Building Mobile Apps to End Violence Against Women

A Refined Human Centered Design Toolkit

Overview

This toolkit outlines a "refined" Human Centered Design (HCD) process, based on learning surfaced from the VXW Award Project. It suggests a series of basic steps for designing mobile applications to address a specific social cause or need, and features tips and considerations for applying these tools for apps to End Violence Against Women (EVAW), specifically.

The toolkit layout follows the HCD model promoted by IDEO.org and used widely across the social sector, which guides designers through the process of HEAR, CREATE and DELIVER. It also encourages an extra set of tips and examples to CONSIDER when tailoring the process to the unique sensitivities of EVAW.

Considerations for EVAW Aps

Before you start your journey to build a mobile app for EVAW, you should consider and ask yourself the following things.

- Time commitment - Building a mobile app can be a serious commitment of both time and work. You'll have to dedicate the time to educate yourself about mobile apps, as well as put the effort to hear the voices of those who you are building the app for, and the creative effort associated with it. A successful app requires attention to detail and time to iterate to constantly improve your app.

- Experience - While it is possible to build an app with this toolkit with minimal experience in gender and violence issues, if you want to build an app that is truly useful to prevent violence against women, then you will need to have some tangible experience in the field. You should also have a network of individuals you can tap into for their expertise and experience when you're listening to others.

- Resources - You will need to have a designer and developer on hand to help you through the entire process. While there are many tools to help a novice build out mobile apps, the expertise and experience of professionals or people who are committed to their fields can make the process go much more smoothly.

- Sustainability - Once you have built the app, there may be other costs associated with maintaining complex backend systems and websites. Do your research into potential providers of these services and costs associated with it. Additionally, if new content needs to be introduced regularly, make sure you have a system in place to provide that.

- Do No Harm - Violence against women is a sensitive topic where privacy issues and other sensitivities are very important to consider and address. While apps can be a powerful tool, without special heed to the privacy, accuracy, discretion of the apps and information, they also bear the risk of doing more harm

than good Review the "Do No Harm" principles outlined below and reinforced throughout the CONSIDER sections of the toolkit.

Hear

The goal of the HEAR phase is to develop a deep understanding of the problem you are addressing. HCD assumes that the people who face the problem are also the best people to inform its solutions. Thus, the HEAR phase begins by articulating your problem and exploring the needs, constraints and aspirations of the people who are affected by it.

Define

The first step in designing any solution is developing a clear understanding of the problem you are trying to address. In many cases, the challenge may already be clear before you start the design process. However, if it is too broad or complex, it may be difficult to design one solution that addresses it effectively. If this is the case, you may benefit from narrowing the problem down to something more specific before you move on.

You may need to engage others in your community or organization to help you prioritize the specific challenge you will focus on. Try asking people affected by the broader problem to help identify what is most important to them. For challenges that are especially complex or unfamiliar to you, try organizing a "Problem Identification Workshop" to bring colleagues or community members together to discuss the problem at hand, and agree on the best place to focus your efforts. Use walking through the following questions one-by-one to help you narrow down your challenge:

- What is the bigger picture problem you want to address?
- Can that problem be broken down into smaller challenges?
- Can those challenges be solved or aided with mobile solutions?
- Are there specific constraints that make certain challenges more addressable than others? (For example: a limited timeframe, a specific mandate, access to certain groups, or a pre-defined geographical focus)
- What remaining problem is the most important or highest priority to those affected by it?

Try to frame your challenge in terms of the people who face it. This will help you to maintain a human-centered focus that will ultimately make your solution more effective and desirable to those who need it.

Explore

Once you have a specific challenge articulated, you want to explore it as deeply as possible so that you fully understand what is needed, what has already been tried, and how you can best solve it.

STEP 1 OF 2

Begin by creating two lists. On the first list, write down all of the things you already know about the problem. Your list might include facts about the problem and the people it affects, existing efforts to solve it, related challenges or barriers, or other insights. Once you have your list, go back and review it. Highlight anything that is an assumption – in other words, something you think you know, but don't know for sure.

STEP 2 OF 2

Then create a second list of things you want to know about the problem. This list might include key assumptions from your first list, other questions you need answered, or early hypotheses to test. List as many things as you can! When you have finished this list, go back and review it.

Are there things on the list you can easily find information about online? Are there resources you can leverage for certain answers?

Identify

After finding as much information as you can on your own, it's time to go straight to the source and research the problem from the perspective of the people it affects.

STEP 1 OF 2

You will ultimately want to define a specific target audience who will be the primary "users" of your mobile app. However, because some problems might affect multiple audiences, it is best not to limit your research to any one target group just yet. Instead, begin by brainstorming the categories of people who have a "stake" in your problem - in other words, your stakeholders. "Stakeholders" might include the people the problem hurts, the people who contribute to the problem, and other organizations, companies or government actors who are critical to either the problem or the solution.

STEP 2 OF 2

Under each stakeholder, note ways that they are related to the problem and ways they may be related to the solution. Keep this list as a reference during the steps that follow.

It would be very difficult to design one app that meets the unique needs of all of your stakeholders, so it will eventually be best to focus your solution to a specific target group. This will help you to explore their specific needs and perspective as early as possible, and help you to focus and refine the app when you get into the

Create phase. While you may not have a specific target user identified before your stakeholder research, you should start to identify possible target groups now, so that you can begin to explore their behaviors, attitudes, education, location, and mobile habits. If it is already clear who will be the target "users" of your app, you can use the Research activities that follow to begin focusing in on them.

Your research methods in the HEAR stage should be generative rather than evaluative - meaning, they encourage people to help generate new knowledge and understanding, and surface new ideas or opportunities that you may not have expected - rather than simply evaluating your own ideas or assumptions with feedback or input.

Research

The goal of stakeholder research is to gather as much input as possible from your target audience - including your future users, as well as the other stakeholders who will be critical to the success of your app. Your research should focus on understanding their needs, preferences, goals, and aspirations, as well as the context they live and work in and the barriers and constraints that it may present.

Your research methods in the HEAR stage should encourage people to help generate new knowledge and understanding, and surface new ideas or opportunities that you may not have expected - rather than simply testing your own ideas or assumptions with feedback or input.

USER INTERVIEWS

What are user interviews?
User interviews are one-on-one conversations to help you better understand user behavior and needs. They help you collect information that you might not otherwise know about, especially with assumptions that you are carrying into the interview. They can help you dispel or confirm your assumptions and provide you with data to help you refine your goals. A typical user interview should last between 30 minutes to 1 hour.

How do you create user interview questions?
To conduct user interviews, create a series of guiding questions that can help you collect the information that you need to understand your target audience. Key areas may include:

- Demographics - Information can include age, gender, education, and economic status.
- Mobile Behavior - Information about what types of devices that people use and what are they doing on them.
- Personal Behaviors - What people actually do around the issues that you are working to address.
- Personal Attitudes - How people think about the issues that you are working to address. And identify the gaps between behaviors and attitudes.

Your goal is to identify the gaps between personal behaviors and attitudes. This should provide you with key information to help you when you start the creation part of the toolkit.

How do you conduct a user interview?
Make the interviewee feel comfortable, so it feels more like a conversation than a series of questions and answers. Some issues that you might discuss could be highly sensitive. So, make sure to let them know that that their answers are all confidential.

You want the interviewee talking as much as possible. The more they talk the more information you'll be able to collect. Use phrases such as:

"Tell me more about. . . "

"What do you mean by. . ."

"Help me understand better . . . "

Don't put words in their mouth though by saying things like "So do you mean. . . "

OTHER RESEARCH METHODS

While interviews are one of the most common and effective ways to gather insights from your stakeholders, there are countless other research methods can be equally valuable. Depending on the availability and nature of your stakeholders, as well as your level of familiarity with them, you may consider the following alternatives:

Expert Interviews

- Format: Conversations with one or more individuals who have expertise on a specific topic or field of interest.
- Best Use: Expert interviews can be critical if you have specific questions that only someone with extensive knowledge can answer. They can also be particularly helpful if you have limited knowledge on a topic and want to learn as much as you can from someone who knows it well.
- Tips: If you have specific questions, you can structure the interview in a question-answer format. However, if you want to learn as much as you can about the topic, consider asking the expert to instead use the time to tell you what they know about the topic(s) of interest. If possible, share your questions in advance so they are prepared to answer!

Focus Group Discussions (FGDs)

- Format: A guided discussion between a 7-10 participants and a facilitator who poses discussion topics and questions.

- Best Use: FGDs can be particularly valuable when you want your audience to brainstorm, reflect or talk openly about ideas as a group or community. It can also be a useful strategy to get feedback from multiple people at once when time is limited.
- Tips: Be sure to ask open-ended questions that encourage discussion. You may find some participants dominating discussions (for example: known leaders, elders, males, or people who are naturally more vocal). Try to encourage everyone to participate, if possible. Alternatively, consider running multiple group discussions with different groups of peers (for example: women all together, youth all together, leaders all together, etc.) to encourage feelings of equality and comfort.

Observation or Immersion

- Format: An opportunity to join an individual or community in their home or workplace to observe and experience their lives and activities firsthand.
- Best Use: Immersion is valuable when you want to deeply understand your users' lives and have extensive time to spend with them in their own or community. Observations can be extremely useful when you want to witness or experience a specific activity firsthand.
- Tips: Make sure that your presence doesn't disrupt or bias your host's usual activities. Try to be casual, emphasize your interest in understanding what they do, and ask lots of questions to help deepen your understanding of what you see.

Guided Demonstration

- Format: A guided walk-through of a specific activity or experience where the host explains what they are doing as they do it.
- Best Use: This can be valuable when you want to understand the process behind a specific experience or activity - in other words how people do something and why. For example, how an NGO worker currently files an EVAW case report.
- Tips: Make sure that your presence doesn't disrupt or bias your host's usual activities. Try to be casual, emphasize your interest in understanding what they do, and ask lots of questions to help deepen your understanding of what you see.

For a complete list of tools that can help you with defining, exploring, identifying, and researching, go to www.vxwaward.org/hcdtoolkit

Create

At this point, you have completed your research, have identified who you want to build your app for, and have a good sense of their needs. Now is the point where you begin to take this information and start creating ideas for what your app could do, and what it could look like.

Synthesize

By this point, you've defined the challenge you want to tackle. You've explored existing solutions by talking to thought leaders in this space, you've identified who your target audience should be, and went into the field to conduct user interviews. Now is the time to systematically gather those findings so you can begin the creation phase.

STEP 1 OF 2: IDENTIFY THEMES

Read through your user interview surveys.
- Should you build an iPhone or Android app? What were the most common devices people were using?
- What were the common issues that people were talking about?
- What social/cultural factors shape that problem?
- What did people talk about needing to address the problems they talked about?

STEP 2 OF 2: CREATE USER PERSONAS

User Personas are key to the human-centered design process, as they are a constant reminder to you when you're building your app about who your target audience is. Throughout all your work moving forward, you will always want a copy of your user personas up on the wall and available, so you can think about them through your creation process. They are a way to model, summarize and communicate the information that you found during your user interviews.

What is a user persona?
A persona is depicted as a specific person, but is not a real individual; rather it is synthesized from observations of many people. Each persona represents a significant portion of people in the real world. This will help you when you begin to create your app, as it will help you focus on who you are building this app for without having to look at all of your user interview surveys.

What does a user persona look like?
Usually a persona is represented on a single piece of paper. It includes information like the photo of a person and gives that persona a name. The user persona will usually communicate demographic information, goals, values, and behaviors.

Now try building 2-3 different personas based on the interviews you conducted. Use this template to start building your own user personas.

Ideate

There are many exercises that you can do to help you create ideas that you can leverage for your app. Below are a selection of tools that we used. A thorough list of ideation tools and exercises are on the Create Tools page.

Future Mapping

The purpose of this exercise is to think through and understand where you and your users have culturally, politically, and socially been in the recent past, present and future. In the workshop, participants map key trends from the past year, the current year, and three years ahead. They then review the map, identify patterns, and discuss the relevance of different trends. It is useful for supporting discussion and debate around high-level themes: society, technology, politics, etc.

STEP 1 OF 6

Before the workshop make sure that you have a long empty wall with the area in front of it cleared. Divide the wall roughly into three equal sections with tape.

On three sheets of paper, write with a thick marker last year, this year, and next year to three years in the future: e.g. 2014, 2015, 2016, 2017, 2018.

Stick the years up, one at the top of each section, in chronological order.

STEP 2 OF 6

Give each participant a marker and post-its.

Bring the group to stand together facing the wall. Explain the purpose of the workshop and give them the following instructions:

We will, as a group, co-create a vision of the future through the lens of the past and the present.

As individuals you will write a significant "thing" (trend, technology, political movement, behavioral shift, etc.) on a post-it: one per post-it. Then you'll walk up to the wall and and stick it up, reading your post-it out loud so the rest of the group can hear.

There's no need to wait your turn. As soon as you have one, write it down and stick it up.

We're aiming to fill the wall in the next 15 minutes.

STEP 3 OF 6

Start with last year, give them 5 minutes to fill the space with post-its, then move to this year, and then to the 5 years in the future.

Support the group to keep the pace up and encourage everyone to participate. If you feel the speed is dragging, ask relevant questions or make suggestions to inspire the group.

STEP 4 OF 6

When the time is up keep the group in front of the wall. Ask them to look at the post-its on the wall and look for patterns and common themes in each year. If time allows, create subgroups to sort the trends under each year and prepare a summary of the key patterns.

STEP 5 OF 6

Run a group reflection and discussion. Some good prompt questions are:

- How was that exercise?
- What have I learned?
- How do I feel about the past, present, and future?
- What does this mean for us? For women? For our country?
- Encourage participants to speak from their personal experience, using "I" rather than "us" and "we".

Wrap up the session by sharing some of the key themes that you heard throughout the discussion.

STEP 6 OF 6

Take a piece of paper and write up one theme on each piece of paper that the group has found, and tape it to the wall. Start to move the post-it notes under each theme. Wrap up the session by sharing some of the key themes that you heard throughout the discussion. Ask the group how they would like to capture their thoughts and actions to use in the future.

Idea & Concept Development

Ideation and Concept Development is a process for groups to work collaboratively to generate creative ideas. It's a general approach that can be adapted and customized to address many issues around ending violence against women. It includes basic principles for idea generation and several steps for groups to work with. It also includes steps for idea selection and development.

STEP 1 OF 8

Gather a team of people that you plan to design and build the app with, along with any other key stakeholders that you want to include in the ideation of the app. Introduce the purpose of the ideation activity, in which the desired outcome is tangible new ideas to solve the issues around violence against women. In any case: begin with an introduction, setting the context.

STEP 2 OF 8

Introduce the below ideation principles for effective ideation. These are simple guidelines to support creativity.

Yes, and… Build on the ideas of others by saying yes! and adding onto their ideas. Listen actively for opportunities to build and elaborate.

More is more In the first stage, it's all about quantity. Focus on getting down as many ideas as possible rather than striving to come up with really "good" ideas. Get it all out.

Postpone judgment Suspend your inner critic and resist the urge to evaluate the ideas as they flow out. Anything goes and the time for judgement is later.

Team is everything Make full use of all brains by ensuring that every team member is included. Create space for everyone to contribute their ideas.

STEP 3 OF 8

The key question: Next, introduce the question that your team will ideate around. In some settings, the group may come up with their own question. In other settings, the facilitator should propose a main question that everyone works on. "The key question" should be an open, clear and engaging one that seeks a solution to a compelling problem or need.

STEP 4 OF 8

Ideation Tools: With the question or questions clear, have the team begin ideating around the question. Introduce one or several ideation methods to support this step.

Association: Using random words or random images, ideate in teams using association. Pull a random word or image and generate ideas for two minutes around it. Then pull a new one and go again.

Negative Brainstorming: Flip the key question to its negative form and ideate around that. For example, how could Hyper Island create the world's worst Toolbox? After brainstorming the negative ideas, explore what happens when they are inverted.

User Perspective: Explore the focus question from the perspective of specific users. What would it look like for a farmer in Battambang? For your grandmother? For a 20 year-old beer promoter? Etc.

Mash-up: Use the "Mash-up approach" by brainstorming a cluster of technologies and a cluster of things related to your focus question. Then, mix-and-match different elements and see what emerges.

STEP 5 OF 8

Ideate! Give the team a set amount of time to ideate using one or more of the tools introduced. There should be sufficient time to allow some flow to develop, but short enough that everyone feels some pressure.

STEP 6 OF 8

Cluster & Narrow After the ideation phase, have teams cluster and organize their ideas. This involves grouping common themes and similar ideas. They should remove duplicates and give each cluster a title.

STEP 7 OF 8

Selection Once teams have clustered and organized their ideas, have them select one or several ideas to move forward with. Provide a set of selection criteria or have teams generate their own criteria. For example: ideas should be selected based on the three criteria of relevance, feasibility and newsworthiness. With criteria set, one rapid method for selection is to use Dotmocracy, in which each participant has a certain number of dots to assign to the ideas on the table. The ideas with the most dots then have the most collective endorsement from the group.

STEP 8 OF 8

Develop it! The final step is to further develop the most promising idea identified in the above step. Here, participants develop the ideas further, exploring the details of the concept, functionality, feasibility, business model, etc. This can be done within the same session, or could be done in a longer session of its own.

Mash-Up Innovation
This final exercise will help you take the learnings from the first two exercises and start creating tangible app ideas to build out. Mash-ups is a collaborative idea generation method in which participants come up with innovative concepts by combining different elements together. In a first step, participants brainstorm around different areas, such as technologies, human needs, and existing services. In a second step, they rapidly combine elements from those areas to create new, fun and innovative concepts. Mash-ups demonstrates how fast and easy it can be to come up with innovative ideas.

STEP 1 OF 3

First brainstorm: Ask the whole group to brainstorm around the areas of:

- TECHNOLOGIES (e.g. telephone, 3D printing, GPS),
- HUMAN NEEDS (e.g. love, transportation, waking up in the morning), and
- EXISTING SERVICES (e.g. Google translate, Spotify, Candy Crush).

Spend 3 minutes brainstorming around each area. Have participants write one idea per post-it. Make the brainstorm active and fast-paced. Have participants call-out each idea as they place it up on the wall. By the end of the brainstorming there should be three large clusters of post-its on the wall, one for each area. The more the better!

STEP 2 OF 3

Mashups: Explain that they will have 12 minutes to come up with as many mash-up concepts as they can.

A mash-up concept consists of 2 or more elements from the wall combined together to create a new concept.

For each mash-up that a team creates, they must give the concept a catchy name and capture it on a piece of paper. The paper should include: the elements that combine to make the new concept (e.g. iPads + Doing Laundry + Paypal) and the name of the concept (eg. Launderfy).

STEP 3 OF 3

Develop: A final optional step is to have participants choose their favorite and/or most feasible mash-up concept and develop it further for 30 minutes, exploring the details of the concept and its functionality. Each team uses one flipchart paper to visualize the concept.

Develop

While you may want a designer or developer helping you through this stage, it is also possible for anyone to come up with the ideas and start communicating them to others through prototypes.

Sketching

Anyone can take a pen to paper and start drawing out ideas. Basic shapes (circles, squares, rectangles), lines, arrows, and stick figures are enough to get your ideas out for others. What matters isn't your artistic ability, but your ability to explain different concepts. Sketches offer a peek into your thinking and will allow the designers and developers you work with understand your ideas. Sketching helps separate the concepts from the details.

STEP 1 OF 5

You have an idea, but you need to start translating that idea into a mobile app interface. Now's the time to start thinking about what that could look like. Start by printing out a template for you to begin your sketching exercises.

STEP 2 OF 5

It's not enough to say, "I want an app that does X, Y, and Z". You need to know what the user will see on each screen of your app to do X, Y, and Z. Look at examples that you found during the research and see what kind of interfaces that you could use from there and apply to the app you want to create.

STEP 3 OF 5

Good storytelling is the key to designing great mobile apps. Start to think through a series of narrative use-cases for your app that illustrate every step in the user's journey through it. For example, a woman is walking home late at night and notices an act of violence happening on the street. She wants to report it, so she opens Safe Agent 008 app, and clicks on the reporting feature. She then fills out a form and submits it.

STEP 4 OF 5

Now that you've defined your story, identify the parts where there is an interaction with the mobile app. In the above example, you should design out what the screen will look like when the woman first opens up the Safe Agent 008 app. Think through where the user will find the information they need for reporting, and how they will get to that feature. Sketch out what the form will look like. And sketch out what will happen after the person clicks on the submit button.

STEP 5 OF 5

Think through as many of the use-cases as you can and try to sketch out what those screens will look like. Think through what screen will appear after you tap on a button, and create a sketch of that. By the end of this exercise, you should have enough screens to build a working prototype of your app.

Prototyping
Now that you have some sketches of the mobile app you want to build, it's time to get that into a prototype that you can test in the field. There are many different kinds of prototypes that you can create that involve studying visual design and coding. However, there are simple types of prototypes that anyone can build using some simple software and the sketches you've just made.

You want to mimic the experience that a user will have when the app is fully developed. So, you want to build screens that are "clickable", where people can touch the screen and the app appears to respond.

The following steps are for building a clickable prototype using POP (Prototyping on Paper), an app that is available on the App Store and Google Play.

STEP 1 OF 4

Download the POP app (https://popapp.in/) and create your own account.

STEP 2 OF 4

Using the app on your phone, create a new project and select the device that you are using. Hit the "+" button at the bottom left of the screen to take photos of the sketches you made.

STEP 3 OF 4

Once you have finished uploading all your photos. You can pull up any sketch, and start creating "hotspots" or draw rectangles on areas of the sketches where you want those to be clickable and can take the user to a different screen.

STEP 4 OF 4

Once you have made all your hotpots on all the different screens, you can hit the play button to see the full clickable prototype. Use a "two finger tap" to quit play mode. Now you're ready to take your prototype into the field and start testing.

Test

Now that we have a prototype, we want to go into the field and start testing.

We want to make sure that the app works well, and that your intended audience can use it for its intended purpose without getting hopelessly frustrated. We want to make sure that the tasks that could be completed are obvious.

Below are the steps involved in doing user testing

STEP 1 OF 5

Preparation: Before you go out into the field to do your testing, you want to make a plan for what you want to test about the app and create a series of questions or tasks for the user to try out.

You may want to record the testing session so you can go back and review the results of the testing later on. It also allows others to learn from the testing that you conducted, especially if you have multiple people going into the field and doing user testing. We suggest having one person conduct the user test with their phone, and another person using their camera to record the interaction.

STEP 2 OF 5

Recruiting: Make sure that the people you are asking to test your app are the target users you identified during the "Hear" stage of the process.

Depending on who your target user is, you want to go to a place where they have the time to give you for testing. For example, if you want to talk to factory workers, go during their lunch break. If you want to talk to students, go to college campus meetings.

STEP 3 OF 5

Conducting: When you start a user interview, it's important to make sure the tester feels comfortable. Tell them things like:

- "We're testing the mobile app, not you. You can't do anything wrong here"
- "Don't worry about making mistakes"
- "Don't worry that you're going to hurt our feelings. We want to improve it, so we need to know honestly what you think."

Make sure to let them know what the app is about and why are you doing the testing.

If you're choosing to record them, ask their permission. Privacy is very important, so let them know that only you and the people working on the project will see the recordings.

When you begin asking the questions that you outlined during our preparation, try to use as few words as possible and focus on observing. Let them figure out how to do the task on their own using your interface. Just relax and watch carefully. Only give them hints when they are completely stuck.

STEP 4 OF 5

Analyzing: Now that you're done conducting the interview, you want to analyze the information that you just received.

Focus on the behaviors of the users, and not just their opinions. If one participant gets confused about one of the tasks you asked them to perform, it's highly likely that others will have that same problem. It's useful information to record that and see how you can solve those problems specifically. That information is much more useful than, "I like this app," or "I don't like blue color".

STEP 5 OF 5

Debriefing: You've done your analysis, and now it's time to take those lessons learned and apply them to improving your app. There may be a variety of results that come out of your user testing. If your users are very confused, you may want to identify the gaps in information that you are missing. Return to the Hear section and

think through a new set of user interview questions or do more research into alternatives that can be done to address the issues that confused people.

It is always a good idea to go through the cycle at least twice before you move onto the Deliver section. This way you know you've maximized your time and effort towards putting together a great app that people will use.

If you are happy with the results of the user testing, you can go ahead and finalize the app with your design and developer team. Get ready to move onto the Deliver section.

Deliver

The Hear and Create phases should have helped to ensure your app design is desirable to your intended users. The deliver phase will help you ensure it is also feasible in terms of available time and resources, and viable for implementation.

Resource

Once you have finalized prototyping and testing the app, it is time to consider what resources you will need to build a mobile app. Below are the factors that we kept in mind.

Cost: The cost depends entirely on the type of app you want to build. For example, it can range from $3,000 to $8,000 for a simple and basic app to $50,000 to $150,000 or more for a more complex app loaded with a number of features.

Therefore, you need to consider what your requirements for your app idea are and get some quotes of the actual development cost from experienced app developers.

Revenue: You will need to determine how you will pay for the apps development, ongoing maintenance, and future updates or iterations. Many apps designed for social causes are funded through grants or investment from donors or NGOs. Others are paid for through funds raised from sponsorships, crowdfunding, or other fundraising efforts. Some apps generate their own revenue through advertisements, and some charge users to download the app. Apps with revenue generating potential can sometimes attract investment capital, where such markets exist. Try completing the Business Model Canvas or other business model tools included in the tools section to help you reflect on your revenue and costs.

Time: The time required to build an app greatly varies depending not only on the number of features and the complexity of each feature, but also on who is designing, implementing and testing your app. It takes at least 2 to 3 months to develop a basic stand alone app and more than 4 months to create an app with backend integration from start to launch.

App developer: The type of app development partner or method you choose will impact the budget and timeline of the project. For instance, offshoring development or using freelancers is a lower cost option compared to working with specialized mobile app development agencies. Choose a developer that fits your needs in terms of budget, timelines, quality, and experience.

Content development: Creating a content intensive app requires an additional amount of hours and days. There may be a delay in the process until the contents are available, adding to the time it takes to build an app. In the case of end users who have difficulty reading, the App may require animation, videos, specialized icons, and the extensive use of voice content to replace the written word. This adds cost and time to the development of the App and may involve the added expense of hiring actors or other specialists.

Translation: Consider the cost and time for language translation if you want to localize your app.

Partners: The successful promotion, maintenance and sustainability of your app will depend upon including the right stakeholders during implementation. Identify stakeholders and/or partners who you will to engage for: feedback, input or approval during development, support to launch and promote the app, and ongoing involvement to ensure content and resources are updated and responsive to needs. Consider what motivation or incentives each of them needs, and be sure you are aligned in your goals, expectations and timelines.

Implement

Now that you have resources in place, make a plan to implement the app. You will need to map out project details to understand what to focus on in each step and timely achieve your goals in the process. Create a worksheet with elements such as activities, timelines, stakeholders and partners, finances, and skills.

APP PROMOTION STRATEGY

During the marketing phase, you should promote the apps through your own networks first. To encourage uptake of the apps, you should promote it through several channels. For example, you can host small workshops to present the app and key functions, lessons learned from the project and about the HCD process. You can also use traditional and social media such as Facebook or Twitter in both Khmer and English to promote the app and spread the word.

It is critical to promote the app in areas where users regularly gather such as universities, garment factories, restaurants, and parks. We would recommend you gather the contact information of 'star users' who have shown a special interest in the project. Create a plan to follow up on their user experience and gather case stories. Leaflets on how to use and download the apps should be printed and distributed at workshops, presentations, and other meetings as well. One of the lessons learnt from VXW Award, we find it very helpful to partner with organizations that work with the same target groups (young women, garment factory workers, entertainment workers and beer promoters). In this manner, they can help promote the app on our behalf and reach the hands of target audiences on a bigger scale.

Refine

The best mobile apps are always focused on listening to their users and improving. Now that you've launched the app, you want to continue to build upon the successes of what worked, and learn from what didn't work. This allows you to build newer versions that meet your user needs.

STEP 1 OF 2:

Testing is a key part of improving your app, and can be done even after the app launches. You can use the same techniques that you used to test your prototype with the launched product as well.

STEP 2 OF 2:

Review the feedback you're receiving on the AppStore and Google Play. While everyone who downloads the app may not write a review, there may be good insights into what was working and issues that people came across.

If you're finding that there are too many problems that have arisen during the app launch, it may be time to go back to the beginning of the Hear section and begin redefining the problem. This is OK. The key element to all of the work that you've done is to build an app that is focused on the people who need it the most. This refined HCD toolkit will continue to help you iterate the process to continually improve what you build.