



PART  
2/3

# Designing Solutions for Urban Community Resilience

A methodology to co-design viable, inclusive and  
sustainable community resilience solutions

May 2019



Global Disaster  
Preparedness Center



**USAID**  
FROM THE AMERICAN PEOPLE

## **Acknowledgements**

The Global Disaster Preparedness Center thanks all those who made this toolkit possible — all the participants in pilot workshops in Mawlamyine, Myanmar; Semarang and Ternate, Indonesia and Luganville, Vanuatu who helped develop and refine these materials; staff from Myanmar Red Cross Society, Palang Merah Indonesia (Indonesia Red Cross), Vanuatu Red Cross Society, American Red Cross and International Federation of Red Cross Red Crescent Societies, ThinkPlace, Pivotal Labs and Pulse Labs Jakarta.

Funded by: The United States Agency for International Development

Authored by: ThinkPlace | [www.thinkplaceglobal.com](http://www.thinkplaceglobal.com)

Citation: Global Disaster Preparedness Center, 2019. *Designing Solutions for Urban Community Resilience*, American Red Cross and International Federation of Red Cross and Red Crescent Societies.

# Toolkit sections

This toolkit is spread across three documents to ensure it is easy to use and navigate. You will need all three sections to complete the design process.

## PART 1/3

### Part 1

Part 1 contains the tools you will need to get you started, and should be used if you:

- have not already done Human Centred Design (HCD) training
- would like to know more of the theory underpinning the tools and activities in Part 2
- want to build your skills as a facilitator

**Unit One** of Part 1 is an introduction to HCD, while **Unit Two** provides helpful tools and information about being a successful facilitator.

## PART 2/3

### Part 2

The document you are currently reading is Part 2 of the toolkit. You should use this if you are working with communities and do not need to conduct HCD training.

*Note: You do not have to go through every single activity in this toolkit if you or your participants do not have time. You can adjust the flow and content of the sessions depending on the participants in your workshop, their availability and capability. You will find sample agendas in Part 3 to help you plan your activities.*

## PART 3/3

### Part 3

The final part of the toolkit provides links to other helpful resources (including links to additional toolkits recommended to complete Key Actions 1 & 2), as well as a collection of print-ready templates which can be used for the activities in Part 2.

# Six Key Actions you can use to design viable, inclusive, and sustainable community resilience solutions

KEY ACTION

1

Build a coalition for community resilience

Method to complete found in

*Toolkit for Building Coalitions for Resilience*

KEY ACTION

2

Build a shared understanding of your community or city

Method to complete found in

*City-wide Risk Assessment*

EVCA

KEY ACTION

3

Understand your opportunities

KEY ACTION

4

Turn your opportunities into ideas for change

Method to complete found in

*Designing Solutions for Urban Community Resilience*

KEY ACTION

5

Test and learn

KEY ACTION

6

Plan for implementation and scaling

# Where this toolkit fits in

This toolkit should be used after you have already built your coalition, and after you have assessed community or city risks and vulnerabilities.

## Key Actions:

1



### Toolkit for Building Coalitions for Community Resilience

This toolkit explains how to engage a wide set of stakeholders; from local government and civil society organisations, to community volunteers. Many NGOs and INGOs are already very experienced in this process. Depending on your level of expertise, you may choose to use this toolkit or simply move ahead to one of the toolkits below.

#### Access at:

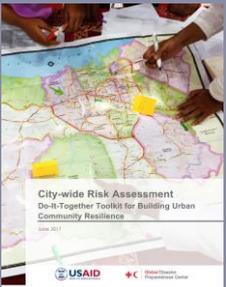
<https://www.preparecenter.org/resources/building-coalitions-urban-resilience-toolkit>

#### Steps:

*Establish intent » Map stakeholders, systems and relationships » Planning and monitoring your engagement*

## Key Actions:

2



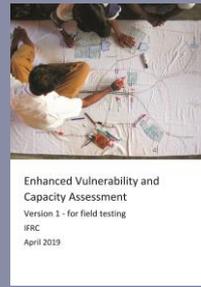
#### City Level

### City-wide Risk Assessment (CWA)

This toolkit helps you assess for disaster risks, stressors and shocks with key stakeholders at the city level.

#### Access at:

<https://www.preparecenter.org/resources/city-wide-risk-assessment-do-it-together-toolkit-building-urban-community-resilience>



#### Community Level

### Enhanced Vulnerability and Capacity Assessment Toolbox (EVCA)

This toolbox takes you through the process for assessing a community for vulnerabilities.

#### Access at:

<https://www.ifrcvca.org>

#### Steps:

*Understanding risk and resilience » Identifying city systems » Engaging with stakeholders » Identifying priorities and resilience actions*

## Key Actions:

3

4

5

6



### Designing Solutions for Urban Community Resilience

This toolkit, spread across three documents, gives you the resources to reframe the risks and vulnerabilities you identified using the above toolkits into opportunities, and to come up with solutions to create a more resilient city or community.

It includes an introduction to Human Centred Design (HCD), a facilitator's guide to support the facilitation of the activities, and many activities to help you take your ideas through to implementable solutions.

#### Steps:

*Recap your findings from EVCA or CWA » Reframe challenges into opportunities » Brainstorm ideas for change » Develop and prioritise ideas » Select ideas and turn into prototype solutions » Test initial prototype solution internally » Make sense of what you have heard and iterate to improve » Learn how to test with users » Re-test with users and iterate to improve » Solution stakeholder and system mapping » Consider aspects of implementation » Plan the roadmap » Understand the implementation environment » Progress the project*

This page is intentionally left blank.



**Designing viable,  
inclusive and  
sustainable solutions**



# Understanding each activity

Every activity page is laid out the same, making them easy for anyone to pick up and use.

## Activity number

Activities have unique identifier numbers. These are set out using the relevant Key Action number, followed by the step number, and ending with an activity number. You don't have to use every single activity, but for continuity try to use them in order from the smallest number (e.g. 3.1.1) to the largest number (e.g. 6.5.1).

## Quick information

Three key pieces of information have been pulled out to make it quick to compare activities. The top icon represents the level of difficulty: one dark bar means the activity is 'easy'; two dark bars meaning 'moderate'; all three bars filled in means the activity is more difficult (though still designed for use at community level).

## Key points

The 'Key points for facilitators' contains information that will help the running of the activity go smoothly, and is informed by the experiences of those who have run the activity in the past. 'Key learning points' tells you the reason for running the activity (i.e. what the participants will gain from completing the activity).

## Process

Activities are described through a series of clear steps. Where appropriate, sometimes prompts are provided for the facilitator to conduct a conversation with those doing the activity. When this is the case, don't just use the provided questions as a script – you can think on your feet and come up with your own conversation prompts based on what is happening in the room.

Activity 0.0.0

## An activity

Difficulty: *Easy*

Preparation time: *5 minutes*  
Running time: *20 minutes*

Materials: *Post-its, sharpies, flip chart paper*

**Key points for facilitators**

- 
-

**Key learning points**

-

**Process**

1.
2.
3.
4.

5. 
  - a)
  - b)
6.

Global Disaster Preparedness Center | Designing Solutions for Urban Community Resilience 8

## Navigation aid

Along the top of most pages in this toolkit there are a series of icons. These refer to the overall structure of the document, and indicate how far through the toolkit you have progressed. The coloured icon is your current position, with all other sections referenced in grey. In this example we are looking at Part 2 (as indicated by the 'shield' icon from the section title page), and specifically we are looking at an activity from Key Action 3 (as indicated by the 3).



# Understand our opportunities

## What is this?

To be able to come up with solutions to improve the disaster resilience of your city or community, you first need to understand what your biggest challenges are. You will use the outputs from the *Enhanced Vulnerability and Capacity Assessment* or *City-wide Risk Assessment* and turn the challenges identified into opportunity areas for ideation.

## Who needs to be involved?



Facilitator



Participants\*

*\*particularly those who have been involved in the EVCA / CWA process*

## How long will it take?



Total preparation time: 15 minutes  
Total running time: 1 hour and 20 minutes



### Action 3.1

# Recap your findings from EVCA or CWA

#### Why do you do this?

Rather than starting from scratch, you will use the outputs from the assessment already conducted in your area. These tools help identify the most important local disaster risks and challenges being faced. To make sure everyone in the room is familiar with the content, recap the risks before reframing them into opportunities.

#### When do you do this?

This should be the first activity you do after the Enhanced Vulnerability and Capacity Assessment or City-wide Risk Assessment, ideally quite soon after it has been completed. The details will be fresh in participants' minds and you will be able to keep the momentum up.



## Useful tools & activities



### 3.1.1 Challenges you are facing today

■ ■ ■ Difficulty: *Easy*

🕒 Preparation time: *5 minutes*  
Running time: *20 minutes*

#### Total time recommended to complete Action 3.1 activities

🕒 Total preparation time: *5 minutes*

Total running time: *20 minutes*



# Challenges you are facing today



Difficulty: Easy



Preparation time: 5 minutes

Running time: 20 minutes



Materials: Post-its, sharpies, outputs from EVCA or CWA workshops

## Key points for facilitators

- Make sure you have the outputs printed from the EVCA / CWA to use as inputs into this session
- The participants may or may not be the same as the participants in the EVCA / CWA so you need to recap to ensure everyone is clear and aligned

## Key learning points

- What the key challenges facing the community or city are

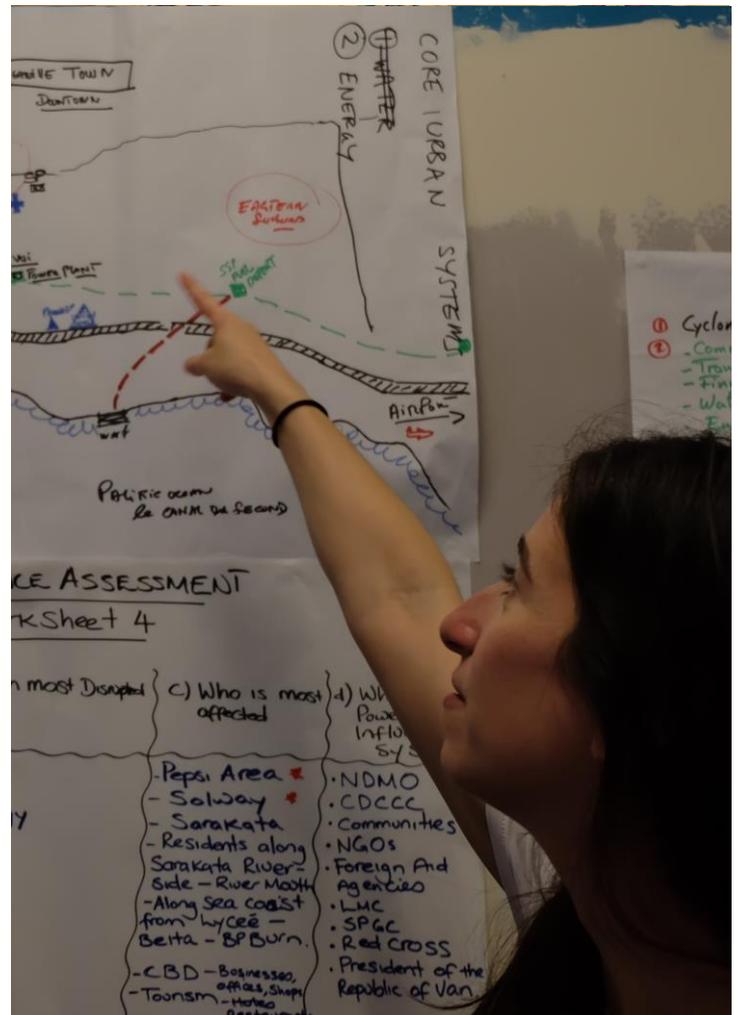
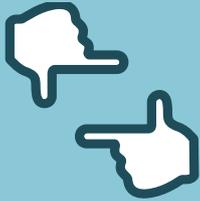


Photo: Aly Belkin @ Pivotal Labs

## Process

1. Ask who in the room participated during the EVCA / CWA process. Get participants who were involved to share one at a time what they remember of the challenges, shocks and stresses on the city or community systems.
2. As people are sharing, make sure you document the content on the whiteboard or flipchart paper, theming or clustering as you go.
3. Hand out the different outputs from the EVCA / CWA to each table, ensuring they are spread around evenly. In 10 minutes, get each table to go through the outputs and identify any additional challenges that have not already been captured on the board. Get them to write these on post-its.
4. Get each table to share back with the group the additional challenges they have found one-by-one, adding the post-its to the relevant part of the board.
5. Once everything is up on the board, prompt the room with questions:
  - a) Do we think this covers all of the challenges we are facing?
  - b) What's missing?
6. Once they have added anything additional, ask them the following question: *based on the prioritisations from the EVCA / CWA assessment and what we know as a group in the room today, which do you think are most important challenges for us to overcome and develop resilience towards?*
7. You can refer back to the prioritisation from the assessment, where particular shocks and stresses were identified as important based on their degree of potential impact and their frequency of occurrence.
8. Once there is agreement in the room on which challenges to prioritise, you can move on. Ideally there will be the same number of challenges as tables in the room, but if not, that's not a problem.



### Action 3.2

# Reframe challenges into opportunities

#### Why do you do this?

In order to come up with up ideas to address your disaster risks and challenges, you need to reframe your problems - often phrased negatively - into opportunities that are framed positively. This reframing sets you up to brainstorm ideas for solutions that will help create a more resilient city or community.

#### When do you do this?

This should be done in the same session as the recap to ensure people are clear on the challenges.



## Useful tools & activities



### 3.2.1 Developing 'How Might We' statements

Difficulty: *Moderate*

Preparation time: *5 minutes*  
Running time: *30 minutes*



### 3.2.2 A vision of the future

Difficulty: *Easy*

Preparation time: *5 minutes*  
Running time: *30 minutes*

#### Total time recommended to complete Action 3.2 activities

Total preparation time: *10 minutes*

Total running time: *1 hour*



# Developing 'How Might We' statements (HMWs)



Difficulty: *Moderate*



Preparation time: *5 minutes*

Running time: *30 minutes*



Materials: *Post-its, sharpies, flipchart paper, markers*

## Key points for facilitators

- The HMW statements might need some extra editing after the participants have developed them, to ensure they are pitched at the right level for successful brainstorming

## Key learning points

- HMW statements are designed to be the starting point for brainstorming ideas that can help to address the challenges



## Process

- Explain that we are going to turn our prioritised challenges (from Activity 3.1.1) into 'How Might We' (HMW) statements, which will help us to brainstorm solutions.
- To create HMWs, you reframe the challenges that you have identified in mapping out the stresses and shocks during the CWA / EVCA. Take each challenge statement (there should ideally be one per table group) and ask participants to rephrase the challenge into an opportunity, which begins with the phrase 'how might we'. They may come up with more than one for each challenge. Use post-its to draft different HMWs. Give them 10 minutes for this.
- Share that the HMW statements need to be broad enough that there are a wide range of solutions but narrow enough that the team has some helpful boundaries within which to come up with new solutions.
 

For example:

*Too narrow* – 'HMW create a cone to eat ice cream without dripping?'

*Too broad* – 'HMW redesign dessert?'

*Just right* – 'HMW redesign ice cream to be more portable?'
- Once each group has developed at least one HMW statement for their challenge, get each group to share back with the rest of the room. Prompt with questions:
  - Can we see that this is now an opportunity area and not just a problem statement or challenge?
  - Is it pitched at the right level i.e. is not too narrow or too broad?
  - Will it allow for a variety of solutions?
- As a full group, decide on the final version of each HMW statement and write each one up in large lettering on a piece of flipchart paper. They will be used in the following session for brainstorming.



# A vision of the future



Difficulty: *Easy*



Preparation time: *5 minutes*

Running time: *30 minutes*



Materials: *A4 paper, coloured pens*

## Key points for facilitators

- This activity is all about linking the challenges people have identified that they're experiencing today with a positive vision of the future in 10 years time

## Key learning points

- Creativity and envisioning the future will help when it comes to generating ideas to achieve our desired future state that is resilient and prepared for disasters



## Process

- Give participants an A4 sheet of paper each, and ensure each table has coloured pens or other similar coloured materials to draw a picture with.
- Ask them to draw a picture showing their vision for their city / community / ward ten years from now. They should try to visualise what it would look like if all of the opportunities they have discussed were realised. Have them think specifically about the challenges they identified in Activity 3.1.1, and the opportunities they turned the challenges into in Activity 3.2.1. These should be reflected in their drawing, showing the positive future state.
- Give them 15 minutes to draw. Be sure to share that it does not matter if you are not a good artist! The idea is to have fun and be imaginative.
- Invite people to stand up and speak about what they have chosen to draw.
- Paste the pictures up on the wall at the end of the session in a place where they can be easily seen for the remainder of the workshop.



# From ideas to solutions for change

## What is this?

This is the most creative and divergent stage of the design process, where you will look at global and local inspiration, brainstorm ideas and develop the ideas in more detail. You then discuss their feasibility, before selecting the most valuable ideas and turning them into prototype solutions.

## Who needs to be involved?



Facilitator



Participants



Red Cross Red Crescent experts

## How long will it take?



Total preparation time: 2 hours and 10 minutes  
Total running time: 5 hours and 25 minutes



# Action 4.1 Brainstorm ideas for change

## Why do you do this?

Brainstorming is a technique for groups to generate creative ideas to solve specific problems. It's important people are able to think freely and are not hindered by feasibility or viability at this stage. The more creative and divergent the ideas, the more likely you will find the ingredients to create strong solutions to your challenges.

## When do you do this?

This brainstorm can take place at any stage once the challenges have been reframed into HMW opportunity statements. Most important is for the facilitator to have had time to search for the innovation inspiration for the brainstorm session.



## Useful tools & activities



### 4.1.1 A bad umbrella

Difficulty: *Easy*

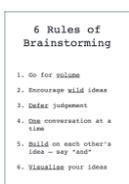
Preparation time: *5 minutes*  
Running time: *15 minutes*



### 4.1.2 How to make a cup of tea

Difficulty: *Moderate*

Preparation time: *5 minutes*  
Running time: *30 minutes*



### 4.1.3 Rules of brainstorming

Difficulty: *Easy*

Preparation time: *5 minutes*  
Running time: *10 minutes*



### 4.1.4 Innovation inspiration

Difficulty: *Moderate*

Preparation time: *90 minutes*  
Running time: *20 minutes*



### 4.1.5 Generating ideas

Difficulty: *Easy*

Preparation time: *5 minutes*  
Running time: *40 minutes*

## Total time recommended to complete Action 4.1 activities

Preparation time: *1 hour and 50 minutes*

Running time: *1 hour and 55 minutes*



# A bad umbrella



Difficulty: *Easy*



Preparation time: *5 minutes*

Running time: *15 minutes*



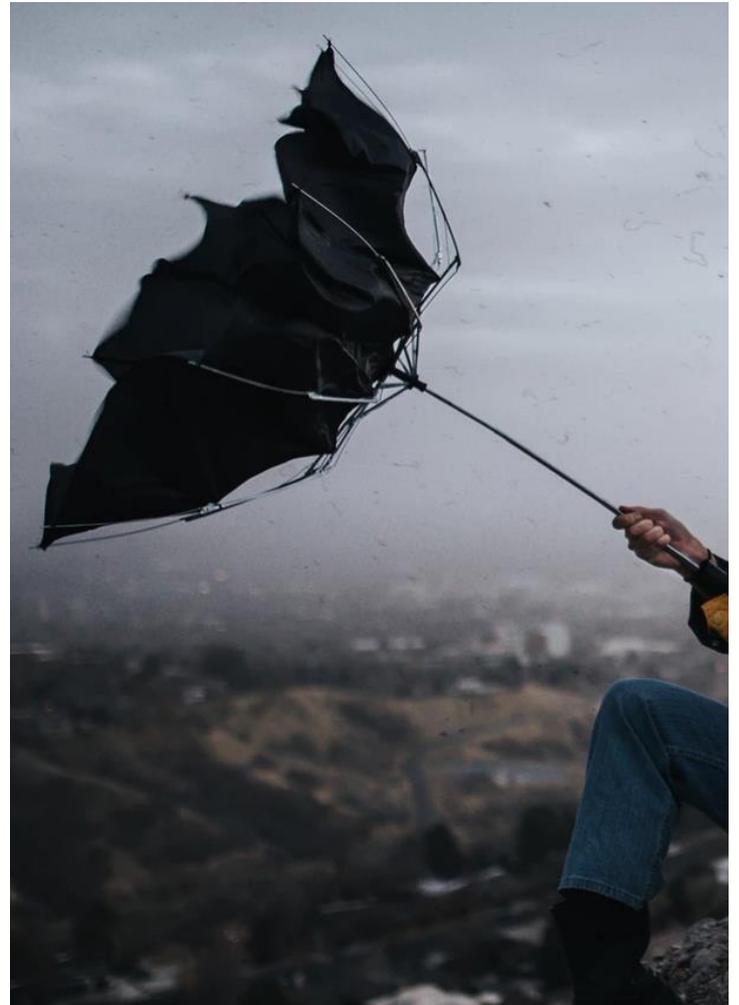
Materials: *Post-its, sharpies*

## Key points for facilitators

- This is a quick and easy way to warm-up to get people thinking and writing
- Purpose is to go for quantity and not perfection of ideas

## Key learning points

- Your best idea is never the first idea
- You can come up with good or better ideas by building on other ideas or re-engineering 'bad' ideas



## Process

1. Share with participants that they are about to brainstorm features of the worst umbrella ever designed. The exercise is about coming up with as many ideas as they can in a short amount of time.
2. Ask participants to use post-it notes to brainstorm all the potential features the worst umbrella design would have in 5 minutes. Write one idea per post it note.
3. Set a target of 100 ideas in 5 minutes for each table group. The target is meant to be challenging. If they are a big group, make the target higher (i.e more than 15 ideas per person).
4. Once the 5 minutes is up, prompt with questions:
  - a) *How did that feel? Did it get easier once you started?*
  - b) *Which idea was your best? Who noticed that the 5th or 6th idea they came up with was better than their 1st?*
  - c) *Why do you think that is so?*
5. Now, ask participants to see if they can combine at least one of their 'bad' ideas or features with someone else's idea to create a new 'good' idea. e.g. an umbrella made from paper could be combined with a plastic umbrella with no handle to make a fully-functioning umbrella.
6. Remind participants that no idea is a bad idea and that this is an important mindset as you head into ideation.



# How to make a cup of tea



Difficulty: *Moderate*



Preparation time: *5 minutes*

Running time: *30 minutes*



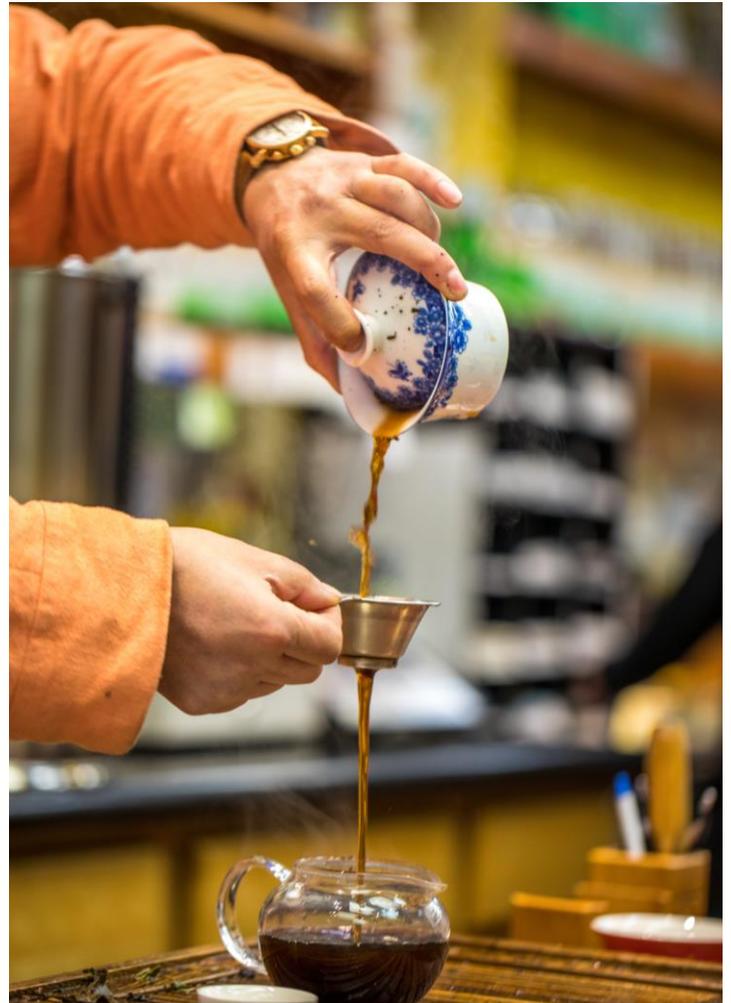
Materials: *A4 paper, post-its, sharpies*

## Key points for facilitators

- You can substitute tea with another locally relevant and common food or drink item, as long as it is simple to make

## Key learning points

- Quality collaboration tends to result in richer and more detailed content
- Different types of collaboration tend to result in different outputs



## Process

- Split the room into 4 groups and explain that the exercise is to draw the steps for how to make the perfect cup of tea. They have 10 minutes to complete the task, but each group has different instructions on how to do it.
  - One group will each individually draw their own process on a sheet of A4 paper.
  - One group will each individually draw on post-its, one step per post-it. They can use multiple post-its, there is no limit.
  - One group will start drawing individually on post it notes. After 5 minutes, give them instructions to come together as a group and compile their post-its into one process. They are not allowed to talk while they do this.
  - One group will start drawing individually on post it notes. After 5 minutes, give them instructions to come together as a group and compile their post its into one process. They are allowed to talk while they do this.
- After the 10 minutes, come back to a group discussion.
- Prompt with questions:
  - Who had more than 10 steps in the process?
  - Who had less than 5 steps in the process?
  - What does that tell us about teamwork vs individual work?
  - What does that tell us about different perspectives?
  - What does that tell us about all the different ways to solve a problem?



# Rules of brainstorming



Difficulty: *Easy*



Preparation time: *5 minutes*

Running time: *10 minutes*



Materials: *Whiteboard or flipchart paper, markers*

## Key points for facilitators

- Brainstorming is a fun and quick way to come up with lots of ideas in a short space of time
- The rules are important to help get the most of out of the participants

## Key learning points

- For brainstorming to work well, people need to understand the rules
- Going for volume is one of the most important points

## 6 Rules of Brainstorming

1. Go for quantity
2. Encourage wild ideas
3. Defer judgement
4. One conversation at a time
5. Build on each other's ideas - say "and"
6. Visualise your ideas

## Process

1. Begin by explaining what brainstorming is – it's a way of coming up with lots of ideas in a short space of time. It can be used in lots of different ways, and today you are going to do it using one particular proven method.
2. Ask participants to volunteer what they think might be a rule of brainstorming. Acknowledge when they get them correct (or almost correct).
3. Ensure they have thought of all the rules. Share any remaining rules they have not come up with.
4. Write them up on a whiteboard or flipchart paper in large font so everyone can see them. These are also in the Resource Library.
5. Prompt with questions:
  - a) *Why is each rule important?*
  - b) *How will it help us achieve our goals?*



# Innovation inspiration



Difficulty: *Moderate*



Preparation time: *90 minutes*

Running time: *20 minutes*



Materials: *Internet access, presentation slides, (optional: printed slides)*

## Key points for facilitators

- This requires significant preparation before the session
- Inspiration is crucial for helping people think outside of the box

## Key learning points

- Aspects of the inspiring solutions can be incorporated into our ideas to solve the current challenges

### Zero-waste Japanese town

Kamikatsu, Japan



- The residents of Kamikatsu, a town of 1,700, sort their trash into **34** different categories
- There are no garbage trucks, so each resident has to wash, sort, and bring their trash to the recycling center—which residents admit took some time getting used to.
- A worker oversees the sorting process at the center, making sure trash goes into the right bins. Some used items are taken to businesses to be resold or repurposed into clothing, toys, and accessories
- Kamikatsu already recycles about 80% of its trash, with the last 20% going into a landfill!

Photo credit: | Equipping Students for City Resilience

### Bigbelly smart solar-powered bins

Singapore



- Intelligent sensors that detect how full they are and can send e-mail or text message alerts to the employees of cleaners.
- Have an internal compactor that can crush rubbish so that the capacity can be eight times more than that of a normal bin.
- Solar-powered and self-sufficient when it comes to energy as they can store power

Photo credit: | Equipping Students for City Resilience

Examples for waste management

## Process

1. Before you begin the ideation session (*Activity 4.1.5*), spend some time researching online different innovations for the opportunity areas relevant to your session e.g. waste management, disaster preparedness etc. Aim for 5-6 strong innovations, more if possible.
2. Good keywords to include in the google search: *design, innovation, technology*. Often you will find news articles, or university reports. Any source is fine to use.
3. It's important that you do not filter the innovation inspiration for viability and possibility. You are trying to inspire participants with examples of great innovation. It does not matter if that particular innovation does not directly apply to the current challenges, or that it may not be possible to implement in the environment you are in.
4. Try to get at least a couple of examples from countries with similar contexts as yours. You can include inspiration from both developed and developing contexts. Remember the idea is to inspire. You can use the examples from Part I Page 12 to help get you started.
5. Capture the content on slides for either displaying or printing. Make sure they are visual – include pictures, diagrams, examples of how the innovation works and has made a positive impact. Try to simplify the innovation into 5-6 sentences that describe what is, why it works and the impact that it had. (see above for examples).
6. Before the ideation session (*Activity 4.1.5*), share the slides or print-outs and talk through them with participants.
7. Prompt with questions:
  - a) *What stood out as being the most exciting innovation to you?*
  - b) *Why was that?*
  - c) *How do you think some of these could apply to our context?*



# Generating ideas



Difficulty: *Easy*



Preparation time: *5 minutes*

Running time: *40 minutes*



Materials: *Post-its, sharpies, flip charts, wall space*

## Key points for facilitators

- Remind participants about the rules of brainstorming to ensure they keep on track and go for volume

## Key learning points

- Brainstorming is a good way of coming up with ideas to address opportunities
- The more ideas generated the better

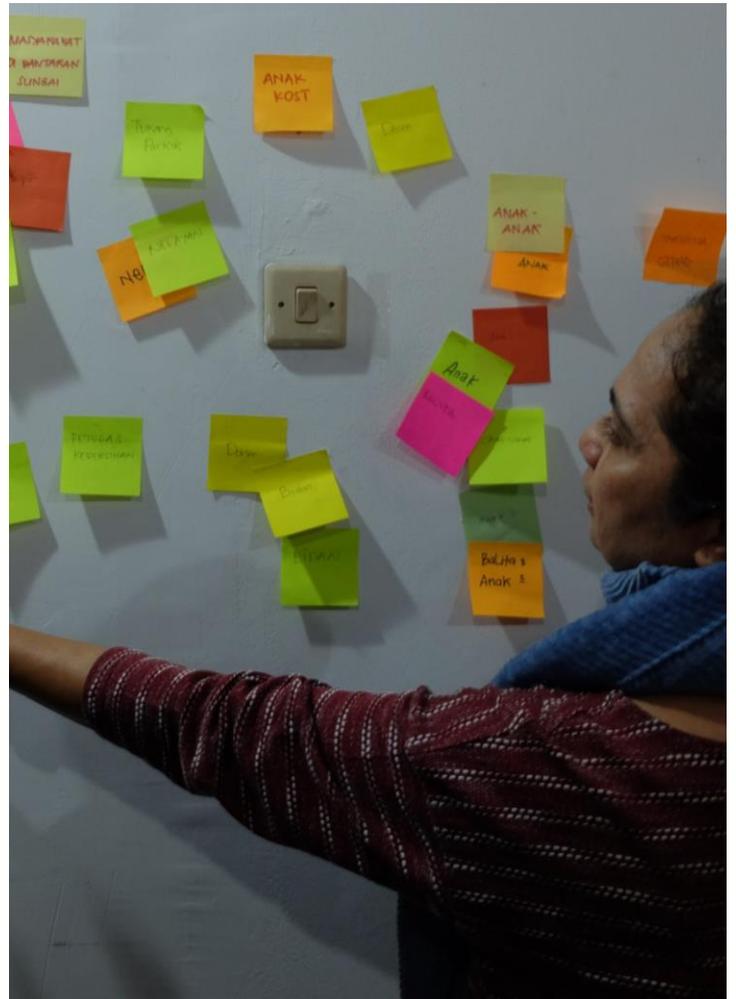


Photo: Aly Belkin @ Pivotal Labs

## Process

- Distribute the HMW statements from *Activity 3.2.1* around the tables. If there are not enough statements, tables can work on the same opportunity area. People can also move tables to work on the statement they are most passionate about or have ideas for.
- Working individually and with no talking, get participants to come up with as many different ideas as possible in 10 minutes that will help realise the opportunities and achieve the positive vision for the future (see *Activities 3.2.1* and *3.2.2*).
- They must use one post-it per idea, and be sure to pull off the post-its and stick them on the table as they go. Don't leave them on the post-it pad.
- Participants to spend 5 minutes sharing their ideas with a partner at their table. Between them, choose the top 6 ideas and share the ideas with their table group.
- As a table group, spend 5 minutes prioritising all of their ideas into the top 3 ideas overall for the table.
- As a whole room, go around table by table and get participants to come up and stick their table's top 3 ideas on the wall (or flip chart). They should read the ideas out one by one as they stick them up.
- As each new table comes up, the facilitator can cluster similar ideas that could build on one another. This will form an 'ideas wall'. Ideas from different HMW statements might cross over which is okay. Be sure to cluster them together.
- If you have more time, you can rotate the groups around the different HMW statements and repeat the brainstorm exercise (from Step 2 onwards). Their ideas should build on what has already been generated.



# Action 4.2 Develop and prioritise ideas

### Why do you do this?

After coming up with simple ideas in the brainstorm, they need to be developed in more detail. By clustering similar ideas, people can combine different elements from basic ideas to create a more considered idea. These then need to be assessed at a high level to establish if they are worth pursuing from a high level viability and possibility perspective.

### When do you do this?

This should be done immediately after the brainstorm while the ideas are fresh in people's minds and they are feeling energised.



## Useful tools & activities



### 4.2.1 Developing the top ideas

Difficulty: *Moderate*

Preparation time: *5 minutes*  
Running time: *30 minutes*



### 4.2.2 Assessing ideas using 'DVP'

Difficulty: *Moderate*

Preparation time: *5 minutes*  
Running time: *1 hour*

### Total time recommended to complete Action 4.2 activities

Total preparation time: *10 minutes*

Total running time: *1 hour and 30 minutes*



# Developing the top ideas



Difficulty: *Moderate*



Preparation time: *5 minutes*

Running time: *30 minutes*



Materials: *A5 idea templates (provided in Resource Library), sharpies*

## Key points for facilitators

- Really encourage people to combine multiple ideas to make one stronger concept

## Key learning points

- In order to develop an idea, you need to flesh out the details and explain different aspects of it to help you improve the idea



Name your idea	
Draw it	Who is it for?
Describe it	What outcome will it achieve?

## Process

1. In pairs, get people to choose a post-it idea (or cluster of ideas that link together) from the ideas wall in Activity 4.1.5. They should choose the idea that resonates with them or excites them the most.
2. In the pair, they need to build out the post-it idea (or ideas) onto one A5 idea template (found in the Resource Library). Ensure they fill out all parts of the template.
3. Once they have finished the first template, go back to the ideas wall and select a second post-it idea (or cluster of ideas that link together) and repeat the process on a new idea card for the new selection.
4. Each pair should aim to complete a minimum of 2 idea templates in 15 minutes. If there are ideas that are not selected from the idea wall at the end, give people 5 minutes to select any remaining ideas they are passionate about and to quickly complete the idea template. It's okay if not all of the ideas are turned into idea cards.
5. In the remaining 10 minutes, get each pair to share their ideas with others at their table. If there are ideas that can fit together or complement each other to make one stronger idea, get the team to write a new idea template that combines the two.
6. Prompt a short discussion with questions:
  - a) *Why is it a good idea to combine ideas which are similar?*
  - b) *Can you see ideas which excite you? Why?*



# Assessing ideas using ‘Desirable, Viable, Possible’ (DVP)



Difficulty: Moderate



Preparation time: 5 minutes

Running time: 1 hour



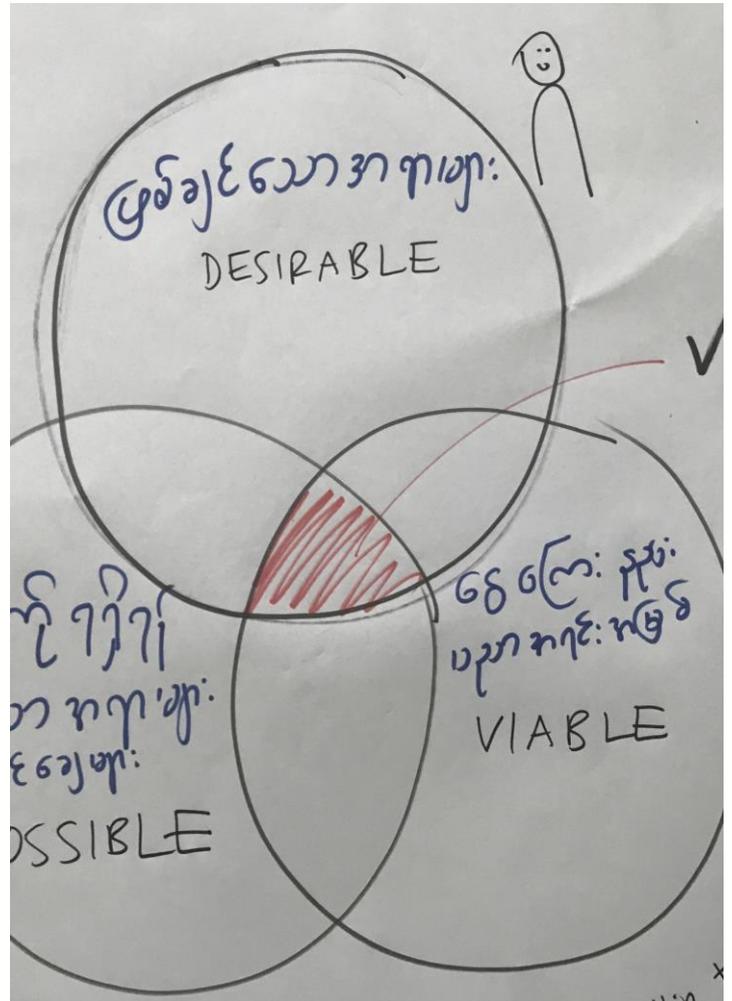
Materials: A5 DVP templates (provided in Resource Library), sharpies

## Key points for facilitators

- Refresh your memory about the ‘Desirable, Viable, Possible’ framework in the Facilitator’s Guide before starting this session (see toolkit Part 1, page 11). Refer to the materials from Activity 4.2.1

## Key learning points

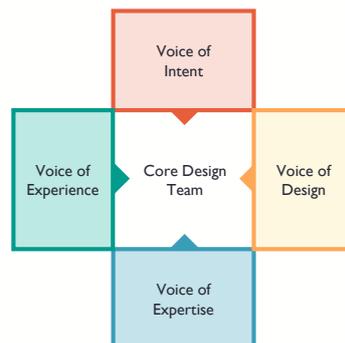
- While you always start with what is desirable for users, it’s important to consider what is viable and possible when assessing your ideas



## Process

1. Spend the first 10 minutes of the session explaining the ‘Desirable, Viable, Possible’ framework (DVP) and why it’s useful. Highlight that you always begin with what is desirable for people first, and that is what you have done up to this point. Our solutions have not considered what is actually viable or possible yet.
2. Once the participants understand the framework, hand out the DVP templates (in the Resource Library) and get each pair to complete one for each of their idea templates. This should take around 15 minutes.
3. Once all the idea templates have a DVP template completed for them, get each pair to reflect on the value of each idea now that they have considered how viable or possible it seems. Get each pair to choose their ‘best’ idea, based on the quality of the idea and its possibility and viability assessment.
4. One by one, get each pair to share their ‘best’ idea with the room and stick them up on the wall. Cluster similar or complementary ideas together.
6. Once all of the ‘best’ ideas are up (and clustered where relevant), get each table group to come up and select one idea, or cluster of ideas, that they want to develop into a more complete solution.

### Remember the role of the Four Voices!



As the ‘Voice of Expertise’ when it comes to disaster preparedness, Red Cross personnel should assess these ideas through this lens. It is important that ideas which have been determined to be desirable are verified as possible and viable by those with the appropriate expertise within Red Cross to give the solutions the best chance of success.



### Action 4.3

# Select ideas and turn into prototype solutions

#### Why do you do this?

Prototyping is an important part of the design process as it makes ideas 'real' and forces people to think about their solutions in more detail. By working through a basic 'features' worksheet and then developing storyboards and prototypes, you will have tangible artefacts to test with users.

Once the prototypes have been developed, there needs to be an evaluation process to ensure we have developed the best solutions possible.

#### When do you do this?

The National Society plays an important role in the last part of this step. Before moving into the testing stage of the design process, you need to evaluate the solutions for viability and possibly again, using the National Society resilience expertise. This may take some time, so depending on the workshop plan and schedule, Key Action 5 activities can be scheduled for a later date. This also gives time to schedule future user testing sessions (see Activity 5.4.4).



### Useful tools & activities



#### 4.3.1 Spaghetti marshmallow towers

Difficulty: *Easy*

Preparation time: *5 minutes*  
Running time: *30 minutes*



#### 4.3.2 Solutions prototyping

Difficulty: *Moderate*

Preparation time: *5 minutes*  
Running time: *1.5 hours*

#### Total time recommended to complete Action 4.3 activities

Total preparation time: *10 minutes*

Total running time: *2 hours*



# Spaghetti marshmallow towers



Difficulty: *Easy*



Preparation time: *5 minutes*

Running time: *30 minutes*



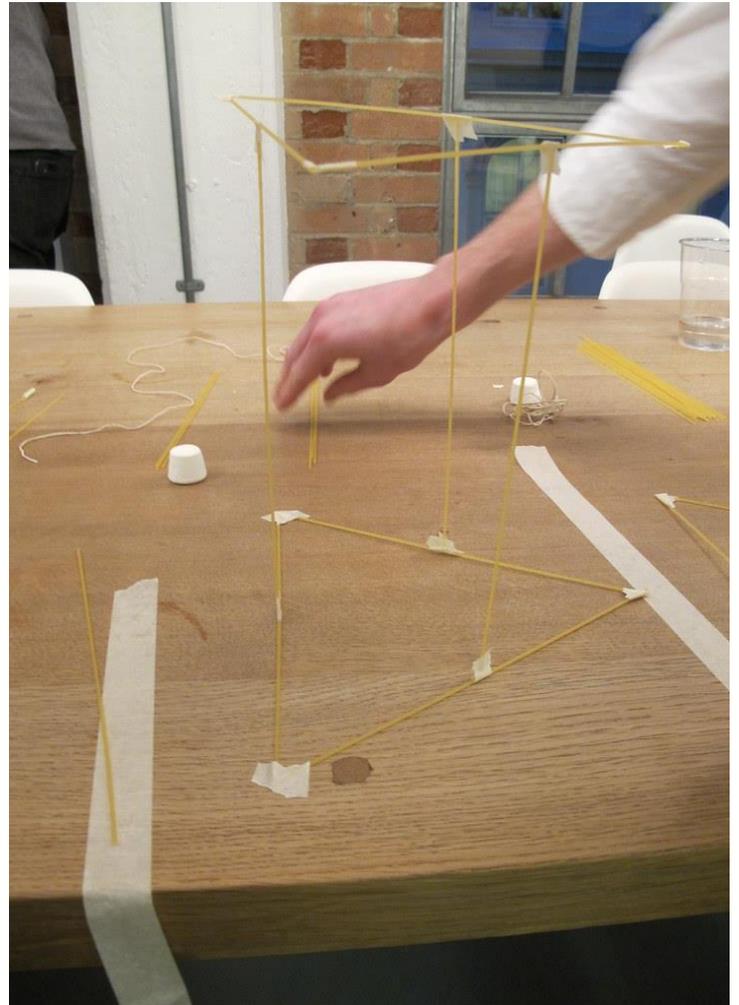
Materials: *1 packet dried spaghetti, 1 packet marshmallows, string, masking tape*

## Key points for facilitators

- You can substitute spaghetti and marshmallows with other local items like straws and different types of sweets

## Key learning points

- The teams that begin 'building' quickly usually end up the most successful through trial and error
- Prototyping early (and therefore failing early!) often leads to success



## Process

- Split the room into 4 groups. Set up each table up with 20 dry spaghetti sticks, 1 marshmallow, 1 metre of string and 1 metre of masking tape
- Split the room into 4 groups and explain their challenge is to build the tallest tower possible that will support the marshmallow. They can use the materials however they like.
- Set a timer for 15 minutes and go!
- Around the 10 minute mark, walk around the groups and ensure that each group has started to build something. Encourage them and make sure they know how much time they have left.
- When the 15 minutes are up, make everybody stand back from their towers. Judge which team is the winner - the team that has their marshmallow the highest distance off the table.
- Prompt with questions:
  - Why do you think that team had the highest structure? Probe for reasons beyond the physical structure itself.*
  - What would you do differently if you did this exercise again? Why?*
  - What can we learn from this when we begin to prototype our ideas?*



# Solution prototyping



Difficulty: Moderate



Preparation time: 5 minutes

Running time: 1 hour and 30 minutes



Materials: Paper, coloured pens or pencils, clay, cardboard, tape, blu-tack, solution overview worksheet (in Resource Library), storyboard examples

## Key points for facilitators

- Encourage participants to get creative in how they explain their idea through prototyping, but make sure they are clear on the features of their idea first (the features can evolve as they build their idea)

## Key learning point

- Prototyping helps make ideas tangible and makes them easier to explain to users during testing



## Process

1. The first part of the session requires the participants to complete the 'solution overview' worksheet, describing the challenge or problem state, the desired future outcomes, what the features of the idea are, how it works and who the stakeholders are. The template can be found in the Resource Library. This should take around 15 minutes.
2. Once each group has completed their solution overview worksheet, explain to participants why prototyping is important:
  - It helps us to make our ideas tangible
  - It gives us something physical to share with users during testing and makes it easier to explain
  - It takes the emphasis off the person who is sharing the idea and puts it onto the idea itself
3. Share examples of prototypes and storyboards for inspiration (in Resource Library).
4. Groups can then begin to storyboard and prototype their solutions.
5. As they work through their storyboards and prototypes, circulate around the room and prompt with questions:
  - a) *How is your prototype helping to explain the key features of your idea?*
  - b) *How can you make all the elements of your solution tangible?*



# Evaluating and extending the solutions

Please note that this page is for facilitators only. It is not a group activity.

## Evaluating the ideas

Once you have completed the activities in Key Action 4, the ideas that have been prototyped into solutions need assessing by the facilitators to ensure they are valuable to continue working on. You can use the following guidelines to assess each solution:

### **Sense-check against the viable and possible frames again.**

- Does the solution require a large financial investment?
- Does it require a significant innovation in technology?
- Does it require something very new or different to the existing capabilities the city or community has?

If the answer to one of these questions is yes, you might want to consider the likelihood of success of the solution.

### **Sense-check against the scope of the key stakeholders involved.**

- Does the solution fit within the scope of the INGO partners, government partners, private sector?

### **Sense-check the uniqueness of each solution.**

- Are there elements of each solution that could be consolidated to result in fewer but stronger solutions to take forward?

## Extending the ideas

It is recommended to engage key disaster risk and resilience experts at this stage to see if any solutions can be built upon to make them more impactful. This could be through an online platform where larger Red Cross Red Crescent staff (across the community, city, country and global levels) can engage with the solutions and give feedback and suggestions for how to improve the idea. This could also be a way for different regions to share new innovations and solutions in the field of disaster risk reduction and resilience.

Having this 'Voice of Expertise' perspective (see Page 9, Section A) is crucial for ensuring viability and feasibility of possible solutions, while ensuring the larger Red Cross Red Crescent staff and in-country technical expertise in this field is being leveraged.



# Test and learn

## What is this?

This stage is all about testing our prototypes, both internally and with external users. This helps us to learn quickly what key users and stakeholders think about our solutions, then you can iterate and improve what you have designed.

### Who needs to be involved?



Facilitator



Participants



Community members  
and stakeholders

### How long will it take?



Total preparation time: *2 hours and 20 minutes*  
Total running time: *9 hours and 15 minutes*



### Action 5.1

# Test initial prototype solution internally

#### Why do you do this?

You start with testing any solution amongst your peers before you go out to do 'real world' testing. This allows you to get feedback quickly and easily, and identifies any gaps you have in your solutions. You can iterate prototypes at a very low cost and begin to improve the fidelity of your solutions.

#### When do you do this?

Internal user testing can be done at any stage after the solution prototypes have been developed.



## Useful tools & activities



### 5.1.1 Internal user testing

■ ■ ■ Difficulty: *Easy*

🕒 Preparation time: *5 minutes*  
Running time: *1 hour*

#### Total time recommended to complete Action 5.1 activities

🕒 Total preparation time: *5 minutes*

Total running time: *1 hour*



# Internal user testing



Difficulty: *Easy*



Preparation time: *5 minutes*

Running time: *1 hour (depending on number of groups)*



Materials: *Storyboards and prototypes, post-its, sharpies, flipchart paper*

## Key points for facilitators

- Internal testing is useful as participants can quickly learn from their peers and rapidly improve their solutions
- Try to keep to time in the round robin

## Key learning points

- Testing early with users (even peers) enables you to gather feedback quickly in a 'safe' space and improve your solution



## Process

1. This is a round robin exercise where each group will share their solution with other 'users' (the other groups) to get feedback.
2. Spend the first 10 minutes of the session getting the groups to think about how they are going to communicate their solution quickly. They should do a practice run within their group.
3. Nominate one person from each group to be the 'presenter'. They will stay behind at their table and explain their solution while the remaining members go to another group (moving in a clockwise direction).
4. Now begin the exercise. The presenter has 5 minutes to explain their solution using the prototype to another group. After the 5 minutes, the 'users' need to give two pieces of feedback on post-its:
  - What they liked about the solution
  - What could improve or build on the solution
5. Collate the feedback on flipchart paper at each group's table.
6. After the first round, get the presenter to stay at their table, but get the other groups to move clockwise to the next group. Repeat the process of sharing and getting feedback this until all groups have been around and heard each group's solution.
7. At the conclusion, prompt with questions:
  - a) *Ask the presenter what it was like receiving feedback from people*
  - b) *Ask people who moved around what it was like giving feedback*
8. Get each group to read through their feedback and use the KCCC tool to iterate their solution (see Activity 5.2.1).



### Action 5.2

# Make sense of what you heard and iterate to improve

#### Why do you do this?

You need to spend time making sense of what you heard from users, regardless of whether they were internal peers or external stakeholders / community members. Using a framework helps you to organise the feedback and informs the changes that need to be made to the prototype solutions.

#### When do you do this?

This should be done immediately after the testing session/s, while the information is fresh in people's minds.



## Useful tools & activities



### 5.2.1 'Keep, Chuck, Change, Create'

Difficulty: *Easy*

Preparation time: *5 minutes*  
Running time: *1 hour*

#### Total time recommended to complete Action 5.2 activities

Total preparation time: *5 minutes*

Total running time: *1 hour*



# ‘Keep, Chuck, Change, Create’



Difficulty: *Easy*



Preparation time: *5 minutes*

Running time: *1 hour*



Materials: *Prototypes, post-its, sharpies, flipchart paper*

## Key points for facilitators

- If there are multiple teams working on the same solution, you might like to suggest that some of them work together (depending on the number of participants in each group)

## Key learning points

- You can make sense of interview feedback using the KCCC framework



Photo: Aly Belkin @ Pivotal Labs

## Process

1. Following the user testing, ask teams to find a space (preferably a wall space) and to start clustering the user feedback. Let the participants know that they will have 10 minutes to complete their clustering. Themes should emerge quite naturally, but if this is not the case, suggest they try writing up a heading for five key features from their their prototype solution sheet, and cluster the interview notes under these headings.
2. Once the themes have been clearly identified, introduce the ‘KCCC’ framework:
  - Keep - retain the feature of the solution
  - Chuck - do not take the feature into the next iteration of the solution
  - Change - alter something about the feature
  - Create - add a new feature or element into the solution
3. Using flipchart paper, get the teams to write up the KCCC framework across four quadrants, and spend 20 minutes deciding where each piece of interview feedback belongs. Based on what is on each post-it, should features on the prototype solution sheet be ‘Kept’, ‘Chucked’, ‘Changed’, or new features be ‘Created’?
4. After the KCCC frameworks are completed, ask each team to now iterate their solution and prototype based on what was decided. Blank solution templates are available in the Resource Library if they want to re-write it.



### Action 5.3

# Learn how to test with users

#### Why do you do this?

Once you have done basic internal testing, it's time to prepare to test your prototype solutions with external users. They could be key stakeholders or community members. Before this external testing, it's important to establish what you want to find out. This will inform what questions you need to ask. You also need to understand what the key roles are in an interview.

#### When do you do this?

This can be done at any stage before conducting the external user testing, preferably just before heading out to conduct the testing sessions so the content is fresh in participants' minds.



## Useful tools & activities



### 5.3.1 Interview roles

Difficulty: *Easy*

Preparation time: *5 minutes*  
Running time: *1 hour*



### 5.3.2 Forming interview questions

Difficulty: *Moderate*

Preparation time: *10 minutes*  
Running time: *1 hour*

#### Total time recommended to complete Action 5.3 activities

Preparation time: *15 minutes*

Running time: *2 hours*



# Interview roles



Difficulty: *Easy*



Preparation time: *5 minutes*

Running time: *1 hour*



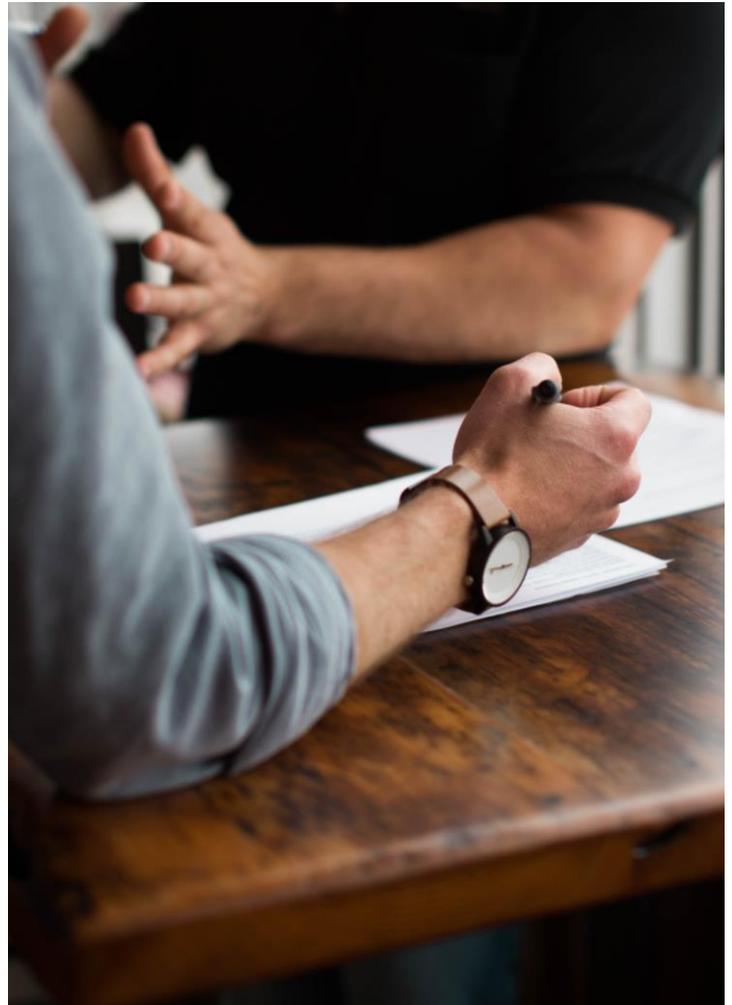
Materials: *Post-its, sharpies*

## Key points for facilitators

- It is a good idea to ask teams to find a quiet place to practice the interviews if you have space around the workshop venue

## Key learning points

- A good interview requires three distinct roles: interviewer, observer and note taker



## Process

1. Introduce the three interview roles (available as a print-ready template in the Resource Library):
  - a) **The Interviewer** – This person leads the interaction with the interviewee (or group to be interviewed), making sure that the conversation is productive and flows naturally. This person should not take notes, but should rather ensure the interviewee(s) feels they are being listened to.
  - b) **The Observer** – This person is responsible for making sure that insights are as rich and well-informed as possible. They look for cues in the environment and the interviewee's body language, looking for when the interviewee might be saying one thing but thinking another. They support the note taker by capturing direct quotes of important parts of the conversation.
  - c) **The Note Taker** – This person is responsible for listening carefully and taking thorough, accurate notes on post-its of key points of the discussion. They need to keep up with conversation, and capture direct quotes when possible.
2. Ask participants to get into teams of three – these should be from the same groups that developed storyboards together earlier. Pair each team with a team working on a different solution, and ask them to stand together.
3. Explain that one team will introduce their solution to one member of the other team, then spend 5 minutes conducting a mock interview. Have each member of the interview team perform each of the different roles. The person (or group of people) being 'interviewed' will speak as if they are a member of the community. Each interview should be limited to 5 minutes. The note taker should take notes with a sharpie on post-its, as in the real interview.
4. At the end of 5 minutes, each team will then swap interview roles within the team and the other team will become the team conducting the interview. Repeat the process, going back and forward until everyone has had a turn in each role.



# Forming interview questions



Difficulty: *Moderate*



Preparation time: *10 minutes*

Running time: *1 hour*



Materials: *Post-its, sharpies, A4 paper*

## Key points for facilitators

- If you have multiple teams working on the same solution, try to ensure they produce a variety of questions between them

## Key learning points

- An open question is considered carefully to ensure it prompts a detailed response
- A list of questions is not a script – if the interviewee has something important to say, let them say it

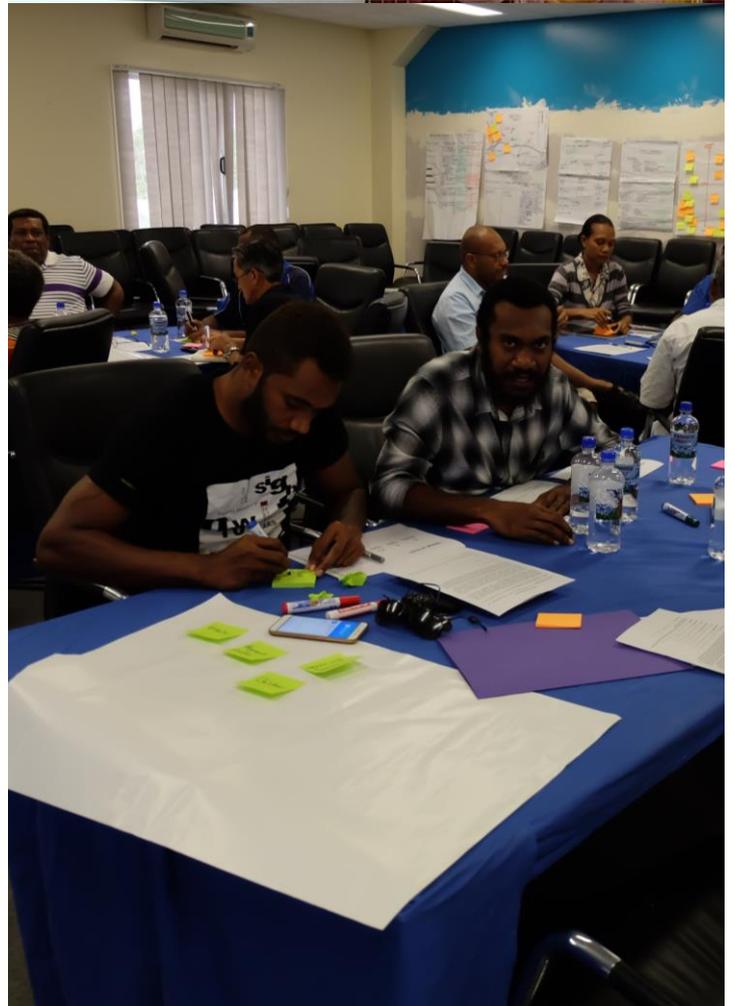


Photo: Aly Belkin @ Pivotal Labs

## Process

1. Start with an introduction to 'open' and 'closed' questions. Explain that a closed question is one which prompts a short 'yes' or 'no' response. An open question is open-ended – it requires the respondent to give a longer response or explanation. A good open question will:
  - a) Require the respondent to think and reflect
  - b) Uncover more about their opinions and feelings
  - c) Give more control of the conversation to the respondent
2. Provide examples of each type of question, such as "do you think poor waste management is an issue in your community?" (closed question) vs "how does the way waste is managed in your community affect you?" (open question)
3. Spend 10 minutes getting people to volunteer examples of closed and open questions from the room. They can be about any topic for now.



## Forming interview questions (continued)

4. Discuss the importance of asking **'why'** with the room. When solving problems, it's often easier to recognise the symptom of an issue, but if you can understand the correct root problem or cause, you can prevent it from occurring at all. This is an example of how you can get to the root problem using **'why'**:
  - **Why** is flooding a problem here?  
*Because the water cannot drain away.*
  - **Why** can the water not drain away?  
*Because the drains are filled with rubbish.*
  - **Why** are the drains filled with rubbish?  
*Because it falls in from large piles left by residents.*
  - **Why** do the resident leave piles of rubbish?  
*Because they take waste from their houses out to the end of the street.*
  - **Why** is the rubbish left at the end of the street?  
*Because the residents do not understand how the municipal collection service works.*
5. Ask the room:
  - a) *What kind of questions were used? [closed or open]*
  - b) *What did the example show us?*
  - c) *What would an appropriate solution be, now that we know residents do not understand the collection service? Highlight that digging a new canal might be the most obvious response at first, but from what we learned in the interview an information campaign or education on waste management might make a big difference.*
6. Get interview teams to look at their solution storyboard and think about what information they would like to find out from users. Give them ten minutes to write these down on post-its. They should write as many as they can.
7. Next, give them another ten minutes to consider who they will be speaking to, and choose their top five post-its to convert into questions for the interview. Make sure you remind the participants that they should let the interviewee do most of the talking, and that if they have something interesting to say, or something they feel is important, then it's okay (even encouraged) to let the interview go a little bit 'off-script'.
8. As teams are writing down questions, walk around the room to provide support, and remind them about using open-ended questions, and asking **'why'**.



### Action 5.4

# Re-test with users and iterate to improve

#### Why do you do this?

Testing with different external users gives you important insight into how valuable your solutions might be for potential end users. Stakeholder testing gives you insight into their willingness and ability to help bring the solution to life and make it a success. The elevator pitch helps you to concisely articulate your solution, before you share prototypes with users.

#### When do you do this?

There are three different types of testing that can be carried out in this section. If you have the time and ability, it is suggested to do all three in the order they appear here. However if you cannot arrange external users, it is completely fine to conduct only the internal activities (Activities 5.4.2 and 5.4.3).



### Useful tools & activities



#### 5.4.1 The elevator pitch

Difficulty: *Moderate*

Preparation time: *5 minutes*  
Running time: *15 minutes*



#### 5.4.2 In-depth internal user testing

Difficulty: *Easy*

Preparation time: *5 minutes*  
Running time: *1 hour*



#### 5.4.3 'Our community's got ideas!'

Difficulty: *More difficult*

Preparation time: *15 minutes*  
Running time: *1 hour*



#### 5.4.4 In-depth external user testing

Difficulty: *More difficult*

Preparation time: *5 minutes (plus organisation a minimum of 1 day in advance)*  
Running time: *3 hours*

#### Total time recommended to complete Action 5.4 activities

Total preparation time: *30 minutes*

Total running time: *5 hours and 15 minutes*



# The elevator pitch



Difficulty: Moderate



Preparation time: 5 minutes

Running time: 15 minutes



Materials: Pitch template (in Resource Library), sharpies

## Key points for facilitators

- This is a great tool to use if you are doing the 'Our community's got ideas' exercise (see Activity 5.4.3) as it helps participants know what is important to pitch to investors

## Key learning points

- Learning how to succinctly articulate and communicate the key components of the solution and why it's important is vital to get buy-in from stakeholders



	Our community is currently experiencing _____ <small>(current challenge / problem statement)</small>
	_____
	_____ will help our community to <small>(solution name)</small>
	_____ <small>(key benefit)</small>
	This is important because _____ <small>(key outcome)</small>
	This will be sustainable because _____ <small>(proof point)</small>
	The key stakeholders that need to be involved are _____ <small>(key stakeholders)</small>
	because _____ <small>(reason they should and would support)</small>

## Process

- Explain that learning how to pitch your solution well is an important part of getting support from key stakeholders. A pitch template is easy framework for explaining an idea or a solution.
- Using the pitch template from the Resource Library, get groups fill in the blanks to explain their solution (one per solution).
- Prompt with questions:
  - Does this tell a compelling story for why and how your solution will address the challenges our community is facing?
  - Do you have enough detail to convince the stakeholders that your solution will work and is worth investing in?



# In-depth internal user testing



Difficulty: *Easy*



Preparation time: *5 minutes*

Running time: *1 hour (depending on number of groups)*



Materials: *Storyboards and prototypes, post-its, sharpies, flipchart paper, interview questions*

## Key points for facilitators

- If you cannot get external users to test your idea with, this activity uses workshop participants and get them to wear different 'hats' as interviewees

## Key learning points

- Testing early with users (even peers) enables you to gather feedback quickly to improve your solution



Photo: Aly Belkin @ Pivotal Labs

## Process

1. Identify who in the room actually represents one of the key users or stakeholders involved in each solution. E.g. if the local government is a key user or stakeholder needed to help implement one of the solutions, and there is a local government representative in the workshop, get them to be interviewed by that group.
2. Where there are not enough or not the right type of users/stakeholders in the room to be interviewed, people will wear the 'hat' of the user or stakeholder, pretending to be the desired user type. Remember that often the end user or beneficiary of the solution will be community members so if someone lives in that community, they can act as the user for the interview.
3. Get each group to decide what interview roles they will play (see Activity 5.3.1) and make sure they have got their interview questions ready to go (see Activity 5.3.2).
4. Help each group to identify who in the room (preferably someone from a different group) can act as their interviewee. Make sure each group has one person to interview.
5. Give the groups 15 minutes to interview their first 'user' or stakeholder. Once this interview is complete, get each group to spend 5 minutes discussing what they heard. What were the key pieces of information shared?
6. Then repeat the exercise. Help each group to identify a second person in the room (preferably from a different group) who can act as an interviewee. Get each group to change the team roles, so different people are leading, note-taking and observing for the second interview.
7. Give the groups 15 minutes to interview their second 'user' or stakeholder.
8. At the conclusion of the second interview, prompt with questions:
  - a) *What was the most interesting piece of information or feedback you received?*
  - b) *Who else would you like to speak to if possible that could give valuable feedback on your solution?*
8. Get each group to use the KCCC tool to organise their user feedback and iterate their solution (see Activity 5.2.1).



# ‘Our community’s got solutions!’



Difficulty: *More difficult*



Preparation time: 15 minutes

Running time: 1 hour (depending on number of groups)



Materials: Storyboards and prototypes, judges, locally relevant prizes, timer

## Key points for facilitators

- This is a ‘Shark Tank’ activity where the participants can quickly get feedback on their solutions in a more formal way
- Get some small prizes if possible

## Key learning points

- Understand how to pitch your idea successfully using the different design tools and gain experience for pitching an idea in a real-life setting



## Process

1. Share with participants that they will be taking part in a competition called “<Community name>’s got solutions!”. Each team will have 15 minutes to prepare to pitch their idea to a panel of judges. The pitch can be up to 10 minutes long. The winning pitch will receive a prize.
2. The judges can be Red Cross/Red Crescent staff, key stakeholders (preferably from government or local business) or community members who can act in one of these capacities. Ideally there will be three judges: one Red cross representative, one government representative and one business community representative.
3. While each team is preparing for their pitch, set up the room. Have a long table with three chairs for the judges at the front of the room, and clear some space in front of the table for the team pitching to stand.
4. The teams take turns one by one to pitch their solution to the judges. Set a timer for 10 minutes. They should use their storyboard, their solution models, elevator pitch and can role-play certain elements of the solution where relevant. At the end of each pitch, the judges should ask questions of the pitch team.
5. Question prompts:
  - a) Why would <key stakeholder> want to support this solution? What is in it for them?
  - b) Have you thought about how this could become a business opportunity for the community, instead of just relying on the government to provide that as a service?
  - c) Why do you think this solution will succeed and make an impact?
6. At the conclusion of all the pitches, have the judges confer and make a decision about the team with the best solution. Present the winning team with a small prize and explain the reason for selecting that solution.
7. Ensure the teams incorporate the suggestions and feedback from the judges to improve their ideas.



# In-depth external user testing



Difficulty: *More difficult*



Preparation time: *5 minutes (plus organisation a minimum of 1 day in advance)*

Running time: *3 hours (depending on distance to travel to interview community members)*



Materials: *Storyboards and prototypes, post-its, sharpies, flipchart paper, interview questions*

## Key points for facilitators

- This is an activity which is high value but needs advance preparation to identify and schedule external users

## Key learning points

- Testing with users enables you to gather feedback to improve your solution



## Process

1. Organising interviews with external users requires time and preparation, but is an extremely valuable exercise to run. You need the ability to identify potential key users and/or stakeholders for each solution in advance of getting to Key Action 5 in the toolkit. If you are splitting up the toolkit steps across different sessions, you may get the time to organise these interviews.
2. Ideally, you will be able to arrange at least 3 user and/or stakeholder interviews for each solution group in a location out in the community you are designing for. The groups can go to different areas in the community. Most important is that they are able to talk with real users or stakeholders in their local environments.
3. Before heading out to conduct the interviews in the community, get each group to review their interview questions and decide on the interview roles they will play. Make sure they take post-its and sharpies to the interview location.
4. As the facilitator, circulate around the different interviews as they are happening and take notes on what you observe so you can give feedback to the participants about their interview techniques.
5. Once each group has completed their interviews and you are back in the workshop space, prompt with questions:
  - a) *What was the most interesting piece of information or feedback you received that has implications on your solution design?*
  - b) *Who else would you like to speak to if possible that would give valuable feedback on your solution?*
8. Finally get each group to use the KCCC tool (see Activity 5.2.1) to make sense of what they heard from the user interviews and to iterate their solution one last time.

KEY ACTION

6

# Plan for implementation and scaling

## What is this?

Now that you have tested and iterated our solutions, it's time to plan for implementation. This requires you to think about who you need to be involved, what else is going on, and what might impact your ability to make your solution a success. You then create a plan which includes regular progress check-ins.

## Who needs to be involved?



Facilitator



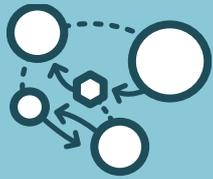
Participants

## How long will it take?



Total preparation time: 55 minutes  
Total running time: 6 hours and 20 minutes\*

*\*Note that Activity 6.5.1 'Planning and monitoring the project' requires 2 x 2 hour additional future check-ins*



# Action 6.1 Solution stakeholder and system mapping

## Why do you do this?

To improve the chance of your solution being successful, you need to understand who are the key stakeholders that will be involved and where they sit in the system. This enables you to better understand the environment your solution will be fitting into. These activities are similar to the mapping exercises completed in Key Actions 1 & 2, but are detailed in relation to your specific solutions, as opposed to at the higher and broader city or community level.

## When do you do this?

These activities can be done at any stage once user testing is complete.



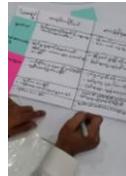
## Useful tools & activities



### 6.1.1 Stakeholder rainbow

Difficulty: *Easy*

Preparation time: 5 minutes  
Running time: 30 minutes



### 6.1.2 Stakeholder give and take

Difficulty: *Easy*

Preparation time: 5 minutes  
Running time: 1 hour



### 6.1.3 System mapping

Difficulty: *More difficult*

Preparation time: 10 minutes  
Running time: 1 hour

## Total time recommended to complete Action 6.1 activities

Total preparation time: 20 minutes

Total running time: 2 hours and 30 minutes





# Stakeholder give and take



Difficulty: *Easy*



Preparation time: *5 minutes*

Running time: *1 hour*



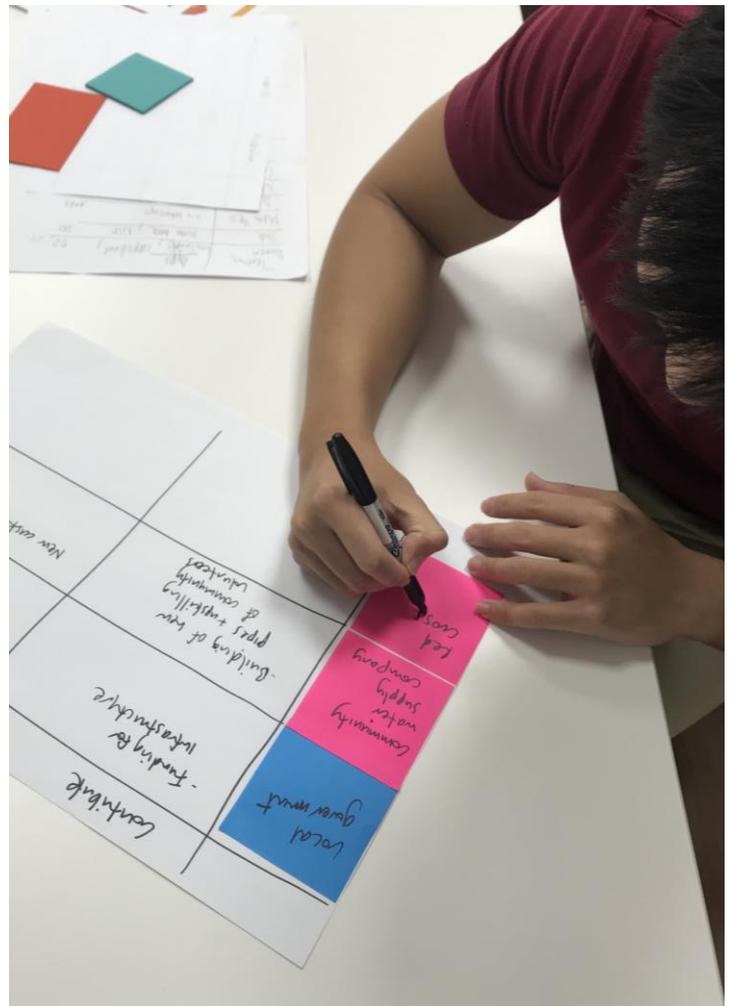
Materials: *A3 paper, sharpies*

## Key points for facilitators

- Try to make sure a variety of stakeholders are considered across the room (i.e. not all groups working with the same set of stakeholders)

## Key learning points

- Understand that stakeholders each contribute something to the solution, but need to receive a benefit in return
- No matter their level of seniority or expertise, all stakeholders can contribute to the solution



## Process

1. In groups of two or three at each table, ask participants to consider 5 key stakeholders. If you have already run the 'stakeholder rainbow' exercise (Activity 6.1.1), ask groups to select the 5 most important stakeholders from their rainbow, making sure to choose at least one from each tier.
2. Groups draw up a table on A3 paper with a column for 'stakeholders', 'contribute' and 'benefit' at the top. Down the side they write their 5 key stakeholders.
3. Explain that no matter their role in the system, every stakeholder contributes something to the solution, whether that be:
  - a) Resources
  - b) Knowledge
  - c) Networking
  - d) Advocacy
4. Get each group to work through their table, filling it in by providing details about what the stakeholders contribute and what benefit they receive in relation to implementing the solution. Do this for each of the 5 key stakeholders they have identified.



# System mapping



Difficulty: *More difficult*



Preparation time: *10 minutes*

Running time: *1 hour*



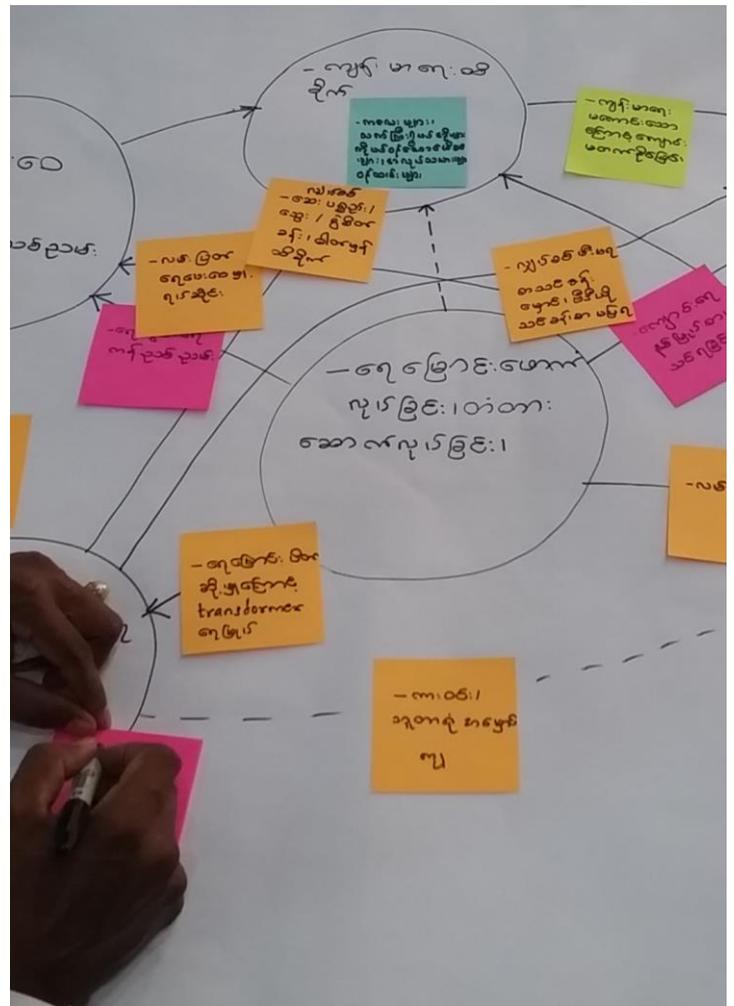
Materials: *Flipchart paper, sharpies, post-its*

## Key points for facilitators

- Encourage people to be messy – systems are complicated, so the maps should be too. They do not need to be perfect, just need to get people thinking about how they are part of a system.
- Provide an example of only one system map, and explain it thoroughly. Too many examples can be overwhelming.

## Key learning points

- Identify the dynamics and interdependencies between systems



## Process

1. Show an example of a system map (see Resource Library) to demonstrate the concept clearly. Walk the participants through it, explaining what each of the systems are; how they interact; and how something happening in one system can have an effect on another.
2. Put up large sheets of flipchart paper on the walls around the room (one per solution), and have the teams write the solution in a 'bubble' at the centre.
3. Get the teams to think about five systems that are most relevant or important to their solution. One they have decided, write them in new bubbles around the solution on the paper. If they have already completed the EVCA or CWA, they can use the same systems that were identified as priority systems in those assessments. These could be communications, transport, water, health, infrastructure etc.
4. Using sharpies, participants should draw connections between the systems, using dotted lines where the connection is informal or not as strong.
5. Then use post-its to describe what these relationships or interactions look like – for example, a drought will have a direct effect on the water system, with knock-on effects for the health system (e.g. possible malnutrition). Walk through the groups as they are working to answer questions and provide encouragement.
6. When groups have completed their system map, get them to consider the stakeholder rainbow that they produced earlier and consider where each stakeholder fits within the systems they have drawn.
7. Hold a group discussion:
  - a) *Who or what might be missing?*
  - b) *Are there opportunities for your solution to have an impact on other systems?*
  - c) *Could some of the important system connections be strengthened and how?*



## Action 6.2

# Consider aspects of implementation

### Why do you do this?

There are different dimensions that need to be considered when planning for implementation. By taking the key features of your solution and looking at these across different dimensions, you will better understand the key activities you will need to undertake and who needs to be involved to bring your solution to life.

### When do you do this?

This activity can be done at any stage once user testing is complete.



## Useful tools & activities



### 6.2.1 Implementation table

Difficulty: *Moderate*

Preparation time: *5 minutes*  
Running time: *1 hour*

### Total time recommended to complete Action 6.2 activities

Total preparation time: *5 minutes*

Total running time: *1 hour*



# Implementation table



Difficulty: Moderate



Preparation time: 5 minutes

Running time: 1 hour



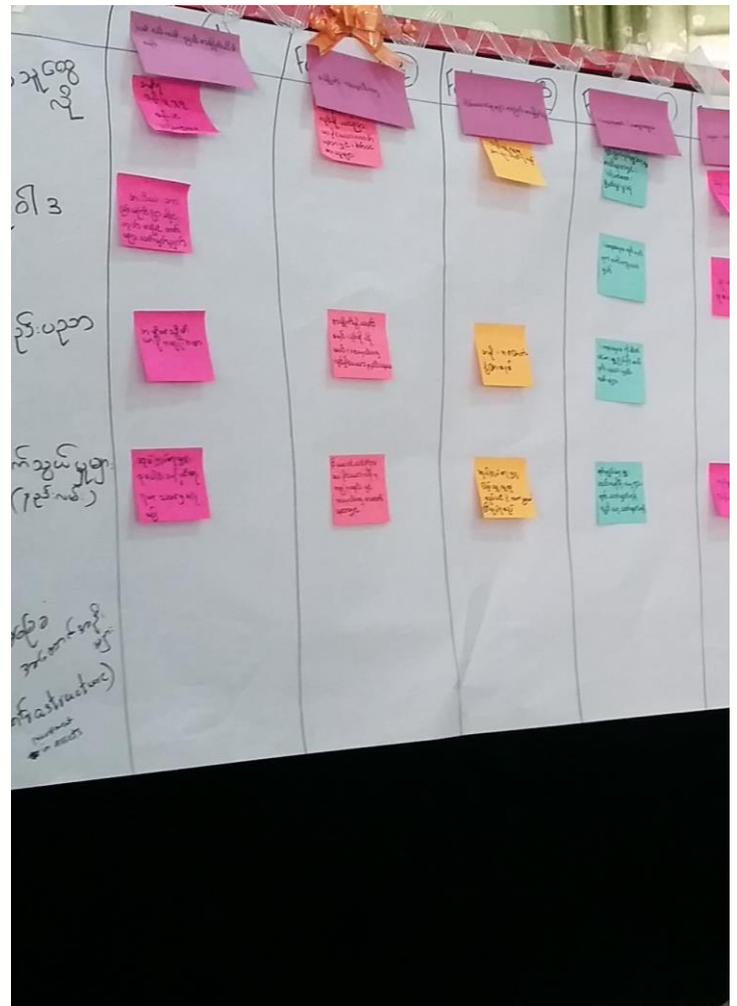
Materials: Flipchart paper, sharpies, post-its

## Key points for facilitators

- Try to encourage participants to fill in every row and column without any gaps

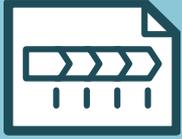
## Key learning points

- Implementation involves activities across many dimensions
- Considering as many implementation factors ahead of time creates a stronger strategy and plan for making the solution a success



## Process

1. In their solution groups, get participants to spend two minutes selecting what they think are the top five most important features of their solution.
2. Once the top five features have been chosen, introduce the idea of an implementation table. Get them to draw one up per group on flipchart paper. Along the top teams should write their five solution features across five columns. The rows down the left will contain different dimensions that need to be considered for implementation. The first row should always be 'People', as implementation cannot happen without people to take action and have accountability. The dimension rows can be as follows:
  - a) People
  - b) Policy
  - c) Technology
  - d) Communications
  - e) Resources
3. You can change the dimensions where appropriate to fit the solutions your groups are working on. Other possible dimensions to consider include 'Processes' and 'Environment'.
4. Get the groups to spend 45 minutes considering all of the activities that will need to happen in order for the solution to be successfully implemented. These activities are to be written on post-its and added to the implementation table.
5. Walk through the groups to answer questions, provide encouragement, and prompt groups to fill any gaps in the table.



### Action 6.3

# Plan the project roadmap

#### Why do you do this?

Creating a project roadmap helps you to visually see how all the activities needed to bring the solution to life link together and how long they might take to execute. The additional detail of who owns or is involved in each activity and the potential costs begin to bring a view of reality that has not previously been considered.

#### When do you do this?

The project roadmap needs to be created once participants have developed their implementation table as the two outputs link closely to each other. Ideally Activities 6.2.1 and 6.3.1 will take place one after the other.



### Useful tools & activities



#### 6.3.1 Roadmap to implementation

Difficulty: *Moderate*

Preparation time: *5 minutes*  
Running time: *1 hour*

#### Total time recommended to complete Action 6.3 activities

Total preparation time: *5 minutes*

Total running time: *1 hour*



# Roadmap to implementation



Difficulty: *Moderate*



Preparation time: *5 minutes*

Running time: *1 hour*



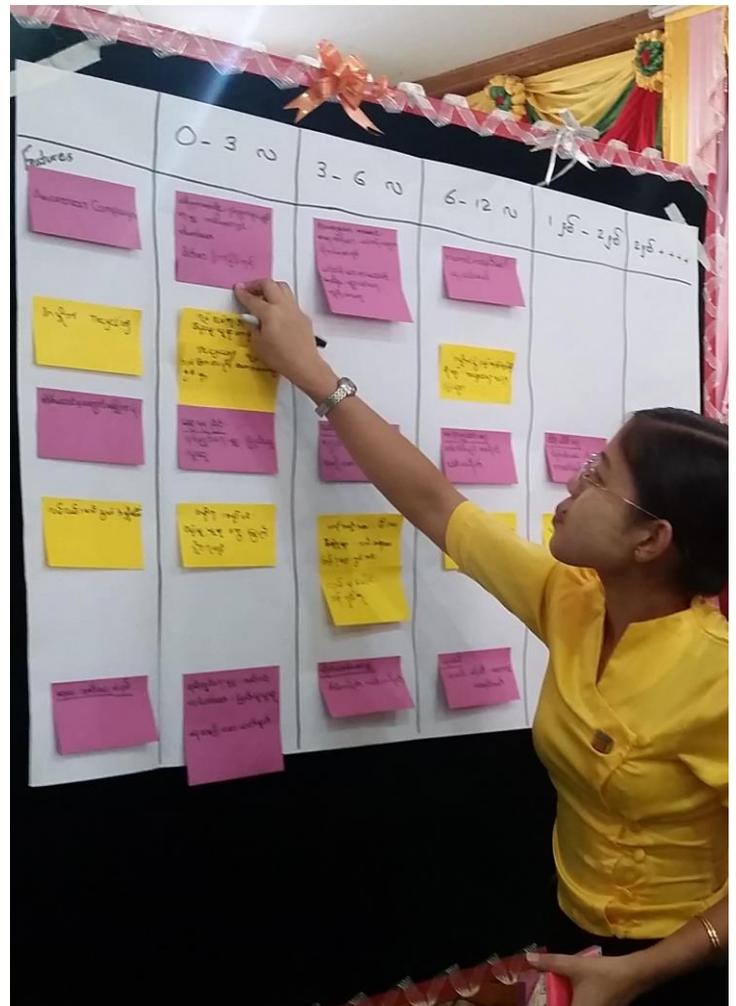
Materials: *Flipchart paper, sharpies, post-its*

## Key points for facilitators

- If there are multiple teams working on the same solution, you might like to suggest that some of them work together (depending on the number of participants in each team)

## Key learning points

- Understand how the activities for implementation map across time
- Consider who will be responsible/accountable for activities, and what costs are involved



## Process

1. Give each solution team a sheet of flipchart paper, and ask them to draw up a table with six columns and one header row. This is best done up on the wall so that everyone can participate standing up around the room. This represents their team project timeline.
2. The first column is for their five key solution features identified in Activity 6.2.1. Ask the teams to write their features on post-its and attach them, spaced equally, down the left side of the sheet. The remaining five columns are for the time horizons as follows:
  - 0 – 3 months
  - 3 – 6 months
  - 6 – 12 months
  - 1 – 2 years
  - 2 years +
3. Give the groups 30 minutes to take the activities that they identified in their implementation table (Activity 6.2.1), and work out where they fit across the project timeline. Explain that they might need to break the activities into smaller steps across the time horizons, and potentially add extra small activities as pre-requisites to others. It is best (though not essential) if teams stick to one colour post-it for this process.
4. Once the groups have filled in as much of their project roadmaps as possible, provide them with a new post-it colour. Ask them to spend the next 30 minutes looking at each of the activities in each horizon. For each one they will now write two things onto a new post-it:
  - a) Who will own/lead the activity?
  - b) What are the estimated costs involved?
5. As a final step, have the groups read through each others' project roadmaps to see what might be missing from their own, then add any new activities to their roadmaps as they see fit.



### Action 6.4

# Understand the implementation environment

#### Why do you do this?

You need to understand what is already happening in your implementation environment to reduce the likelihood of duplication and any resulting inefficiencies. It is also a good idea to identify up front any possible barriers you can foresee, as this highlights where extra time, energy, resource or budget might be required.

#### When do you do this?

These activities should be completed once the roadmap has been developed.



## Useful tools & activities



### 6.4.1 Challenges

Difficulty: *Easy*

Preparation time: *5 minutes*  
Running time: *30 minutes*



### 6.4.2 What is already happening in our community?

Difficulty: *Easy*

Preparation time: *5 minutes*  
Running time: *20 minutes*

#### Total time recommended to complete Action 6.4 activities

Total preparation time: *10 minutes*

Total running time: *50 minutes*



# Challenges



Difficulty: Easy



Preparation time: 5 minutes

Running time: 30 minutes



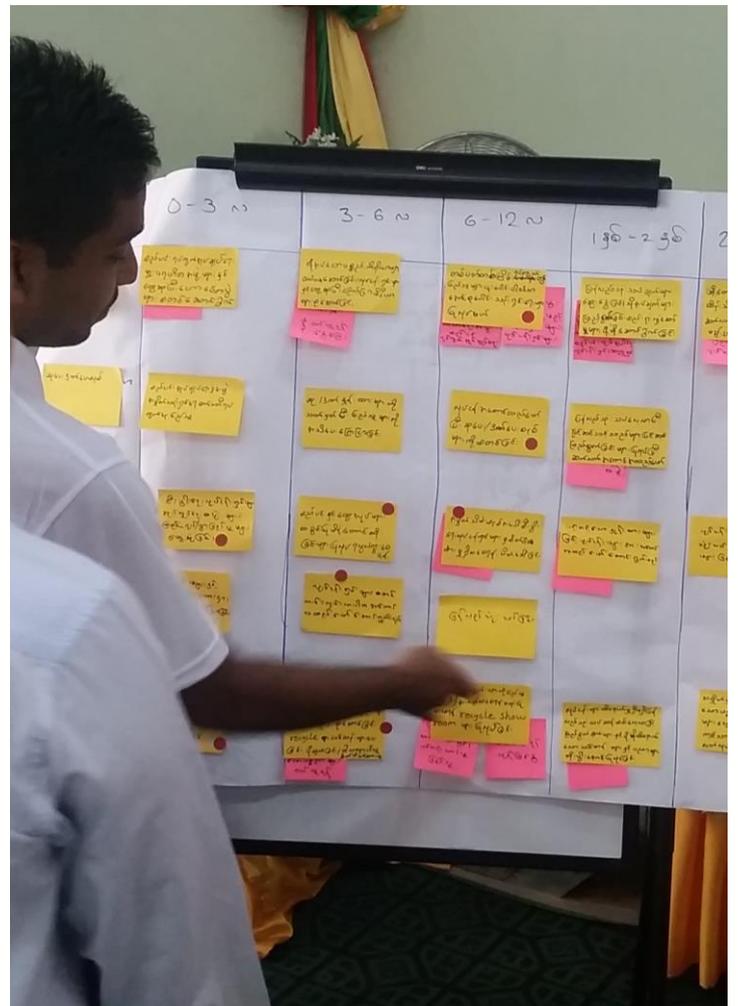
Materials: Flipchart paper, sharpies, post-its, coloured sticky dots

## Key points for facilitators

- Make sure groups know that they are trying to identify all possible challenges, and not just voting for the most significant ones

## Key learning points

- Identify what challenges might stand between today's situation and the ideal future once the solution is implemented.



## Process

1. With each of the roadmaps for implementation still on display (from Activity 6.3.1), give each group a set of 15 coloured sticky dots.
2. Explain that they are to use these dots to identify possible challenges on their roadmap.
3. The groups should think critically about their roadmap, and hold a discussion about which activities will be particularly difficult. The difficulty could be linked to many different factors, which could include:
  - a) Funding / investment required
  - b) Legislation / regulation (government approval)
  - c) The cultural shift required
  - d) Resourcing / labour force
  - e) Logistics
  - f) The behaviour change required
4. Give the groups 15 minutes to discuss among themselves where the potential challenges are, and use the sticky dots to identify them on the post-its. Make sure to clarify that this is not a voting process, and that groups can use as many or as few dots as they feel is appropriate.
5. As groups are working, walk around the room and provide support, and remind them to consider the stakeholder rainbow and system map – what are the different levels of society and systems at play, and what challenges might come with each?
6. After the 15 minutes, ask one or two groups to share back to the room. Finish with a full room discussion and prompt with questions:
  - a) Which challenges seem more difficult to overcome than others? Why?
  - b) How might we get around them or how might they be resolved?
  - c) Who would we need to help us?



# What is already happening in our community?



Difficulty: *Easy*



Preparation time: *5 minutes*

Running time: *20 minutes*



Materials: *Flipchart paper, sharpies, post-its*

## Key points for facilitators

- As with earlier ideation activities, remind participants quantity is better than quality, and to write down absolutely everything they can think of

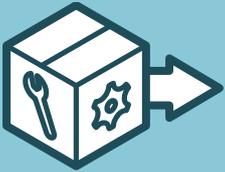
## Key learning points

- Be able to identify who else in the community might want to join efforts or could help overcome our challenges
- Understand what is already happening to avoid duplication of effort



## Process

- Ask the participants to consider who else in their community or local area is doing similar work. This may be people tackling similar issues with similar solutions, or people who are working on complementary initiatives. These could be:
  - Formal or informal groups/organisations
  - Government or non-government coalitions
  - Other existing projects
- As individuals, instruct participants to take a pack of post-its and a sharpie and spend 3 minutes generating as many of the above that they know of (one per post-it).
- When the 3 minutes are up, ask for a volunteer to come up and read out one of their post-its. If anyone in the room has a matching post-it, have them bring it up and play 'snap' on a large sheet of flipchart paper.
- Repeat the process until you have collected all of the groups and projects on everyone's post-its. As people come up to add their post-its to the flipchart, help them to cluster similar ones together.
- Now select one participant at random and ask them to come and circle all of the groups and projects that are relevant to their solution. Ask their solution team:
  - Are there opportunities for collaboration?*
  - Could these groups help to overcome the challenges that you have identified?*
  - What should our next steps be now that we know other people are doing similar work to us? Will this change our roadmap plan?*
- Ask for somebody from another solution team to come up and repeat Step 5 (using another pen colour if possible), and repeat until all solutions have identified everything similar or relevant that is already happening in the community.



## Action 6.5

# Progress the project

### Why do you do this?

After working through this toolkit, you do not want the hard work you have done and the solutions you have developed to sit idle and go nowhere. You need to ensure they have an owner, and that you have a plan for keeping the implementation on track.

### When do you do this?

This should be the final activity completed in the toolkit.



## Useful tools & activities



### 6.5.1 Planning and monitoring the project

Difficulty: *More difficult*

Preparation time: *15 minutes*  
Running time: *1 hour plus 2 x 2 hour future check-ins*

### Total time recommended to complete Action 6.5 activities

Total preparation time: *15 minutes*

Total running time: *1 hour plus 2 x 2 hour future check-ins*



# Planning and monitoring the project



Difficulty: *More difficult*



Preparation time: 15 minutes

Running time: 1 hour (plus two further 2 hour check-ins in future)



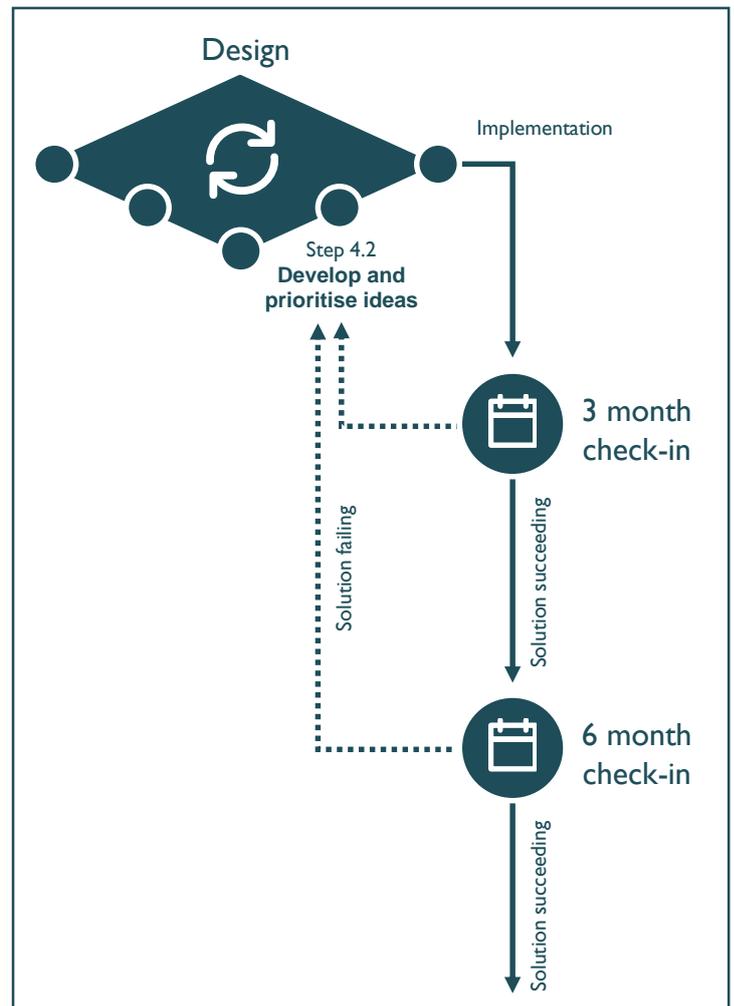
Materials: Storyboards and prototypes, post-its, sharpies, flipchart paper

## Key points for facilitators

- You need proactively reach out to the group you were working with after 3 and 6 months to do a progress check-in

## Key learning points

- A design approach helps you to learn quickly and fail fast – these regular check-ins help you to be agile and quickly correct your course if things aren't working or progressing



## Process

- Using the project roadmap created in Activity 6.3.1, participants need to nominate a Team Leader for their solution and create their own personal action plan based on the activities they have identified that will be happening in the next 3 months.
- First, get each solution team to nominate a Team Leader. They can do this however they like. The leader may volunteer, or they may hold a vote. The Team Leader will be responsible for checking in with their team members across the next three months.
- Once they have nominated a Team Leader, have each team assemble around their roadmap and discuss then divide up the activities for the next 3 months. Make 1 person responsible for each activity. They can be supported by another team member but there must be 1 person who is responsible overall for each activity.
- Have each person write a *Personal Action Plan* which details what is expected of them for each activity which they are responsible for and what they need to do.
- Once everyone has their *Personal Action Plan*, stick these all up on the wall together. Get each person with a camera on their phone to take a photo of all the actions they are collectively agreeing to do in the next 3 months.
- Ask if there are any questions or concerns about people not being able to achieve the actions they have planned for. Address them as they arise, and share with participants that you (as the facilitator) will be available to support them if they come across any challenges in the next 3 months before you meet again. They should contact their Team Leader first, but if they cannot solve the issue themselves, then you will be available to help.
- As the last activity in this session, schedule a tentative date in 3 months' time that you would like to meet everyone again at the same venue for 2 hours.
- Make sure you keep the project roadmaps they have created to use at the next workshop which will be a progress check-in.

See following page for subsequent workshop detail.



## Planning and monitoring the project (continued)

### PROGRESS CHECK-IN (IN THREE MONTHS' TIME):

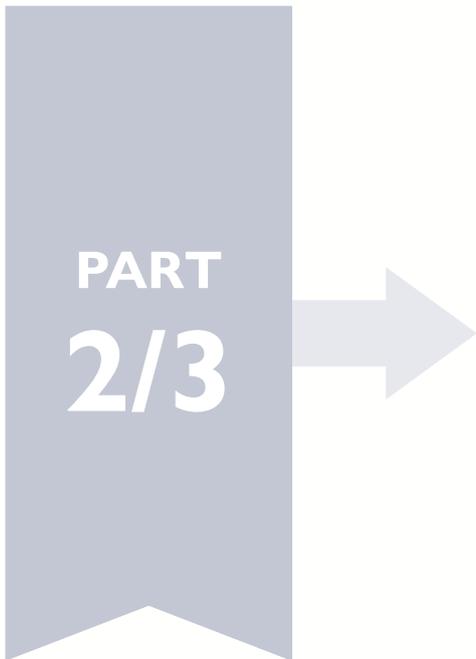
8. Put up each team's project roadmap of activities on display around the room before the workshop starts.
9. Once all of the participants are seated in their solution teams, welcome everyone back and play a quick icebreaker.
10. As a whole room, spend about 15 minutes getting people to share about their personal experience over the past 3 months. Prompt with questions:
  - a) *What went well?*
  - b) *What was challenging?*
  - c) *Did anything exciting happen?*
11. Then get each team to spend the next 30 minutes in their groups going through in detail what has been achieved and what hasn't over the past 3 months. They should do this standing up by their project roadmap, and can refer back to the photos they took at the end of the last workshop if they like. Encourage them to move the activity post-its around based on what has and hasn't been achieved. They may also need to write new post-its to add to the plan to reflect what happened.
12. Once they have reviewed the past 3 months, get them to now focus on what they have planned for the coming 3 months. Encourage them to adjust the activity post-its to reflect where they are currently at to create an achievable plan for the upcoming 3 months. Spend 30 minutes on this activity. Get them thinking about who the people they will need to engage are, and what challenges they think the might come across that they can plan ahead for now.
13. Have each person write a *Personal Action Plan* which details what is expected of them for the activities which they are responsible for, as they did last time. Let them know they can change the Team Leader if they want to.
14. Share that you will be going through the same check-in process again in another 3 months' time (6 months from the initial workshop). Like last time, their Team Leader and yourself will be available to help address any challenges they come up against during this time.

### PROGRESS CHECK-IN (IN SIX MONTHS' TIME):

15. Repeat the process from steps 8 – 11
16. After each team has reviewed their progress from the past 3 months, get each solution group to spend 10 minutes sharing back to the whole room about the overall progress they have made and any major blockers their solution is experiencing.
17. Now get participants to begin preparing for the next 3-6 months of implementation. As the facilitator, spend at least 10 minutes with each group discussing in detail the progress they have made (or not made).
18. If there has been little progress, probe for more information about why this has been the case. Seek to understand what the root cause is with the group. Use the evaluation guide on **page 41** to help you with this.
19. Remember that it's okay if one of the solutions does not succeed or becomes too challenging to continue working on. Once you have identified the reason behind it, share the learnings with the whole room to ensure everyone understands the challenges that solution faced and why.
20. For projects that are progressing well, the team should continue with the planning the next 3-6 months of their project.
21. For the teams whose projects are not progressing and you make the collective decision to stop working on it, you can revisit the outputs from Activity 4.2.1 and encourage them to take on the challenge of developing a new solution if they wish. Alternatively, they can move into one of the other project teams to support their project if desired.

# End of Part 2

See Part 3 to find a collection of print-ready templates which can be used for the Activities outlined here in Part 2, as well as links to other helpful resources.



**PART 3/3** **Designing Solutions for Urban Community Resilience**

**A methodology to co-design viable, inclusive and sustainable community resilience solutions**

May 2019

 **Global Disaster Preparedness Center**  **USAID**  
FROM THE AMERICAN PEOPLE



# Designing solutions for urban community resilience

A methodology to co-design viable, inclusive and sustainable community resilience solutions