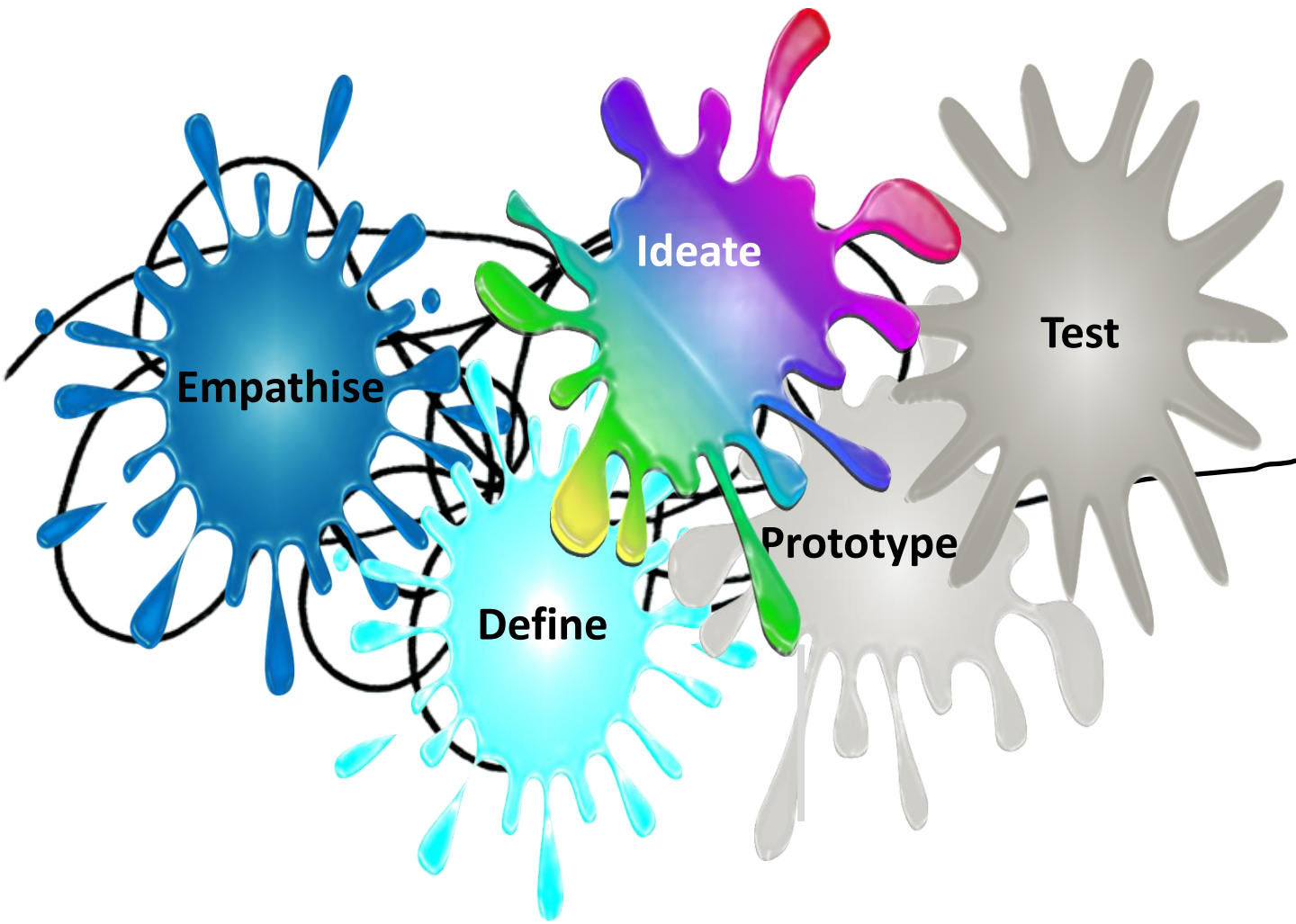


EMPATHY

Design Thinking begins and ends with **Empathy** for the people who experience the service/system that you are focussed on exploring. At this point you are a group of **curious explorers**, deeply interested in the stories and experiences of the users of the system or service. It is not your job to judge, defend or interpret what you have heard. Stay with the people who experience the system or service as long as you can to get a real feel for what is happening, **immerse yourself in their world**. The investment of time at this point is the foundation stone for the rest of the process.

It is critical that you spend significant time with the users of the service or system. We recommend you look at both ends of the 'bell curve' where the service or system is working well and the user experience is good and where the service or system is not working well and the user experience is bad.
This way you can gather as many stories as possible, understand and surface as many assumptions as possible and appreciate what excellent would look and feel like at both ends.

When you go and spend time with people, naturally you will need to put them at ease and be really clear about what you are there for and what the roles are of the team. You may have a graphic recorder, photographer and observer as well as the person carrying out the inquiry. We suggest that the observer is focussed on what they saw in terms of interactions, what they heard in terms of tone, pitch and pace and what they felt in terms of the emotion in the space.

The following methods, tools and frameworks can be helpful at this point:

- *Appreciative Inquiry Discovery Question to find out what it is about the system/service that really works*
- *Appreciative Inquiry Dreaming Question to find out what it is about the system/service that could be different/better in the future*
- *Appreciative Inquiry Design Question to find out the **forensic detail** of what they would like to happen in the future that doesn't happen now and the impact that would have on them*
- *Empathy Maps*
- *Creative use of images to ask people to chose an image of what it looks and feels like to them now as opposed to what they would like it to look and feel like*
- *The 'What's Working' Quadrant*

From here you will move onto the second stage of the Design Thinking Process: Define.
The quality of your recordings in whatever format remain invaluable and as you move around in the 'mess' of the process you may come back to this fundamental information many times.

DEFINE

Design Thinking begins and ends with **Empathy** for the people who experience the service/system that you are focussed on exploring, as you move to the **Define** stage be mindful of your internal voices of judgement, fear and cynicism. Central to the success is listening with attention, grace and ease to all of the team that were part of the **Empathy** process.

At this point in the process it is critical that you spend significant time with a representative sample of the people that were part of the first stage, looking at information that you have gathered from both ends of the 'bell curve' and begin to surface the themes and insights that you notice emerging.
*Its good to have a big wall space where you can post the visuals/photos that came out of the **Empathy Journey** stage. Think about a CSI investigation board, you are building a picture of what is going on for people together.*

Themes are thoughts and opinions that have been said over and over and feel as if they 'come from' the same sort of place. These are possibly things you would have expected given your experience of the system/service.
Insights are more surprising, these may be thoughts and opinions that surface that you did not expect, possibly unintended impacts of the system/service that flag a blindspot in your understanding.
Find a way to cluster themes and insights that makes sense to you as a Design Team, keeping your original idea of what your Design Challenge was at the centre.

At this point stand back, go for a walk or a coffee and then come back to your board and ask yourself the question: **'What do we recognise as our Design Challenge now?'** You may think that you knew this before you set off on the Empathy journey but very often going on that exploration, listening to those stories and seeing the themes and insights that emerge can change your perception and understanding of what is really going on and what people are really experiencing.

Finally it could be really helpful to think about:

- What are we discovering that is connected to everything else?
- Where do things feel most fluid?
- What's the visual metaphor we are seeing?
- What's the visual metaphor we want to see?
- Where do things feel most stuck?

IDEATE

Design Thinking begins and ends with **Empathy.** As a result of your **Empathy Journey** with the users of the service/system you will have been able to **Define** insights. The next stage invites you to generate as many **Ideas** as you can.

Before you begin to generate ideas, a critical step is to take your themes and turn them into 'How might we…?' questions. These questions should be broad enough to generate lots of ideas and defined enough that it stays connected to the data that you gathered as part of your **Empathy Journey**. This can be tricky, think about what you have learned about flipping and reframing. Take the themes and insights and flip them into a positive statement. You need to make sure it's not over complex. As you do this and pose the questions it can be helpful to have an overarching phrase to support the ideas generation such as:
We might ……..by……
This may feel over pedantic but it helps to get 'How' responses and not 'What' responses.

It is at this point in the process that you adopt an abundance mentality, it's all about getting as many ideas as possible. It's good to have a big wall space where you can post the coloured post-it notes from the brainstorm and have the space to move things around.

Rules of brainstorming - There are lots of ways to run a brainstorm. This is just a way that we have found works well, everyone is involved and there is no chance of things being filtered:

- Pass out pens and Post-its to everyone and have a large piece of paper, wall or whiteboard on which to stick them
- Review the Brainstorm Rules of your specific brainstorm before you start
- Pose the question you want the group to respond to, write it down and put it at the top of the paper, wall or whiteboard
- Generate as many ideas as possible
- Set a time for the first round, at this point there should be no conferring but participants should be encouraged to look at other ideas and build on them. I think 10 minutes per 'How might we?' question
- Thereafter allow a further 10 minutes for participants to look at everything and post any further ideas they have

You can repeat this process as often as you want until you are sure there are no more ideas to come.

Bundling/Sorting/Looking for themes

Bundling Ideas takes you from strong individual concepts to solutions of substance. Think of it as a game of mix and match, with the end goal of putting the best parts of several ideas together to create more complex concepts. You've probably noticed that many ideas start to resemble each other - which is a good thing. Try different combinations; keep the best parts of some, get rid of the ones that aren't working and consolidate your thinking into a few concepts you can start to share.

This could then be one of the ideas you move forward to the next stage.

Design Thinking encourages you not to decide and become focussed on one right answer too early and this is too early! So before you complete this stage you need to have 2 or 3 ideas to move forward to the Prototyping Stage with.
You might look for:

- A real outsider, really creative, outwith current thinking/experience
- A Rolls Royce top of the range idea
- A safe bet idea

PROTOTYPING

One of the things that makes **Design Thinking** unique is the use of **Rapid Prototyping**. Prototyping is a different thing than Piloting. With Piloting you are taking one idea and testing it out, at the point of the pilot the idea will be pretty well developed. This often means that there is a timeline for the pilot and that significant investment has already been made, so stopping the process even if it's not working rarely happens. Prototyping is the opposite. It is quick, cheap and not the finished thing. It is a way of thinking with your hands, manifesting what has been inside your head or a group of heads and bringing it out into a visual, an object or a structure. Think about Thomas Eddison and the light bulb. He failed over a thousand times before he got it to work, each of these failures brought him closer to success as he learned from each iteration of his prototype.

In our experience, at this stage you often find glitches that can be ironed out before you test the prototype with your service/system user

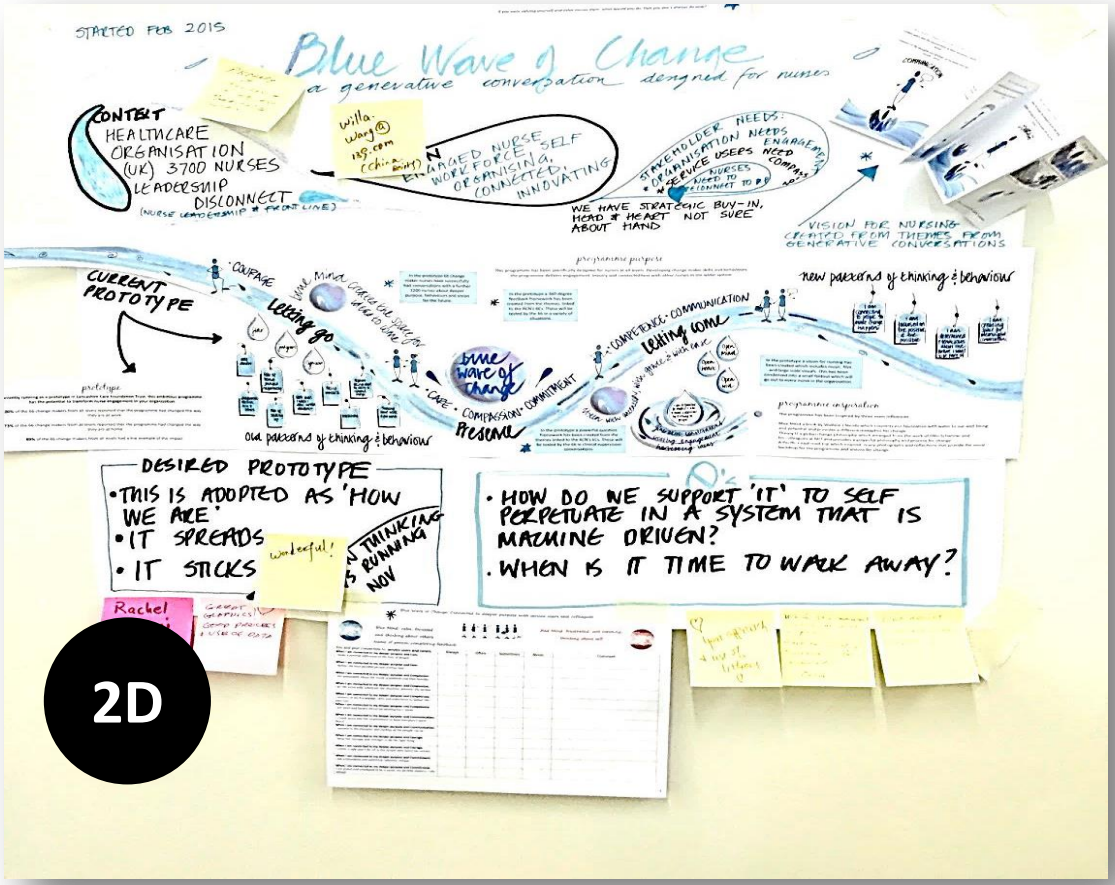
To make it easy we have divided prototyping methods into **3 types**:

- 2D Paper Prototyping
- 3D Structural Prototyping
- 4D People Prototyping

We have provided guidance and some real examples on the following pages:

2D Paper Prototyping

- Getting your idea on paper in a **2D visual** way can help you to represent the relationships between the system, the intention, the key players and processes, outside your head
- This should be at least flipchart size, it could have elements of collage as well as coloured drawings and words
- Keep it simple; big shapes, use of colour and lines to show connections and relationships
- You might want to highlight any questions you are holding at this stage
- It could also be a mindmap, where you put the idea for your prototype in the centre and use the 'branches' of the mindmap to represent the system, the intention, the key players and processes and any questions you are holding
- How you create your 2D prototype is up to you, remember pictures speak louder than words and **colour increases our level of retention by 75%**
- You should be able to use your **visual** to explain your prototype in 10 minutes

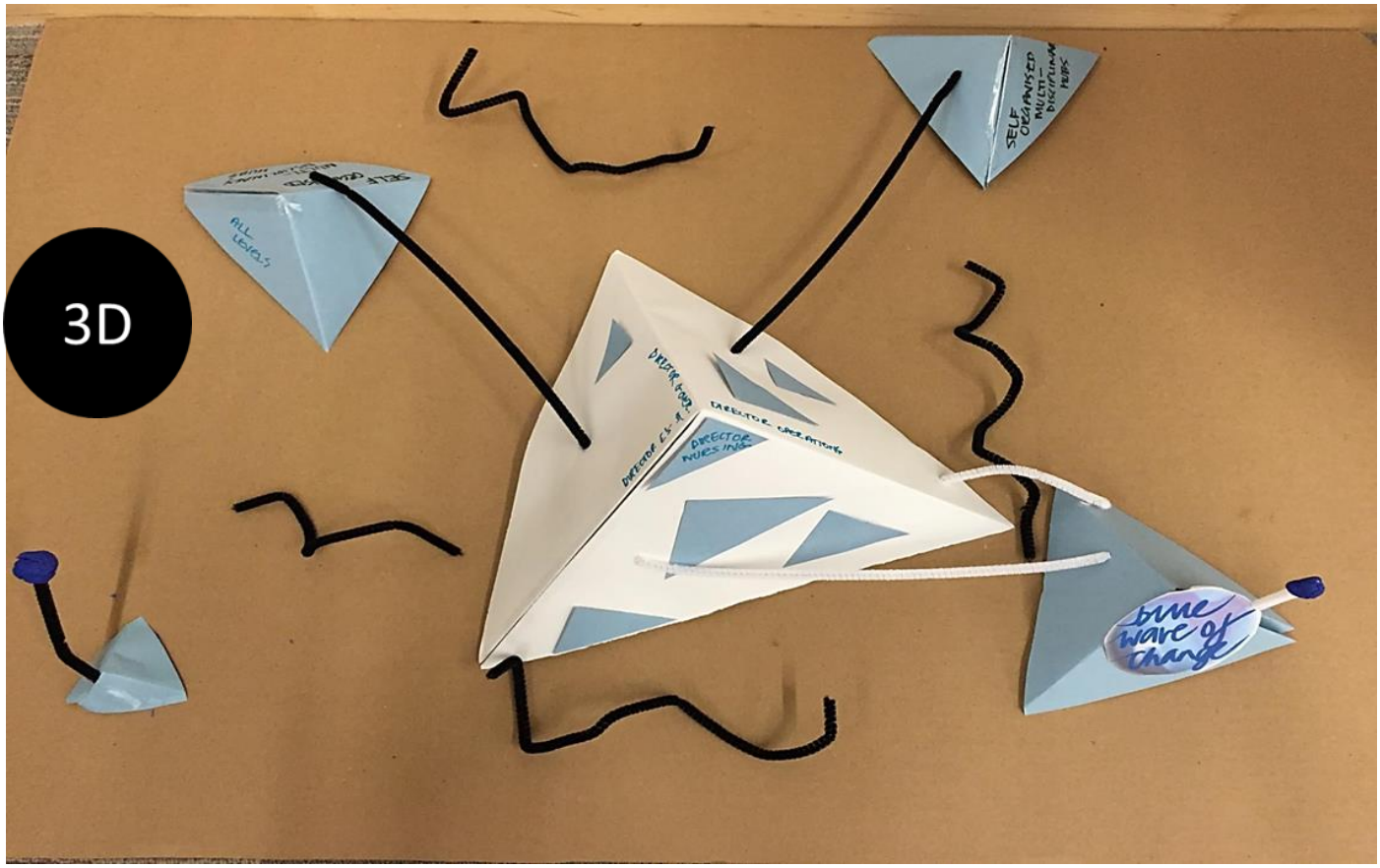


The 2D Prototypes cover:

- *the context*
- *the vision*
- *the stakeholders needs*
- *the proposed process*
- *the support required*
- *the questions currently held*

3D Structural Prototyping

- Getting your idea into a **3D structural** format can help you to move the key people, processes and intentions around to get a sense of connections, gaps, lines of sight and blind spots
- Keep it simple; use the size of objects as a metaphor for power/position or you can use colours to represent different groups of stakeholders
- You can use things like string and pipe cleaners to show the connections and questions
- Where you have space this can be as large and complex as the real situation, it is a great way to get the stakeholders round the table to build the model of the prototype together
- You can use basic containers, clothes pegs, string, skittles or make something from paper in a 3D format
- How you create your 3D prototype is up to you, remember that this is part of the learning process and your prototype may change as a result of the process
- You should then have someone, not part of your Design Team, to look at the 3D prototype and ask you questions about support, challenges, opportunities and measuring impact



This 3D prototype uses colours and shapes as follows:

- *White for the current situation in the organisation*
- *Blue shows where the prototype has already 'taken hold' or needs to be in the future*
- *White pipe cleaners show FMA current role and relationship*
- *Black pipe cleaners show FMA desired future role and relationship*
- *Size and shapes about relative power and influence*

4D People Prototyping

- Getting people to take on roles within your prototype and embody the dimension of feeling can present questions that you had not thought about or complexities you had not noticed so far, this is **4D Prototyping**
- This is not about how it is or should be. It is merely a representation that can provide you with more information about the prototype
- Individuals take the key 'roles' or concepts of the ideas and build their prototype from the different positions and spaces they take with each other. They can for example; decide to be 'loosely linked' together, bound together, stuck together, tangled, wear layers and layers of clothing…the list is endless, it goes as far as the prototype needs
- You are using people as they are, this is not about dressing up! It's the same principle as the 3D prototyping but real people taking on the shape and emotion of the prototype
- How you create your 4D prototype is up to you, remember that this is part of the learning process and your prototype may change as a result of the process

This 4D prototype:

- ***Is a human representation of the 3D prototype***
- ***Shows all the key players and the relationships between them***

The 4D Process
Embodying the players and the systems within the prototype

1. Appoint a facilitator

2. In the first instance the group will explore how their prototype sits in the current system (not about how it is or should be, but what you are feeling about it as a result of the work you have already done)

3. Facilitator will call out the roles, one at a time (6/8 of you will need to step forward and take on the roles, as best as possible people don't take their own). Others to observe

4. Facilitator will then ask you to think really deeply about what it 'feels' like to be that role, to place yourself in the space and to let your body try and take on the shape of that feeling

5. Then the next role will be offered and they will place themselves in relation to you and so on

6. Once everyone is in place the facilitator will invite someone to start and say 'I am …..and I feel….' and so on until we have heard from everyone

7. Stay in the position – no more than **6 minutes** for this

8. Now begin to move the prototype in terms of what you need to do, who you need to connect more with to get started (not about how it is or should be, but what you are feeling about it as a result of the first 4D prototype)

9. Once everyone is in place, the facilitator invites someone to start and say 'I am …..and I feel….' and so on until we have heard from everyone

10. Stay in the position – no more than **6 minutes**

11. Finally the facilitator will sit with the group and ask:

- **What have you discovered about your prototype that you didn't know before this experience?**
- **How would you change your prototype to reflect what you have discovered?**

In a live situation you would now create an action plan for testing your prototype and getting feedback

How do I know which one is best?

- One of my key learning points from studying Prototyping at MIT is that working through each gave my final plan more depth, and I commend you to do that
- Irrespective, after you have iterated your prototype you then need a plan about how you will 'test' the idea out with the system or service users
- Remember you are not trying to finish anything at this point, this is just the next stage in the overall process

TESTING

One of the things that makes **Design Thinking** unique is the use of **Rapid Prototyping** and the next stage **Testing.** At this point it is important that you are testing the Prototype, not the finished article, that will come later in a **Piloting and Implementation** stage.

Now that you've got a prototype to share, get it in front of the people you're designing for. There are lots of ways to do it: Reconvene the **Empathy Journey** participants and other stakeholders and share your prototype.

Capturing honest feedback is crucial. People may praise your prototype to be nice, so assure them that this is only a tool by which to learn and that you welcome honest constructive feedback.
Share with lots of people at both ends of the bell curve so that you get a variety of reactions to make sure you're capturing a cross-section of potential users.

Write down, or graphically record the feedback you hear and use this opportunity with the people you're designing for to ask more questions and push your ideas further. Filming feedback sessions can be great too, but remember to get consent and think about the impact on honesty.

Doing something with the feedback

Sit with your design team and share the feedback you collected. Share inspiring stories and consider your learning.

You'll now probably want to synthesize some of the feedback you got. You can **Create Frameworks** based on what you heard and how it applies to your idea. You might also now try a **Brainstorm** around how your idea could change based on your feedback.

Get tangible and start building the next iteration of your prototype. Integrating Feedback and Iterating is closely tied to Rapid Prototyping. So once you've determined how your prototype should change to reflect the feedback you got, build it again.

Remember that this is a method for refining your idea, not for getting to the ultimate solution the first time. You'll probably do it a few times to work out the kinks and get to the right answer.

TESTING

Moving to a Live Prototype

Though you've been getting feedback from the people you're designing for all along, a Live Prototype is one of the most powerful ways to test your solution with the system/service users.

Until now, your prototypes have been rough, and they've done only enough to convey the idea you wanted to test. A Live Prototype, however, gives you a chance to stress test your solution in real-world conditions.

It can run from a few days to a few weeks, and is a chance to learn how your solution works in practice. Live Prototypes are all about understanding the feasibility and viability of your idea.
Keep iterating until it is as good as it can be.

Doing something with the results of the live prototype

You've got a concept you feel great about and you've tested it in the world. Now you'll need to create a plan for how you're going to implement it.

A Roadmap helps you gather the key stakeholders in your project and collectively figure out a timeline, assign responsibility for each element of the project, and establish milestones.

Devising an innovative solution and putting it into practice are two different propositions.
All of the normal rules of Project Implementation apply at this point, the only caution would be to keep the conversation going, stay close to your intention and the people you are designing for and keep an open mind.

There are lots other great ways to engage with this part of the process and the next stage of Implementation including:

- Resource Assessment
- Roadmap
- Building Partnerships
- Ways to Grow Frameworks
- Team Dynamics
- Pitching
- Piloting
- Sustainability Testing
- Monitoring and Evaluation

See more at www.ideo.com/work/**human-centered-design**-toolkit where there are lots of free templates as well as ideas and case studies.