

Getting inside the Brains of Decision Makers

Peel Newcomer Strategy Group

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Introduction

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The background features a decorative graphic consisting of several overlapping, wavy lines in shades of light blue and light green. These lines curve across the top and right sides of the page, creating a modern, abstract design.

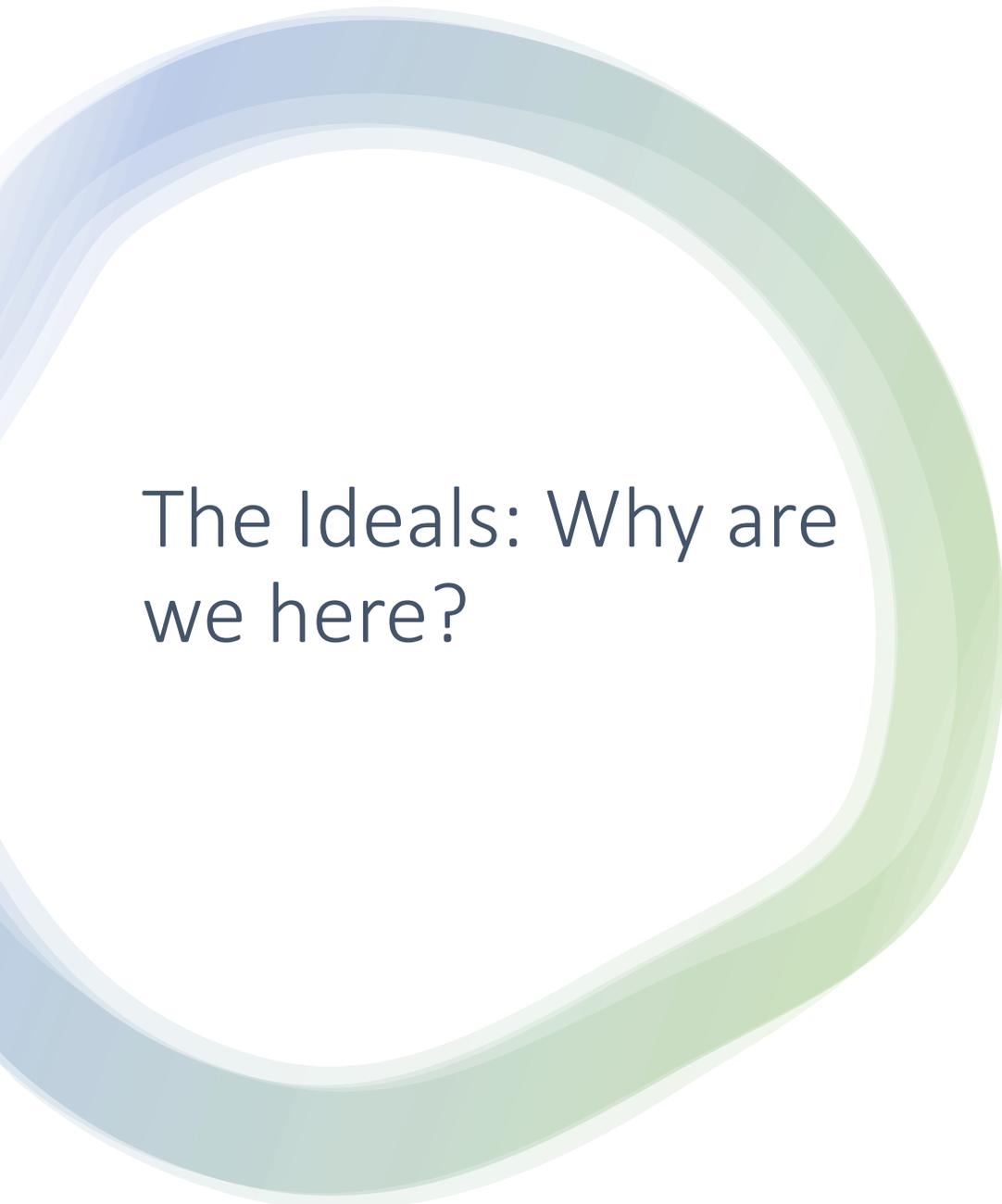
What challenges do you face when integrating data into your daily work?

The Practical: Why are we here?

1) Much of our work as service providers involves advocating to funders that we need financial support for our valuable programs. What new strategies can we use to convince them?

2) When resources are limited, we want to be as fair as possible in allocating them. What tools can we use to determine what is most fair and equitable?

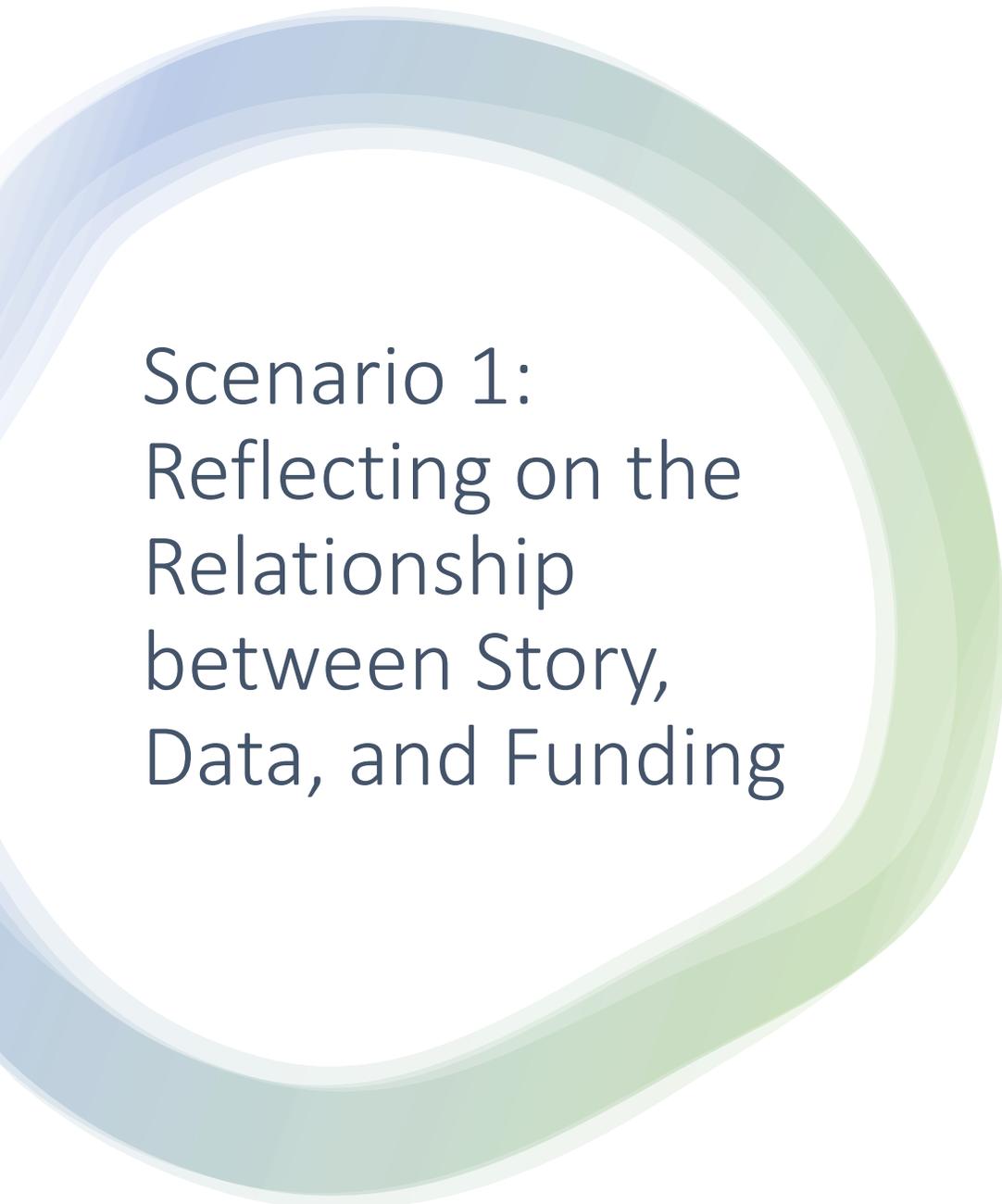
3) There is so much data out there. What are some of the best data sources for understanding diversity, and equity in Canada, and how can we access them?



The Ideals: Why are we here?

1) Some people are primarily motivated by stories, others by numbers. How can we integrate both to make compelling arguments?

2) As advocates for equity seeking groups, our work is often to dialogue with people who disagree with our views. Though it's tempting to assume these people don't care enough about those in oppressed groups, there might be other reasons why they are hesitant to offer support. This presentation seeks to equip us with tools to relate to the people who are 'on the fence', have questions, or are 'in the middle.'



Scenario 1: Reflecting on the Relationship between Story, Data, and Funding

- Which story moves you to act the most? There are no wrong answers.
- If you were a public health funding agency (for instance the Global Fund) what questions might you want to ask if you were deciding how much money you want to allocate to each disease outbreak?
- After the reveal: What are the takeaways. How do narratives and numbers compliment each other? Are there ways that they are in tension?

Scenario 1: Stories of Diseases & Outbreaks

1) A mysterious illness hits a small town. Only children get sick – at first they just look bloated, then they lose the ability to communicate. They aren't able focus, lose control of their motor functions gradually, and begin to nod because they are no longer capable of holding their heads upright. These symptoms don't go away.

2) A grandmother is responsible for caring for her 5 young grandchildren. She notices the skin on her hands looks infected. Gradually the infection spreads, and becomes painful. Ultimately it results in the loss of her fingers. The disease might be contagious.

3) People begin to get cold like symptoms, mostly coughs, shortness of breath, and runny noses. The case count rises, 500 people positive one day, 600 the next. About 3% of cases are very severe, the death toll was 10 people yesterday, and 5 today.

4) A small town gets hit with a parasite that causes weakness, fatigue and bleeding gums. Babies and seniors are the sickest. There is no funding for the local clinic so no one has treatment. The death toll is rising.

Scenario 1: Data on Diseases and Outbreaks

Disease: Nodding Syndrome

Origin: Northern Uganda/ DRC

Number of cases: 500+

First identified: 2012

Cause: Unknown, probably a parasite.

Disease: Leprosy (Hansen's Disease)

Origin: Egypt

Number of cases: 2 – 3 Million people living with the disease globally.

First identified: 1550 BCE

Cause: Bacteria Leprae (vector still unclear)

Disease: Covid 19

Origin: China

Number of cases: 134 Million total globally

First identified: 2020

Cause: Virus

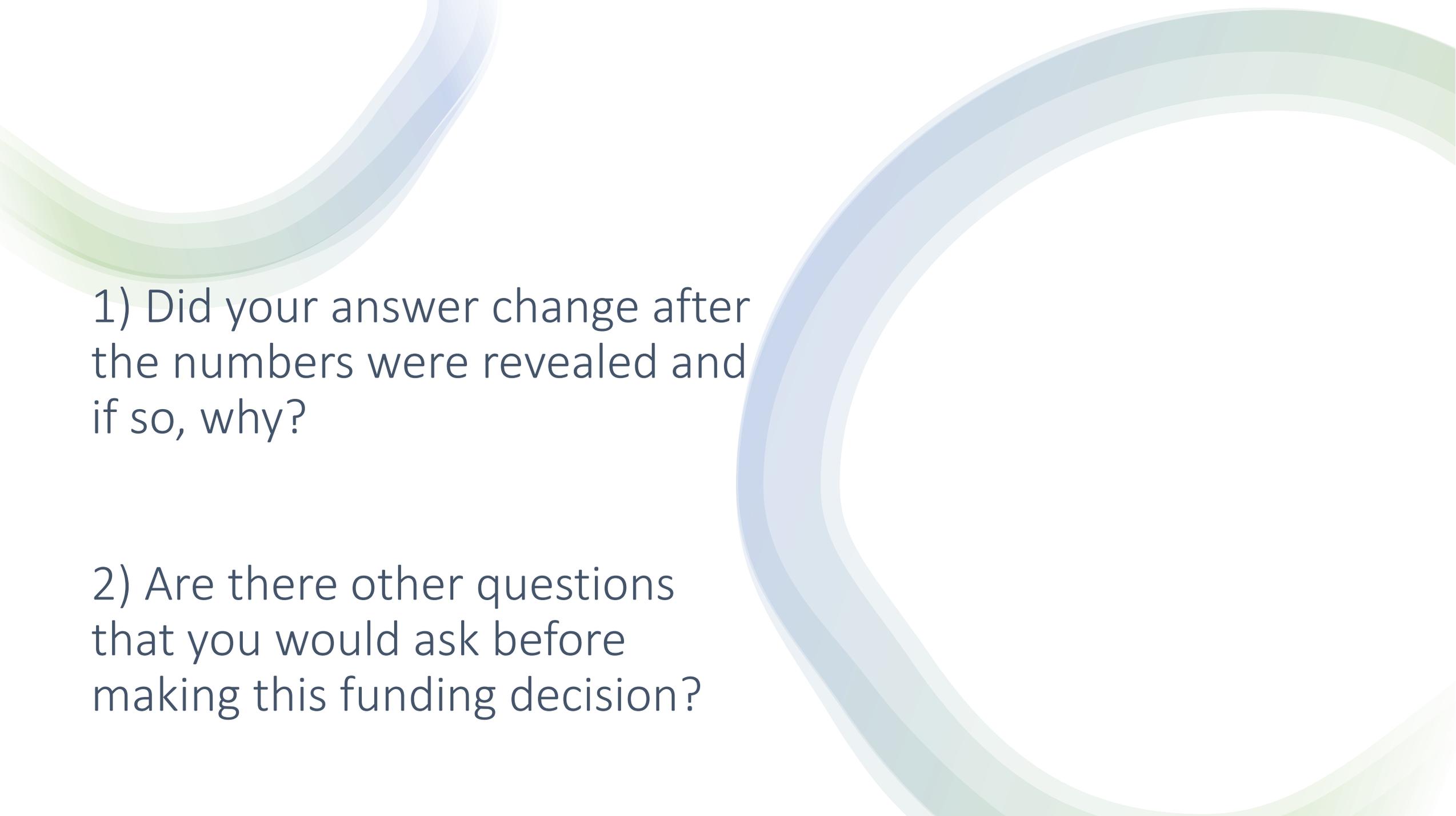
Disease: Chikungunya

Origin: Tanzania

Number of cases: 2000 cases so far in 2021

First identified: 1952

Cause: Mosquito transmitted virus



1) Did your answer change after the numbers were revealed and if so, why?

2) Are there other questions that you would ask before making this funding decision?

Tools Used to Make Decisions

Quantitative Methods

- T-Tests
- Regression Modelling
- Multi-variate Analysis
- Cost Benefit Analysis
- Software tools – R, Stata, etc.
- Gender-Based Analysis
- Demographic Analysis

Qualitative Methods

- Structured interviewing
- Focus Groups
- Participant Observation
- Narrative Interviewing
- NVivo coding and visualizations
- Logic Models/ Log Frames

Qualitative Coding Process - NVivo

Codes

Name	Files	Refere
Technology	3	6
System Compl	3	5
Specialist	1	2
Public vs.	2	2
Family Do	4	8
Settlement Ser	2	4
Quotes for Re	3	10
Primary Care	1	1
Sexual and	1	1
Longterm	1	1
Extended	1	1
Diabetes	1	2
Dental an	3	4
Cancer Scr	1	1
Positive Feedb	3	6

access to that might improve your state of health, whether now or in the long-term?

0:34:27 S1Q10
Gagan: I can't think of anything, but the example I gave... like I wanted to see a dermatologist... it is not a long term thing but I couldn't find any in Brampton, I don't know if I missed something... there were a couple in Mississauga, it's still the Peel region but... nothing I can think of at this point.

Stacy: yes... like access to dermatologist, or access to specialists

Gagan: yes, access to specialists... that's another thing. I don't know if hospitals... because in the country I come from, generally, even in private hospitals... there are specialists if not everyday they'll come a few days during the week... that part I don't know... if the hospitals here... if they have those specialists... it's just the example I gave but there can be other examples ... I'll definitely try to find that information... but when I was looking for a specialist I didn't see the Brampton General Hospital as one of the options, so I am not sure if they have someone or if I am missing something
[Stacy's comments on the question]

Gagan: yeah and you know what? [...] The people who were born here they'll have good

R Studio – Modelling with Quantitative Data

The screenshot displays the RStudio environment for a project named 'rsrecovr'. The top-left pane shows the source editor with R code for generating a scatter plot. The top-right pane contains the Environment, History, Connections, Build, Git, and Tutorial tabs. The bottom-left pane shows the Console with R code execution results. The bottom-right pane shows a viewer window displaying a scatter plot titled 'Scatter chart with size and color'.

```
400 > {r, eval=FALSE}
401 # generate distance/delay scatter aesthetic
402 ggplot(delay, aes(x = dist, y = delay))
403   geom_point(aes(size = count), alpha = 0.5)
404   scale_size_area(max_size = 3)
405 >
```

The scatter plot in the viewer shows 'delay' on the y-axis (ranging from -20 to 40) and 'dist' on the x-axis (ranging from 0 to 5). The size of the points is proportional to the 'count' variable, with a legend indicating sizes for 100, 200, and 300. The points are colored based on their 'dist' value, with a gradient from purple/blue for lower values to yellow/green for higher values.

Console output:

```
Results for "context" in ~/git/rsrecovr
Replace with: session
Replace All

~/git/rsrecovr/R/all.R
37: results <- rbind(results, cbind(project = NA, contextsession = NA, ...))

~/git/rsrecovr/R/projects.R
10: # list all the contextsession IDs
11: contextsessions <- list.files(state_folder, pattern = "[a-zA-Z0-9]...")
13: # recover the sources from each contextsession
14: results <- lapply(contextsessions, function(contextsession_id) {
16:   recovred <- recovr_sessions(file.path(state_folder, contextsession_id))
21:   cbind(data.frame(contextsession = contextsession_id), recovred)
```

Important Datasets hosted by Statistics Canada related to Diversity and Equity

- **General Social Survey**

- Modules on victimization, caregiver burden, family structure, giving and volunteering, social identity. 20 000 person sample.

- **Canadian Community Health Survey**

- Health status, health care utilization, and health determinants 130 000 person sample (every 2 years).

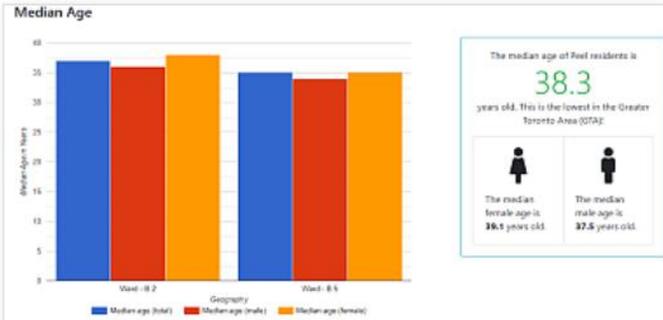
- **Longitudinal Administrative Databank**

- Random sample of 20% of Canadian tax filers.

- **Longitudinal Immigration Database**

- Combines immigration and tax data files to assess immigrant labor market behavior. Has existed since 1952.

Peel Data Centre

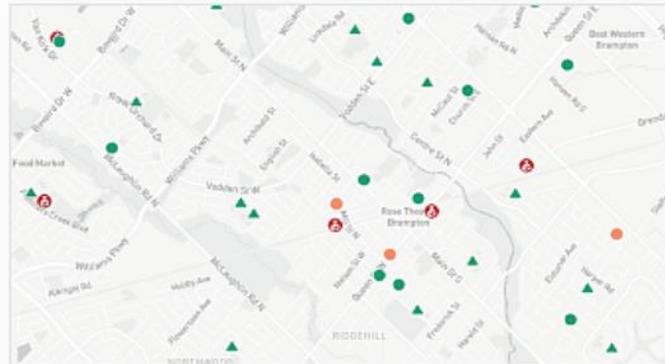


2016 Ward profiles

Find out more information about the people living in the municipalities and wards of Peel Region with our visualization tool. Many topics from the Census are included, such as demographics, income, transportation, immigration, and languages.

Dashboard Demographic

Use tool

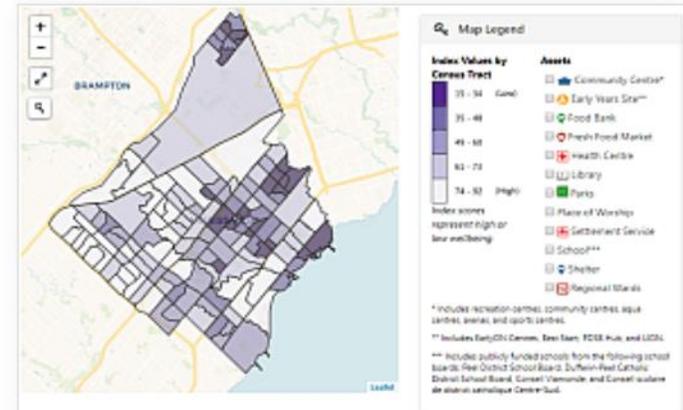


Early learning and child care map

View the location of child care centres and early years sites in Peel Region. This tool is useful for service providers, local organisations, and citizens looking for child care or early years resources.

Map Services

Use tool



Neighbourhood information tool (NIT)

The Neighbourhood Information Tool (NIT) provides a neighbourhood wellbeing score and social and demographic information on each area of Peel.

Dashboard Demographic

Use tool

Top

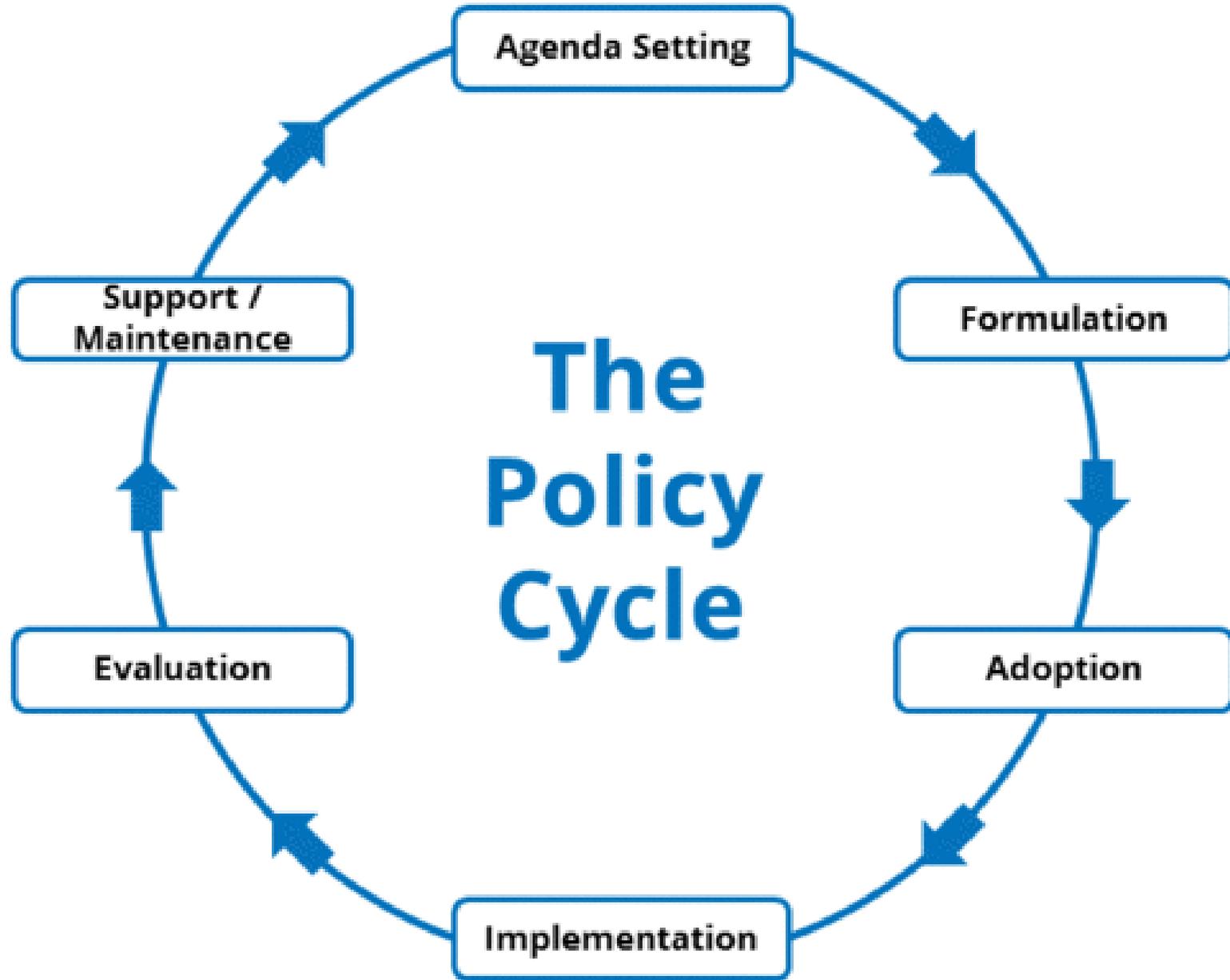
Scenario 2: Ventilators for Covid 19 Patients

- Policies that assist us in making complex ethical decisions under pressure:
- Two patients with Covid 19 are checked into a hospital at the same time. Both have severe forms of corona virus and need a ventilator. Unfortunately, only one ventilator is available. A doctor is required to triage the two patients to determine who gets it.
- Patient one is a black female, age 42 with complex health conditions relating to diabetes. She was in the high risk category to contract the virus due to these health conditions.
- Patient two is a white male, aged 65 with no severe pre-existing health conditions. He is in the high risk category because he is a senior, and a smoker.
- If you were a health policy maker determining what procedure should be followed in this case, what factors would you consider?

A 3D rendering of a puzzle with one red piece standing out among many white pieces. The red piece is in the center, and the white pieces are arranged around it, some of which are missing, creating a sense of a puzzle being solved or a key piece being highlighted. The lighting is soft, creating subtle shadows and highlights on the pieces.

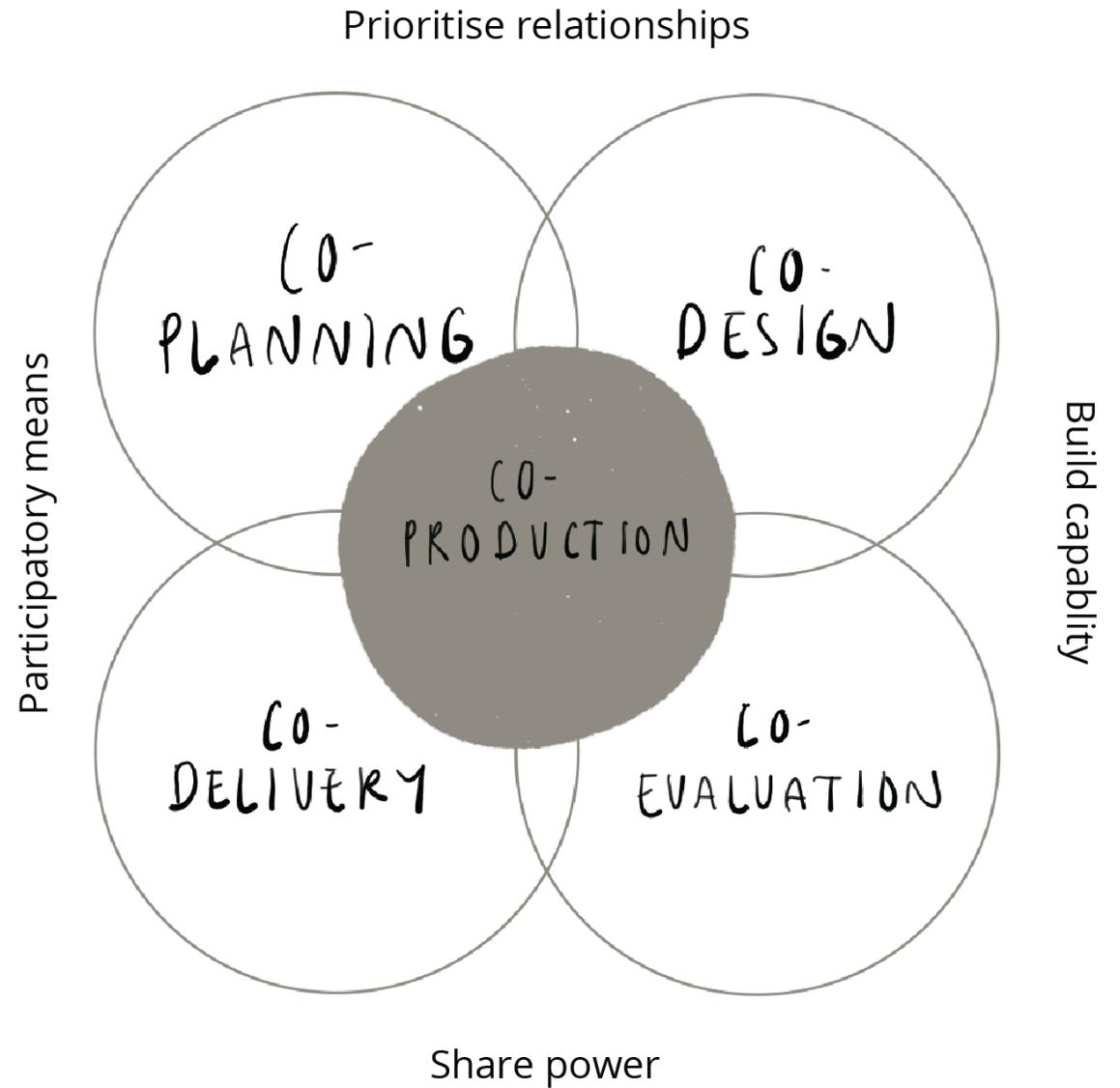
What is the
purpose of policy?

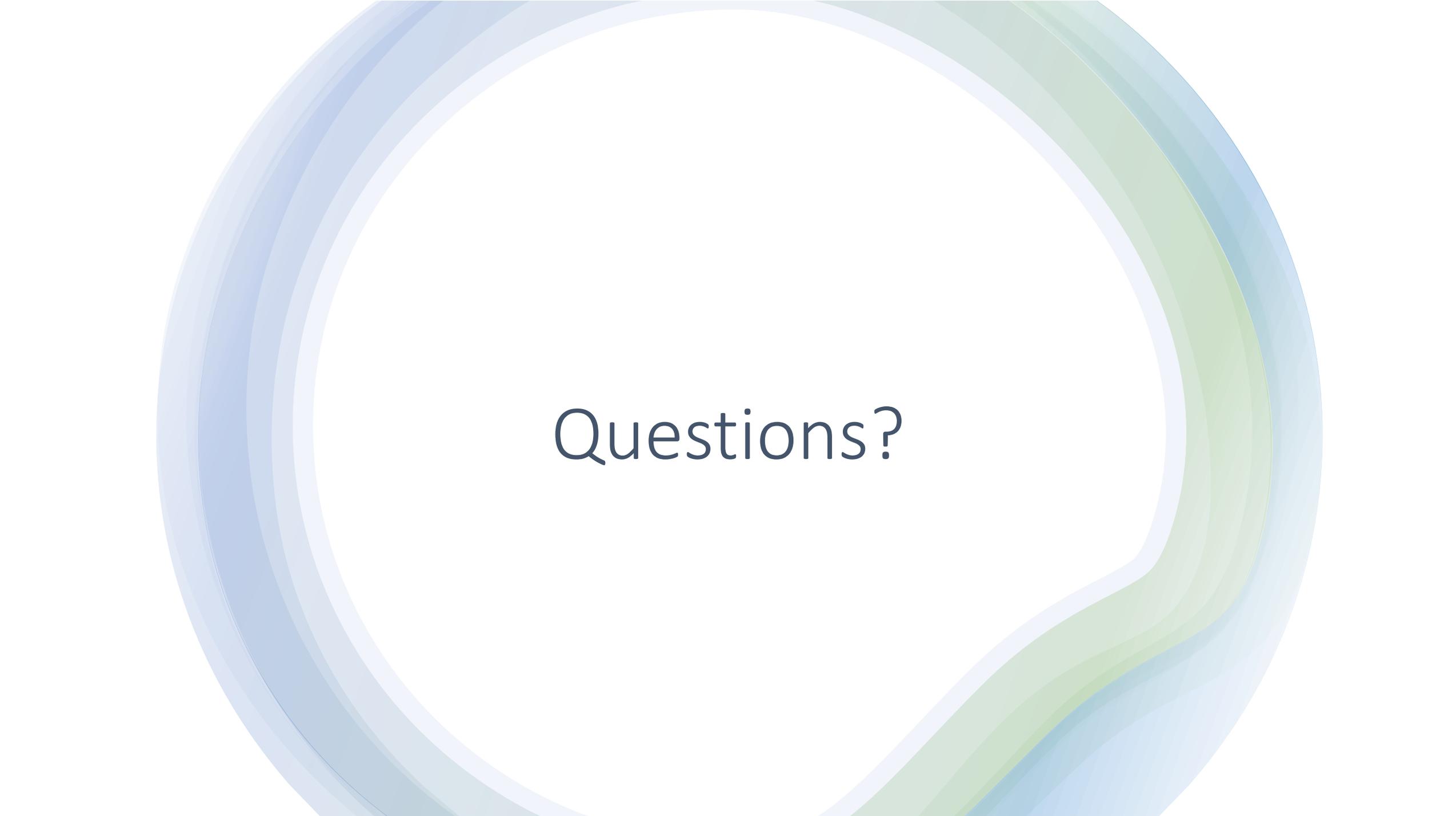
Policy Definition: *A system of rules or principles that govern a group of people, a process, or a place.*



“The fundamental principle that should be used is if there aren’t enough ventilators, which will probably be the case sometime soon, is to give the resources to the people who would be most likely to die if they did not get the ventilator and would be most likely to live if they got one.” - Klitzman

Research Codesign Model





Questions?