land ownership of our learners ranged between 2.5 and 4 hectares. This suggests that Weather Index Insurance is particularly used by farmers just above ‘subsistence farming’ and more research needs to be done to see why people who own less than 2.5 hectares of land, are not interested in the product. It may be that farmers listed in FISP are not frequently holding or cultivating less than 2.5ha of land.
The platform

Organizations working on financial empowerment of the poor are still assessing how best to make digital services useful and understandable.

As Zazu we took the view that a digital platform to increase financial literacy must be so simple that any organisation, anywhere in the world, must be able to use it without technical training. The solution we developed is a web-based portal, which an approved administrator can access. Once logged in the portal, they can create a course, upload translated versions of the content, save it and make it instantly available on the 3 digit phone number operated by Zazu.

To access the content, a learner needs to ‘trigger’ the learning process with a specific word. In this programme, we were teaching farmers under the FISP programme and it therefore made sense for the farmers to text ‘FISP’ to 619.
This ‘pull’ approach presupposes that learners know about the existence of the 619 programme. In this programme, Mayfair Insurance undertook a media buying exercise, purchasing slots on TV and radio - with the call to action of sending ‘FISP’ to 619 and start learning, for free, how weather index insurance works. Further outreach activities were organised at the community level in conjunction with the local extension officers. This information was also made available at participating agro-dealer shops.

We also wanted to make sure that in case someone was not listening to the radio or watching TV when the adverts were aired, they would still be able to know about the existence of the platform. To do that, we used a ‘push’ strategy i.e. reaching out to all FISP farmers who had a phone, with an SMS containing a clear call to action.
How did they learn?
The learning platform

From the onset, we wanted to test out a key assumption: would people learn, at scale, about insurance over a chatbot?

In the pilot we had done the previous year, we used USSD as a way to interact with the chatbot. And one of the key frustrations of that product was that USSD, by nature, would ‘time-out’ halfway through the course and in doing so, force the learner to redo their learning session. In this iteration, we wanted to make sure that learners would be able to re-read the courses, and essentially, ‘start’ and ‘stop’ the learning process whenever they wanted to.
In order to do that, we decided to provide the chatbot over SMS. SMS, when compared to USSD, means that when a message is delivered to the learners’ phone, it is always and remains accessible, until the learner deletes the content. And unlike USSD, a learner could learn at their own pace, without worrying about losing the connection.

Research shows that the best learning occurs when people are ready and need the information. SMS helped to reach people in a mindset in which they were more likely to engage with the content.
Insurance cover is from 21st November to 31st March.
0 -> Continue

If you are under FISP your insurance is paid through your contributions.
0 -> Continue

Farmers can receive payouts for early dry spell, late dry spell and excessive rainfall.
0 -> Continue

It only covers weather and not cover other causes such as pest and disease.
0 -> Continue

Claim payments are done automatically based on the weather conditions. There is NO need for farmers to report claims as the claim payments are on the basis of the weather conditions, as monitored by the satellite.
99 -> Home
The FISP platform was made available in Zambia’s 8 main languages: English, Tonga, Lozi, Bemba, Luval, Lunda, Kaonde and Nyanja. This was necessary in order to ensure universal Zambian access to the platform. A key assumption in providing the content in all mani local languages, was that people would prefer to learn in their main home language.

This assumption was wrong: English was most people’s preferred language when accessing and interacting with the content.

Programmes can use this information when creating materials to leave with people, or explaining how their product works.
Time of day

Whether it’s teaching people over digital products like a chatbot or organising a meeting in person, it goes without saying that people will only learn/engage if they can fit the requirements around their existing schedule.

In our case we wanted to really understand: at what time do people really have free time to engage with the platform? Knowing this, any organisation can be confident that they are planning with the farmer in mind.
As a phone based product, the Zazu FISP platform only works if there is cell phone network. Once people began to use the platform, we wanted to see which was the most popular network. Knowing this, partners can see which mobile networks are used by farmers and so are best to deliver content. Consider for example an organisation wanting to teach people about finance. In the planning stages, as well as picking the areas they wanted to focus on, they would want to know which mobile network operator works in those areas. Looking at this data can inform their strategy: i.e. should they promote the platform only to Airtel or to MTN subscribers?

In this programme, there was little difference between Airtel and MTN. Thus, programmes should ensure content access by both Airtel and MTN to enable broader audiences. In Zambia Zamtel is now expanding cell towers to distant rural areas, so it also may be important to consider.
Week-on-Week analysis

Received SMS’s by week
Conclusions & Recommendations
Conclusion 1:
On average, a learner took the course 1.5 times. Clearly there is an appetite for learning over this chatbot. The time is now to broaden awareness of other insurance products.

Recommendations:
To truly increase financial inclusion beyond an entry level financial product like a mobile wallet, insurance is one of the handful of products that must be widely promoted. In order to increase the number of people using insurance products across the board, stakeholders need to regroup and assess their objectives.

Conclusion 2:
FISP introduced WII. WII risks being seen as a FISP product rather than a stand-alone product.

Recommendations:
Insurance companies and to some extent the regulator need to further discuss WII and how farmers can access it outside the FISP programme. Beyond this, it needs to be made clear how people can subscribe, and how payouts will be made, in the event an individual subscribes for WII on their own.
There are now a plethora of organisations committed to increasing financial inclusion. Financial inclusion looks at increasing access to financial services, starting with increasing financial literacy in rural communities. Often these organisations are working in silos, which increases the likelihood of efforts being duplicated. When this happens, value for money is not being really delivered.

With the insights we have gathered, we are looking to do more than just teaching people. We are now aware of what financial services people are looking for. With our mobile wallet now on the market, we have a distribution channel to connect learners to reliable financial service providers. What’s more, there exists a huge opportunity to provide localised financial services that are specific and unique to each individual, by aggregating third party providers up and down the breadth of Zambia.
Get in touch to work together

Zazu

Africa is shamelessly unbanked. When we look at the current state of financial services, we see systems that are too rigid and not fit for purpose. Our vision is to create the most helpful digital account while also helping people understand their finances. By bringing information at people’s fingertips, they’re able to learn and make informed decisions about managing their money.

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FSDZ

We are a Zambian organisation working closely with key players throughout the economy to ensure that all Zambians are financially healthy, particularly the most excluded and underserved. We help rural families, women, youth, low income people, and other households in Zambia to understand and access a wide range of sustainable, comparable and affordable financial services.

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