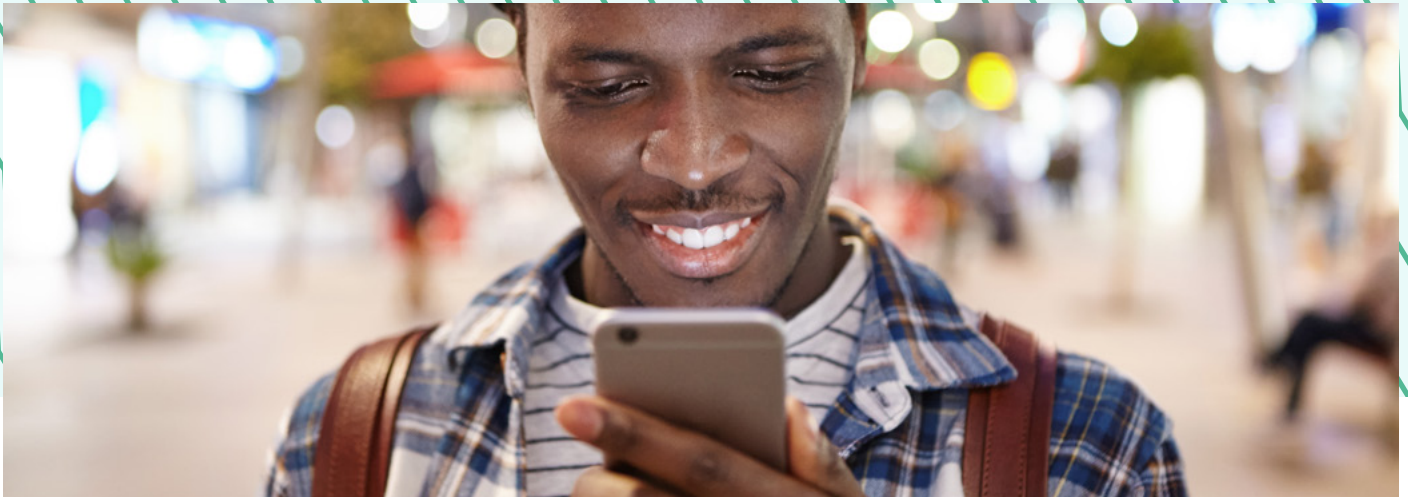


Chapter 4.
**Promoting vaccination
uptake through social
media: A handbook**



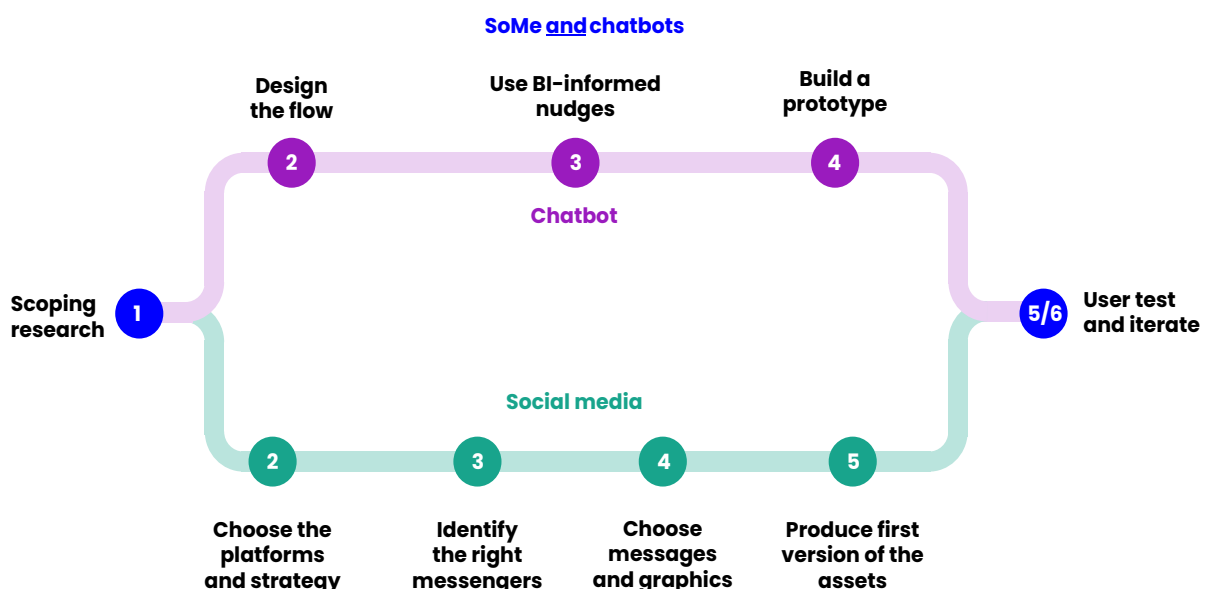


This chapter provides a step-by-step, user-centred guide to developing social media (SoMe) campaigns and chatbots interventions aimed at increasing vaccine uptake.

Intended for practitioners in the LMICs, it provides a roadmap with the key steps needed to design either a chatbot or a SoMe campaign, with a focus on increasing real-world vaccination rates. This includes identifying the right mix of functionalities, messages, framings, platforms, and messengers for specific interventions, audiences and contexts. For each step, we offer key considerations and practical tips for design, implementation, and evaluation.

The steps shown in blue are shared broadly across both types of interventions, while those in purple and green are specific for chatbots and social media campaigns, respectively. Your campaign can include either one of the intervention types on their own, or a combination of both.

Figure 15. Roadmap to develop SoMe and chatbot interventions.



1. Scoping research

The first step to designing an intervention – whether on social media or instant messaging platforms – is to define the target. This means narrowing in on your specific group and exploring the barriers preventing people from getting vaccinated. Messaging content, for example, will differ considerably depending on whether the target group is unaware of how to get vaccinated or is hesitant due to misinformation or mistrust.

A good place to start is to review the existing literature to identify common barriers and potential levers to behaviour. Where available, prioritise systematic or scoping reviews, which offer a synthesis of recurring barriers across studies. If unavailable, even individual qualitative and observational studies (particularly those focused on your intended population) can help. Experimental or quasi-experimental studies, while not always focused on barriers per se, can offer useful contextual understanding, including which constraints are most responsive to intervention and what has worked elsewhere. Finally, use grey literature (e.g., NGO reports, programme evaluations, policy briefs) which can help fill evidence gaps, especially in under-researched settings. However, you need to be mindful of the potential methodological limitations of these sources.

As we saw in [Chapter 1](#) many vaccination gaps in the LMICs stem from behavioural barriers. However, these barriers will differ across contexts. We should be cautious not to assume interventions that worked in one setting will be equally effective elsewhere.

Localised qualitative research and exploratory methods can help you identify the specific enablers and blockers specific to your setting.

At BIT, we use a range of tools and frameworks to help us structure this research. For example, the LEAD¹⁶⁸ framework helps generate behavioural insights through mixed methods, COM-B¹⁶⁹ supports the categorisation and prioritisation of barriers as well as drivers to achieve maximum impact (e.g., based on impact and feasibility). For a detailed guide on how to unpack the barriers and drivers of behaviours see [BIT's explore report](#).



At this point, you should have a good understanding of the behaviour you are targeting, what might be standing in the way, and use this information to inform the goal of your campaign. These insights will guide both your content and channel strategy, whether it comes to your social media and/or chatbot campaign.

From here, the design paths diverge: first we go through three key steps of designing a chatbot, followed by four steps for designing a social media campaign.

Box 1

Social media campaigns, chatbots, or both?

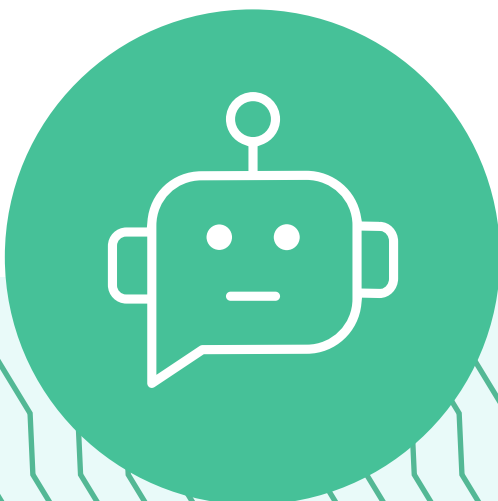
The roadmap above outlines two separate design pathways: one for social media campaigns and one for chatbots. When deciding which is most suitable for your campaign, consider your aim and your audience:

Social media is ideal for quickly reaching large audiences, shaping social norms, and raising awareness. It is effective for broadcasting messages, sharing stories, and creating visibility around vaccination.

Chatbots excel at two-way, personalised conversations. They provide a private space where users can ask questions, receive tailored information, and overcome personal concerns around vaccination. Chatbots are particularly useful for guiding users from intention to action, such as booking a vaccination appointment.

Combining both can be even more effective. Social media captures attention and builds motivation, a chatbot then helps users take the next step. For example, Facebook or Instagram posts might deliver a compelling message and direct users to a social media chatbot, where users can get more tailored support to follow through with the call to action, such as booking a vaccination appointment. This combined approach was used in VaxSocial Nigeria, as described in [Chapter 3](#).

Note that your choice will also influence how you evaluate the campaign (see [Appendix](#)).



2.A Chatbots: Design the flow

Chatbots allow users to perform multiple, sequenced actions, and access multiple functionalities in one digital space. The selection of these functionalities (which define what your chatbot can do) should be informed by two core considerations:

- 1 The behavioural barriers identified in your earlier research, and
- 2 The behavioural strategies most likely to address them.

To guide your selection of functionalities, ask:

- 1 What do you want your chatbot to achieve? What is the target behaviour you are trying to influence? What is the key barrier to this behaviour (see e.g., Chapter 1) and what chatbot functions and types of messaging could help overcome it (see e.g., Chapter 2)?
- 2 What resources (including time, technical capability, and software engineering support) do you have to build more complex features? What is the right balance between depth of content and simplicity given your audience and resource constraints?
- 3 What types of data do you have access to that could be used to personalise the user experience (e.g., demographics, vaccination history, or frequently asked questions)?

The first of these questions – what you want your chatbot to achieve – is the most crucial one to consider. Is it to:

- Provide information?
- Help users book an appointment?
- Help them attend it?

Additionally, what is it that prevents them from doing this, and what kind of functionality could help users to follow through with this behaviour? Understanding the specific behaviour you are aiming to support is important, as you will inevitably be working with operational constraints, but also with limited attention spans from your users.

Personalisation is another core consideration. As seen in Chapter 2, one of the unique strengths of chatbots is their capacity for tailored experiences. The degree of personalisation you can deliver (based on your data and your technical setup) should inform your design decision from the start.

Once you have identified the core functionalities of your chatbot, the next step is to design the conversation structure: the flow. This determines how users will navigate the chatbot and access its features. A well-designed flow ensures the experience is intuitive, engaging, and aligned with your behavioural goals.





Note on AI-driven bots:

Whilst rule-based/static chatbots (without AI) require fully developed strict flow, following an if-then logic with pre-specified questions and defined answers (e.g., “If user says X, go to step Y”), AI-driven bots are configured differently.

They focus on higher level scaffolding, with defined key user intentions, goals, techniques to use, personality (e.g., friendly, concise and informative), and fallback strategies in case of misunderstanding, as well as guardrails and safety protocols to respect.

A middle-ground is represented by bots with modular flow, where rather than one fixed tree, you build reusable blocks that the AI can refer back to as, and if needed. In this handbook, we largely focus on rule-based bots, but refer to distinctions and similarities with AI bots when appropriate.



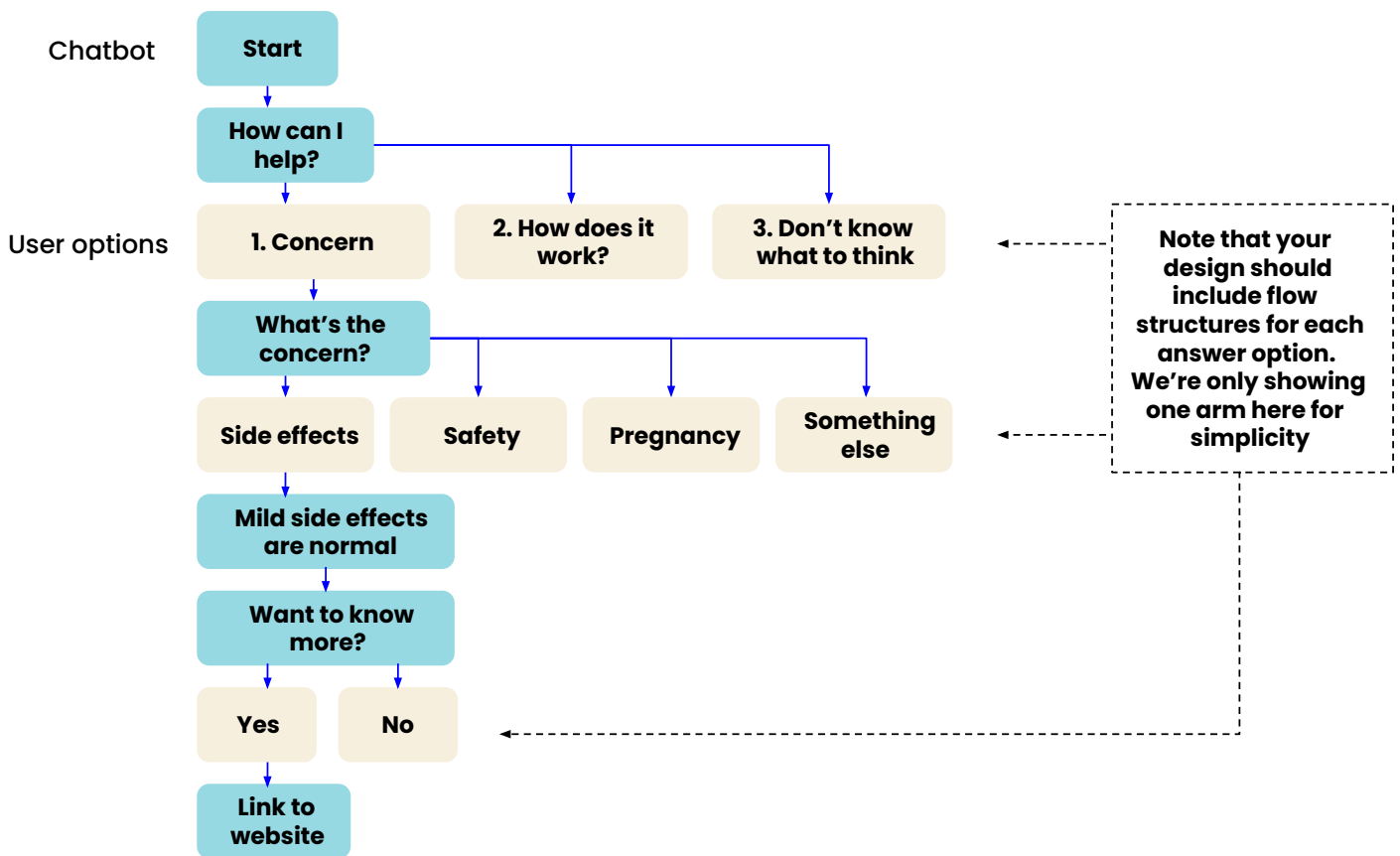


A flowchart can help visualise the different routes a user might take using the static or modular chatbot. Each branch should represent a different path the user can follow based on their responses, and should reflect the core functionalities you have prioritised. For example, if one of your chatbot's core features is to provide reliable, trusted information about vaccines, the corresponding conversation flow might look like Figure 16 below.

With AI-driven bots:

Instead of detailed flowcharts you may build higher level conversation design maps of prompt frameworks.

Figure 16. Example chatbot flow. Blue boxes are chatbot messages, and sand coloured boxes are user decisions. Note that this illustration only shows one user journey through the chatbot (Concerns → Side effects → Yes).



There are a number of software packages you can use to visualise the flow, including Whimsical, Lucidchart and Miro.



With AI-driven bots: The same software can be used when designing AI-driven bots for high-level mapping, but there are also specialist tools to design and/or prototype the entire bot which provide helpful visualisation capabilities. Two examples are Voiceflow, which is purpose-built for visualising conversation flows and testing them interactively, and Figma, which can be used for designing the visual interface and storyboard how conversations look within that interface.

When designing chatbot flows, aim to minimise friction. Narrowing down the user's journey with simple, contextual choices keeps them moving smoothly toward their goal. Avoid overwhelming your end user with too many paths or options, especially early in the journey. Competing demands on attention mean users are likely to disengage at the first sign of confusion or friction. Remember your product is fighting for attention with a myriad of digital and other distractions.

This is why iterative testing of your chatbot is key – more on that in later sections. First, the next step is to translate your flow into actual chatbot content (i.e., each message, question, and reply option), which we explore in the following section.

2

At this point you should have defined your chatbot's primary goal (e.g., information provision, appointment support, etc.), what core functionalities will support this goal and have designed the flow of your chatbot, illustrated in a chart.



Evaluation reminder!

Even as you are designing your chatbot flow, you should start thinking about how you will monitor key metrics and evaluate the process of its rollout and/or impact. You will find more information on this in **Appendix A. Evaluating social media interventions.**

3.A Use BI-informed nudges

Once you have designed the flow of your chatbot, the next step is to craft the messages. This applies irrespective of whether you are building a static, rule-based chatbot or a fully AI one – the difference will be in the level of detail.

With the static bot you will need to design every message for each path of your flow, down to the letter. This requires more upfront effort and severely constrains the conversations, but ensures high content control.



With AI-driven bots: AI bots will only need a sample of example messages alongside the general prompts configuring the bot. These example messages and instructions help

- illustrate the tone, as well as inform the type of content and type of information sources to use, and
- guide the underpinning language model to generate relevant and contextually appropriate responses.

This gives the AI-driven bots greater flexibility to adapt to varied inputs, but also require strong testing protocols to ensure consistency, safety, and alignment with behavioural goals. Whilst relying on trusted information sources and content validation with experts matters across the board (especially with health-related content), with AI, diligent stress testing becomes even more of a crucial step.

Messages are at the heart of the chatbot user experience, therefore they should be as clear and engaging as possible.

For static bots, a helpful way to draft messages is by using an Excel spreadsheet that mirrors your chatbot's flow (see previous step). Each row could represent one step in the flow, and include:

- The bot's message,
- The user's options for responses,
- Any conditional logic (e.g., "If the user says X, go to step Y").

Your first message (known as the template) plays a key role in shaping the experience. Unlike other parts of the flow, this will be the same for all users. This message sets the tone, anchors expectations, and immediately invites engagement. It is therefore important that this first message clearly communicates the purpose of the chatbot, what the user can expect and what their options are.

Box 2

Applying BI principles to static chatbots

Behavioural principles offer a useful lens in supporting the design of chatbots. While traditionally, interventions involving digital formats (such as SMS reminders) have focused on optimising the format, timing or framing of messages, chatbot designs allow us to go further. With chatbots we can help evolve these digital tools to be more dynamic and personal (as highlighted in [Chapter 2](#)), combining timely reminders, tailored content and responsive support in one place. Complementary to traditional methods, they can enhance existing demand generation efforts by making vaccination uptake easier, more timely and attractive.

Drawing on BIT's experience, we provide a snapshot of some of the key behavioural features and messages that can be integrated into static chatbot flows below:

- **Personalised eligibility:** Helping users understand which vaccines they or their children are eligible for, and why, and bringing their attention to them.
- **Location finder:** Simplifying access by identifying the nearest vaccination site using GPS or structured options to reduce friction, particularly in urban or unfamiliar areas.
- **Planning / implementation intentions:** Prompting users to specify when, where and how they plan to get vaccinated (such as how they will get to the clinic, or before or after which errand); and using this personalised plan (which serves as a commitment device) to remind them later (see also [Chapter 1](#)).
- **Gamification:** Introducing light, playful elements, such as quizzes, checklists or points, can help increase engagement, particularly among younger users or in lower-stakes settings.
- **Embedding in engaging content using visual or social media:** Strengthen behavioural flows by integrating short videos or graphics from trusted messengers such as influencers. This is where chatbots and social media strategies can complement one another!
- **Voice notes and languages:** Adapting content formats (including the use of voice notes and local languages) can make chatbots more inclusive, especially for low-literacy audiences.

These are just some ideas that we tried and tested. For instance, our work on the chatbot in Argentina incorporated location finders and planning features, which helped more than double vaccine uptake compared to a one-way control.¹⁷⁰

However, in a recent replication of this work we found that adding more engaging features such as a motivational video from a national celebrity did not outperform the original flow.

In our work on a separate chatbot developed to help report and address intimate partner violence (IPV) in South Africa, we found that both the information-based and gamified versions had significant effects in reducing young women's exposure to IPV, with the gamified version providing the most effective the gamified version to be the most effective at reducing self-reported violence.¹⁷¹

For further inspiration:

- BIT's EAST framework¹⁷² can offer a useful lens for bespoke behavioural features and messaging.
- If you are looking for tips for AI-driven bots, browse bespoke guides like the The Wharton Blueprint for Effective AI Chatbot.

Important note of caution: Fun as that may be in the design stage, avoid overloading your chatbot with too many (behavioural) features. Simplicity and ease of use should take priority, especially when working with limited resources. Though it seems some additional features can improve engagement in some cases, at times the difference may be too small (or zero) to warrant the effort. That is the state of the evidence for now – but stay tuned for changes.

Before finalising your initial messages and moving to testing, ask:

- Do they speak to the specific barrier you are trying to address?
- Are the messages short enough to be read easily on a mobile screen?
- Do at least some of them have behavioural insights embedded in, to boost their effectiveness?

Remember, this is only the first version. Once you have created a working prototype (4.A), test and iterate with real users to refine both your flow and message content – whether written by humans or generated by AI. Iterating and co-designing with users will help ensure your final product is well tailored to your audience and goals.

3

At this point, you should have an initial set of messages that align with your flow, clearly address behavioural barriers, and guide users toward meaningful action. In the next section, we will look at how to test and iterate your chatbot's performance before launch.

4.A Build a prototype

With your chatbot flow designed and message content drafted for each point of interaction – for a static bot (or instructed your AI on how to conduct conversations with users), the next step is to develop a working prototype. This is the first functional version of your chatbot, bringing together the structure and the content you have already developed, into a usable product that can be tested with real users. It is only through this iterative process of user feedback and expert input (where relevant), that you can develop a final version that is aligned with your goals and user needs.

There are many platforms available for building chatbots. Your choice will depend on your behavioural goals, technical resources available to your team, and the platform where your users are most active. In many LMICs, WhatsApp is a common platform of choice due to its widespread adoption and ease of access. If your team has limited technical capacity, consider starting with no-code tools, which allow you to create chatbot flows using drag-and-drop interfaces, often without needing to write any code.

Some platforms suitable for WhatsApp deployment include:

- **No-code, WhatsApp:** [Turn.io](#) or Landbot.
- **Low-code/requiring developer support, WhatsApp:** Botpress, Twilio studio, Voiceflow.

Note that you can build both static and full AI-driven chatbots with some of these no-code and WhatsApp platforms.



With AI-driven bots: While the platforms above offer various ways to build chatbots, building AI-driven bots involve additional decisions that affect their capabilities, data handling, and performance.

For example, choosing the right underpinning language model affects how broadly the bot can converse or how specialised it can be. Considerations around data security as well as where and by what platform it is processed will also be essential, especially when handling sensitive user information.

Many advanced AI bots use a technique called Retrieval Augmented Generation (RAG). This allows the AI to access and cite specific, up-to-date information from your trusted knowledge bases (such as health records or internal documents) rather than relying solely on its general training, which is vital for accuracy and preventing hallucinations in specific domains. Understanding these architectural choices is complex and will require close collaboration with developers or data engineers.

In general, whether you are building a static bot or an AI-driven bot, if you plan to scale or integrate it into more complex systems (e.g., health records or appointment systems), you will likely need developer involvement, as well as support from a WhatsApp Business Partner to deploy the chatbot on the official platform.

To run a chatbot on WhatsApp, you will need:

- A [WhatsApp Business Account](#).
- Approval through the WhatsApp Business API.¹⁷³
- A platform or partner to host and manage your chatbot deployment (such as Turn.io or another verified provider).

Whether you are using no-code tools or custom development, the goal of this stage is to turn your flowchart and message spreadsheet into a working prototype. That means:

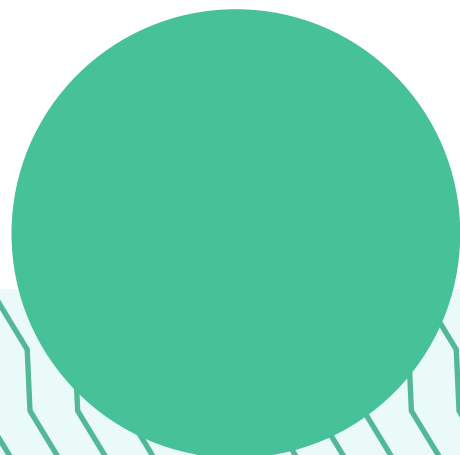
- Ensuring the logic of your flow works as designed.
- Setting the correct conditions for branching responses.
- Ensuring the experience feels intuitive and aligned with your behavioural goals.
- Formatting messages to be mobile-friendly and visually accessible (e.g., using emojis, line breaks, or buttons).

For static bots, you might need to tweak some language or flow once you see how they look and feel in practice. For example, a message that seemed short on your spreadsheet may feel long when read in a mobile chat bubble. Before testing with real users, try navigating the chatbot yourself. Walk through each possible path of your static bot:

- Are the options clear?
- Do all branches work as expected?
- Do any parts feel confusing or unnecessary?

This initial quality check will help catch early issues and ensure your first impressions with users are positive. Once your prototype is ready, most chatbot-building tools will generate a **URL or QR code** you can then share with testers.

“Before testing with real users, try navigating the chatbot yourself. Walk through each possible path of your static bot”





With AI-driven bots:

Prototyping and testing require a broader approach, given the AI's ability to improvise open-ended messages. This includes both functional checks to ensure it works as intended, and deeper stress testing for safety and robustness.

Functional prototyping and testing for AI bots typically involves:

- **Validate language understanding:** Ensure the AI accurately interprets user inputs as well as identifies the correct intent and key information, even with different phrasing, typos, colloquialisms, slang, etc.
- **Evaluate response quality:** Check that the AI generated responses are consistent with the defined personality, content guidelines, and safety protocols.
- **Test contextual awareness:** Confirm that the bot remembers relevant information from previous messages and uses it appropriately to maintain an accurate and coherent conversation flow.
- **Verify system integrations:** If the bot connects to external systems such as appointment schedulers, or is required to produce relevant redirection URLs, ensure it accurately retrieves, processes, and presents this information.
- **Assess fallback and handoffs:** Confirm that the bot handles situations it does not understand or cannot resolve, by providing options, asking clarifications, and / or smoothly escalating to a human agent or other escalation point if necessary.

Deeper stress testing will also be required given that messages are not predefined, to ensure consistency, safety, and alignment with your goals. It is essential to test for factual accuracy, tone, consistency, and the ability to recognise when to defer or escalate.

Stress testing involves evaluating how the chatbot performs under challenging, unexpected, or high-risk conversational scenarios. This process typically begins by defining key risk areas – such as misinformation, user distress, or off-topic queries – and developing a set of test prompts that reflect real-world edge cases. These might include deliberately ambiguous messages, provocative language, or misinformation framed as user concern (e.g., “I’ve heard vaccines cause infertility”). Each input is assessed based on whether the bot responds appropriately: correcting gently, refusing safely, or escalating when needed.

In practice, stress-testing combines automated testing (i.e., running large batches of prompts through the model) with manual red-teaming, where human testers simulate diverse user behaviours, including local dialects, slang, or emotionally charged scenarios. Depending on the complexity of the chatbot and the risk level of the use case, this process can take anywhere from a few days for a small prototype, to several weeks or even months for a fully scaled deployment in public health or government services.

The goal is not just to flag factual or ethical risks, but to ensure the chatbot maintains a consistent, helpful tone and supports behaviour change objectives, especially in low-trust or high-stakes environments. Insights from stress-testing are then used to fine-tune system prompts, add safety guardrails, and adjust fallback behaviours before the chatbot is launched more broadly.

4

At this point, you should have a functioning prototype that users can interact with. The step following this (see sub-section 5/6), we will explore how to test your chatbot with real users, collect actionable feedback, refine and iterate toward a final, scalable product.



2.B Social media: Choose the platforms and strategy

As of July 2025, the largest group of social media users globally falls within the 18–34 age bracket.¹⁷⁴ Following this, younger users represent the dominating presence across most social media platforms, though platform preferences do vary by age groups.

For example, Facebook – with its focus on text-based content, and community or interest groups – remains the most popular platform among older generations. Data from the UK¹⁷⁵ and US¹⁷⁶ suggest that 71–72% of people 56 who go online use Facebook, but only 21–28% use Instagram.¹⁷⁷ While internet penetration is lower in some LMICs,¹⁷⁸ Facebook is still the most-used social media platform in countries such as Kenya and Nigeria.¹⁷⁹

In contrast, younger audiences are gravitating towards video- and image-based platforms such as TikTok, exceeding Facebook's popularity.¹⁸⁰

While the choice of platform should be guided by target demographics and usage in the country of interest, it is worth noting that Instagram yields the highest engagement rates, such as clicks, likes, and comments, in nonprofit and healthcare sectors.¹⁸¹

We recognise that it can be challenging to find detailed and up-to-date data of social media usage in some contexts, especially in the LMICs. In such cases, you may need to make assumptions on the best available data.



Key questions to guide your choice of platform:

- What characterises your target audience?
 - What is their age range?
 - Where do they live?
 - What is their ethnic, cultural, and/or socioeconomic background?
- What is the best platform to connect with this audience?
 - What platform do they use the most?
 - Do they use different platforms for different things? How so?
 - Which platforms do they trust?
- What SoMe features would you like to leverage?
 - Do you want interactive engagement?
 - Do you want video content?
 - Do you want to be able to link to a website?

2

At this point, you should have a clear idea of what platform(s), (e.g., Facebook or Instagram) you can use to reach your target audience, and what type of content it lends itself to (e.g., static ads, short videos, reels).



Evaluation reminder!

Even as you are choosing the platforms and strategy for your social media campaign, you should start thinking about how you will monitor key metrics and evaluate the process of its rollout and/or impact. You will find more information on this in **Appendix A. Evaluating social media interventions.**

3.B Identify the right messengers

Social media campaigns often rely on trusted messengers: individuals who can help reach our target audience and deliver your message in a relatable way.

These could be people or groups with large followings among your audience, or those perceived as trustworthy messengers for the ideas you are communicating.

Box 3

The messenger effect

The messenger effect refers to how the credibility, attractiveness, or authority of the person delivering a message can influence how that message is received, often more so than the content itself.¹⁸² Messages are more likely to be accepted when delivered by someone the audience respects as an expert, likes or admires, and relates to.

Types of Messengers:

- **Authority messengers:** Experts or leaders (e.g., doctors, CEOs).
- **Attractive messengers:** Charismatic, popular, or likable people (e.g., celebrities, influencers).
- **Peer messengers:** People similar to the audience (e.g., friends, community members).

In visually driven platforms such as Instagram or TikTok, content delivered through trusted individuals (particularly local influencers with an existing following) often outperform posts shared via official organisational accounts, especially when those accounts have limited reach.

Meta-analytic findings suggest that influencer-created content tends to generate higher engagement and conversion, likely due to increased credibility and perceived authenticity. Therefore, if your campaign is run in settings where trust in institutions may be lower, leveraging the voices of familiar or

relatable figures on visually rich platforms can serve as an important behavioural lever to bridge the gap between information and action.¹⁸³

“Influencer-created content tends to generate higher engagement and conversion”

Key questions to ask yourself to identify messengers:

- 1 Who is the most appropriate messenger for different target audiences?
- 2 What influencers would your target audience trust and relate to?
- 3 Who can convey the necessary expertise?

There are a few criteria that can help guide your selection:

- 4 Number of followers: Indication of how well-known they are.
- 5 Engagement rate: Total number of engagements with their posts (e.g., likes, comments, etc.) divided by followers as an indication of whether their posts stimulate interaction.¹⁸⁴
- 6 Audience characteristics: Indication of whether their content aligns with what your target audience would be interested in.

- 7 Offline reputation and perceived credibility: Even highly followed, engaging messengers can backfire, if they are seen as controversial, inauthentic, or disconnected from the topic. Consider their public image beyond the platform.

Once you have identified potential messengers you want to work with, consider testing your selection with a small group from your target audience. More on this on [sub-section 5/6](#).

3

At this point, you should have identified possible messengers for your campaign and have an idea of how to brief them for the best possible collaboration.

4.B Choose messages and graphics

Your campaign messages and visuals are the core of any campaign, particularly on ad-driven platforms such as Facebook. Overall guidelines for aligning messages and visuals include:

- **Short, focused text backed by BI:** Use short messages or simple visuals. Evidence from SMS reminder trials suggest that simple and concise messages can drive behaviour.¹⁸⁵
- **Plain, easy-to-understand language:** Avoid jargon and simplifying phrasing can significantly improve comprehension, especially among audiences with varied literacy levels.¹⁸⁶

- **Visual aids to draw attention:** Adding pictures closely linked to text can substantially improve attention, recall, comprehension, and even adherence, particularly in low-literacy settings.^{187, 188}
- **Clear call to action:** Messaging that includes a direct prompt to action (e.g., “Click to book your vaccine slot”) is more likely to lead to intended actions. SMS reminders with built-in appointment links have been associated with increased vaccination uptake.¹⁸⁹



Box 4**Applying behavioural insights to your campaign**

Integrating BI into your campaign can boost your campaigns' effectiveness in driving behaviour change. See Chapter 2 for a review of the literature and Chapter 3 for a worked example. As outlined in Chapter 3, a simple way to apply BI to your messages is by making them EAST: Easy, Attractive, Social and Timely. This box summarises some of those key principles.

Easy:

- 1 **Keep the message simple.**^{190,191} Is it easy to read? Does it include scientific jargon? Are you highlighting (only) the key pieces of information?
- 2 **Have a clear call-to-action.**¹⁹² What should the reader do after seeing this? Explain how, where and when to get a vaccine.
- 3 **Use interactive designs and visual aids.**¹⁹³ Is it easy to find information and understand numbers and risks, facilitating information processing and retention? Does the visual hierarchy of your ad elements highlight the most important information?
- 4 **Tailor messages to context- and group-specific concerns.**¹⁹⁴ Do the messages address concerns and barriers of specific subgroups?

Attractive:

- 1 **Leverage people's emotions.**¹⁹⁵ When designing a vaccination campaign, trigger the feelings of affection and protection towards loved ones, including the community. Avoid scaremongering, but know that inducing fear combined with positive calls to action can be effective, especially for health-related campaigns.
- 2 **Personalise.**¹⁹⁶ Make participants feel that a communication is written for them, even better if it is coming from a credible, identifiable human being rather than a nameless entity.
- 3 **Framing messages in ways that resonate with people.**¹⁹⁷ Frame messages in terms of local values and norms, targeting a person's self-image. Frame messages as gains or losses depending on whether you want to encourage or deter action.
- 4 **Use narratives, and make it relatable.**¹⁹⁸ Show, not just tell. Use examples, stories, answers to people's questions and real people to bring the message to life.

Social:

- 1 **Use trusted messengers.**¹⁹⁹ People weigh the same information differently depending on the credibility or identity of the messenger. The messenger is also critical to establish trust between the target population and the health authorities.
- 2 **Facilitate connections.**²⁰⁰ Allow the audience to ask questions and interact with experts through lives, polls, comments.
- 3 **Leverage social norms.**²⁰¹ Highlighting what others in the community are doing can help communicate vaccination as an expected behaviour. Perceiving greater support for vaccination from friends, parents or a doctor can help increase vaccine intentions.
- 4 **Use role models.**²⁰² If the behaviour is still not common in the community, portray early adopters and role models who can encourage others.

Timely:

- 1 **Help people plan.**²⁰³ Encourage detailed, actionable plans by breaking down complex goals into smaller steps. Identifying barriers and providing strategies to overcome them helps people follow through effectively.
- 2 **Exploit time pressure and scarcity.**²⁰⁴ Highlighting urgency or deadlines motivates immediate action. Creating time pressure, like limited-time offers, focuses attention and encourages quicker decisions.

4

At this point, you should have chosen the message and graphics of your campaign material, and applied BI principles to help it effectively encourage behavioural change.

5.B Produce a first version of the assets

Now that you have selected your platforms, messengers, and key messages or graphics, the next step is to bring your campaign to life by creating a draft version of your campaign assets. These might include the actual pieces of content that will appear in people's feeds or message threads: social media posts, short videos, static ads, or story-based content. The goal at this stage is to create realistic, working drafts that reflect your strategy and can be tested with your audience.

You do not yet need a polished final design at this stage. Low-fidelity prototypes – built in PowerPoint, Canva, or even sketched out on pen and paper – are often sufficient, as long as they are clear and realistic enough for users to provide meaningful feedback. Think placeholder images, basic copy, and approximate layouts. The key is to bring your campaign to life in a tangible way, so it can be tested, refined, and ultimately made more effective in the next step.

Following sub-section 4.B, you should create a few variations to test different behavioural insights.

As you produce the first version of your assets, check if:

- The message is clear, focused, and addresses a specific barrier.
- The asset feels relevant and appealing to the intended audience.
- The messenger appears trustworthy and relatable.
- There is a simple, visible call to action.

Depending on your timeline and capacity, you may work with graphic designers, videographers, or content creators to produce these drafts. If you are using generative AI tools, make sure to carefully review the outputs for tone, clarity, cultural fit, and factual accuracy.

5

At this point, you should have a first design of your campaign assets (messages and graphics for ads) in line with the decisions you have made in previous steps. These should be ready to show to users.

5/6. User test and iterate

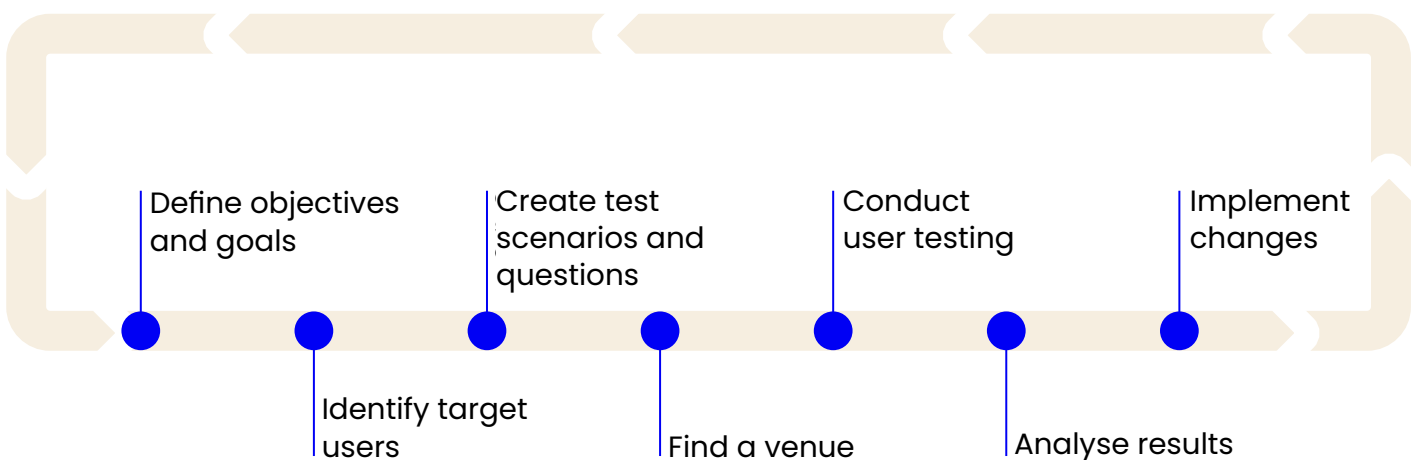
User testing is the process of simulating real-world exposure to your chatbot or social media campaign materials with actual users, in order to gather feedback and refine your intervention. This helps ensure your approach resonates with your audience and is designed to meet its intended objectives.

User testing allows you to confirm, improve or reject your initial assumptions by:

- **Identifying issues:** Understand whether your campaign assets or chatbot messaging lands as intended with users, and spot areas that may confuse or disengage them.
- **Gaining new insights:** Learn more about your target audience's lived experiences, which you can then use to refine your assets or chatbot.
- **Co-designing solutions:** Gather practical suggestions from users on how to make your content more relevant, usable and engaging.

However, it is important to recognise that opinions will likely differ, especially in small samples. Always consider the insights you gain alongside the knowledge you have from existing evidence and literature before making any changes.

Figure 17. Steps needed to plan, organise, and implement successful user testing.



- **Define objectives and goals:** Be clear about what you want to learn through user testing. In most cases, this will be some version of: “To what extent does my campaign material or chatbot achieve its intended effect on users in their context?”.
- **Identify target users:** Recruit a small sample of users from your target audience (typically 5–10 users is sufficient for initial testing). You do not need full representativeness of your target group, but a varied sample can be valuable. Varied, in this case means selecting users based on a few relevant sampling criteria that reflect the diversity within your intended audience. These criteria could include age, geographic location, cultural background, digital literacy, or familiarity with the topic – for instance, prior experience with vaccination (or the lack thereof). Defining these criteria in advance helps ensure that your insights reflect a range of user needs and perspectives. You might consider offering compensation for their time.
- **Create test scenarios and questions:** Have a high-quality version of your campaign material or chatbot ready. Make sure you have adequate equipment be it projector or a screen for a short video, printed visuals of ads or alternatives to mobile devices to navigate a chatbot.

You will also need to create a list of the questions you will aim to answer via the user testing for instance:

- How engaging do users find the content of the concept videos?
- How useful is a chatbot flow?
- To what extent do they find the content or chatbots useful?

- Is there anything that people generally do not understand?
- Is there anything that opinions differ on?
- Did they find the assets?
- What improvements could we make?

Make sure these questions align with your campaign purpose and that the questions you end up asking participants are open ended questions but unassuming (i.e., avoiding questions such as “How confusing did you find...” sets up participants to respond to your framing, which may skew your data). It is also useful to ask users about their attitudes toward vaccination before they engage with your materials, as this context may shape their responses.

- **Find a venue:** Choose a space that is accessible to your participants, and offers a quiet, distraction-free environment. If travel is required, factor in compensation or offer assistance with transport.
- **Conduct user testing:** User testing sessions typically last 1–2 hours. Present your materials or chatbot and invite participants to explore and react to them. Gather feedback on what works, what does not, and what could be improved. Gather their opinions, insights, things they do not understand, and how they think things should work. Where possible, record the session (with participants’ consent) or take detailed notes for your analysis.

Box 5

Biases that could affect the user testing

Social desirability bias:²⁰⁵ This occurs when survey respondents or interviewees answer in ways they believe will be viewed more favourably or accepted by the researcher. For instance, an interviewee might say they found the information very convincing, even though they privately remain sceptical, to avoid seeming uninformed or anti-vaccine.

Confirmation bias:²⁰⁶ The tendency to focus on information that supports our existing beliefs, expectations, or hypotheses. This could affect the interviewers when collating the insights gained from user testing. For instance, if we believe that a certain aspect of our campaign works well, for instance, that a certain type of ad conveys the message very convincingly, we may pay more attention to interviewees who support that idea, than those who present a different experience.

Analyse results: Interpret the findings with a focus on answering your original questions. Tools from qualitative analysis offer multiple ways of organising your data systematically. At BIT we endorse the Framework method²⁰⁷ for this stage. This approach involves:

- Using a matrix to structure summaries and session notes.
- Organising data by sub-themes (columns) and rows for each user.
- Highlighting cross-cutting patterns and different views to support analysis.

This allows for a systematic processing of your insights from user testing interviews and observations. When analysing your results, Avoid drawing quantitative conclusions such as “5 out of 6 people liked our ad”, as your sample will most likely be too small for generalisation. Instead, look for recurring themes and key insights.

Implement changes: Use your findings to improve your chatbot or campaign materials. Note that depending on the complexity of your intervention (e.g., different types of audiences, number of assets, length of chatbot flow (AI involvement) and resources available, you may need several rounds of user testing and revisions, in an iterative feedback loop, before you finalise your intervention.

5/6

At this point, you should have a very clear idea of how well your campaign or chatbot lands with users and get a clear sense of any necessary improvements to the campaign assets, chatbot flow or messages.