

# Using Human-Centered Design to Visualize Qualitative Data

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## A Workbook



# Visualizing data helps us

## Capture Attention

Increase the speed of understanding, maximize retention, and increase sharing!

## Improve Clarity

Not just for our audience but, in the process of making them, for ourselves!

## Inspire Action

We make decisions based on our emotions!

**Good visuals tell a story.**  
*Good stories describe change.*  
*Change is about choices.*

# Human Centered Design

## Is the best method for creating compelling stories

Involve humans in every step of problem-defining and problem solving  
Make designs appropriate and useful by focusing on audience needs  
Engage in an ongoing process of using feedback to gauge and generate success

## Is especially ideal for qualitative data visualization

Keeps the focus on the why, how, and, importantly, who  
Allows one to embrace ambiguity and paradox  
Balances objectivity with empathy

## Is a process...

Empathize, Ideate, Define, Prototype, Test, Iterate, repeat...

*Tip: If working creatively and/or collaboratively isn't familiar to you, you may experience some discomfort as you try something new. Don't make it harder than it has to be. See if you can take the pressure off yourself to do it "right" and trust that just doing it is enough - as you practice, you will improve over time.*

# Empathize

First clarify: What is the data about? What question(s) does it answer?

Now consider: What decision makers need this information?

Choose one of these potential decision makers. Find someone who is in that role and ask them:

What do you already know about this topic?

What do you struggle to understand about this topic?

What influences your decision making when it comes to this topic?

*Tip: It is ideal to interview 3-5 people  
and consider what is common among their responses.*

# Ideate

Make as long of a list as possible of all the appropriate visuals that you could use to show (not tell) them about what the data says in ways that would best make sense to them. Don't expect that if you just show them the data, they will "get it." The goal of a visual is to make choices clear.

Types of visuals to consider:

- Photos, of objects/symbols, people/characters, or landscapes

- Mind map

- Network map

- Circle map

- Venn diagram

- Quadrant or 2x2 matrices

- Flow chart

- Feedback loop

- Storyboard or sequential images

*Tip: If you are uncomfortable "advocating" for only one choice you think they should make, you can show all the potential choices.*

# Define

Sketch out at least three of the visuals you listed using just pencil and paper. Use supporting text sparingly, aiming to have the visuals be able to stand on their own if possible. The goal is keep creating visuals as you explore the data further until you have identified what you think is the best story to tell. Allow the visuals to be tools for thinking rather than for communicating.

*Tip: Try not to worry too much about the accuracy and precision of the data in the visual at this point. It is more important to focus on translating ideas from your head onto paper. If it helps you, remind yourself that no one else need see these sketches!*

## *Pause to Reflect*

Were you able to let go of the pressure to present and just become more familiar with the data?

Were you able to see new relationships in the visuals you drew? Did you learn anything new?

Were you able to sense there are different depths of visual exploration and thus explanation?

# Prototype

Now that you have an idea of the visual story you want to tell, create a more presentable version. If you choose to use a computer or tablet, use software that you are already familiar with but don't resort to using default software settings. Every piece of the visual should be an intentional choice, from titles and labels to colors and sizes.

*Tip: KEEP IT SIMPLE. Remove anything that is obvious and include only what is meaningful. Limit yourself to 1-3 colors and make sure that any text you include is not more dominant than the visual. Limit the time you spend on this stage - the next two will help you improve more than spending a bunch of extra time here will.*

# Test

Share the drafted visual with 3-5 different decision makers and ask them:  
Does this visual help you connect with and better understand the data?  
What questions are you left asking, if any?

*Tip: You can also ask them when, where, and how they would prefer to get this type of information to help you decide how you will share the story once you are ready to.*



# Iterate

After gathering some feedback, reflect on the following questions:

In what ways did the visual help or not help them see connections and relationships they might not have without it?

How will you improve your visual so that it better helps the decision maker?

Do you need to include more in the visual, and if so, how can you present information sequentially rather than all at once to maintain clarity?

*Tip: Also reflect on your own design process:*

*What was most difficult for you?*

*How might you make it simpler, get more support,  
or build skills for the next time?*

## *Looking for more support?*

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