

# #DigilInventors Challenge

## Design Innovation Toolkit

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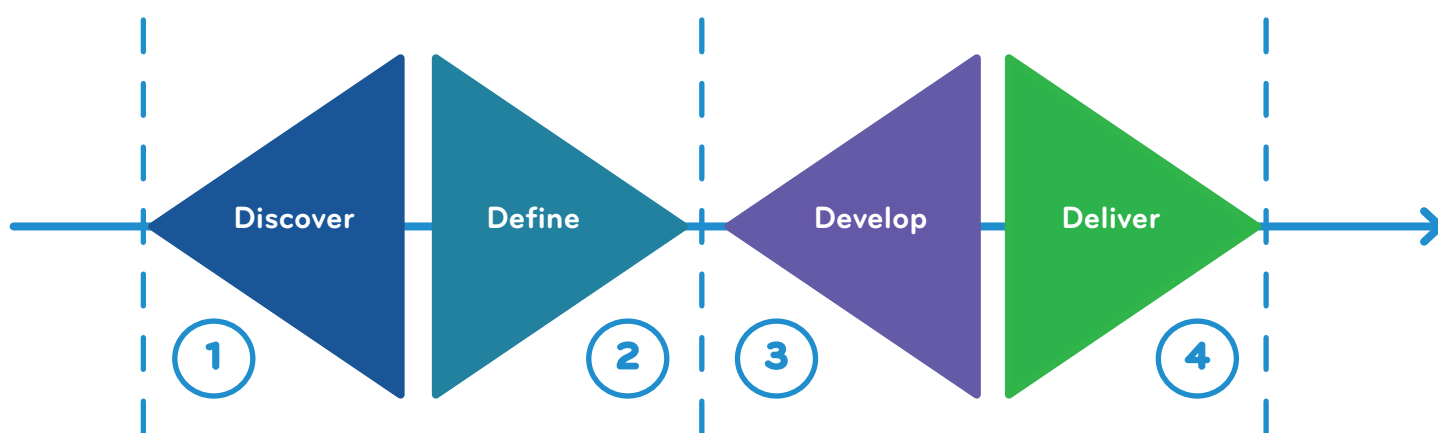
# Welcome to the #DigilInventors Challenge

This booklet is here to help you explore, test, and improve your big idea using the power of Design Innovation. That means thinking like a designer — being creative, solving problems, and focusing on the people you're designing for.

## What is Design Innovation?

Design Innovation is a way to take an idea and turn it into something real and useful.

It follows four key steps:



- 1 Discover** – Learn more about the problem and the people you're designing for
- 2 Define** – Focus your idea by understanding what really needs to change
- 3 Develop** – Come up with creative solutions and test them out
- 4 Deliver** – Share your final idea and show how it works

## What's in This Toolkit?

Inside this booklet, you'll find a series of design tools used by real designers and students from the Glasgow School of Art. These tools will help you at each step of the design process.

You'll find tools like:

- **User Interviews** – Ask people questions to understand their needs and experiences
- **Journey Mapping** – Draw a step-by-step picture of what it's like to be in someone's shoes
- **How Might We Questions** – Turn what you've learned into creative design challenges
- **Prototyping** – Use paper, Lego, or whatever you have to build a rough version of your idea
- **Gallery Walk Feedback** – Share your idea and get helpful feedback from others
- **Impact Posters** – Reflect on what worked and what you'd do differently next time

You don't have to use every tool, but we recommend exploring them all. Pick the ones that best support your idea.

## How to Use This Booklet

Read through each phase: Discover, Define, Develop, Deliver

Look at the tools under each phase – each one has a short description

Choose the tools that will help you most

Complete the worksheets that go with each tool – they'll guide you step by step

Watch the example videos (linked separately) to see how GSA students used some of these same methods in their own health and care projects.

## Final Tip

**Be bold, be curious, and have fun!**

Design is all about experimenting, learning from others, and improving your ideas as you go. We can't wait to see what you come up with!W

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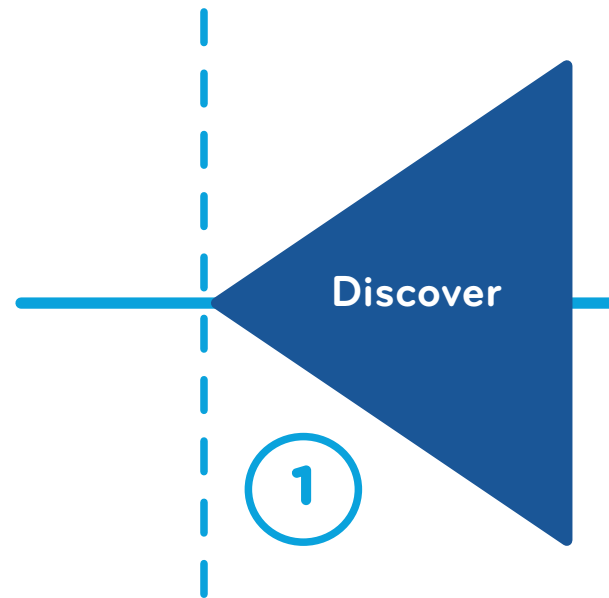
DIY Toolkit: Learning Reflection Tool adapted visually

Young people design posters answering: “What changed? What worked? What would I do next time?”

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# Discover

This is where your journey begins! In the Discover phase, you'll explore the problem and learn as much as you can about the people it affects. You might talk to real people, ask questions, and gather stories to understand their needs, challenges, and feelings. This helps you see the problem from their point of view and opens your eyes to new ideas.



## 1. User Interviews

Design Kit (IDEO)

Understand needs, behaviours, and motivations from the source.

## 2. Stakeholder Mapping

Nesta Toolkit / Service Design Tools

Identify and prioritise key people and groups involved.

## 3. Journey Mapping

Service Design Tools

Visualise the current user experience to find pain points and opportunities.

# 1. Interview

**HOW TO USE**  
Use this when you want to understand what someone really thinks, feels, or needs.

Talking directly to people is one of the best ways to learn what matters to them. Interviews help you design better ideas because you hear real stories and experiences.

### 1 Keep it simple

Only 2 or 3 people from your team should join the interview. Too many people can feel overwhelming for the person you're talking to. Decide who will do what:

- One person asks the questions
- One person takes notes
- One person (if needed) takes photos (with permission!)

**2 Write your questions ahead of time**

Start with easy questions about the person's life, like:

“What’s a normal day like for you?”

“What do you enjoy doing?”

Then move on to more focused questions that link to your project.

**3 Write down exactly what they say**

Don't guess or change their words. Try to write what they actually say – this will help you understand their point of view better.

#### 4 Pay attention to more than just words

Look around you. Where are you? How is the person acting or feeling? What do you notice about their environment? This extra detail can help you spot things they might not say out loud.

### Bonus tip:

Always be polite and respectful. Thank the person for their time – and if you want to take any photos or record the interview, always ask for permission first.

## 1. Interview Guide

### 1 Open General

What are some broad questions you can ask to open the conversation and warm people up?

[illegible]

## 2 Then Go Deep

What are some questions that can help you start to understand this person's hopes, fears, and ambitions?

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins or other markings on the paper.

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# 2. Stakeholder Mapping

## HOW TO USE:

Use this when you want to understand who's involved in your project and how they're connected.

The People & Connections Map helps you see all the different people, groups, or organisations connected to your idea. It shows who you're helping, who supports you, and how everyone links together. It's like making a map of your project's "community."

### 1 Start with your idea in the middle

Draw a circle in the middle of your page and write your project or idea inside it.

### 2 Think about everyone involved

Now draw other circles around it for the people, groups, or organisations connected to your idea. These could include:

- People who will use your idea (like students, teachers, or parents)
- People who might help you (like a charity or youth worker)
- Groups who might fund or support your project
- Friends, classmates, or team members working with you

### 3 Draw the connections

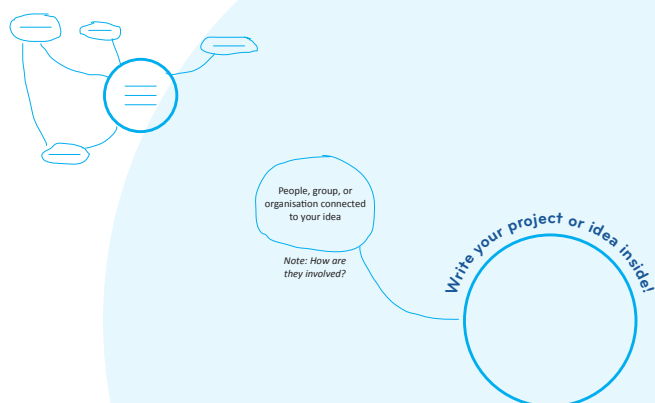
Use lines to connect the circles to each other and to your main idea. This shows how people are linked – some may work together, others may just be connected through your project.

### 4 Add notes if needed

You can add short notes to explain how each person or group is involved – for example:

- "Supports us with funding"
- "Will use the app"
- "Gives us advice"

## 2. Stakeholder Mapping



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# 3. Journey Map

## HOW TO USE:

Use this when you want to understand what it's like to go through an experience — step by step.

A Journey Map helps you imagine or describe how someone (like a user or customer) goes through a process. It shows what happens at each step, what works well, and where there are problems or “pain points.” You can also include how the person feels at each stage.

### 1 Choose your person (user)

Decide who you're mapping the journey for. It could be someone who would use your idea, like a student, teacher, or family member.

### 2 Think about the full experience

Write down what happens before, during, and after the person uses your idea or goes through the situation. This helps you see the whole journey, not just one moment.

### 3 Break it into steps

Draw the journey as a timeline or a row of boxes. In each step, write what the person is doing (for example: searching online, asking for help, using your product).

### 4 Add thoughts, feelings, and problems

Under each step, add:

- What the person is thinking or feeling
- What's going well
- What's confusing, annoying, or difficult

You can draw emojis or arrows to show if their feelings are going up or down.

### 5 Look for pain points and ideas

Use the map to spot any steps that are tricky, frustrating, or could be improved. These are great places to focus your design ideas!

## 3. Journey Map

Your Person



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BEFORE USING YOUR IDEA

WHEN USING YOUR IDEA

AFTER USING YOUR IDEA



ADD STEPS ON ANOTHER SHEET IF NEEDED

STEPS

1

2

3

4

5

What the person is  
thinking or feeling

What's going well  
for the person

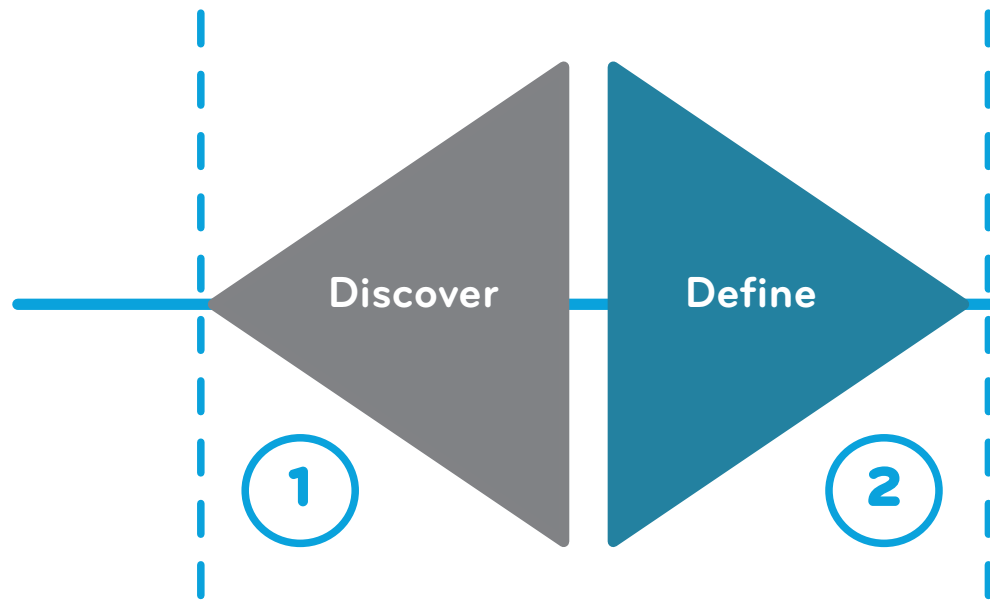
What's confusing,  
annoying, or difficult  
for the person

Feelings diagram



# Define

Now it's time to focus. In the Define phase, you take everything you learned during Discover and figure out what really needs to change. What's the main problem you want to solve? Who are you helping? Why does it matter? This phase helps you shape your project into something clear and meaningful – something worth solving.



## 4. How Might We (HMW) Questions

Design Kit (IDEO)

Reframe insights into design opportunities.

## 5. Problem Definition Canvas

DIY Toolkit

Focus on what needs to change and for whom.

## 6. Personas

Service Design Tools /  
Atlassian Playbook

Humanise insights and prioritise design goals.

# 4. How Might We

## HOW TO USE:

Use this when you want to turn a problem into a creative question that helps you come up with ideas.

“How Might We” (or HMW) questions help you take what you’ve learned from research — like interviews or journey maps — and turn it into exciting design challenges. These questions don’t give the answer, but they help guide your thinking in the right direction and open up lots of different ideas.

### 1 Start with what you’ve learned

Look at what you discovered in your interviews, journey maps, or observations. What are some problems or needs that people have? Write these down as insight statements

Example: “Young people don’t feel confident talking about mental health”.

### 2 Turn insights into questions

Now rephrase your insight as a question that starts with “How might we...”

Example: “How might we help young people feel more confident talking about mental health?”

### 3 Check your question

Ask yourself:

- Can this question lead to more than one answer?
- Does it feel open and creative?

If your question is too narrow (too specific), make it a bit broader.

If it's too broad (too vague), make it more focused.

### 4 Try a few versions

There’s no perfect HMW question — so try writing a few different versions.

Example:

- How might we make it easier for young people to speak up about how they feel?
- How might we create a space where mental health feels safe to talk about?



# 5. Problem Definition Canvas

## HOW TO USE:

Use this when you want to understand a problem better and look at it from different angles.

Sometimes, the thing that looks like the problem is just a symptom of something deeper. The Problem Definition Canvas helps you break a problem down, ask the right questions, and see it more clearly — so you can come up with better ideas to solve it.

### 1 Choose the problem you want to explore

Start with an issue you've noticed. It might be something you discovered during interviews, journey mapping, or something you care about fixing.

### 2 Work in a team (or on your own)

You can do this on your own or in a small group. Use the Problem Definition worksheet to guide you. Talk about the problem and write your ideas in the boxes.

### 3 Look at it from different angles

Think about:

- Who is affected?
- What do they need?
- What's causing the problem?
- What assumptions are you making?

Sometimes, you'll realise you've been seeing the problem one way — and there's actually another way to look at it.

### 4 Reframe the problem

Try flipping the problem around.

Instead of: "How can we help older people who need care?"

Try: "How can we support older people to share their skills and stay independent?"

Changing the way you see the problem can help you find new, more creative solutions.

### 5 Compare and discuss

If you're working in a group, compare your ideas. Are you seeing the problem the same way? Do you all agree on what needs to change? This helps you focus your team and make sure you're solving the right thing.

## 4. Problem Definition

I want to clarify my priorities  
by focusing on key critical issues

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What is the key issue you are trying to address and why is it important?

What is it a problem for?

What social/cultural factors shape this problem?

What evidence do you have that this is worth the investment?

Can you think of this problem in a different way?  
Can you reframe it?

# 6. Persona

## HOW TO USE:

Use this when you want to bring your users to life and stay focused on who you're designing for.

A **Persona** is like a character you create to represent a real person who might use your idea. It helps you understand their needs, goals, and everyday life — so you can design something that truly works for them.

### 1 Think about the people your idea is for

Start by looking at the research you've done — interviews, journey maps, or observations. Who are you trying to help? What kind of people are they?

### 2 Create a character

Give your persona a name, age, and brief background to help you picture them.

Example: Sarah, 14, loves football but struggles to find a girls' team near her.

### 3 Focus on what matters

Describe their needs, challenges, habits, and goals.

- What do they want?
- What problems do they face?
- What matters to them most?

**Tip:** Only include details that help with designing your solution. (You don't need to say their favourite pizza topping unless it's relevant!)

### 4 Use your persona as a guide

Keep your persona in mind as you design. Ask yourself:

- Would this work for them?
- What would they think of this idea?
- Does it solve a problem they actually have?

## 5. Persona

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Name:

Key Attributes:

Short Description:

Needs:

Opportunities:

Draw your person or stick an image



Quotation

What could they say about your idea/project?

“

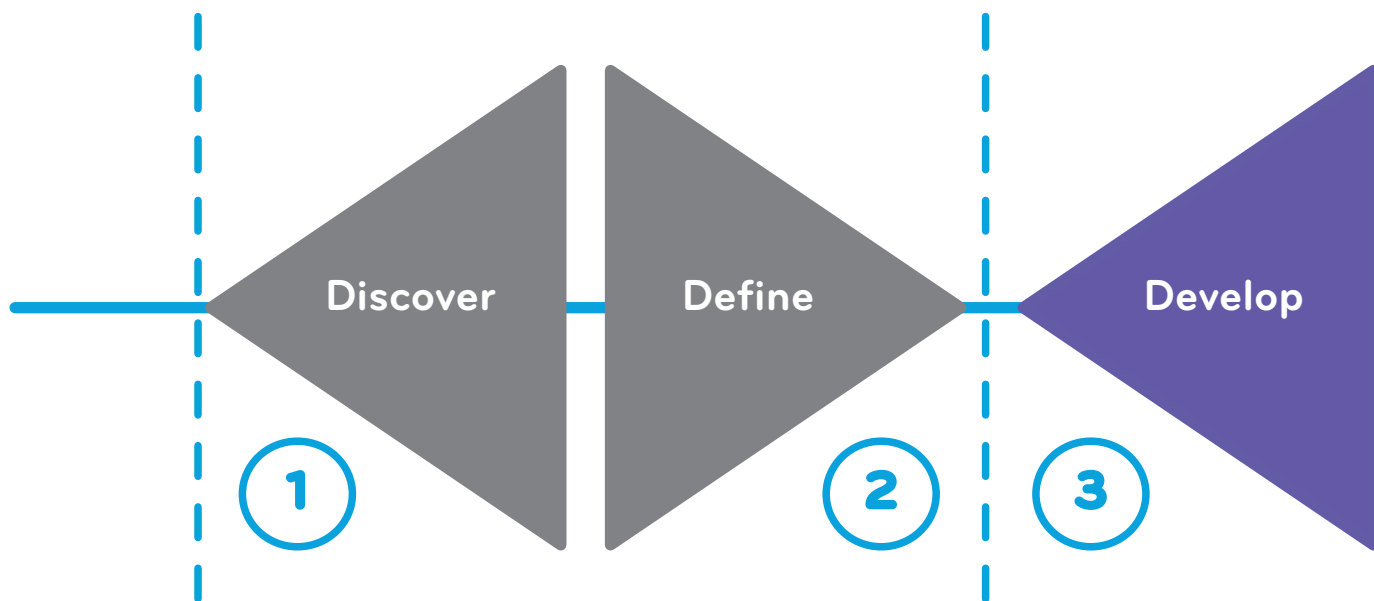
”

Challenges:

Activity Sheet (5) Persona Cards A4

# Develop

This is the creative part! In the Develop phase, you come up with lots of different ideas and try out the best ones. You can sketch, build quick models, role-play your ideas, or act them out. It's all about experimenting and testing what works. Don't worry about getting it perfect – just try things out and keep improving.



## 7. Lego or Paper Prototyping

From design thinking workshops for young people

Build rough models or interfaces using paper, cardboard, or Lego.

## 8. Yes, And... Idea Storms

Inspired by Liberating Structures

A collaborative and fun way to grow ideas without criticism — builds creative confidence.

## 9. Storyboard

Templates with Blank Frames

From Service Design Tools / Design Kit

Fill-in-the-blanks comics showing how the idea helps a user.

# 7. Lego or Paper Prototyping

## HOW TO USE:

Use this when you want to build a quick, hands-on version of your idea to see how it might work.

Prototyping means creating a simple model of your idea so you can test it out. You can use Lego, paper, cardboard, or anything else you have on hand. It doesn't need to be perfect — the goal is to try things out quickly and improve your idea by experimenting!

### 1 Choose your materials

Pick what you want to build with:

- Lego – great for physical objects or systems with moving parts or people
- Paper or cardboard – perfect for sketching screens, signs, or flat objects

### 2 Start building your idea

Think about how your solution works. Then build a rough model of it. You don't need to get every detail right — just build enough so someone else can understand your idea.

Examples:

- A Lego model of a community centre with different spaces
- A paper mock-up of a mental health app screen
- A cardboard version of a wearable device

### 3 Show how people would use it

Act it out! Use Lego characters or drawings to show how someone interacts with your idea. What happens first? Then what? This helps you spot anything confusing or missing.

### 4 Test and tweak

Once you've built it, ask for feedback. What works? What doesn't?

Then change it, add to it, or rebuild it. That's the power of prototyping — it's easy to improve!



# 8. Yes, And . . . Idea Storms

## HOW TO USE:

Use this when you want to come up with lots of creative ideas — together!

“Yes, and...” is a fun way to build ideas as a team. Instead of saying “no” or “but,” you say “Yes, and...” to add on to someone else’s idea. This helps the group stay positive, stay creative, and keep the ideas flowing — no idea is too wild!

### 1 Start with a challenge or question

What problem are you trying to solve?

Example: How might we make school more fun for everyone?

### 2 Think quietly for a minute

Give everyone a moment to think and maybe jot down one or two ideas. This helps people feel more ready to share.

### 3 Take turns sharing ideas

Go around in a circle or popcorn-style. When someone shares an idea, the next person starts their sentence with:

“Yes, and...”

and then adds something to the idea.

Example:

- “We could create a quiet room for students to relax.”
- “Yes, and we could fill it with beanbags and calming music!”
- “Yes, and maybe students could book a time to use it when they feel stressed.”

### 4 Write down all the ideas

Have someone write all the ideas down — even the silly or surprising ones. No judging! You never know what will spark a great solution.

### 5 Pick your favourites

Once you’ve got a big list of ideas, look through them and decide which ones are exciting, helpful, or worth exploring more. You can combine ideas or change them slightly too.



# 9. Storyboard

## HOW TO USE:

Use this when you want to draw out how your idea works, step by step — like a comic strip!

A Storyboard is a simple way to show what happens when someone uses your idea. It helps you think through your idea visually, from beginning to end. You don't need to be good at drawing — stick figures are perfect! What matters is telling the story.

### 1 Choose part of your idea to show

You don't need to draw your whole project. Pick a moment you want to show — like how someone finds your idea, how they use it, or what happens after.

Example: Someone downloads your app, uses it, and feels better.

### 2 Use a series of boxes (like a comic strip)

Draw 4–6 frames in a row. Each one shows a step in the journey — what the person is doing, where they are, and what's happening. You can use:

- Stick figures
- Speech bubbles
- Simple labels
- Emojis to show feelings

### 3 Take your time (but not too much!)

Spend about 30–45 minutes drawing your storyboard with your team. Don't worry about making it look perfect — the goal is to show how your idea works.

### 4 Share it with others

Act out your storyboard to your team or another group.

Talk through each step:

- What's happening?
- How does the user feel?
- Is anything confusing or unclear?
- Ask for feedback and update your storyboard if needed!

## 6. Storyboard

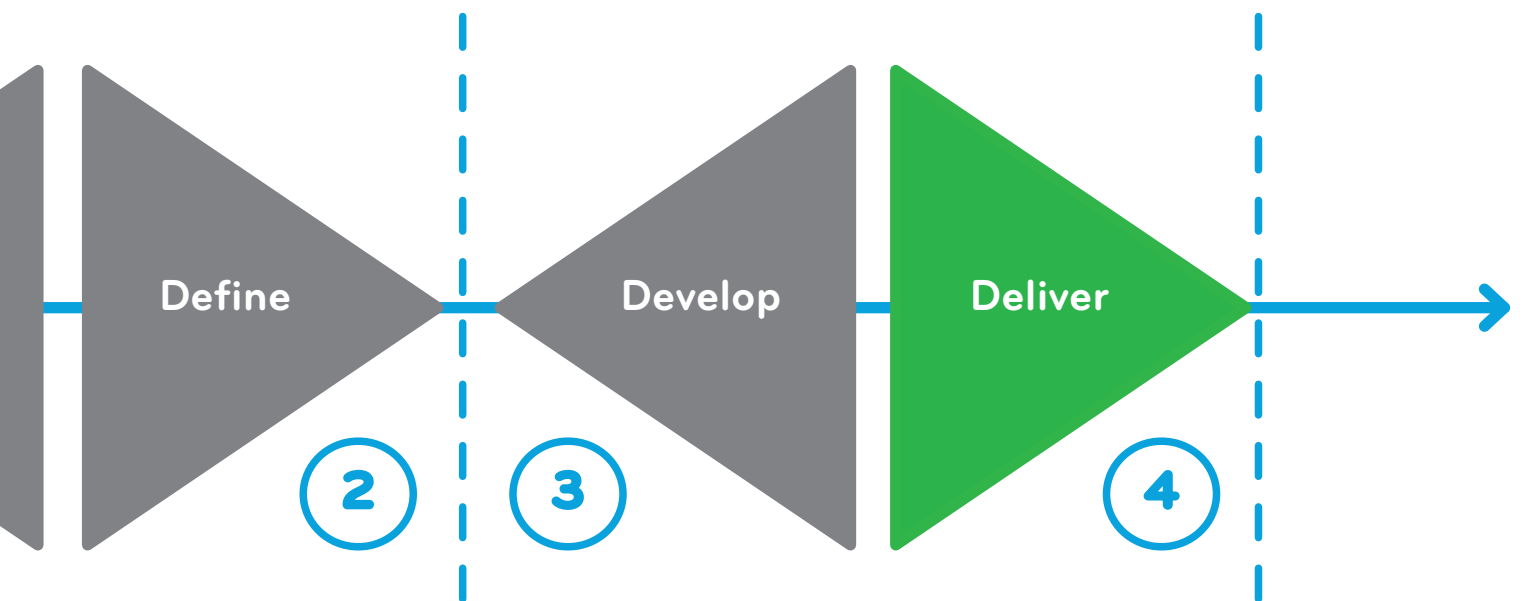
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# Delivery

Time to bring it all together. In the Deliver phase, you choose your strongest idea and get it ready to share. You might make a simple prototype or poster that shows how it works and how it helps people. Then you present it, get feedback, and reflect on what you've learned. This is where your idea becomes real!



## 10. Roleplay / Skits for Testing

Youth-friendly alternative to user testing

Act out how a solution works — fun, fast, and effective.

## 11. Gallery Walk Feedback

Adapted from Atlassian Playbook

Display ideas around the room (or virtually) and use smiley stickers or “I like / I wonder” notes for feedback.

## 12. Impact Reflection Posters

DIY Toolkit: Learning Reflection Tool adapted visually

Young people design posters answering: “What changed? What worked? What would I do next time?”

# 10. Roleplay / Skits for Testing

## HOW TO USE:

Use this when you want to act out your idea and see how it works in real life.

Role Play is a fun and practical way to test your idea by acting it out. It helps you see how your product, service, or experience might work in the real world — and what you might need to improve. You can act as the user, the helper, or even the product itself!

### 1 Choose the idea you want to test

Pick a part of your idea that involves people interacting — like using your product, asking for help, or joining an activity.

Example: Someone uses your app to book a mental health session.

### 2 Decide who will play which role

Work with your team to assign roles. Think about:

- Who is the user?
- Who is helping them?
- Are there any tools, services, or steps involved?

Everyone should know what part they're playing and what the situation is.

### 3 Set up a quick scene

You don't need a stage or fancy costumes (though they can help!). Just set the scene:

- Use props or signs if helpful
- Pretend you're in the real setting — a school, clinic, or bus stop, for example

### 4 Act it out!

Run through the scene like a mini play. Focus on what happens step by step, how people interact, and how the idea feels in action.

You can act it out once, then try again with small changes to see how it improves.

### 5 Reflect and improve

After the Role Play, talk about:

- What worked well?
- What was awkward or confusing?
- How did the “user” feel?

Use what you learned to tweak your idea or make it clearer and easier to use.



# 11. Gallery Walk Feedback

## HOW TO USE:

Use this when you want to share your work with others and get helpful, positive feedback.

A Gallery Walk is like a mini exhibition of your ideas! Everyone sets up their work around the room (or online), and then walks around to look at each other's projects and give constructive feedback — kind, useful advice that helps you improve your work.

### 1 Set up your work for display

Prepare your poster, prototype, sketch, or storyboard — whatever you've been working on — and display it somewhere others can easily see. You can also do this digitally using tools like Padlet, FigJam, or Google Slides.

### 2 Walk around and explore others' work

Move around the space (physically or online) and spend a few minutes looking at each project. Read carefully, observe the ideas, and think about how the work could be made even better.

### 3 Leave kind and useful feedback

Use sticky notes or a feedback sheet to write comments. Use sentence starters like:

- "I liked..."
- "I wonder if you could..."
- "Have you thought about..."

Be specific! Instead of saying "Nice", try "I liked how clear your drawings were — they helped me understand your idea."

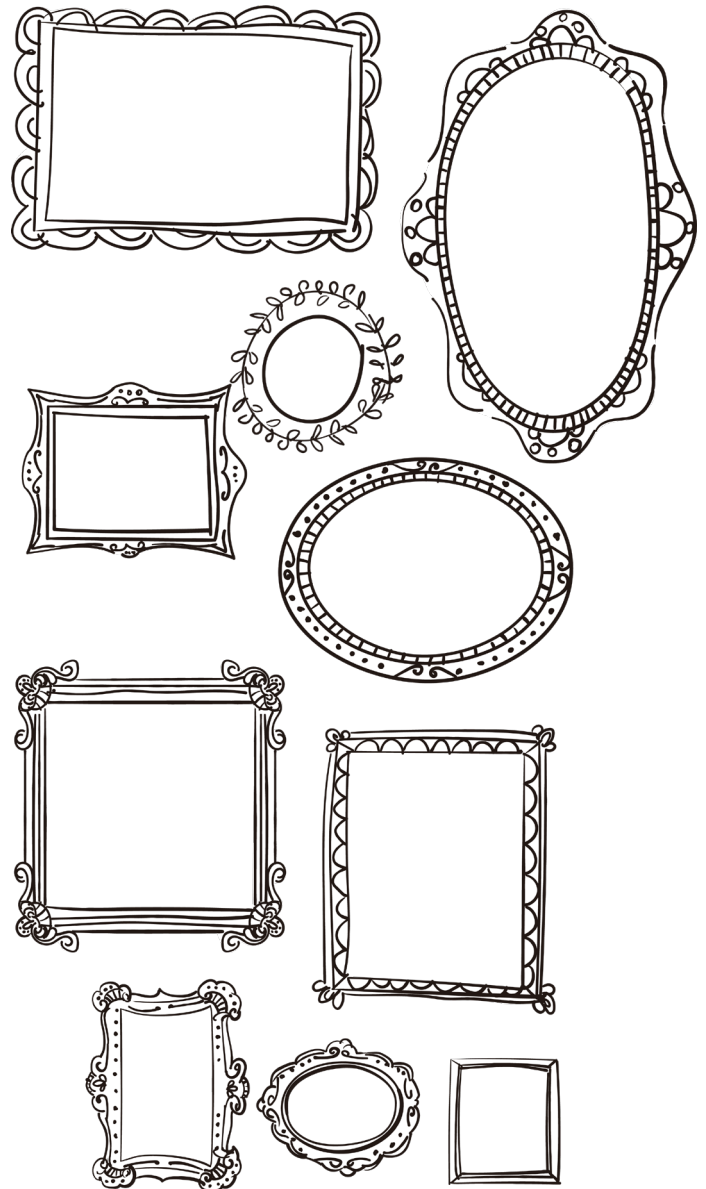
### 4 Reflect on the feedback you receive

Once everyone has given feedback, return to your own work and read what others wrote. Think about:

- What worked well?
- What could you change or improve?
- What surprised you?

### 5 Make updates to your project

Use the feedback to improve your idea! You might change part of your prototype, rewrite your explanation, or add more detail to your storyboard.



# 12. Impact Reflection Posters

## HOW TO USE:

Use this when you want to look back on your project and show what worked, what changed, and what you learned.

Impact Reflection Posters help you tell the story of your project — from where you started to what difference your idea made. It's a creative way to celebrate your progress, reflect on your learning, and share your impact with others.

### 1 Think about your project journey

Ask yourself:

- What was the problem we were trying to solve?
- What did we make or do?
- What changed because of our idea?
- What did we learn along the way?

### 2 Choose a layout for your poster

You can use a printed template or design your own! Some ideas to include:

- A timeline or story of your project
- Photos or drawings of your prototype or process
- Quotes from users or teammates
- What you'd do differently next time

You can use tools like Canva, Adobe Express, or just pen and paper.

### 3 Fill in your poster with honest reflection

Write or draw your answers to these 3 big questions:

- What worked well?
- What changed as a result of our project?
- What would we do differently next time?

Be honest and specific — this helps others learn from your experience too!

### 4 Share your poster with others

Display your poster in class or present it to your team. You can also include it in a final presentation. Invite others to ask questions or add comments about what they noticed or found interesting.

### 5 Use what you've learned in your next project

Reflection isn't just about looking back — it helps you move forward. Use what you discovered from your impact poster to improve your ideas in the future.



# References

The tool/ method, reference and more information are available at:

## ① User Interviews

Inspired by: Design Kit (IDEO)

<https://www.designkit.org/methods/2.html>

## ② Stakeholder Mapping

Inspired by: Nesta Toolkit / Service Design Tools

<https://media.nesta.org.uk/documents/diy-toolkit-full-download-a4-size.pdf>

## ③ Journey Mapping

Inspired by: Service Design Tools

<https://servicedesigntools.org/tools/journey-map>

## ④ How Might We (HMW) Questions

Inspired by: Design Kit (IDEO)

<https://www.designkit.org/methods/how-might-we.html>

## ⑤ Problem Definition Canvas

Inspired by: DIY Toolkit

<https://media.nesta.org.uk/documents/diy-toolkit-full-download-a4-size.pdf>

<https://www.youtube.com/watch?v=o4dddmOpQ5s>

## ⑥ Personas

Inspired by: Service Design Tools / Atlassian Playbook

<https://servicedesigntools.org/tools/personas>

## ⑦ Lego or Paper Prototyping

Inspired by: From design thinking workshops for young people

<https://medium.com/design-club/using-lego-and-design-thinking-to-build-user-centred-spaces-a47153777f08>

## ⑧ Yes, And... Idea Storms

Inspired by: Liberating Structures

<https://www.liberatingstructures.com/1-1-2-4-all/#:~:text=Engage%20Everyone%20Simultaneously%20in%20Generating,actions%20do%20you%20recommend?>

## ⑨ Storyboard Templates with Blank Frames

Inspired by: From Service Design Tools / Design Kit

<https://servicedesigntools.org/tools/user-scenarios>

## ⑩ Roleplay / Skits for Testing

Inspired by: Design Kit (IDEO)

<https://www.designkit.org/methods/role-play.html>

## ⑪ Gallery Walk Feedback

Inspired by: Adapted from Atlassian Playbook

<https://www.atlassian.com/team-playbook/plays/project-poster>

## ⑫ Impact Reflection Posters

Inspired by: DIY Toolkit: Learning Reflection Tool

<https://diy-toolkit.org>