UX DESIGN GUIDEBOOK

A guide to help agritechs improve the user experience of their digital solutions

GSMA
Mobile for Development

M4D
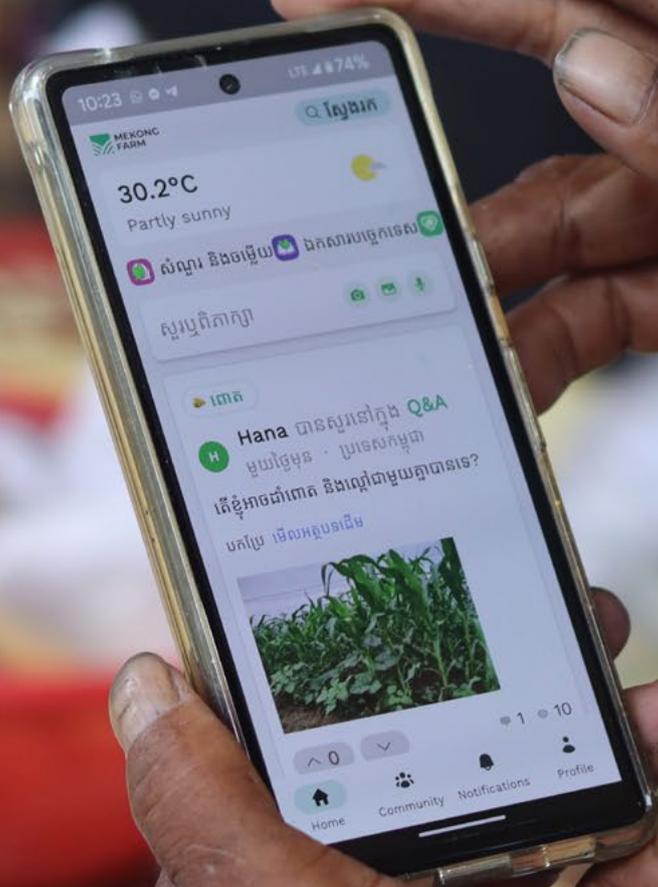
GSMA

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry and society thrive. Representing mobile network operators (MNOs) and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: connectivity for good, industry services and solutions and outreach. These activities include advancing policy, tackling major societal challenges, underpinning the technology and interoperability that make mobile services work and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

bop inc

At Bopinc, we connect low-income consumers with the dignified choices of tomorrow. We believe the best products should be available where they matter most. From startups to multinationals, we help organisations to design and deliver inclusive, commercially viable products, services and business models.

Our diverse team of global innovators, entrepreneurs and creatives, bridge the gap between private and development sectors. Through intensive consumer engagement, we discover user needs which allows us to design products and services that people really want to use.

The effect of our work leads to real impact for the Base of the Pyramid. Whether it's a better harvest, more income, or access to insurance. We know how to do good, while doing well, in a market of more than four billion low-income consumers.

GSMA AgriTech Accelerator

The GSMA AgriTech Accelerator works towards equitable and sustainable food chains that empower farmers and strengthen local economies. We bring together and support the mobile industry, agricultural sector stakeholders, innovators and investors in the agritech space to launch, improve and scale impactful and commercially viable digital solutions for smallholder farmers in the developing world.

Commissioned by GIZ

The GSMA AgriTech Accelerator is commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ), on behalf of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. GIZ is a federal enterprise with worldwide operations. It supports the German Government in the fields of international cooperation for sustainable development.

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Acknowledgements

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01.
Introduction

About this guidebook

This guidebook has been developed to support anyone involved in creating digital agriculture solutions for users in low- and middle-income countries (LMICs), from farmers to agents, aggregators, advisors or other stakeholders.

The guidebook is aimed at designers, developers, product managers and community partners who want to create a meaningful and useful experience for users with low digital literacy, particularly (although not exclusively) in low-income agricultural contexts. Why? Because a well-designed user experience (UX) allows these users to access and benefit from the digital tools available to them.

While the focus of this guidebook is on designing the right UX for apps, much of it applies to other digital channels too, such as USSD, IVR, OBD and SMS.

There are plenty of materials on how to design a good user interface, but most do not address the real-life user experiences of users in LMICs, such as poor internet connectivity, limited data, old handsets, cracked screens and difficulties learning how to use a smartphone. The realities and restrictions of creating a digital solution on a shoestring budget are also often overlooked. This guidebook focuses mainly on agritechs that want to improve or expand existing digital solutions, but it is also relevant for those building a new product from scratch.

The GSMA and Bopinc have bundled the lessons from the GSMA AgriTech Accelerator, in which nine agritechs, each with their own unique digital solution for farmers, were offered a suite of technical assistance (TA), including UX design support. Together, we facilitated 20 week-long product iteration workshops in which we conducted user research and held ideation and co-creation sessions to improve the design of the agritechs' digital solutions. The guidebook builds on those lessons, as well as the input and experiences of the Accelerator cohort members, Bopinc and the GSMA AgriTech programme.

GSMA AgriTech Accelerator cohort members:

eProd *(Kenya)*

Esoko *(Ghana)*

Farmspeak *(Nigeria)*

Greenovator *(Cambodia)*

Jokalante *(Senegal)*

MooMe *(Tunisia)*

OKO *(Mali)*

TDX *(Ghana)*

Winich *(Nigeria)*

A product iteration workshop at eProd. ©Bopinc

How to use this guidebook

Whether you are creating a mobile app, a web-based tool or a simple SMS-based service, this guidebook is a tool for anyone creating digital agriculture solutions in low-income markets.

Each chapter is a stand-alone section focusing on a specific challenge, from getting to know your user, to making them feel comfortable with your product, turning them into frequent users and optimising and growing your digital solution without making it too complex to use and manage. Each chapter highlights the challenges and priorities at different stages of product development, as well as design strategies, practical tips and case studies from the GSMA AgriTech Accelerator.

At the end of the guidebook is a set of worksheets that the GSMA and Bopinc used to support the Accelerator cohort members. These range from a simple blank canvas to capture insights from user research to templates for creating a persona, user journey or product roadmap. They are a practical tool for anyone keen to explore, design and develop new features or an entirely new product.

Finally, this guidebook is not a set of fixed rules—it is a starting point. Use it, question it and adapt it. Most of all, stay tuned in to your users. After all, they are the true experts of their experience.

02.
Background

Before you dive in

This guidebook focuses on UX design, but UX doesn't exist in a vacuum. It is closely tied to user interface (UI) design, which shapes how digital products look and behave. Central to both is user-centred design (UCD) – a broader design philosophy that guides how we approach problem solving.

The next sections explain UX and UI design to help you understand how they are related and how they will show up in this guide.

What is UX design?

User experience (UX) design is the practice of creating meaningful and useful experiences between users and digital products or services. It goes beyond how something looks to how something works, how it feels to use and how effectively it helps users achieve their goals.

UX design considers every step of the user journey in the adoption of a digital agriculture solution – from first impressions to creating a profile, completing tasks or asking for

help. A good experience removes friction and builds confidence, especially for users with lower digital literacy. It is often the small design details that shape whether a user feels empowered or frustrated.

The UX process typically includes user research, persona creation, ideation, wireframing, prototyping, usability testing and several rounds of iteration. Most decisions are guided by real user insights and data – not just opinions or aesthetics.

What is UI design?

User interface (UI) design focuses on the visual and interactive elements of a digital solution – everything a user sees, touches, hears or clicks. This includes buttons, icons, typography, colours, spacing, layout and sound.

While UX is about how something works, UI is about how it looks and behaves. A well-designed UI is visually consistent, accessible and easy to navigate. It guides users clearly

and reinforces usability through feedback and visual cues. UI is also where product and branding meet, conveying the brand identity of the company behind the product.

UI design doesn't happen in isolation. It supports and reflects the goals defined by UX design. You can think of it as the finishing layer that makes the underlying UX not just usable, but appealing.

What is user-centred design?

User-centred design (UCD) is a design philosophy and process that puts real users – especially those whose needs are often overlooked – at the centre of every decision. Instead of relying on assumptions or technology-first thinking, UCD starts by understanding the people who will use the product or service. UCD enables you to create products and services tailored specifically to users' needs. It is not just about designing for users but designing with them in mind.

UCD provides the foundation for UX and UI design by shaping how problems are framed and how solutions are validated. It reminds us that good design doesn't start with the product or digital technology. It also doesn't start behind a computer or with a team of clever developers. It starts with the users.

UCD is an iterative and research-driven design methodology to get from an idea to a product. UX and UI design both happen within

this process. The path is rarely linear – there will be ups and downs, twists and turns, fast progress at times and a slower pace at others.

There are typically three stages in UCD: Discover, Design and Develop. In the Discover stage, user research is conducted to uncover the problems faced by users. In the Design stage, ideas are generated that might help solve those problems. Prototypes are created to test ideas on users. This may take several iterations. Then, in the Develop stage, the solution is created. Here, the uptake and impact of the solution need to be monitored and measured. Almost always, this will trigger new insights that start a new iteration in the UCD process.

Throughout the entire process, expertise in UX and UI is vitally important. It helps to translate user insights, clarify ideas, build and test prototypes and ultimately design your digital solution.

03.
Get to know your users

Introduction

Before you design, redesign or scale your digital solution, you need to understand who it is actually for. Who are your users? What do their daily routines look like? What problems are they facing? How do they currently use their mobile phones, if at all? In the agriculture sector, users may be farmers, agents, cooperatives, aggregators or warehouse managers. No matter who your end users are, designing a good UX begins with understanding their world.

This chapter helps you lay the groundwork for great UX by understanding your users' digital reality, choosing a research approach that fits your goals and constraints and synthesising what you learn into meaningful insights for your team.

Three steps to better understand your users:

1. Understand your users' digital reality

To design effective tools, you need to first understand the digital landscape in which your users live. This includes the types of devices they use, their digital skills, internet usage and familiarity with apps. All this influences what kind of digital solution will (or won't) work.

2. Choose the right research approach

There is no one-size-fits-all research method. We will help you decide how to combine interviews, observation, online tools or offline exercises, depending on your goals, timeline and users.

3. Turn your findings into user insights

Research is not just about collecting information and user feedback. It is also about what you see, hear and feel, and turning your observations into useful, actionable insights. We will share practical ways to synthesise your findings and prioritise what to act on.
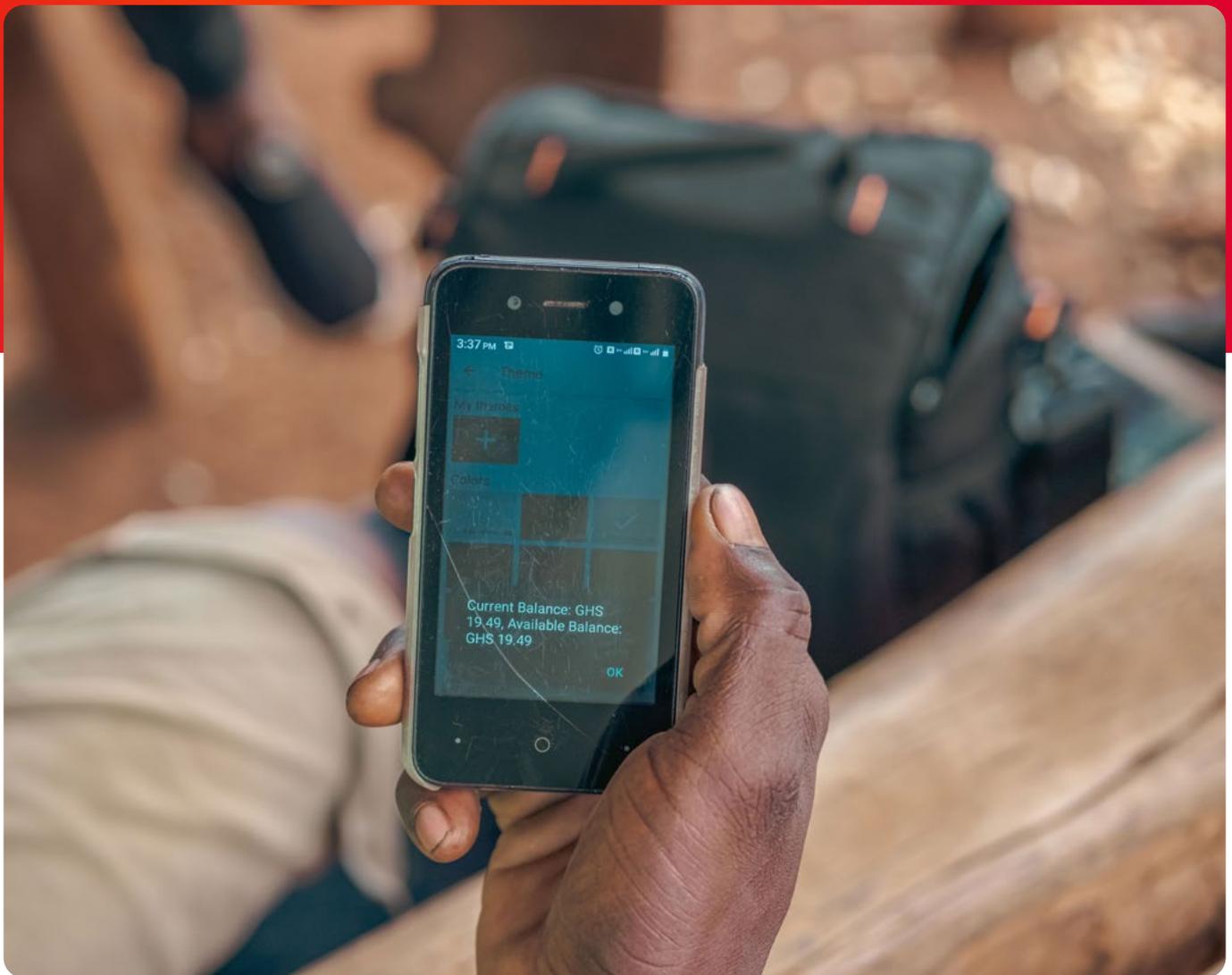
1. Understand your users' digital reality

Before jumping into design, it is important to map out your users' digital habits and environment. For instance:

- What kind of mobile phones do your users have? Do they use mobile apps?
- Are they comfortable interacting with apps or are they more comfortable using SMS or USSD?
- Are they familiar with mobile money?
- How confident are they with typing, tapping or recording voice notes?

Do you know what kind of digital world your users live in and how it affects their behaviour?

In low-income agricultural settings, your users' digital experience may be shaped by practical constraints: feature phones, limited data use because of cost, worn-out devices from heavy use on the farm, low legibility in bright sunlight or poor signal. Their comfort with digital tools may vary widely, from daily WhatsApp users to those who avoid smartphones completely. Understanding these realities helps you make smart decisions about which features to build, how to design them and how much support users might need.

Simple mobile phones help farmers manage finances, but screen damage and glare can make information hard to read. ©Bopinc

Here are five areas to explore when assessing your users' digital reality:

Device access and ownership

Do users have their own phone or do they share one with family or co-workers? Are they using smartphones or feature phones? What is the condition of their device in terms of battery life, cracked screens, storage or operating systems?

Connectivity and internet access

Is there network coverage in the areas where they live and work? Do they regularly access the internet or only when absolutely necessary? How do data costs affect their behaviour? Note that for users with feature phones and limited internet access, channels like USSD, IVR, OBD and SMS can help to deliver digital services.

Digital literacy and confidence

Can users comfortably navigate apps or mobile menus? Can they complete simple tasks like sending a message or finding saved content? Do they understand basic icons or need text explanations? Do they know how to update apps?

App habits and familiarity

Which apps do they use often? WhatsApp, Facebook, YouTube or mobile money? Do they interact with these apps through voice notes, emojis or tap-based actions? Knowing this helps you align your design with familiar habits and behaviours.

Language and phone settings

What language is their mobile phone set to? Do they read text messages in English, Swahili, Bengali? Is Roman script used or a local script? If your product depends on basic literacy or language proficiency, make sure your content matches user preferences.

Farmers rely on mobile phones for daily tasks, but device type, access, and settings shape how they use digital services. ©Bopinc

2. Choose the right research approach

Once you have mapped the digital reality of your users, it's time to learn more about their needs, habits and motivations. To do that, you'll need to choose a research approach that fills your knowledge gaps and fits the realities of your users.

Are you using the right research approach for your goals, your resources and your users' environment?

In agricultural settings, conducting research isn't always straightforward. Internet access may be limited, travel time can be longer than anticipated and users may not feel comfortable answering detailed questions right away. That is why it's important to pick a method (or a mix of methods) that works in the field, not just on paper.

You don't need a big research budget to learn valuable information. What matters is being intentional about how you listen, observe and validate what users say and do.

Observing how users navigate their phones often reveals insights that interviews alone may not capture. ©Bopinc

Here are some tips to help you select and shape your research approach:

Mix questions with observations

What users say does not always match what they do. Combine interviews with direct observation or walk-throughs to see how users actually behave. For example, how they use their mobile phones in daily life or in their farming practices.

Choose methods that fit your goals

Do you want to understand behaviour, test reactions to an idea or gather data at scale? Use interviews and focus group discussions (FGDs) for depth; surveys for breadth; and hands-on activities, like showing a prototype and asking users to group or rank features, to get feedback on what makes sense to them.

Meeting participants in their own environment helps build trust and surface richer insights. ©Bopinc

Keep sessions short and focused

Your users are busy. Don't overwhelm them with a long list of questions. Focus on what matters most and test your questions in advance with a colleague to make sure they are clear and relevant, especially if they have been translated.

Make a flexible plan

Keep your user research plan flexible. People might become unavailable or might be accompanied by others for a one-to-one interview. Having a robust logistics plan is critical, but keeping it flexible is even more important. If you come with a big group, split up into two teams. You will hear and observe more and get to compare what you learned.

Adapt to your users' environment

In most cases, face-to-face visits work best, especially with users who have low digital literacy or do not know your team. It is advisable to meet users at a place where they feel comfortable. If you meet them at their farm or home, you also get to observe their everyday environment. Remote methods like phone interviews or voice notes may work for follow-ups or digitally confident users. Always choose what suits your users' environment, not just what is convenient for you.

Include diverse users

Try to hear from users in different areas with different roles, genders, literacy levels and experience with your solution (or similar products). This will help you spot patterns and edge cases that a homogeneous group might not reveal. Every user is different.

3. Turn your findings into user insights

Research does not end when you leave the field or stop recording. To make your findings useful, you need to synthesise them, prioritise them and turn them into insights that can guide product decisions.

Are you turning raw data into clear insights that your team can act on?

You may come back with a lot of notes, quotes and scattered impressions. But your team won't benefit from information overload. Instead, aim to distil what you've learned into a few focused insights that highlight user behaviours, needs and opportunities. This is what turns user research into design direction.

Here are five practical tips to make your findings actionable. At the end of this guidebook, you'll find a series of worksheets that you can download, print and use. They will help you streamline your research findings.

Clustering notes and observations helps teams spot patterns and turn research findings into clear user insights. ©Bopinc

Cluster your observations

Group notes, quotes or bullet points into themes, such as app usage, trust, pain points or daily routines. You can also sort by positive, neutral and negative observations to identify what is going and well and what is not. Clustering helps you spot common user experiences.

Tip: Try to do as much of this in the field (or in the evening after a day of research) so that the information is still fresh.

Write insight statements

Turn each cluster into a clear and short summary statement. For example, "Users prefer voice over text because it feels more personal and easier to access on a shared device."

Tools like worksheets and sticky notes help teams map user journeys, pain points, and priorities in a visual and collaborative way. ©Bopinc

Create personas

A persona is a short fictional profile that represents a typical user based on real research. A simple one-pager is enough, as long as it captures specific behaviours, the tools they use and the barriers they face. Avoid vague goals like "wants more income". Instead, describe what the user does, what challenges they encounter and what would genuinely help them. You can have multiple personas.

Map the user journey

A user journey map is a visual representation of the process a user goes through to achieve a specific goal when interacting with a (to-be-designed) product or service. It outlines each step the user takes, including their actions, touch points, feelings and pain points.

Identify pain points and opportunities

Highlight what users are struggling with. These "pain points" are typically things your product or service can address. They can be many different things, ranging from social to financial, and from practical to informational. It can be in the field, in their home or at the market. Note where there is room to make things easier, faster or more useful. These opportunities can form the starting point for idea generation.

Prioritise what to act on

You will likely uncover more insights than you can act on. Use a simple matrix (e.g. value to user vs effort to fix) to decide what to tackle now and what to note for later.

04.
Make your users feel at home

Introduction

This chapter provides guidance on creating user experiences that encourage smallholder farmers to adopt digital agriculture solutions that enhance their farming practices. For most farmers, replacing traditional methods with digital solutions on a mobile phone is a massive transition that should not be underestimated. After all, it requires them to abandon established routines and behaviours and put their trust in an unfamiliar app or device that will affect their livelihood.

Many of your users are completely new to using digital agriculture solutions on their mobile phone. How do you help them get comfortable using your product or service?

In chapter 3, you learned how to understand your users better. With that in mind, you will now try to figure out what might help them make the leap to become first-time users. This chapter presents four design strategies that can help your team craft more effective and user-friendly digital experiences that will make them feel more comfortable and familiar with your digital agriculture solution, rather than confused or frustrated.

Four design strategies to help users become comfortable using your digital solution

1. Roll out the red carpet
For someone to use your product, you need to make registration and onboarding as easy as possible. We will share a few tips on how to roll out the red carpet for your users.

2. Create a familiar environment
Make sure your users recognise themselves in your products. It is essential that their digital experience reflects their real-life experience.

3. Mimic farm processes
It is important that your digital solution mimics and aligns with the processes, activities and routines on a user's farm.

4. Design user-friendly interfaces
Designing your interfaces so that they are naturally understood by your users is not easy. Luckily, there are a few tricks to get you on the right track.

1. The red carpet

Getting started is often the hardest part, especially when adopting a new technology. Your prospective users may feel hesitant or unsure about using your app for the first time, particularly if they have limited digital experience. That is why it's important to roll out the red carpet for first-time users.

Treat your prospective users like movie stars. Make their introduction to your app as smooth and welcoming as possible.

A confusing or overwhelming onboarding process can quickly discourage prospective users. Relying on their skills, initiative or curiosity might not be enough to get them to embrace your digital solution. To ensure a smooth start and build confidence, consider the following approaches.

Agents can guide new users step by step, building trust and helping them confidently use digital tools. ©Bopinc

Easy onboarding

Onboarding is a user's first experience with your app, from opening it for the first time to understanding how it works. Make this journey as smooth as possible by guiding users through the basics step by step, using clear visuals and minimal text. A well-designed onboarding process helps new users feel confident and reduces the chances of dropping off before they get started.

Rapid registration

Registration is often the first barrier users face. Keep the process short and focused. Ask only for essential information needed to get started. Long forms or unclear steps can discourage users, especially if they are unsure whether the app will bring them value. Where possible, consider offering an "unregistered user" option that allows people to explore the app before committing. This lowers the entry barrier and helps build early interest and trust.

Fantastic forms

Forms should be short, simple and easy to complete on a mobile device. Use buttons, icons and dropdowns instead of long text fields. Where possible, enable voice-to-text for users with lower literacy levels. Consider staging the registration process: collect only essential details upfront and ask for more information later to customise features. This keeps users moving forward and reduces the risk of them dropping off.

Tutorials

Tutorials help users learn how to use your app, especially when they are not familiar with smartphones. Keep them short and visual. Use illustrations, voice notes, video or icons to explain actions clearly, while being mindful of data usage. You could even consider personalising the tutorial with a digital character or mascot. Wherever possible, offer lightweight or offline-friendly formats to ensure accessibility.

Agents

Agents who are already part of the user journey can provide valuable support during the set-up process, assisting users with registration and explaining key features. This can build trust, especially for users who are hesitant or new to digital tools. While agents can greatly reduce drop-off during onboarding, it is important to design your product in a way that, over time, users can navigate it confidently without ongoing support.

Case study: OKO

OKO

Creating an efficient and effective farmer registration tool

OKO provides weather-based crop insurance for smallholder farmers in Mali. The insurance provides a much-needed safety net to farmers facing increasingly unpredictable weather and climate patterns, which make them vulnerable to catastrophic yield losses. The insurance is designed to issue automatic payouts to farmers who experience yield losses from extreme weather. OKO has built a network of agents and partners to introduce the insurance, support onboarding and collect premium payments for cover.

Many farmers are unfamiliar with crop insurance, which leaves OKO agents struggling to reach their registration targets. To support OKO with farmer registration, it redesigned its agent app to explain how the insurance works and enable more effective and efficient registration.
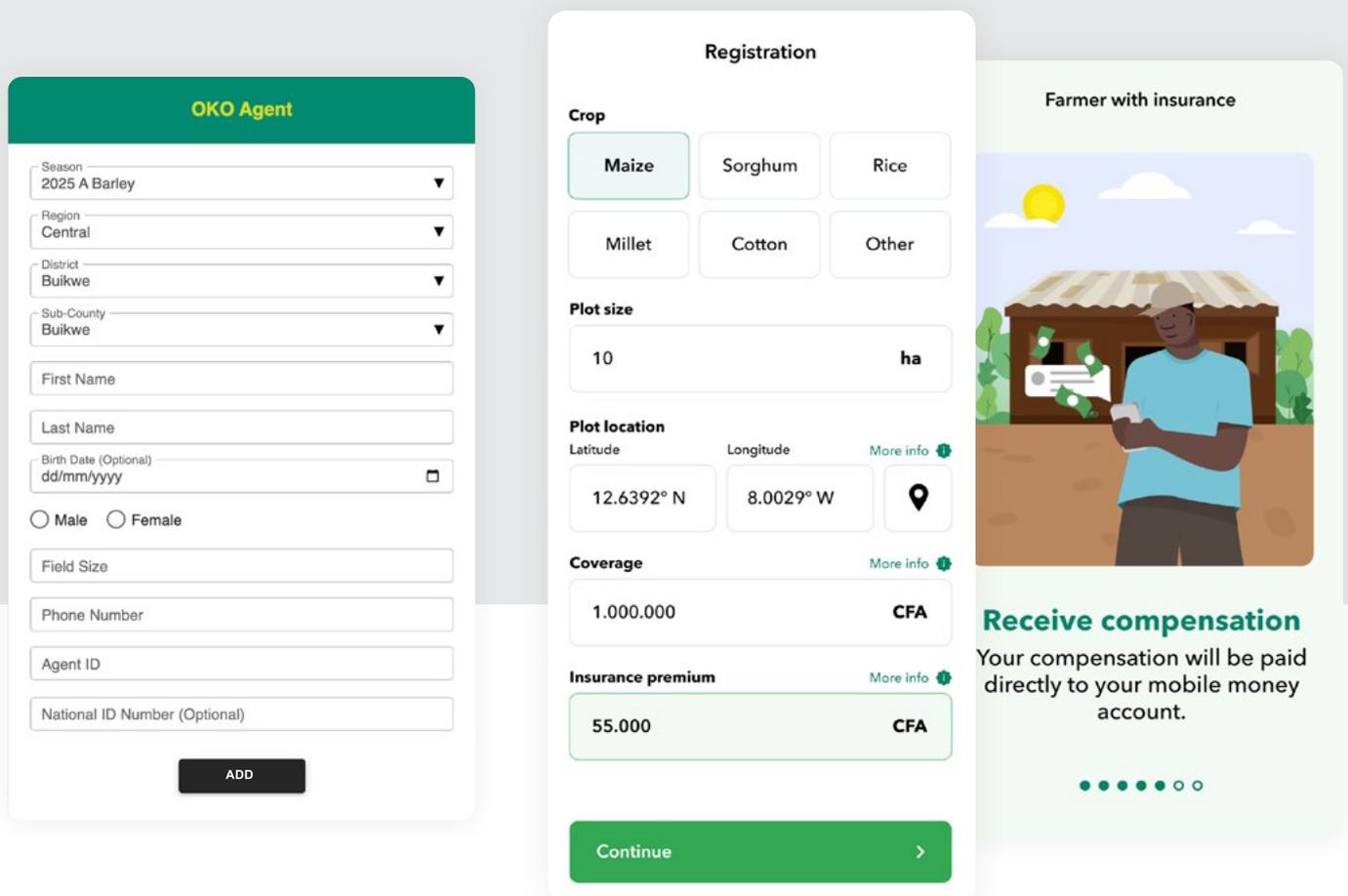
Original design

The original agent app only registered farmers and did not help agents explain the insurance product to convince farmers to sign up and pay. The app featured a lengthy, single page registration form that did not support batch registrations of multiple farmers, which would have been handy for agents who run demos for groups of farmers in a village.

New design

The redesigned app has illustrations and descriptions to help agents better explain crop insurance, the registration process and conditions for payouts. The lengthy form has been replaced by a four-step form – location, personal information, policy and payment – as well as a group registration feature that allows agents to register multiple farmers at once. Along with a variety of minor UX/UI changes, this makes registration much easier to follow and explain.

2. Create a familiar environment

When introducing a new digital solution, especially to users who may have limited experience with digital interfaces, creating a familiar environment is essential. It helps build trust, flattens the learning curve and fosters a sense of control.

Your digital solution should feel like a natural extension of your user's agricultural environment.

Product teams need to create interfaces that are intuitive and relevant to farmers' everyday lives. From a UX perspective, this means understanding farmers' daily routines, (agri)cultural practices and social interactions. These insights should be translated to the user interface to offer a visually consistent experience that feels familiar and understandable to the user.

By taking a user-centred approach and incorporating familiar elements in the design, designers can create mobile interfaces that are accessible, engaging and empowering for users with limited digital literacy. The following four tips can help you leverage your users' everyday environment to improve their experience with your digital solution.

Local language

Using the right language makes your app feel more familiar and welcoming. Wherever possible, offer the interface in local languages or dialects, and use everyday vocabulary that users readily understand. Avoid technical terms, formal phrasing or unfamiliar abbreviations. Simple language builds trust and makes it easier to get started.

Personal touch

A personal touch can make your product feel more human and less like a technical tool. This could mean mentioning the user's name in notifications, showing which agent or branch they are interacting with or referencing a local place or crop. Small details like this build familiarity and help users feel that the app was made for them.

Visual elements

Strong visuals can bridge literacy gaps and build instant recognition. Use images, icons and colours that reflect the local environment, such as familiar crops, tools, clothing styles or landscapes. These cues help users orient themselves and reduce hesitation when navigating the app for the first time.

Familiar patterns and interactions

If users already use apps like WhatsApp, Facebook or mobile money platforms, build on those mental models. Using familiar patterns and interactions, such as bottom navigation bars, swipe gestures or visual confirmation ticks, helps users understand your solution more intuitively and reduces the need for explanation or training.

Case study: Greenovator

📍 **CAMBODIA**

Using voice technology to create an accessible app for farmers

Greenovator is an agritech based in Myanmar. In 2023, it launched the Mekong Farm app – a community platform for farmers in Cambodia. The app includes a newsfeed that connects farmers (similar to Facebook) and allows them to ask agriculture-related questions and receive advice from farmers and experts. Other features include weather forecasts, business linkages and farming guidelines.

To launch a successful product, Greenovator wanted to create an app that met the needs of Cambodian farmers, who were not comfortable typing on their mobile phone and at times struggled to read small text.
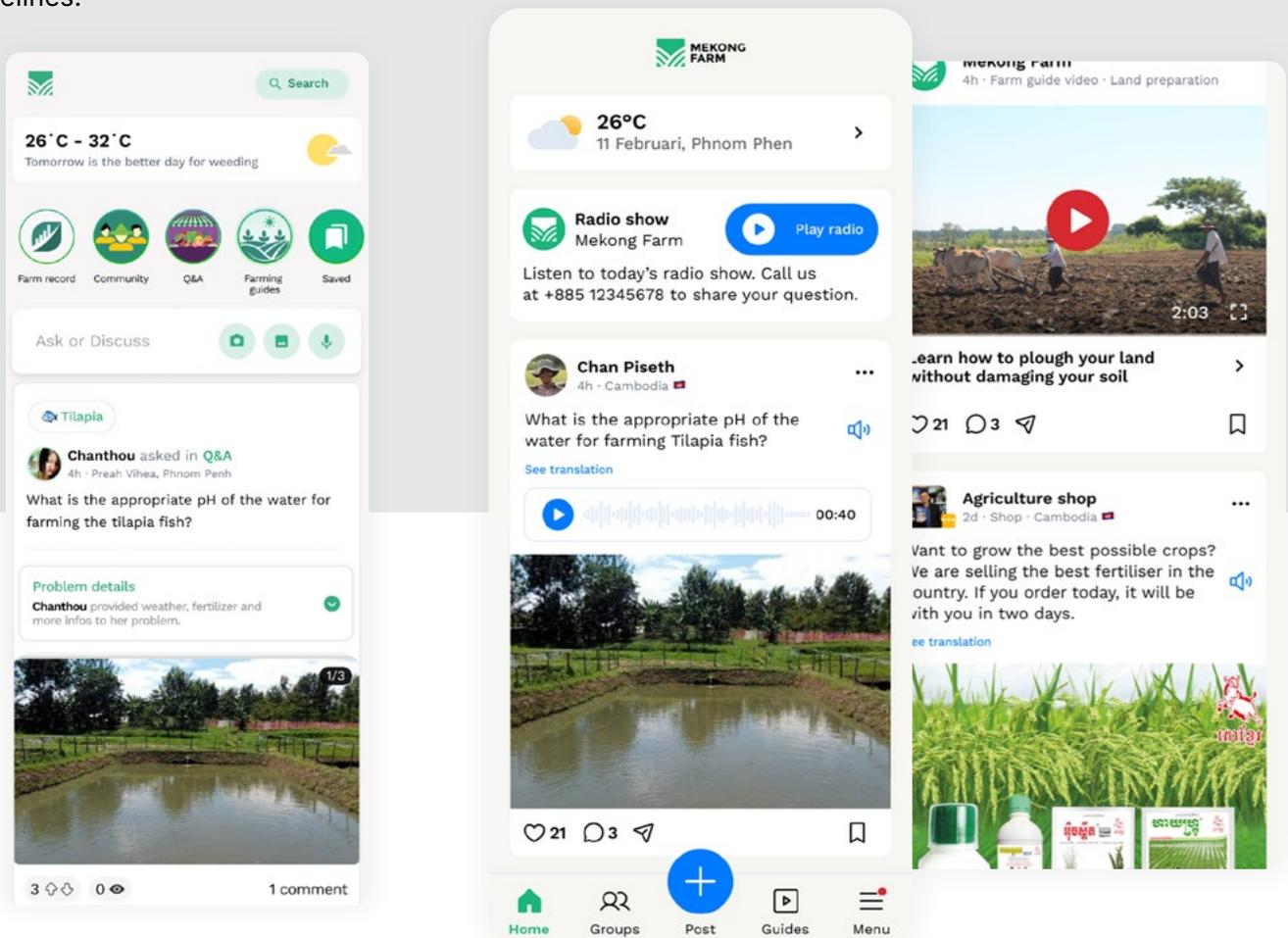
Original design

The Mekong Farm app featured a newsfeed on the home screen with buttons that linked to other functions. This collection of features made the interface feel overwhelming to farmers. To ask for advice or respond to posts, users had to type messages on the already content-heavy screen.

New design

User research revealed that farmers were fairly familiar with recording and listening to voice messages. Greenovator updated the app by introducing voice-to-text and text-to-voice functionality. Farmers can ask questions through a voice recording and press a button to hear what other farmers have posted. Voice was also integrated in registration and navigation. To clearly signify voice functionality, anything related to voice was in bright blue. The newsfeed interface was also simplified and improvements were made to registration, onboarding and navigation.

3. Mimic farm processes

To design an effective mobile interface for smallholder farmers, it is crucial to mimic the processes, activities and routines on their farm. This is especially true when your digital solution helps farmers better manage their farms, improve their farming practices or receive agronomic advice.

The better your digital solution reflects and enhances farming processes, the more likely it is to become a valuable tool for your users.

Most farmers follow specific workflows tied to the seasons, such as preparing the land, planting, tending crops and harvesting. For example, during the planting season, farmers may need guidance on seed spacing or weather forecasts to determine the best planting times. For farmers that keep livestock, their workflow might be related to daily feeding routines or tracking when they administer medicines.

The design of your solution should mirror how users already record information, communicate and make agricultural decisions. It might also help them capture information that is not currently being recorded and improve their practices.

Right time, right place

If your product pushes information to farmers, make sure the content is tailored to their specific needs. There is no use sending potato harvesting techniques to a rice farmer. Similarly, make sure the information reaches the farmer at the right time – for example, just before harvest or planting. This way, rather than being dismissed as irrelevant, slowly but steadily your product becomes an advisor.

Understand practices and problems

Do your research to understand exactly how the farmers in your value chain work. What crops do they grow? How do they care for their animals? How do they keep records of their farm? What issues come up? Once you truly understand their practices and problems, you can design a solution that helps improve them.

Patience is key

In agriculture, you must work with the seasons. It might take a few months before you can test your product. Unlike other sectors, you cannot test, iterate or ship your product on a weekly basis. This means you need to clearly define what you want to test each season and have the patience to wait for the results.

## Case study: MooMe

📍 TUNISIA

Digitalising dairy farm management

MooMe developed an app to digitalise record keeping for smallholder dairy farmers, who typically have five to 10 cows.

The first iteration of the app confused many farmers. Too many features, unclear navigation and a bold colour palette made the app overwhelming. Instead of offering insights, farmers were unsure what to expect, where to tap or how to navigate. As a result, they rarely entered their records.

To help farmers move from traditional record keeping to a digital solution on a mobile phone, the app needed to be simplified. To ensure it resonated with farmers, a lot of effort was put into reflecting their daily practices and their cows' different stages of growth and milk production. The app does this by offering basic functionality at first and allowing farmers to opt in for more detailed functionality as they progress.
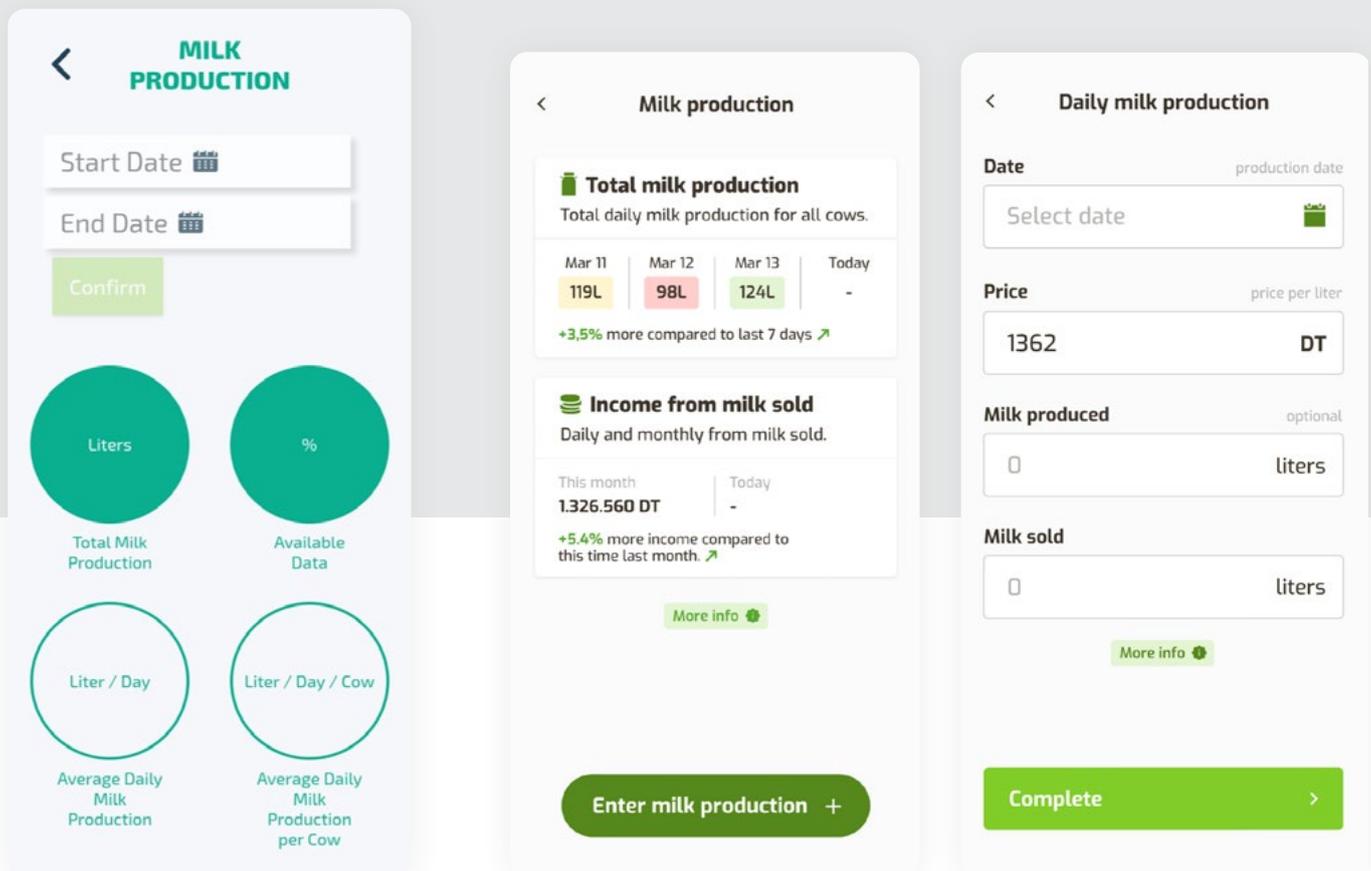
Original design
The screen above shows milk production insights. To generate a report, farmers had to set the time period and then navigate to a different section of the app to enter their daily milk production. This created a disconnect between record entry and milk production insights.

New design
There is now a direct connection between entering milk production and receiving insights. Farmers can see previous days' milk production and income from milk sold. Similarly, they can track the feed conversion rate after entering the feed given to the herd. Each insight is shown in a "card", giving it greater focus. The aim has been to keep the app simple to prevent overwhelming first-time users.

4. Design user-friendly interfaces

For digital agriculture solutions to have real impact, clarity and simplicity are key. Interfaces overloaded with features, text or technical jargon can quickly overwhelm users and push them away. To be effective, the user experience must feel intuitive and immediately relevant, even for those with limited digital literacy.

To achieve this, design with the user's context in mind. Consider where and when they are using your product, what else is competing for their attention and what information they need most in that moment. Focus on presenting only the fields and data that help them take the next step in a way that is quick to grasp. The following tips offer practical ways to create a digital solution that feels simple and easy to navigate.

Less is more

Limit noise
Does your app really need all those features? Do you really need to show all that information? What can you hide or move elsewhere? Many product teams struggle with keeping the interface clean and simple. Over time, apps can become a patchwork of features and options, so be very cautious about adding functionality to screens. Focus only on what is really needed and try to limit noise.

Limit choice
Try to limit the number of actionable elements on a screen. The more options a user has, the harder the choice will be. Ideally, when designing for an audience with low digital literacy, users can go backward and forward, or view details and return to an overview, for instance.

Discussions during a product iteration workshop with Farmspeak to determine what features to focus on. ©Bopinc

Hierarchy makes happy

Clear hierarchy helps users quickly see what matters most on a screen. It makes an app feel organised and predictable, guiding people through pages and flows without confusion. When hierarchy is missing, everything competes for attention and the experience becomes more difficult.

Architectural hierarchy
This is about the structure of your app. Group related information together and order menus, sections and steps in a way that mirrors how users naturally think and work. A good structure helps people find what they need quickly with fewer steps.

Visual hierarchy
Visual hierarchy uses size, colour, contrast and placement to direct the user's attention. Strong elements draw the eye to the most important actions, while lighter or smaller elements signal secondary information. This makes screens easier to scan and quicker to understand.

Textual hierarchy
Use font size, weight and spacing to show the importance of different text elements. Clear headings and distinct body text make content easier to read and navigate, especially for users with lower literacy or less digital experience.

Case study: Jokalante

📍 SENEGAL

Creating a clear interface for a communications platform

Jokalante developed a business-to-business (B2B) communications platform that allows it to share voice, SMS and WhatsApp messages with large audiences. Many of its customers are non-profits that want to develop information campaigns for groups of farmers.

While the platform provides a lot of features, it is hard to navigate, to understand how to create a campaign or to access an overview of contacts or existing campaigns. Due to the complex design of the platform, client staff did not feel confident using the platform on their own. This led to Jokalante staff running campaigns on behalf of its customers. In redesigning its platform, the aim was to create a much more user-friendly interface that would help customers feel more confident and able to use it without assistance.
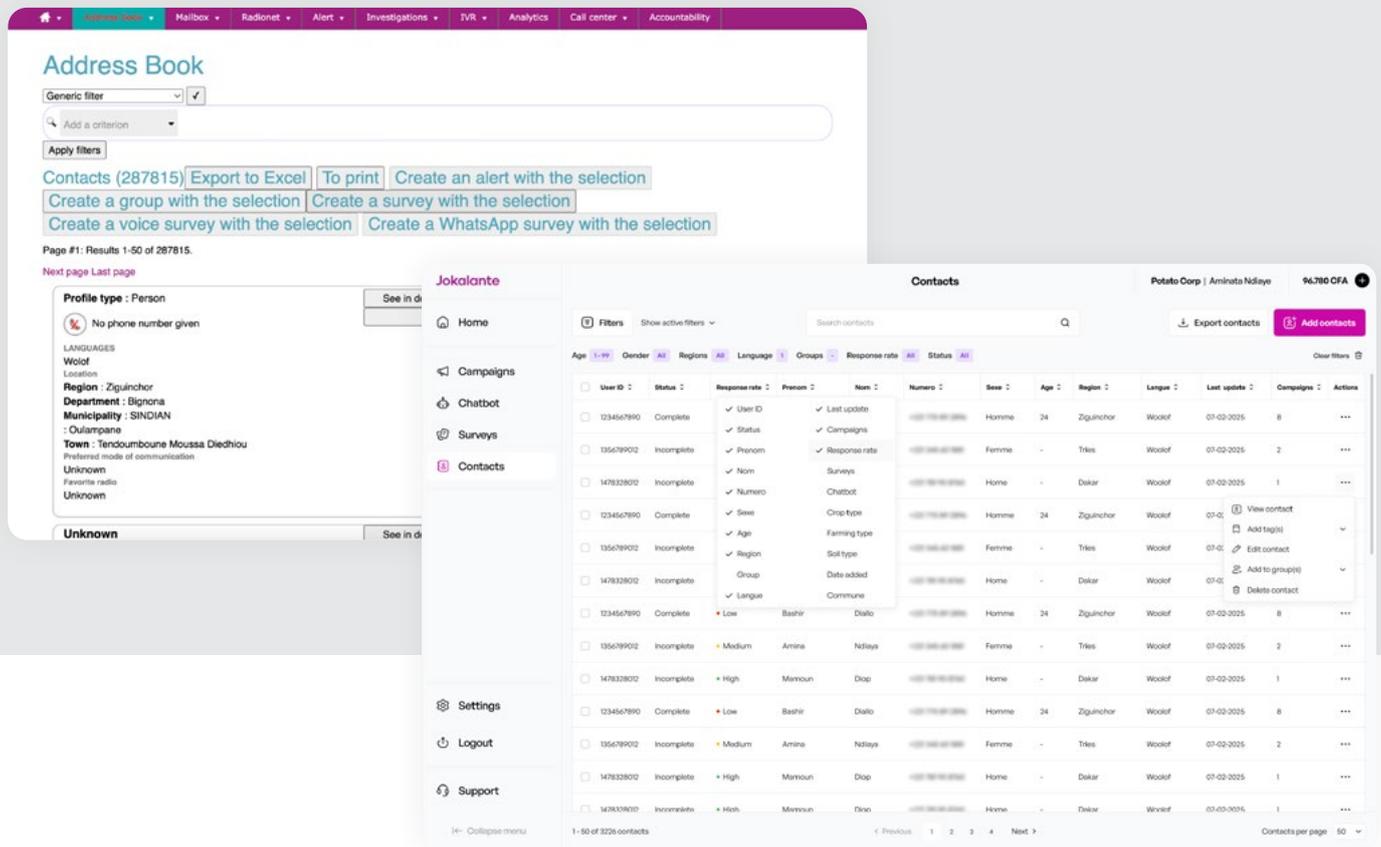
Original platform
The original platform lacked a clear hierarchy. The top menu bar showed (too) many features of varying importance. The excessive number of grey action buttons was visually overwhelming, and the address book did not provide a to-be-expected overview of contacts. It was also unclear how to view, add, edit or delete contacts.

New platform
The menu was simplified and moved to the left of the screen, showing only the key features of the platform, each with a clear icon. The interface was redesigned to make the content the focus. The contacts tab that you see opened here shows all the contacts. There is a clear pink button to add contacts, and users can also filter and export contacts. Two floating menus have also been introduced to show or hide columns and to view, edit or delete a contact.

05.
Keep your users coming back

Introduction

Having a user try your product once is a big win, but getting them to come back again and again is where the real value lies. Repeat use means your product is useful. It means users remember it, trust it and are integrating it in their work. In other words, your product is starting to stick.

Most digital tools only reveal their true value when users use them frequently and consistently. So, how do you encourage users to return?

Repeat behaviour doesn't just happen on its own. Your users have many competing priorities – on the farm, in their household and also on their phone. Some users are still building their digital confidence and using shared or low-end devices. They might only go online when it really matters. If your product doesn't feel worth returning to, it will quickly be left behind.

Repeat use happens when your product is easy to return to, efficient to use and clearly rewarding. In this chapter, we will explore three practical design strategies to help make that happen.

Three design strategies to keep users coming back

1. Make data entry easy
Data entry is often the price users pay to get value from your digital solution, but it can feel like a chore. By simplifying forms and prompting data input at the right time, you reduce the effort required and encourage regular use.
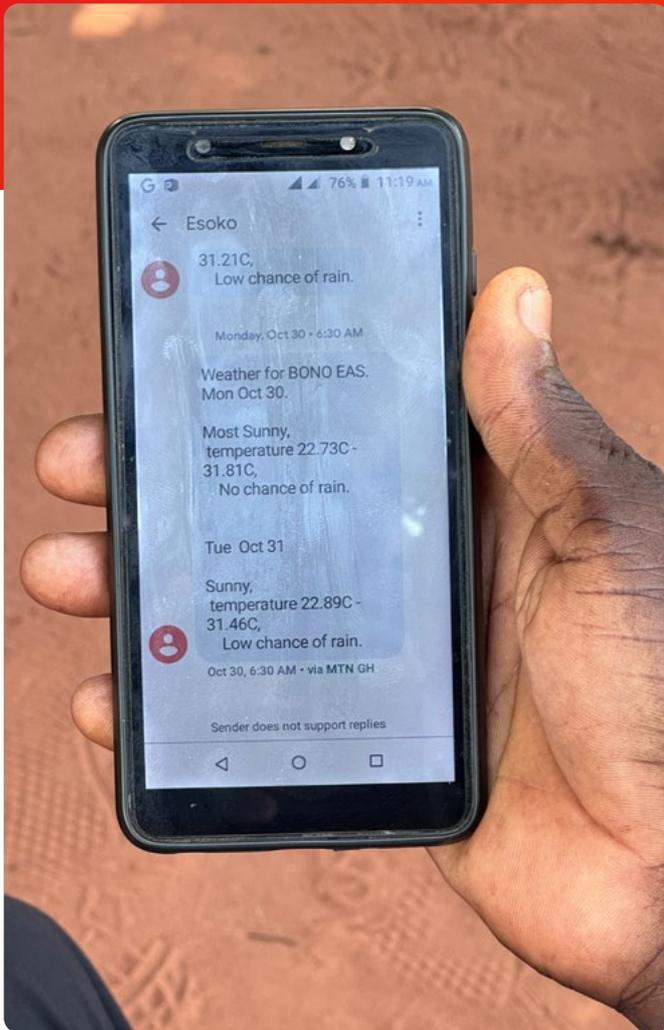
2. Make it efficient
Even a motivated user will drop off if your platform feels slow or clunky. Fast, focused workflows create a smooth experience, and the smoother it is, the more likely users are to return.

3. Make it rewarding
If users see a benefit in coming back (whether it is better insights, time saved or tangible rewards), they will keep using your product or service. Highlighting these benefits builds long-term habits.

1. Make data entry easy

Most digital agriculture solutions require users to enter data regularly. Think of user registrations, capturing production records, sales and expenses or inventory changes. Yet, this is often where users drop off. Why? Because data entry feels like work, especially if typing on a small screen, repeating tedious tasks over and over or when you have a poor internet connection working against you.

Are you making data input feel effortless or like a daily burden?

To drive repeat use, remove as much friction as possible. Well-designed forms, timely prompts and thoughtful reminders can make data entry feel less like a task and more like a natural step in the user's day. This is particularly important for users with low literacy or digital confidence. The less they have to figure out, the more likely they are to return. If you design data entry right, it is easier than doing it with pen and paper.

A Ghanian farmer shows a weather forecast, provided by Esoko, on his phone. ©Bopinc

Smart sequencing

Arrange questions and input fields in the same order users naturally follow in their daily work. For example, if a farmer usually collects produce first and then calculates payments, the app should mirror that flow. Aligning with real-world routines makes the experience feel intuitive and reduces confusion.

Less typing, more tapping

Typing can be slow and error-prone on small screens, especially for users with low literacy or limited typing experience. Use buttons, tick boxes, drop-down menus or pre-filled suggestions instead of open text fields whenever possible. It speeds up the process and makes the interface easier to navigate.

Default where you can

Save users time and reduce friction by auto-filling information they are likely to repeat. This could include defaulting to today's date, their usual location or the product they last recorded. Small conveniences like this can make a big difference in how smooth the app feels.

Timely prompts

Instead of asking users to enter lots of data at once, spread it out across the day with well-timed prompts. Trigger a message after real-life events like completing a delivery or feeding animals. A short prompt at the right moment feels more helpful and less like a chore.

Give more information

Sometimes users may not fully understand why certain data is being asked for. Add a small "More info" icon that opens a pop-up with a short explanation. This helps improve understanding and supports learning while using the app.

Polite reminders

Too many alerts can annoy users and lead to app fatigue. Instead, use short, friendly and respectful notifications that relate to real user behaviour. A gentle nudge that says "Don't forget to record yesterday's sale" works far better than a pushy or generic message.

Flexible entry

Life is unpredictable and so are your users' routines. Let them enter data retroactively if they missed a day or correct mistakes without hassle. Flexibility in data entry makes your app feel more forgiving and more human.

Avoid guess work

Always make it clear what kind of information users are expected to enter. Use field labels, examples or hints. For instance, "Weight in kilograms" or "Amount in bags". This helps users complete the task with confidence and avoids mistakes.

Prevent mistakes

Help users avoid errors by flagging suspicious or unusual entries before they are saved. For example, if a farmer logs 800 kg of maize from a single plot, show a quick message asking them to double-check. This builds trust in the tool and improves data quality.

Case study: Esoko

📍 **GHANA**

Supporting agents to register farmers efficiently

Esoko is a Ghanaian enterprise that provides content services to large rural audiences. The company has gradually expanded its offerings to include data collection, biometric profiling, analytics and communication services. All this has helped provide essential services to more than 1 million farmers.

Esoko has established a large network of agents that help provide its services. Although it already had a few digital tools to manage and streamline its services, Esoko did not have one that digitalised the operations of its agents. The team realised that agents could optimise their work if they had an app to register farmers efficiently and provide the right content services.
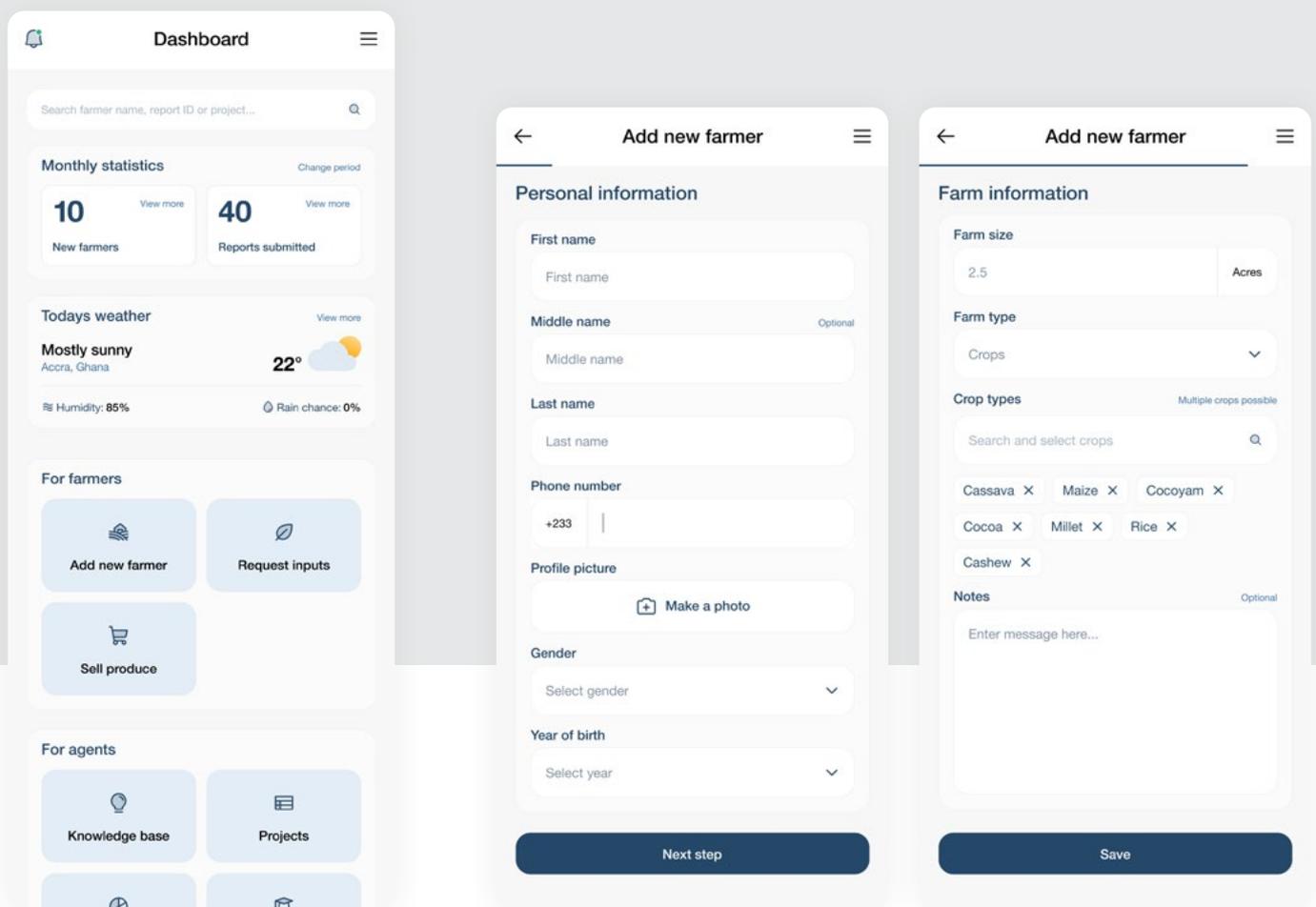
New design

Together with Esoko, an app for tablet displays and mobile phones was designed that helps agents register farmers. Registration starts with validation of the farmer's phone number through a one-time password (OTP). The registration steps that follow are grouped thematically (personal information, farm location, farm information and crop type) to guide agents and farmers through the process.

All fields have titles and clear descriptions. This way, even inexperienced agents can quickly figure out how to complete the form. Where possible, dropdowns or selection buttons were integrated. Once the registration form is complete, farmers can review the information that was entered and suggest changes to fix any mistakes.

2. Make it efficient

Busy farmers do not have time for long loading screens, deep menus or endless taps. If your app feels like a hassle, it won't become part of their routine. They need platforms that get straight to the point and work even when the connection doesn't.

How many steps does it take to complete an action?

Fast, streamlined interactions are key to building habits. When users know they can complete tasks quickly, they are far more likely to return.

Collaborating on ideas to redesign eProd's platform. ©Bopinc

Prioritise key actions

Make it as easy as possible for users to find the most important features. Put them on the home screen or in the main navigation. Avoid tucking them away behind unfamiliar icons or deep menu layers. Clear access to common tasks like recording sales or checking inventory saves time and reduces frustration.

Cut the clutter

Streamline the experience by removing anything that isn't essential. Extra steps, long forms or rarely used options can slow users down and create confusion. Keep user flows lean and focused, especially since many users are multitasking or using the app in busy outdoor environments.

Stay logged in

Help users return to where they left off without starting over. Avoid repeated logins or wiping progress when the app closes or loses signal. For users who rely on shared or low-end devices, staying logged in and preserving drafts or partial entries can make the difference between completing a task and giving up.

Design for offline use

Don't assume users have a stable connection. Enable users to capture and store data offline and sync it automatically once signal is restored. Make it clear which entries are saved locally and which ones are fully synced, so users stay in control even when they're working in remote areas.

Avoid decision fatigue

When users are faced with too many choices they can feel overwhelmed or make the wrong selection. Offer defaults or highlight the most common options. For example, show the top three filter settings instead of 10. This keeps the experience simple, clear and faster to navigate.

Case study: TDX

📍 **GHANA**

Helping aggregators log purchases efficiently

TDX is a Ghanaian agritech platform working to digitalise commodity trading. Its goal is to make it easier for buyers, traders, exporters and investors to purchase produce directly from smallholder farmers while helping farmers earn better prices by cutting out exploitative intermediaries. Aggregators, who work closely with farmers, are key to making this system work.

TDX had already been facilitating trade between aggregators and buyers, but without the digital tools to make the process efficient or scalable. Following field research, the team recognised the need for a tool that empowers aggregators to manage sourcing and payments more independently, while providing TDX with real-time data on field operations. Aggregators need a system that works with limited connectivity, simplifies communication with farmers and makes payments and market prices transparent.
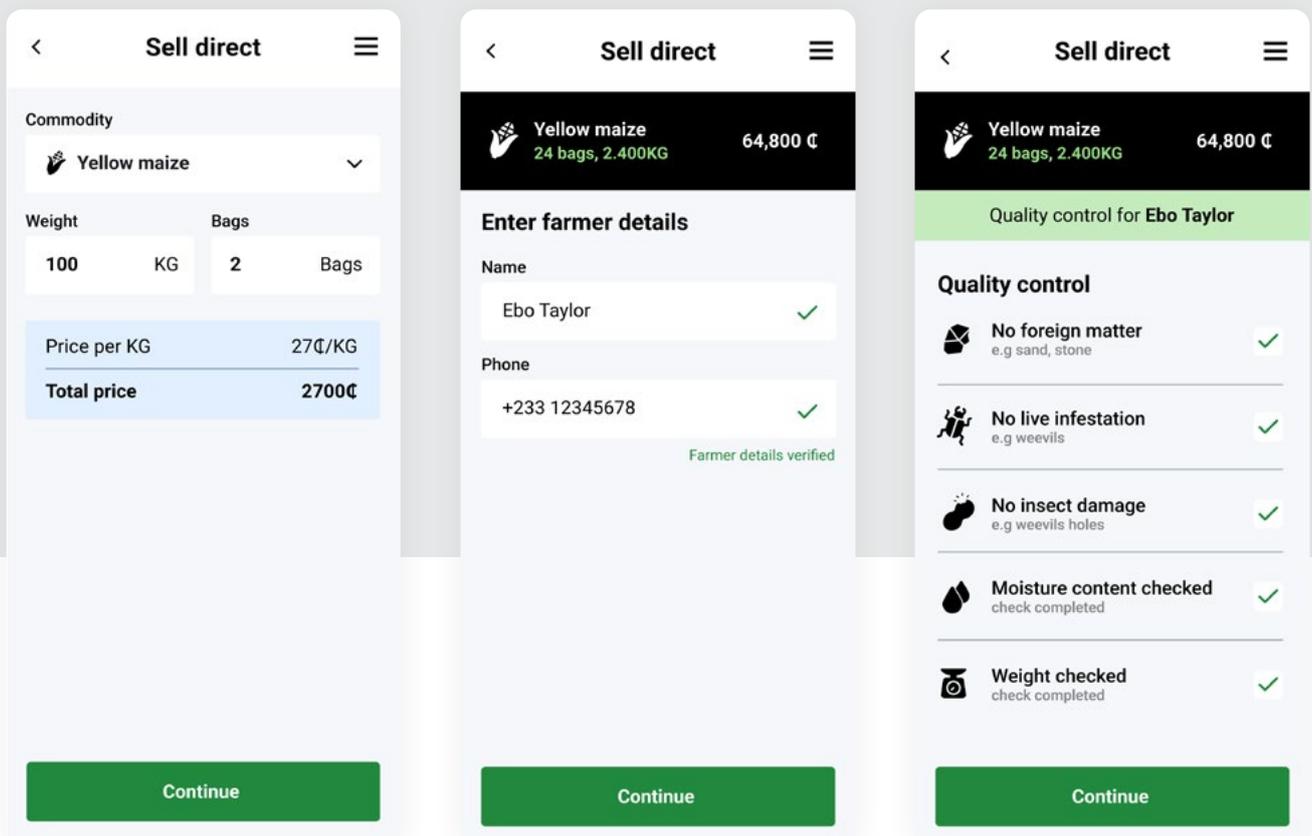
New digital tool

A task-oriented app was designed to digitalise aggregator operations. Aggregators can log purchases from farmers directly and record crop type, weight and quality in just a few clicks. ID and biometric verification are optional. Order status, payments and pending commissions are also available in one view. Once the purchase is logged, farmers receive a confirmation via SMS.

By focusing on function over fashion, TDX offers an intuitive and easy-to-use app for aggregators that performs well both online and offline. The digital workflow shows potential to reduce time and simplify steps compared to traditional paper-based methods while also making transactions more visible.

3. Make it rewarding

People return to what makes them feel good, and your product should do just that. When users see real value, they are more likely to form habits around your platform.

What do your users gain by coming back?

The reward doesn't have to be flashy. It just has to feel useful. If users see that they're improving their business, saving time or gaining access to something valuable, they'll return. But, they may not see this value on their own. You need to highlight it.

Show progress

Help users see how far they've come by showing progress over time. This could be as simple as a message like "You've registered 50 new farmers this month" or a dashboard that tracks key activities. Even if users do not track these things themselves, highlighting their efforts helps reinforce the value of using the app regularly.

Show data in the right context

Not all data makes sense in the same time frame. Daily fluctuations in egg production are normal, while harvest volumes should be compared by season. Present data in ways that match real-world patterns so that users are not misled or confused by short-term changes that don't require action.

Give insights, not just data

Raw numbers are often hard to interpret, especially for users with limited numeracy or data experience. Turn data into clear insights using simple charts, colour-coded labels or short messages like "Last week was your busiest yet." Make it easy for users to understand what the numbers mean and why they matter.

Bite-sized pieces

Showing too much data at once can overwhelm users and lead to confusion. Break up insights into smaller, easy-to-understand sections. If possible, let users choose what type of information they want to see. For example, "Sales this week" or "Inventory status". This helps them focus on what is most relevant.

Offer incentives

Motivate users to keep engaging with the app by offering small rewards. These could be badges, discounts or access to features unlocked through consistent use. Even symbolic rewards, like a gold badge for completing five tasks in a row, can make users feel proud and encourage them to come back.

Celebrate consistency

Even small wins are worth acknowledging. A simple message like "Nice work! Your records are up to date" can create a sense of accomplishment and reinforce good habits. Consistent positive feedback helps users feel their efforts are recognised and they're on the right track.

Let the records work for them

Help users see the value of their data by making it useful in the real world. This could mean generating a summary they can show to an input supplier, using transaction history to apply for a loan or creating reports they can take to a cooperative. When users see that their data has practical benefits, they are more likely to keep using the app.
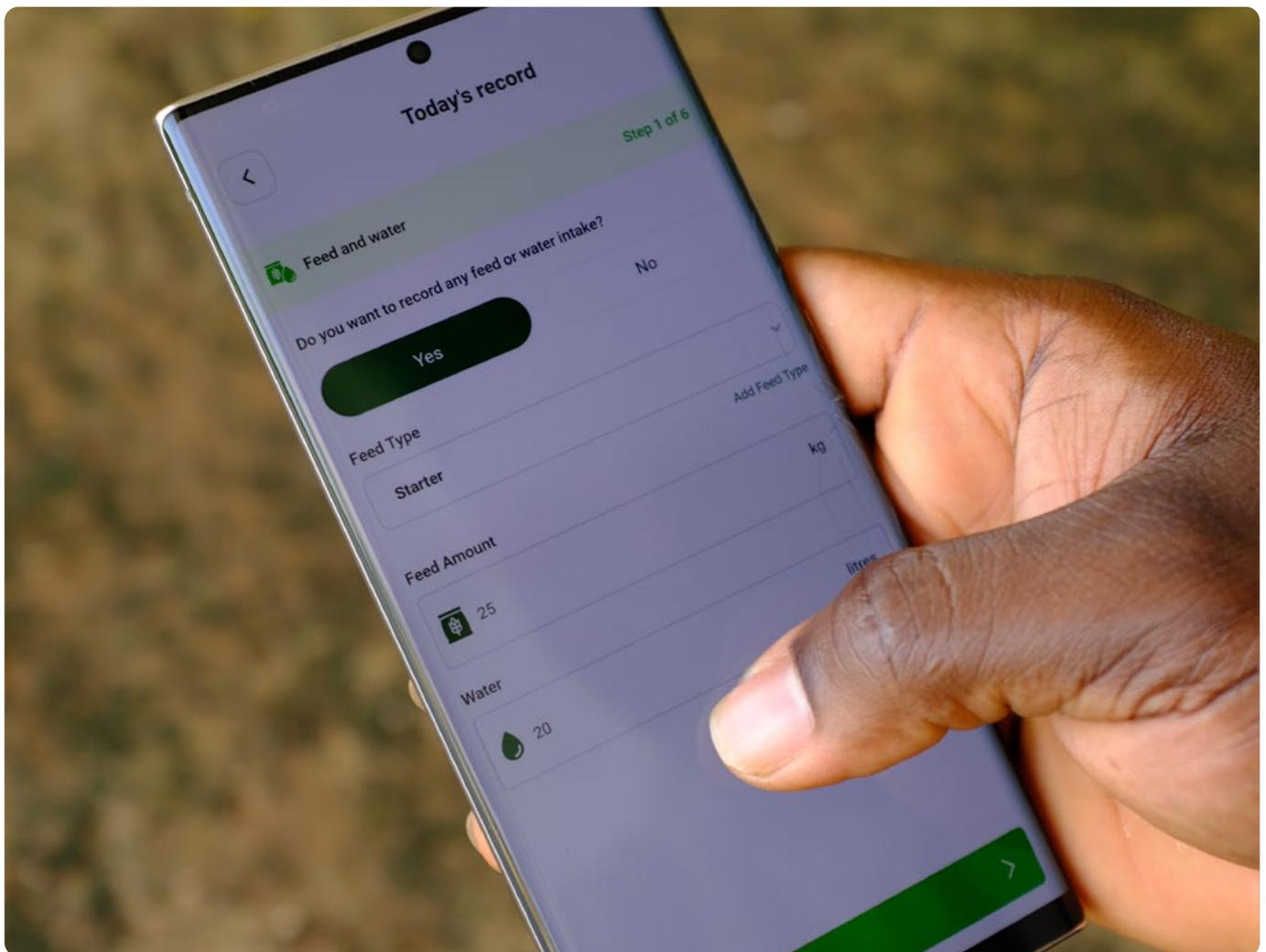
Farmspeak's app allows poultry farmers to easily enter their daily records. ©Bopinc

## Case study: Farmspeak

📍 **NIGERIA**

Getting insights on your flock, straight from your phone

Farmspeak helps poultry farmers in Nigeria get the most out of their farms. Its app, FS Manager, supports them to manage their flocks efficiently and professionally. On the app, farmers keep a record of their daily activities, for example, the amount of feed provided, bird weight or the number of eggs collected.

The Farmspeak team built an app with many different features, but user research uncovered an abundance of features that confused users and several that were hardly used. Also, the web app did not support offline use, making it impractical for farm use.

In rethinking the app, it was decided to remove excess functionality and simplify it to focus on easy data entry and productivity insights. The app was also rebuilt to support offline use.
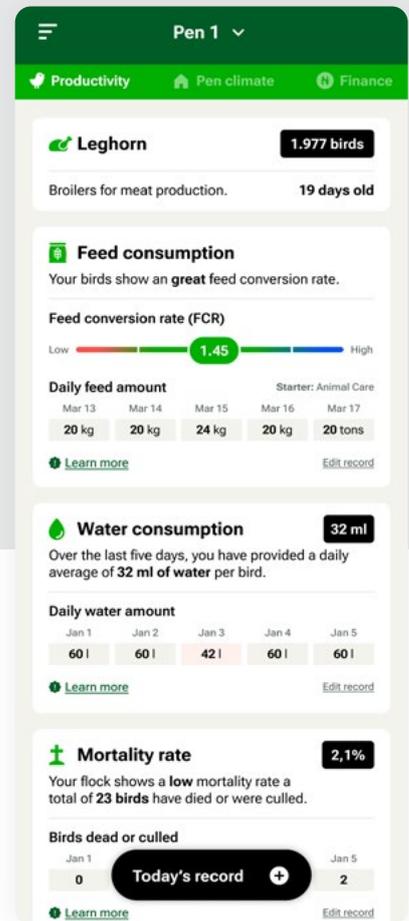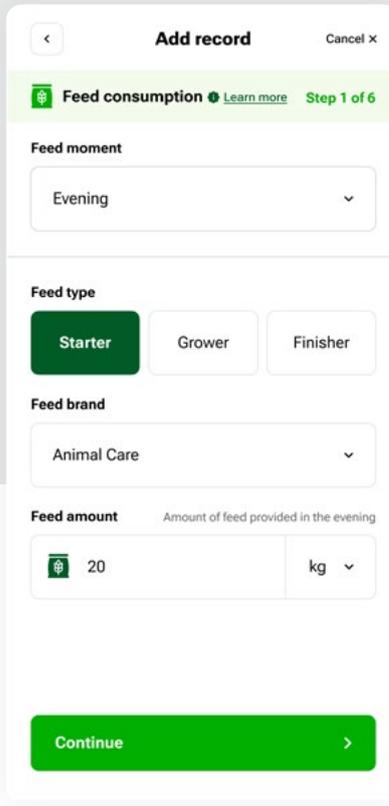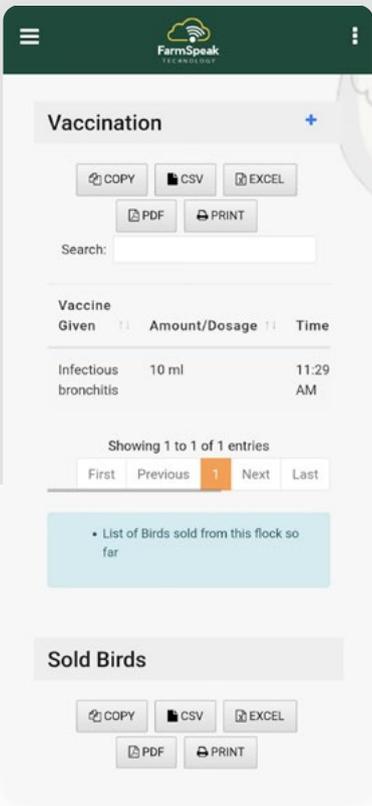
Original design

On the original app, farmers had to key in daily records of feed amounts, medical treatments and average bird weight. However, there was no reward for entering the data, and many farmers failed to update their records or did it very inconsistently.

New design

In the new app, a lot of effort was put into making data entry as clear and easy as possible. The entire flow of data entry was refined. A dashboard was also introduced that shows immediate insights for each piece of data entered. Farmers can easily monitor the health and growth of broilers and the productivity of layers across a few different metrics. A lot of customisation is also now possible, allowing farmers to focus on the metrics most relevant to them.

06.
Grow your product, not your problems

Introduction

In the early years of building a successful digital solution, the main challenge is getting users onto your platform. You have limited funds and have started lean. You may have even taken some design and development shortcuts to build your product or service without breaking the bank. Now, your business is beginning to scale, your team is getting bigger, you may welcome other user segments, you might be active in multiple countries and you will likely start to add additional features.

At the same time, your users and partners are becoming more and more demanding. This creates a new challenge: making sure your solution keeps performing effectively, stays clear and user-friendly and is as effective as it can possibly be.

Without careful attention, digital products can quickly become cluttered, confusing or difficult to manage. Poorly managed feature growth often leads to patchwork products that are hard to understand, both for your users and your team. This risk is even greater in resource-constrained environments where users have limited time, data or digital confidence, and where your company may have finite resources to support an increasingly complex product. The right growth strategy is essential to keep your solution strong, scalable and trusted over time.

In this chapter, we explore three practical design strategies to help you fine-tune and grow your digital agriculture solution: keeping it manageable while it evolves, optimising it where it matters and keeping it consistent.

Three design strategies to help you grow your digital solution effectively

1. Keep it manageable
A growing product or service can easily become unmanageable. Staying disciplined by knowing what to add, what to remove and when to say no, ensures your digital solution remains useful and sustainable over time.

2. Optimise where it matters
Prioritise your growth efforts. Focus your improvements on the flows and features that have a real impact on user success and business outcomes.

3. Keep it consistent
Users build trust when the experience feels predictable and familiar. Consistency across navigation, terminology and visuals reduces confusion and boosts confidence, especially for users who are still developing their digital literacy.

1. Keep it manageable

As your solution and team grow, it is easy to lose sight of what really matters. New features get added, flows become tangled and the experience becomes harder to maintain, both for your users and your team.

Is your solution staying simple, scalable and under control as it grows?

Keeping your digital solution manageable is a discipline. It involves making tough choices, staying focused and building in a way that supports sustainable growth, not just expansion.

Group features by user segment

Organise your product or service so that each user segment, such as farmers, agents or managers, can use it exactly to their needs and liking. The features most relevant to their context should be accessible, and irrelevant features or functionality should be tucked away.

Prioritise ruthlessly

Only build features that are clearly backed by user demand or have strong potential for business impact. If something doesn't serve a real need or distracts from your core value, it's better to say no – even if it feels like a good idea.

Phase out low-value features

Just because a feature exists doesn't mean it should stay. If it's rarely used or doesn't deliver clear value, consider simplifying it or retiring it entirely. This reduces clutter and makes your solution easier to maintain.

Pay your design debt

When creating a solution as a startup, you build up design and development debt. You may have taken shortcuts, oversimplified features, allowed inconsistencies or ignored mistakes. It happens. Make sure to fix these before you focus on expanding your product or service.

Think platform instead of products

If you are building tools for multiple user types, like farmers, agents and managers, make sure they work together as a coherent platform. Avoid treating each one as a stand-alone product. They should feel connected and part of the same ecosystem.

Build for light, sustainable growth

Design your solution so that it can grow with your business without needing a complete overhaul – for example, to support new crops, geographies or types of users. A clear structure and reusable design patterns help you scale without adding complexity.

Document your design choices

Keep a simple record of why key design decisions were made, such as screen layouts, field names or process flows. Also track features or ideas that were considered but rejected, and the reasons why. This helps future teams maintain consistency, avoid repeating past mistakes and build on what already works.

Case study: eProd

Simplifying mature value chain software

Active in a variety of value chains in many different countries, eProd provides an end-to-end enterprise resource planning (ERP) solution for agribusinesses that want to manage their supply chain more effectively. The software comes with a web app for the agribusiness and a mobile app for recording the produce collected in the field.

The first version of the eProd software was developed 20 years ago. It has since gone through many iterations and updates. Adding more and more functionality over time made the solution very complete, but also presented new users with a steep learning curve. Even existing users could not fully utilise the software because it was so complex.
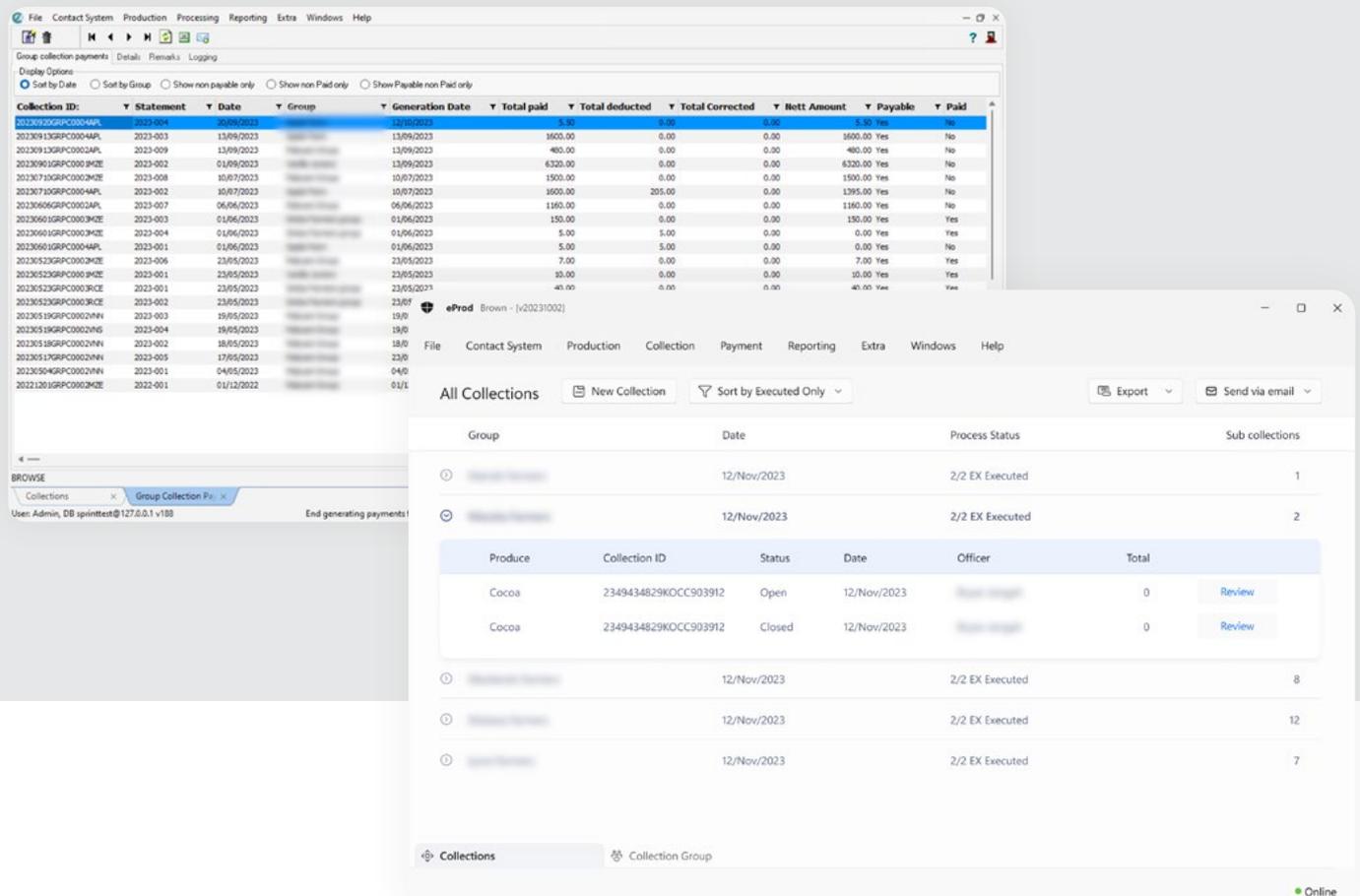
Original platform

eProd's platform had a multitude of features in a crowded interface. Its button texts did not resonate with users and navigation cues were unclear. Even with proper training, the users we interviewed said they had difficulty using the software.

New platform

A modern and cleaner look for eProd's desktop software and mobile app was designed over the course of two workshops. The aim of the redesign was to create simpler, more user-friendly interfaces with fewer steps, clicks and options. The underlying information architecture and structure were largely kept intact to avoid a complete overhaul of the software. Most suggestions for redesign were related to the user interface.

2. Optimise where it matters

Product and business growth is not a linear process. There are often many things – big and small – you want to change about your digital solution, but you don't have the resources to work on all of them.

Growing your product or service is a balancing act. Should you prioritise user requests, business potential or bugs and errors? It's important to set the right priorities. Optimisation efforts should focus on improving what matters most: the critical tasks that create value for your users and your business.

Focus on improvements that will significantly benefit your users and your business.

By concentrating on user and business impact, you increase the value of your digital solution without wasting effort on things that don't really matter or don't drive business results.

Focus on the most-used flows

Start with the core journeys that users rely on most, like recording sales, adding farmers or checking stock levels. These flows should be as smooth and reliable as possible since even small issues in high-traffic areas can have a big impact on user satisfaction and business results.

Use real-world feedback

Field agents, customer support staff and user interviews are some of your most valuable sources of insight. They can help you spot friction points, confusing steps or workarounds that users have developed. Make decisions based on what users actually experience, not on what seems logical from behind a desk.

Fix small, frequent frustrations

Minor issues, like a slow-loading screen or hard-to-tap button, may seem insignificant on their own but can seriously affect the overall experience if encountered daily. Addressing these pain points can quickly improve usability without a full redesign.

Use behavioural data to guide improvements

App analytics can show you where users drop off, how long tasks take and which fields are frequently skipped. Use this data to find weak points in your flows and focus your energy on fixing what is really getting in the way of smooth usage.

Simplify critical screens

Strip back busy screens and focus only on what is essential. The pages users visit most – like dashboards, transaction records or daily activity logs – should be easy to scan with clear actions that stand out. Avoid clutter and minimise visual noise.

Test in real-world conditions

Before rolling out any changes, make sure they perform well under your user's actual conditions. This includes testing on older phones, with limited connectivity and with users who have less digital confidence. This is the only way to know whether your solution will hold up to everyday use.

Case study: Winich Farms

📍 **NIGERIA**

Optimising fulfilment workflows ahead of product expansion

Winich Farms, based in Lagos, Nigeria, connects smallholder farmers to offtakers and processors through its aggregation platform. As the company prepared to launch a collateralised loan system – enabling farmers to store produce in fulfilment centres in exchange for upfront payments – the team needed to improve how inventory was tracked and managed across locations.

Prior to participating in the GSMA AgriTech Accelerator, Winich did not have a structured fulfilment dashboard in place. Warehouse operations were managed manually or through basic internal tools, with no way to segment produce by contract type (e.g. regular sale vs collateralised). As the business model evolved, it became clear that fulfilment was a critical bottleneck. Without a clear system, there was risk of confusion, inefficiencies and trust issues, especially as collateralised loans require high levels of transparency and traceability.
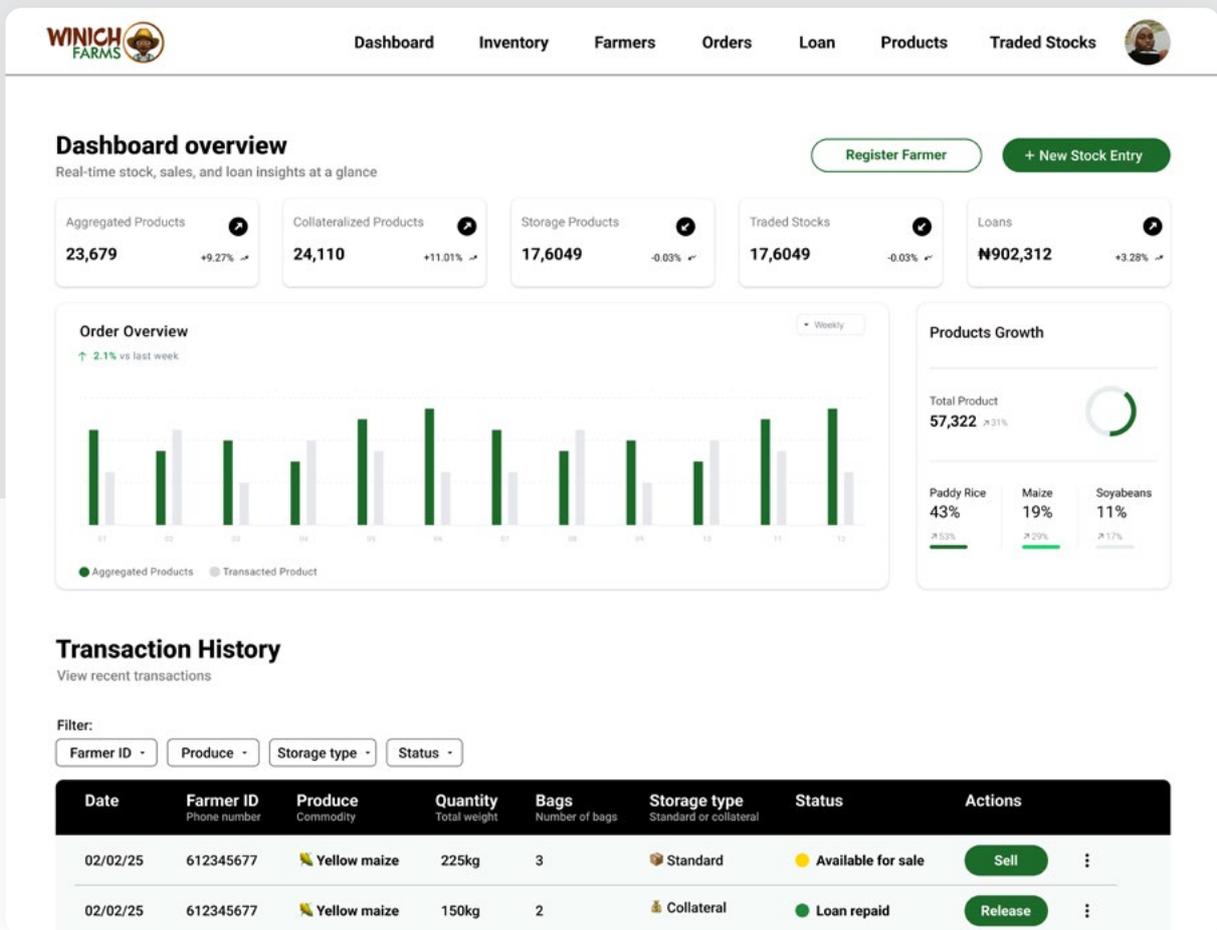
New dashboard

The team prioritised fulfilment as a high-impact area to improve before scaling further. A fulfilment dashboard was designed that brings structure, visibility and control to inventory management. Warehouse staff can now log stock entries, categorise produce by contract type and track stock movement across centres. Colour-coded segmentation and automated receipts reduce human error, while loan-related logic (such as automated calculations and tracking) is built in. By focusing efforts on this critical part of the workflow, Winich can confidently expand its services without operational breakdowns.

3. Keep it consistent

For many users in rural and low-income markets, digital solutions may still be unfamiliar territory. Inconsistent layouts, unclear buttons or changes in navigation can quickly erode confidence and create frustration. As you aim to grow your solution, you will need to be rigorous in ensuring your interfaces are consistent.

Does every part of your platform feel familiar, predictable and easy to trust?

Keeping your platform consistent is about creating an environment that teaches your user how to operate your solution. For example: text fields are white, buttons have colour, titles are big, body copy is small, green is good, red is bad. If you are consistent in applying these kinds of use cues (note: there are many more), you remove the guess work. When users do not have to figure out how things work on every screen, they make fewer mistakes, move faster and stay longer. Importantly, they will need less support from your team.

Although it takes a good eye to spot inconsistencies, it doesn't take a design expert to create a more consistent user interface. Instead, it takes rigour and meticulous design administration to define components and apply them consistently. It also helps to regularly observe real users interacting with your product or service – through simple user acceptance testing – to spot where patterns might break or feel unfamiliar.

User research on the MooMe desktop application with a large dairy farm in Tunisia. ©Bopinc

Use familiar mobile patterns

Stick to basic navigation and interaction styles that users may already recognise from apps like WhatsApp, Facebook or mobile money services. Familiar layouts reduce the learning curve and help users feel confident from the start.

Think in components

Most interfaces consist of a fairly standard set of components, such as a menu, navigation bar, text fields, info cards, bottom sheets and modals. Standardise these components and apply them consistently across your platform.

Create a clear visual language

Consistent use of colour, fonts and icons helps users understand and navigate your app more easily – especially semi-literate users who may rely more on visual cues. A clear visual language also supports your brand identity and builds trust over time.

Build a design system

A design system is a comprehensive set of standards, guidelines and reusable components that guide the design and development of your digital products in a consistent and scalable way. It takes a big effort to create, but provides your team with excellent guidance when growing and expanding your products. It also helps with turnover and onboarding new designers.

Make actions consistent

When users perform similar actions (like adding a new record, confirming a transaction or submitting a report), make sure the steps, buttons and prompts feel the same across the platform. Consistent actions help users feel more in control and reduce mistakes.

Test consistency with users

Even with a strong design, small inconsistencies can creep in over time. Run regular user acceptance testing or short observation sessions with real users to see where patterns break or where screens feel unfamiliar. This helps catch issues early and keeps the experience predictable.

Synchronise updates across all channels

If you offer multiple channels, such as a mobile app, web platform, SMS or USSD, make sure the user experience is aligned across all of them. That includes visual design, language and the order of steps. A consistent experience builds confidence and prevents confusion when users switch between platforms.
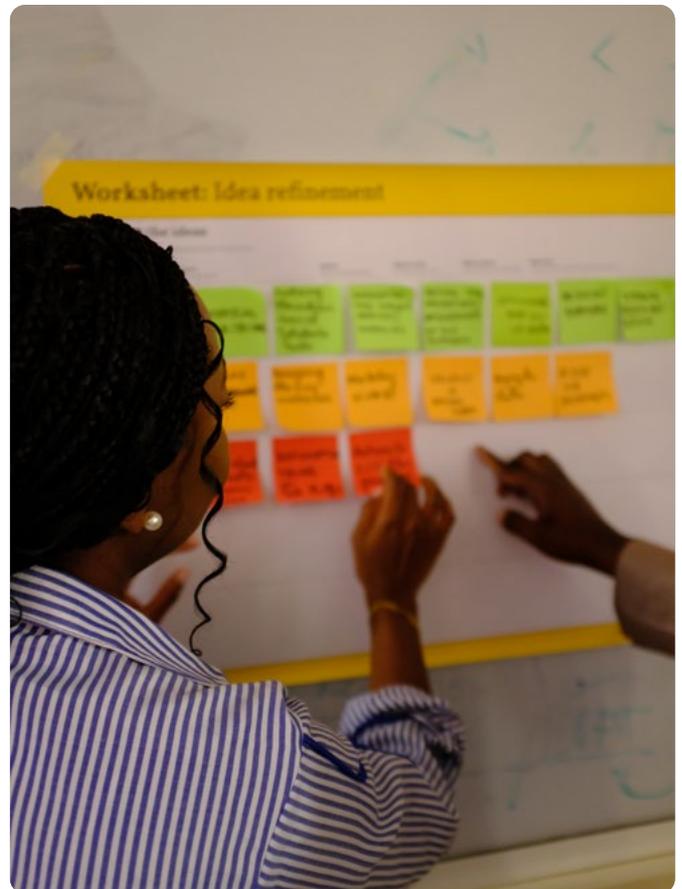
07.
Conclusion

Conclusion

The journey from understanding users to designing, building and growing a digital agriculture solution successfully and sustainably is a gradual process that requires patience, ongoing learning and many course corrections along the way.

Creating effective and inclusive digital solutions requires empathy, curiosity, restraint, hard work and skill. Throughout this guidebook, we've presented design strategies to guide you on this journey. It shows how small, thoughtful choices – like a simplified form, a timely notification or consistent visuals – can transform a user experience from frustrating to empowering.

We've highlighted the importance of deeply knowing your users. Without this understanding, even the most advanced features will miss the mark. We built on this by outlining how to create digital solutions that feel intuitive and familiar, especially for users with low digital literacy. Strategies like clear onboarding, reflecting real-world environments and simplifying navigation help turn hesitant first-time users into confident ones. To build long-lasting engagement, the design of your solution must reduce friction, save users time and encourage consistent use.

As your product or service evolves, there can be a strong temptation to add more features, target more users and expand quickly. However, growth without intention often leads to complexity, confusion and disconnection. The most successful digital solutions are not the most feature-rich ones, but those that stay grounded in the everyday needs of their users. They are consistent, purposeful and make the lives of users a little easier each time they're used.

Ultimately, good UX is not about perfection – it's about progress. It's the ongoing work of listening closely, improving deliberately and never losing sight of the people behind the screens. When you design with care and clarity, you don't just build better digital solutions – you build trust, confidence and lasting impact.
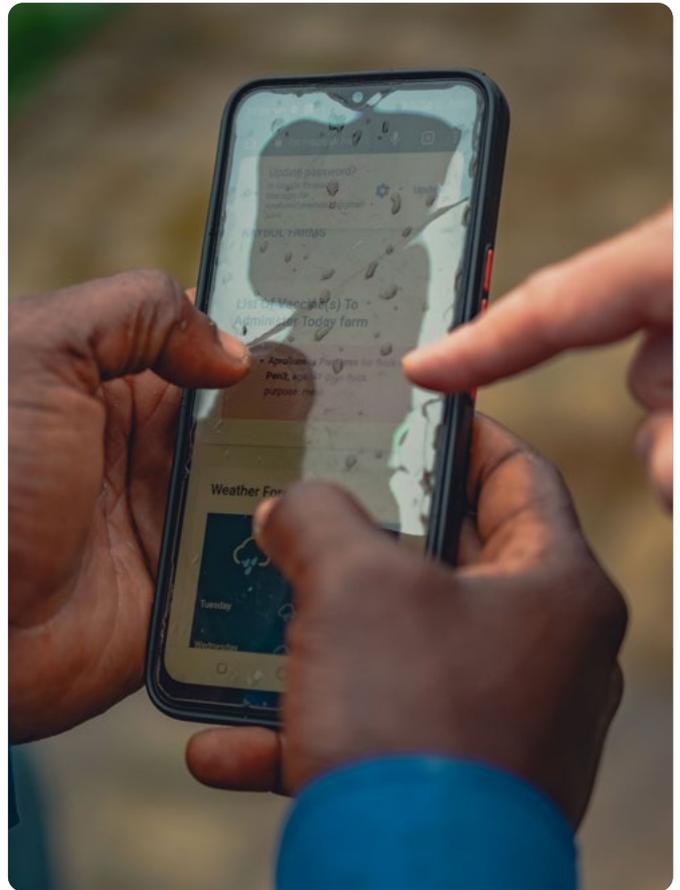
A poultry farmer showing how they use the Farmspeak application. ©Bopinc

08.
Worksheets

Worksheets

⬇ Download all worksheets

During the GSMA AgriTech Accelerator, Bopinc and GSMA facilitated 20 week-long product iteration workshops in which user research, ideation and co-creation sessions were conducted to identify improvements to the design of the digital products.

To streamline these workshops and conversations, a series of worksheets were created. The worksheets range from a simple blank canvas to capture insights from user research to templates for creating a persona, user journey or product roadmap.

If you are involved in developing and designing a digital agriculture solution, you can download, print and use these worksheets. They can help shape your ideation process and will hopefully assist you in creating a better user experience.

1. Field research reflection
Recommended print size: A3

A simple worksheet for a quick reflection after a day of field research. We imagine that you and your team will speak to many users on this day. This worksheet helps you capture the main insights while they are still fresh. This can be a "stand-up" exercise and shouldn't take more than 20 minutes.
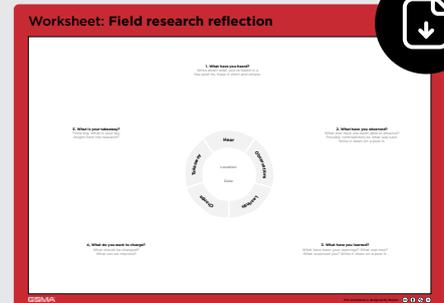
2. Insights
Recommended print size: A1

This empty worksheet packs a lot of power. After conducting field research, you will need to spend time in the office mapping out all the insights you've collected. Collectively, you write the insights on sticky notes and cluster them thematically. For instance, farming behaviour, app use, user challenges, bugs, edge cases and new feature ideas.

If you have collected insights from distinct user segments, it is best to document findings for each segment separately on individual worksheets.
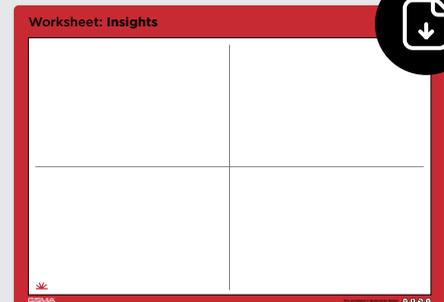
3. Persona
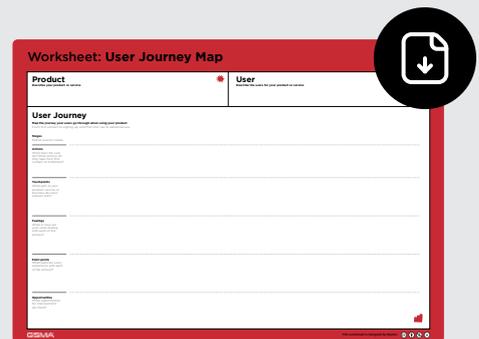### *Recommended print size: A3*

This is a simple worksheet to create a persona of your users. A persona is a fictional character that represents a specific user type based on real data and user research. Personas help your team to understand user needs.
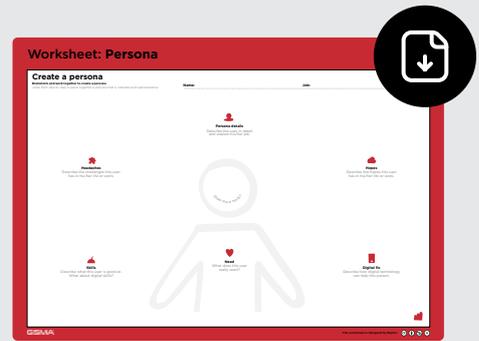
4. User journey map
Recommended print size: A1

This is a visual representation of the process a user goes through to achieve a specific goal with a product, service or system. It outlines each step the user takes, including their actions, touch points, feelings and pain points. The aim is to find opportunities for improvement.

5. Crop journey map
Recommended print size: A1

This worksheet can be used to create a crop journey map. It is quite similar to a user journey map, only you use this sheet to map a season for a specific crop or for a farmer. Again, you will use it to identify improvements to the journey.

6. Ideation
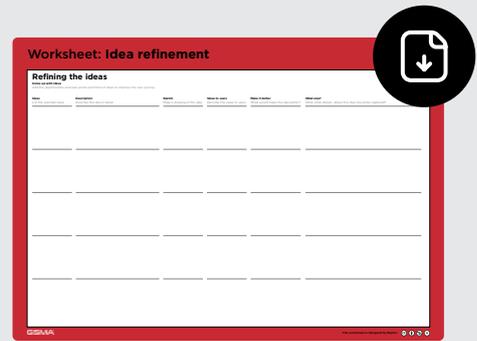### *Recommended print size: A1*

This worksheet is for capturing ideas. While you were mapping insights or user journeys, you probably came up with ideas on how to improve your product. You can use the rows to cluster and combine similar ideas.
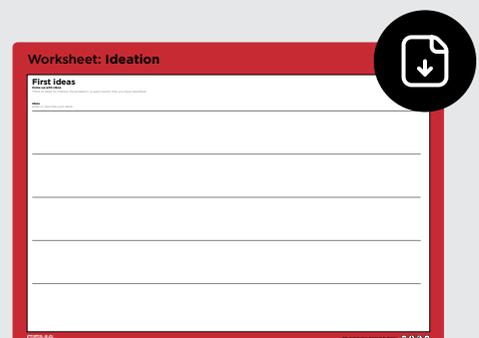
7. Idea refinement
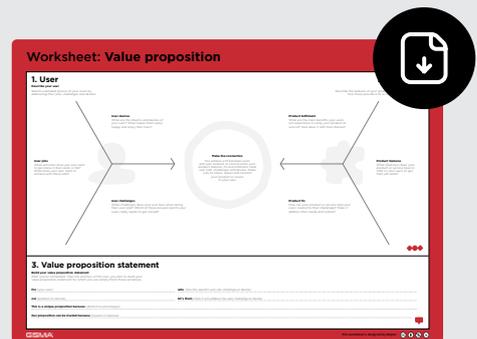### *Recommended print size: A1*

This worksheet helps to refine up to five ideas that you have distilled in your ideation process. It helps to refine and improve the ideas and present them in a clear way so that everyone in your team understands them.

8. Value proposition
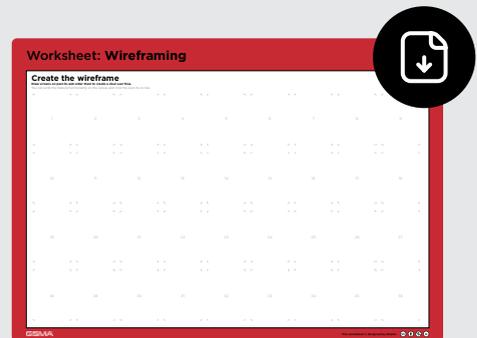### *Recommended print size: A3*

This worksheet can be used to (re)define your value proposition. A value proposition answers the most important question in the mind of your users: Why should they use your product or service? This worksheet helps you gain clarity on the value of your digital solution.

9. Wireframing
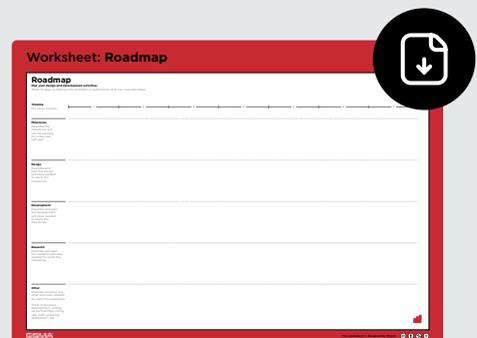### *Recommended print size: A1*

This is a simple but effective worksheet to work out basic wireframes on sticky notes. The worksheet is designed so that you can fit exactly nine standard-size rectangular stickies from left to right. This way, you can quickly draw up features or flows.

10. Roadmap
Recommended print size: A1

This worksheet can be used to detail a roadmap for product development. It spans a seven-month period and allows you to record your intended milestones for this period, keeping in mind design, development and research activities.

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