

Checkpoint 1: Defining the Problem & Understanding Context

Think of Checkpoint 1 as a roadmap to defining your project. Once you complete it, you will be in a better position to develop a research plan and initial project proposal, and move on to the next stage of the contest.

The following worksheets help you contextualize your chosen problem and identify possible entry points to solving it by asking Who, What, Where, Why, and How. It is important to complete them in order listed, as they build on each other to give you a solid foundation moving forward.

Use the [Resources](#) on the Challenge website for additional information on your Challenge topic and recommended readings.

- 1.1: Understanding the Problem - The 5 Whys
- 1.2: Mapping Stakeholders, Resources, & Constraints
- 1.3: Identifying Leverage Points
- 1.4: Rapid Ideation of Solutions
- 1.5: Checkpoint 1 Summary Doc

Purpose: Asking 'Why?' five times is an effective strategy for understanding the greater context (system) and root causes surrounding a specific problem. It creates a big-picture guide for your research and helps you identify stakeholders, resources, and possible points of intervention.

Example:

Problem:

Children are especially vulnerable in the aftermath of an emergency situation such as Typhoon Haiyan in the Philippines

WHY?

They are unsupervised

They are at-risk for kidnapping and exploitation

They are psychologically affected, which can cause developmental disorders, lost potential, and lifelong negative impact if not addressed

WHY?

It takes a long time to reunite them with their families

Traditional infrastructure to protect children is weakened from the disaster

The system to notify social workers is slow, as traditional networks are only partially functional

WHY?

Birth certificates and documentation get lost or destroyed

Social workers are either displaced or focused on immediate relief efforts

There is no real-time data collection for the social-work process

WHY?

Documentation exists only on paper forms, which are especially susceptible to flooding and other physical destruction

There are not clear protocols for maintaining protection mechanisms after a disaster

Data is collected mostly on paper forms that are vulnerable to theft and/or damage

WHY?

Protocols were developed in an era when paper was the only means of storing records. The digitization of government processes is slow, and subject to competing priorities.

Process: Identify the overarching problem that you are trying to tackle in the areas of Child Survival or Emergency. Use your own research, the Challenge Resources, and the example on the previous page to help you complete the as many sections as possible in the chart below. Refer to Explore Challenges to choose your Challenge topic.

Problem you are tackling:

WHY?

WHY?

WHY?

WHY?

WHY?



Purpose: Understanding who is affected by a problem and who might be impacted by an intervention helps you define who you are designing for, who you might collaborate with, and potential points of resistance.

Example:

Potential Users

Who are the people most affected by this problem?

Relevant Stakeholders

Who else is impacted by this problem? Who might be responsible for providing help with the solution? Who else might be impacted by the solution?

LEAST DENSE <i>individual user</i>	<i>family unit (what is common?)</i>	<i>village</i>	<i>region</i>	<i>nation</i>	MOST DENSE
child (0-18) caregivers	parents grandparents uncles/aunts cousins	humanitarian aid workers Local leaders: baranguey capitans Local transport drivers: cab drivers Local groups: women's groups religious groups Community members students teachers	Political heads: local mayors governors Department of Social Work & Development Women and Child Protection Task Force (Police)	national government national NGOs military	International agencies & NGOs: UNICEF UNHCR ICRC International militaries

Needs

What are the needs of the person you are designing for?
Consider immediate needs such as food, water, and power, as well as long-term needs like better communication channels, secure financial transactions, etc. **Be specific.**

What are the needs of other stakeholders?
When you design a solution, you want to give every stakeholder a reason to wish you success.

<p>Children water, food, shelter, medical attention, protection, safe spaces to play, education, etc.</p> <p>Caregivers power supply channels, communication channels, connections to local aid workers, reporting mechanisms, etc.</p> <p>Humanitarian workers Damage & Needs Assessment (DNA) report to know where people are, other tools for rapidly assessing damage, etc.</p> <p>Local mayors Communication channels, connection to aid deliveries, networks for aid distribution, power supply, etc.</p>

Resources

What resources are available in your chosen context?
Consider materials, supplies, tools, people, and any existing systems/structures/programmes that your project can build on.

<p>Things motorcycles, cell-phones, netbooks, solar suitcases, etc.</p> <p>People social workers, local transport drivers, teachers, students who have programming skills, women's groups, religious groups, youth groups, etc.</p>



Process: Refer to your '5 Whys' worksheet and the example on the previous page to help you identify which people and organizations might be involved with the problem at different levels. Try to identify who your user might be - is it a child? a mother? How do units of scale (individual, family, region, etc.) change depending on who your user is? Consider urban-rural dynamics, religion, ethnicity, socio-economic status, etc.

Potential Users

Who are the people most affected by this problem?

Relevant Stakeholders

Who else is impacted by this problem? Who might be responsible for providing help with the solution? Who else might be impacted by the solution?

ex:

LEAST DENSE					MOST DENSE
<i>individual user</i>	<i>family unit</i>	<i>village</i>	<i>region</i>	<i>nation</i>	<i>global</i>

Needs

What are the needs of the person you are designing for?
 Consider immediate needs such as food, water, and power, as well as long-term needs like better communication channels, secure financial transactions, etc. **Be specific.**

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Resources

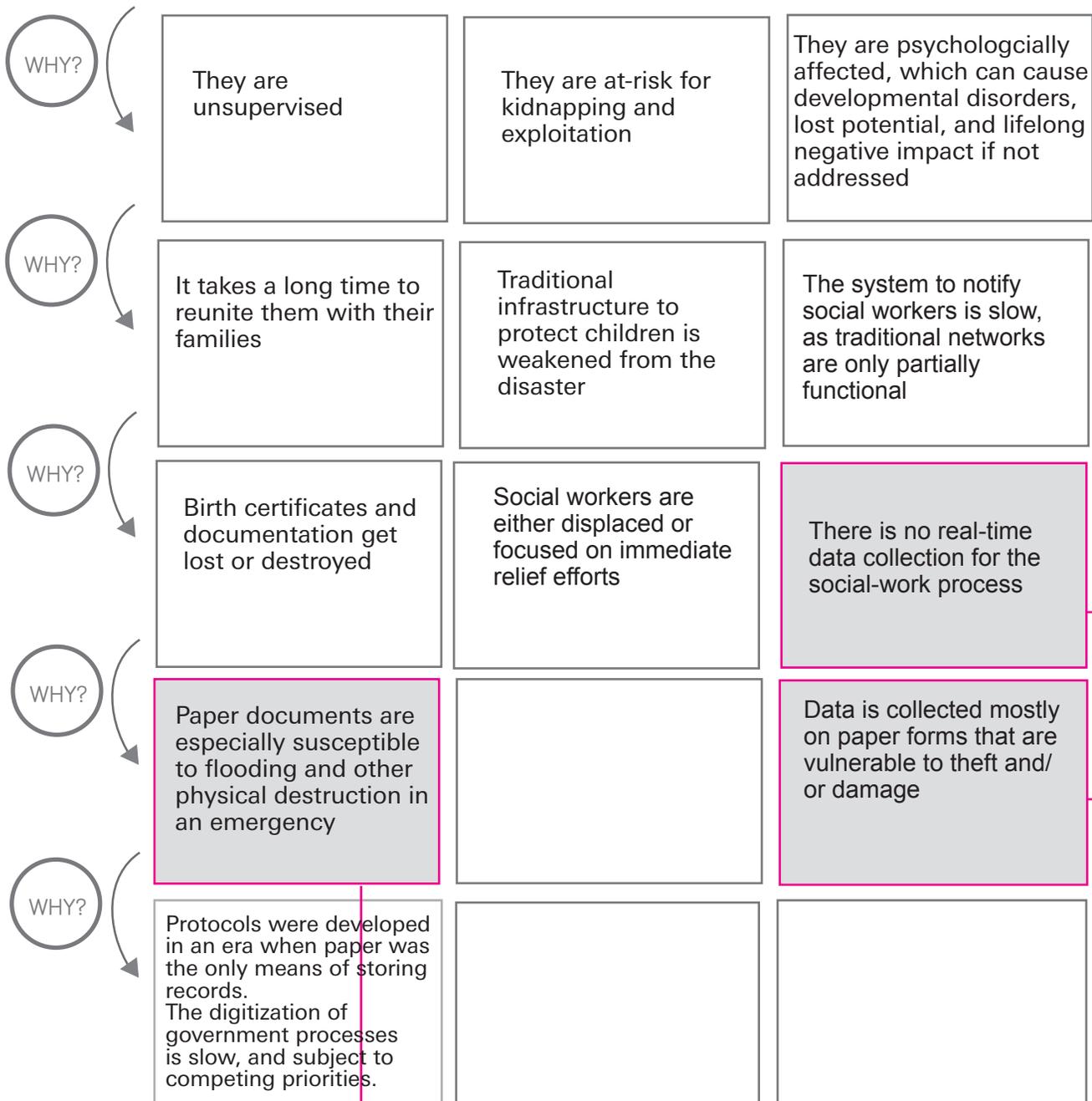
What resources are available in your chosen context?
 Consider materials, supplies, tools, people, and any existing systems/structures/programmes that your project can build on.

Purpose: Leverage points give you strategic and targeted ways to begin tackling a problem. As social theorist Donella Meadows says, "These are places within a complex system where a **small shift in one thing can produce big changes in everything. ... Leverage points are points of power.**"

Example:

Problem:

Children are especially vulnerable in the aftermath of an emergency situation such as Typhoon Haiyan in the Philippines.



How might we create a platform for real-time data collection?

Could we make data collection and record storage digital?



Process: Identify three possible leverage points in the system you are exploring, where you think you could engage end-users to design an effective intervention.

1. Read the full [Donella Meadows article](#).
2. On your '5 Whys' worksheet, highlight three potential leverage points. Refer to the example on the previous page.

Look for places where:

- You would have the most opportunity to engage your end user (through a change in behavior, product functionality, etc.)
- A small shift could cause a larger impact across the system

Avoid places where:

- A change would rely solely on the cooperation of external partners (such as governments or other NGOs)
- A change is primarily policy-based, or would rely on large-scale infrastructure

Purpose: Rapid ideation embraces likely failure as an open door to creativity. Drawing scenarios gets creative juices flowing and helps your brain see patterns and articulate insights you might not identify otherwise.

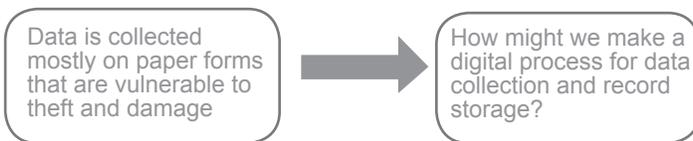
Process:

Your team will need:

- 15 minutes
- At least 20 half-sheets of scrap paper
- Pens/markers
- Your completed Leverage Points worksheet

1. Pick a leverage point from the worksheet (one per person).

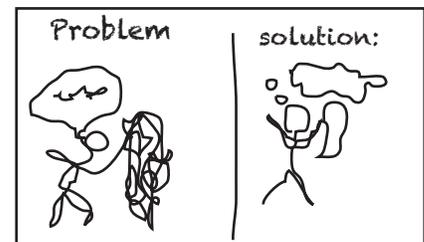
2. Reframe your leverage point as a “How might we” design question.



3. Take a stack of paper. Brainstorm as many solutions as you can in 5 minutes.

The rules are:

- one idea per sheet of paper
- on the left side, draw the current problem
- on the right side, draw your solution and write a few words about it



5. As a team, share your ideas.

6. Photograph at least 3 of your drawings. You can upload them as part of your Checkpoint 1 Summary Doc.

Purpose: The Summary Doc at each Checkpoint helps you track and share the core takeaways from your work as your project evolves.

Team Information:

Team Name: _____

Challenge Topic: _____

Entry point you are focusing on: _____

Target region: _____

What are two root causes that you are interested in learning more about?

Ideation Results

Share three of the most promising ideas from your brainstorming session.
Please attach photos or scans of your drawings if you can.

Idea 1

Corresponding Leverage Point

Idea 2

Corresponding Leverage Point

Idea 3

Corresponding Leverage Point

Checkpoint 2: Research & Consultation with Experts

Checkpoint 2 helps you dive deeper into key research areas, frame relevant questions for UNICEF experts, and refine your ideas into an initial project brief.

Your questions will be shared with UNICEF experts, who will reply with information and feedback to help guide your project development.

The [Checkpoint Resources](#) available on the website provide additional reference on topics such as how to engage users and evaluate your project ideas.

- 2.1: Engaging your end-user
- 2.2: Researching existing efforts
- 2.3: Three questions for experts
- 2.4: Checkpoint 2 Summary Doc



Purpose: Two key principles of UNICEF’s innovation work are that the design process and outcomes be user-centered and equity focused. In order for development efforts to respond to user needs and context on the ground, they need to be designed in collaboration with the people who they are trying to benefit. At this stage, you are making assumptions about your user needs and preferences, but winning teams will have the opportunity to work with end users and test these assumptions.

Example

Who do you think your end user is, and how will they benefit from your proposed design?
In keeping with the RapidFTR example from Checkpoint 1, our end users are OWCP officers working in child protection. We want to improve their ability to collect, store, and use data, especially in emergency situations.

Make a baseball card of your end user.

Who are they? What are their stats? Consider factors specific to your project as well as age, location, education level, religion, ethnicity, socio-economic status, etc.



Name:

Job: Officer of Women and Child Protection Task Force (Division of local police)

Location: lives in Salcedo Town, Samar, Philippines, reports to local precinct in Salcedo Town

Regular Responsibilities: any gender-based violence and protection related work

Age: 28

Familiarity with technology: High

Primary mode of transportation: motorbike & sometimes police car

Primary mode of communication: smartphone & radio

Sociological role: Embedded and trusted in local community

How will you engage your end user in designing a solution?

How can your project benefit from your end user’s talent and skills?

Users can help successfully adapt and deploy RapidFTR in the Philippines by:

- suggesting modifications to the RapidFTR platform and questionnaire to better suit local needs
- identifying other key resources such as programmers, local organizations, and other local networks

etc.

Why will your end-user want to participate?

- She will be able to do her work more efficiently and effectively with the help of the technology
- Her interest in and aptitude for learning new technologies



Who do you think your end-user is, and how will they benefit from your proposed design? _____

Make a baseball card of your end user.

Who are they? What are their stats? Consider factors specific to your project as well as age, location, education level, religion, ethnicity, socio-economic status, etc.

If you are able, please attach an image of your end user to this document or as a separate file.

How will you engage your end user in designing a solution?

How will your project benefit from local talent and skills?

Why will your end-user want to participate? What might be potential barriers to participation?



Purpose: Understanding other efforts in your area of focus and why they succeeded or failed is key to designing with purpose and having impact. It helps us build on successes and avoid replicating existing efforts or past failures.

Process: From your research, identify three existing initiatives around your chosen topic. For each, identify up to three points of success and/or failure and lessons learned that can be usefully applied to future projects. Consider key points in the design and delivery process, including development, distribution, access, motivation, cost, and sustainability.

Existing Initiative 1 (with link):

What has been successful? Why?

What about it has failed? Why?

Key lessons learned:

Existing Initiative 2 (with link):

What has been successful? Why?

What about it has failed? Why?

Key lessons learned:

Existing Initiative 3 (with link):

What has been successful? Why?

What about it has failed? Why?

Key lessons learned:



Process: Consider questions relating to each stage of your process so far. Are you still confused about certain stakeholder dynamics or the sociopolitical situation on the ground? Do you need more information about which technologies, products, or programs your end-users are already using?

Example:

Where do OWCP workers currently obtain information on where separated children might be?

Question 1

Question 2

Question 3

Team Information:

Team Name: _____

University: _____

Challenge Topic: _____

Entry point you are focusing on: _____

Target region: _____

What is your proposed intervention?

How will it be implemented?

Write a short description (3-4 sentences) about who the user is, how they would benefit, and what resources (human, technological, etc.) are needed.

What research do you have to back it up?

Provide links to two resources you used (one can be an internet search).

Give a one-sentence summary of how each resource was helpful.

5. What is innovative about your project? What value does it add to existing programs, systems, or products?

Checkpoint 3: Synthesis & Communication

With the bulk of your research done, the goal of Checkpoint 3 is to revise and strengthen your project idea using expert feedback, and then communicate your idea effectively to others.

The primary deliverable is a 1-minute YouTube video about your project. The videos will be posted online to build conversation and get feedback from a global community of peers.

Refer to the additional [Checkpoint Resources](#) available on the Challenge website for example videos.

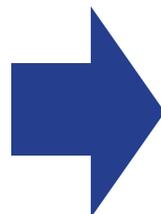
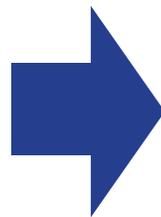
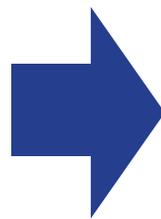
- 3.1: Change 3 things about current proposal
- 3.2: Checkpoint 3 Summary Doc
- 3.3: 1-minute project pitch video



Purpose: To thoughtfully revise and improve your project idea.

Process: Identify three elements of your existing proposal that should be changed based on the expert responses and/or the additional reference materials they provided. Consider how the new information changes your understanding of context, as well as elements such as type of intervention chosen and assumptions about user participation.

Use details from the expert responses as evidence to support your changes.



Team Information:

Team name: _____

University: _____

Team members: _____

Challenge topic: _____

Entry point you are focusing on: _____

Target region: _____

What is your revised intervention?

Use the following format to create an 'elevator pitch' that clearly identifies what you are proposing:

_____ is a _____ that does _____ for _____
(your innovation) what what who

example: RapidFTR is a smartphone application for data collection that registers separated children to expedite their reunification with caregivers.

Metrics

Once implemented, what are three things you could measure to evaluate your project's success or failure?

Equity

How does your project address social inequalities?

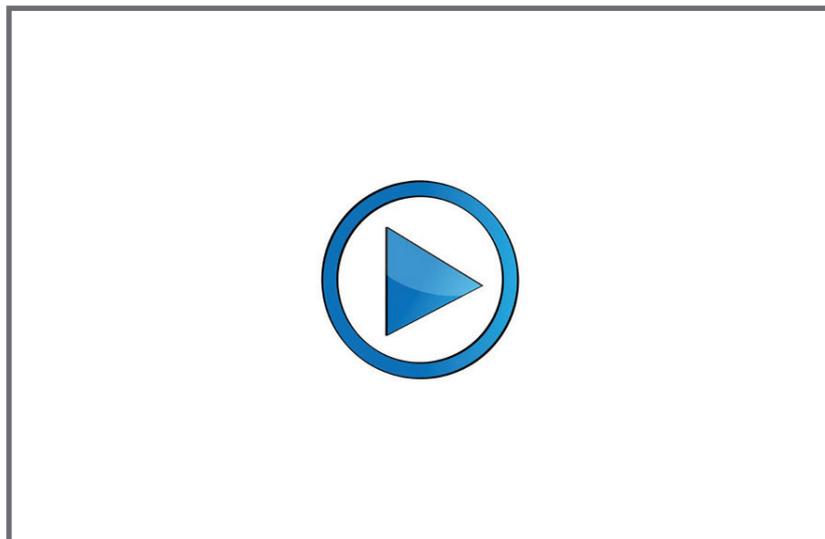
If you were to implement your project, how would you ensure that all groups - especially the most marginalized - had equal access to it?



Purpose: Being able to communicate your idea clearly and concisely is essential to a good proposal and to engaging support for your project. A short video is a great format to practice defining what you are developing and why it is valuable, and get feedback from a wider audience.

Process:

1. Use your Summary Docs from Checkpoint 1, 2, and 3 to build an outline for your video. You are telling a story - set up the problem, why it matters, who your audience is, what your proposal is, and why your project is innovative and exciting.
2. Think about how you can use visuals and sound creatively to get your point across. Print and use the blank storyboard under [Resources](#) to map out your video.
3. For instructions on how to create a YouTube video, visit: http://www.youtube.com/t/about_getting_started.
4. Paste the link to your YouTube video here:



Checkpoint 4: Revision & Final Proposal

Checkpoint 4 provides the guidelines and instructions for submitting your final proposal. Your proposal will be the primary point of evaluation during the first round of judging.

Checkpoints 1-3 have laid the groundwork for the content you need to include, so the focus here is on providing the structure and format to organize and present all of your work in a compelling way.

Sheet 1 is the guidelines and structure for the final proposal. Proposals are due on May 20 by email (unicefchallenge@gmail.com), and must follow the specified length and formatting guidelines. Proposals that do not meet these guidelines will be disqualified.

Included is a Feedback Rubric; we strongly encourage you to have your faculty advisor look at a draft of your proposal to help with things like information organization and clarity of language.

- 4.1: Final proposal guidelines
- 4.2: Feedback rubric for advisor review

Purpose: To assist teams with formally presenting their ideas in a compelling way. Proposals will be the primary focus for the first round of judging.

Please review the proposal according to the following:

1. Meets length and formatting guidelines Yes No

2. Clearly articulated problem statement and identification of a target audience 1 2 3 4

Comments:

3. Demonstrated understanding of context 1 2 3 4

Comments:

4. Evidence of research and building on existing efforts 1 2 3 4

Comments:

5. Clearly articulated project idea and justification for the chosen approach 1 2 3 4

Comments:

6. Clear implementation plan 1 2 3 4

Comments:

7. Measurable outcomes that are clearly linked with the problem statement and proposed intervention 1 2 3 4

Comments:

Instructions: Proposals are due on May 20 by email (unicefchallenge@gmail.com), and **should be submitted as a Word document or PDF that follows the length and formatting guidelines specified below**. Proposals that do not meet these guidelines will be disqualified.

CONTENTS:

I. Proposal Cover Sheet

Your cover sheet should include:

- Team name and Challenge topic
- One sentence project description
- Team member names, university, and email addresses

II. Executive Summary

Summarize your proposal in one paragraph (single-spaced). Include the link to your YouTube video.

III. Project Proposal

Your proposal must be 2-4 pages, double-spaced, 12 pt. font, and 1" margins. It should include the following subheadings:

A. PROBLEM STATEMENT

What is the main problem you are trying to address, who is it affecting, and why is it important?

B. CONTEXT

What are the social, technical, and environmental factors in your operating environment? Discuss relevant cultural norms, political structures, supply/demand factors, etc., and how they affect your project.

What is the related work around your problem topic and the type of solution you have chosen? Reference similar projects or existing efforts addressing the same problem. Describe how your project differs from, contributes to, or complements this work.

C. PROPOSED SOLUTION

What is your idea and how do you plan to achieve it? Describe the type of intervention you have chosen, how it will be implemented, and what activities will be carried out. Include collaborations with stakeholders and partners, and their contributions.

D. OUTCOMES/DELIVERABLES

What will be the concrete, measurable results? Describe how you will determine if you have achieved them.

E. TESTING PLAN

If you are one of the three winning teams, what will you test and who will you test with? Briefly outline how you will prepare for your fieldwork in the coming year, and how you will measure success and failure. Include a timeline of specific steps.