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Person 1

Increasing populations changing policy requirements

Sustainability and recycling goals and improved technology department

"Smart cities" movement to become more efficient in managing

This management is the key factor of small cities

Due to the population growth

One of the main challenges that the cities face

This system that allows citizens to segregate the various types of solid waste

They want to dispose and the municipal authorities to efficiently collect the same

The system should be Mobile app based.

Person 2

citizen should have an option to schedule a waste pickup request particular date and time

The pickup request can be no less than 24 hours in advance

Citizen should be able to see all upcoming waste pickup request

Garbage collector should be shown a list of all pickups to be made that day

garbage collector from one point to another point

Garbage collector is shown the following: Citizen name&location Garbage amount

Person 5

For the demonstration of the system you may use pre-filled data

We would also like to see your database scheme

You can use any language or framework to create this system

We would like to see the codebase route matching algorithm you are using

Garbage collection is done via trucks

Each truck can only carry one category of waste

Along with the most effective route for all pickups

Garbage collection should be shown a list of all pickups to be made that day

You have to calculate the most most optimal route for each truck

Person 6

Deliverables it is the demonstration of the system

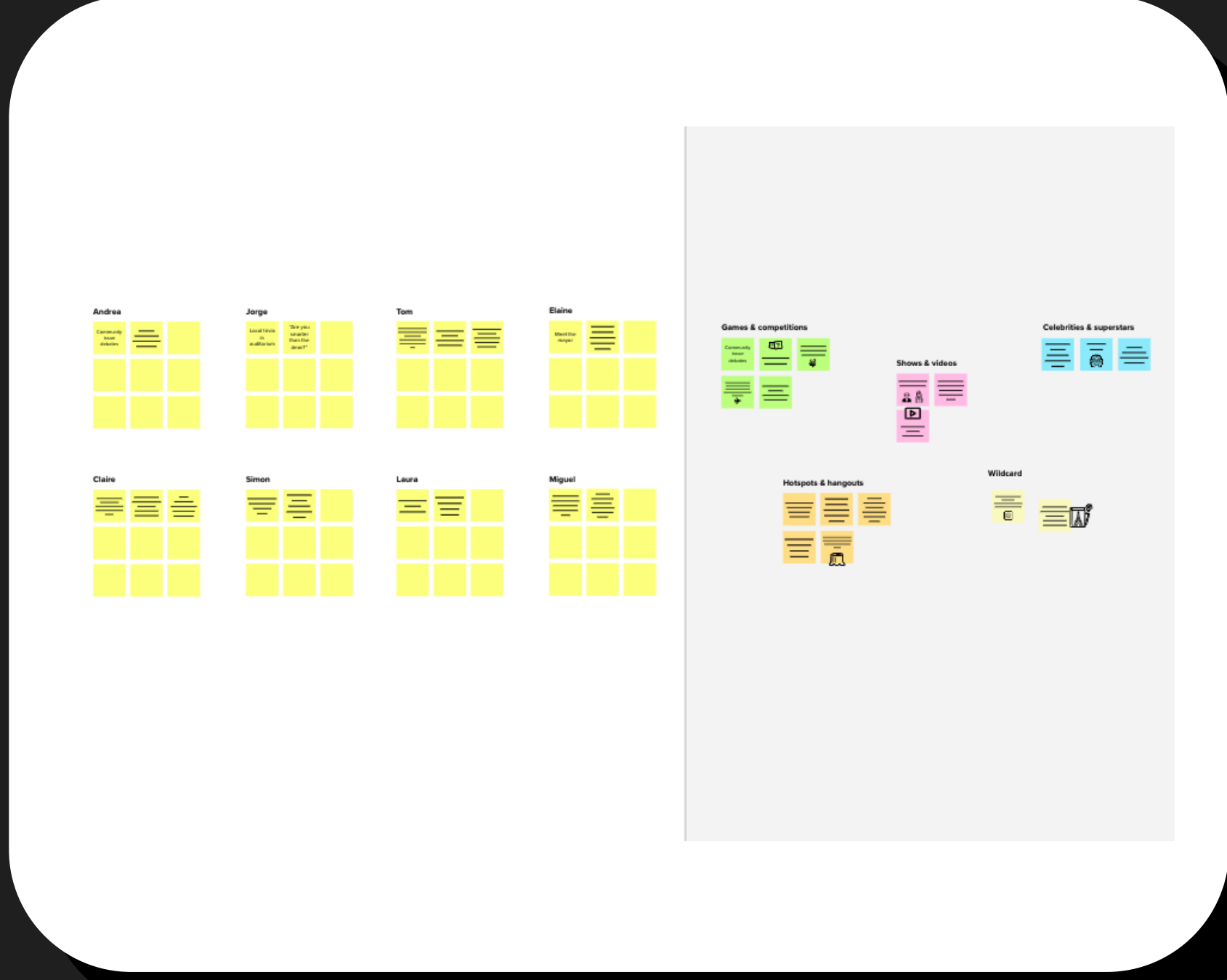
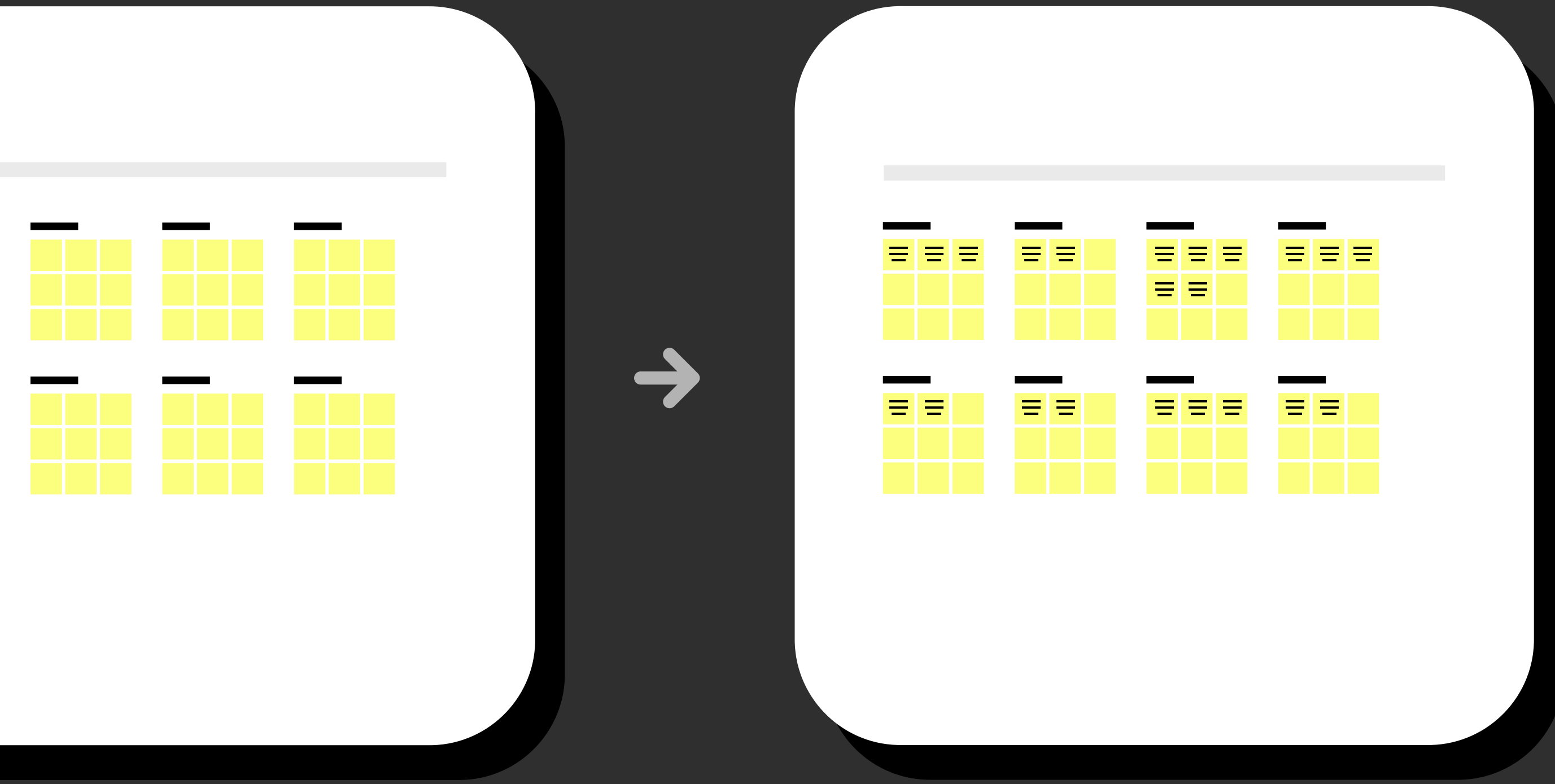
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implement a hybride mobile app

we can see all garbage trucks,citizens,collection requests



Need some inspiration?

See a finished version of this template to kickstart your work.

Open example →

Person 3

Person 4

citizen should mention the amount of waste for disposal	A growing population and economy	Increased volumes of smart waste generated	waste stream because of urbanization and industrialization	Design a smart waste collection system	That allows citizens to segregate the various types of solid waste	Solid waste that want to dispose and the municipal authorities
Along with a most efficient route for all pickup	Diversion of waste streams to material recovery	Declining levels of capital investment and maintenance	waste disposal is preferred over other options	Dispose the municipal authorities to efficiently collect the same	The system should be mobile app based	Waste management suffers from a pervasive under pricing
waste of are available organic waste recyclable waste	waste handling facilities at more than 2000^12	Few waste treatment options are available to manage waste	increased complexity of the waste stream	Which means that the cast of waste management	That are not fully appreciated by consumers and industry	Waste disposal is preferred over other option

Person 7

Person 8

use for codebase route matching algorithm	A growing population and economy, which means increased volumes of waste generation	Increased complexity of the waste stream because of urbanization and industrialisation	Where data is available. it is often unreliable and contradictory	Few waste treatment options are available to manage waste	So they are more expensive than the landfill costs	The major problem occuring affecting solid waste management are unscientific treatment
BONUS make a web interface for both citizen&garbage collector	This puts pressure on the waste management facilities	The main waste flows and national waste balance because the submission	Waste management suffers from a pervasive under-pricing	Improper collection of ethical problems	This in turn leads to hazards like environmental degardation	Water pollution and air pollution and soil pollution
it can multiple categories as well	It is already in short supply	Waste data is not obligatory	the development of the NWMS is an important milestone in the process	it is a better life for all south african	In order to keep as much material out of the last fill as possible	Explaining the three rs of the waste management reduce reuse recycle



## Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

5 minutes

PROBLEM

How might we [your problem statement]?



### Key rules of brainstorming

To run an smooth and productive session



Stay in topic.



Encourage wild ideas.



Defer judgment.



Listen to others.



Go for volume.



If possible, be visual.



Brainstorm

Write down any ideas that come to mind that address your problem statement.

🕒 10 minutes

TIP



You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!



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Person 3

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Diversion of waste streams to material recovery

Declining levels of capital investment and maintenance

waste disposal is preferred over other options

waste handling facilities at more than 2000'12

Few waste treatment options are available to manage waste

increased complexity of the waste stream

Person 4

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Increased complexity of the waste stream because of urbanization and industrialisation

Where data is available it is often unreliable and contradictory

This puts pressure on the waste management facilities

The main waste flows and national waste balance because the submission

Waste management suffers from a pervasive under-pricing

It is already in short supply

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the development of the INWMS is an important milestone in the process

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Improper collection of ethical problems

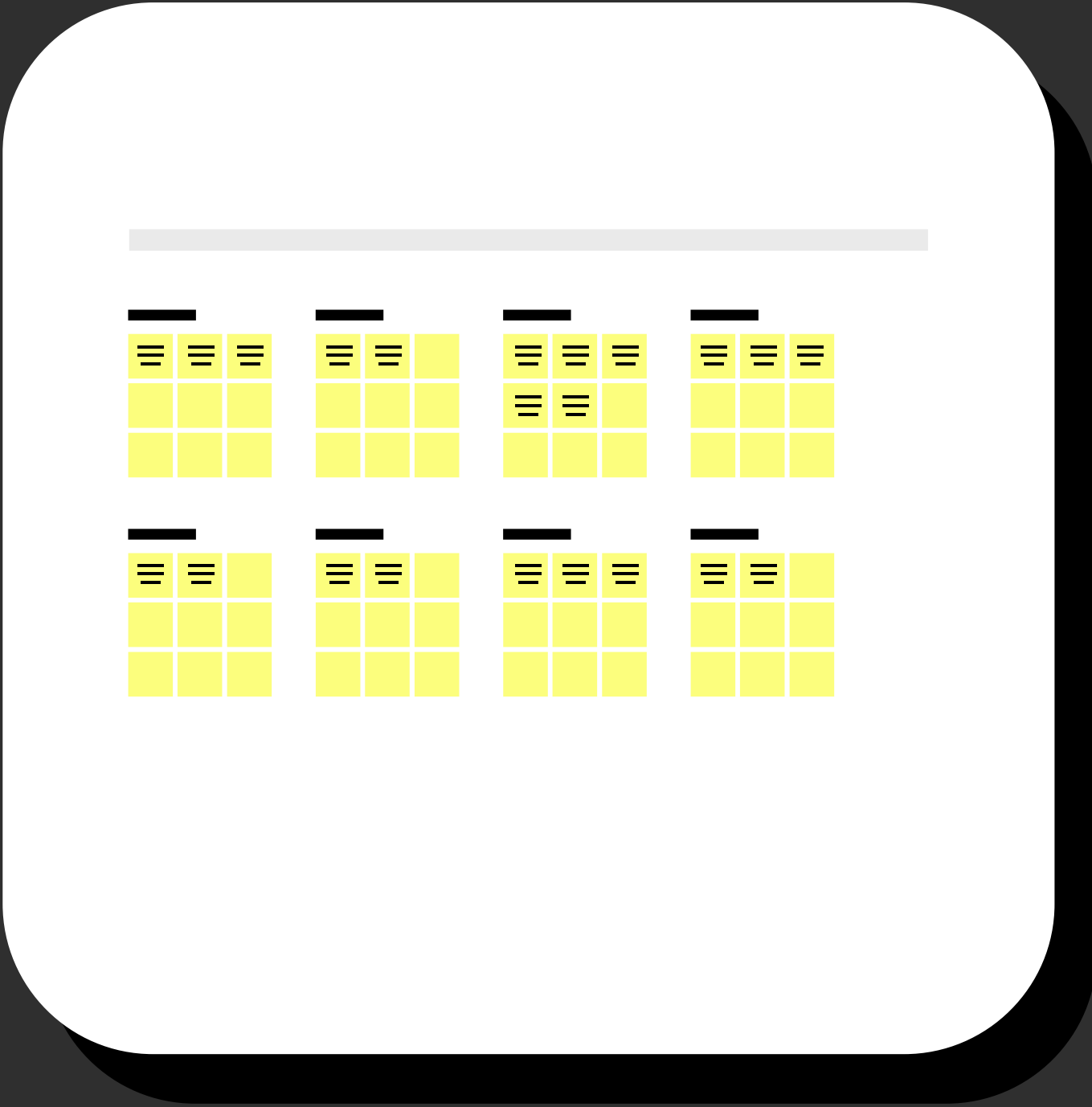
This in turn leads to hazards like environmental degradation

Water pollution and air pollution and soil pollution

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In order to keep as much material out of the last fill as possible

Explaining the three rs of the waste management reduce reuse recycle




3

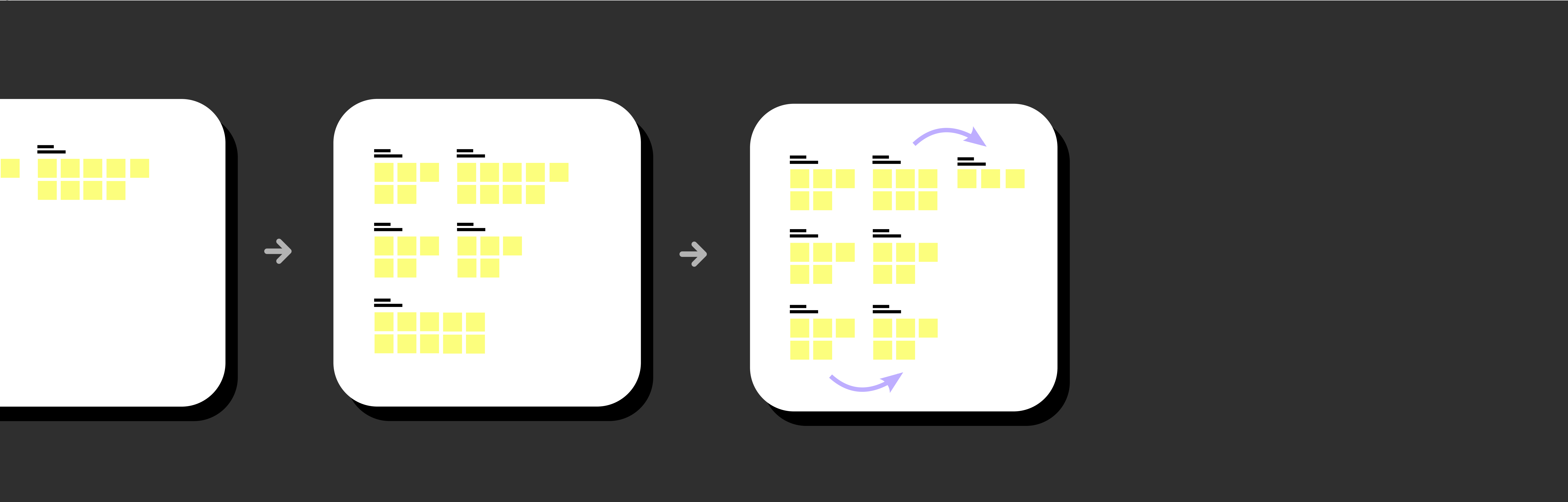
Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

🕒 20 minutes

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.





Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

🕒 20 minutes



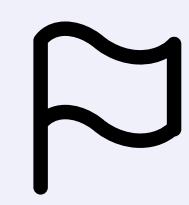
Importance

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

TIP

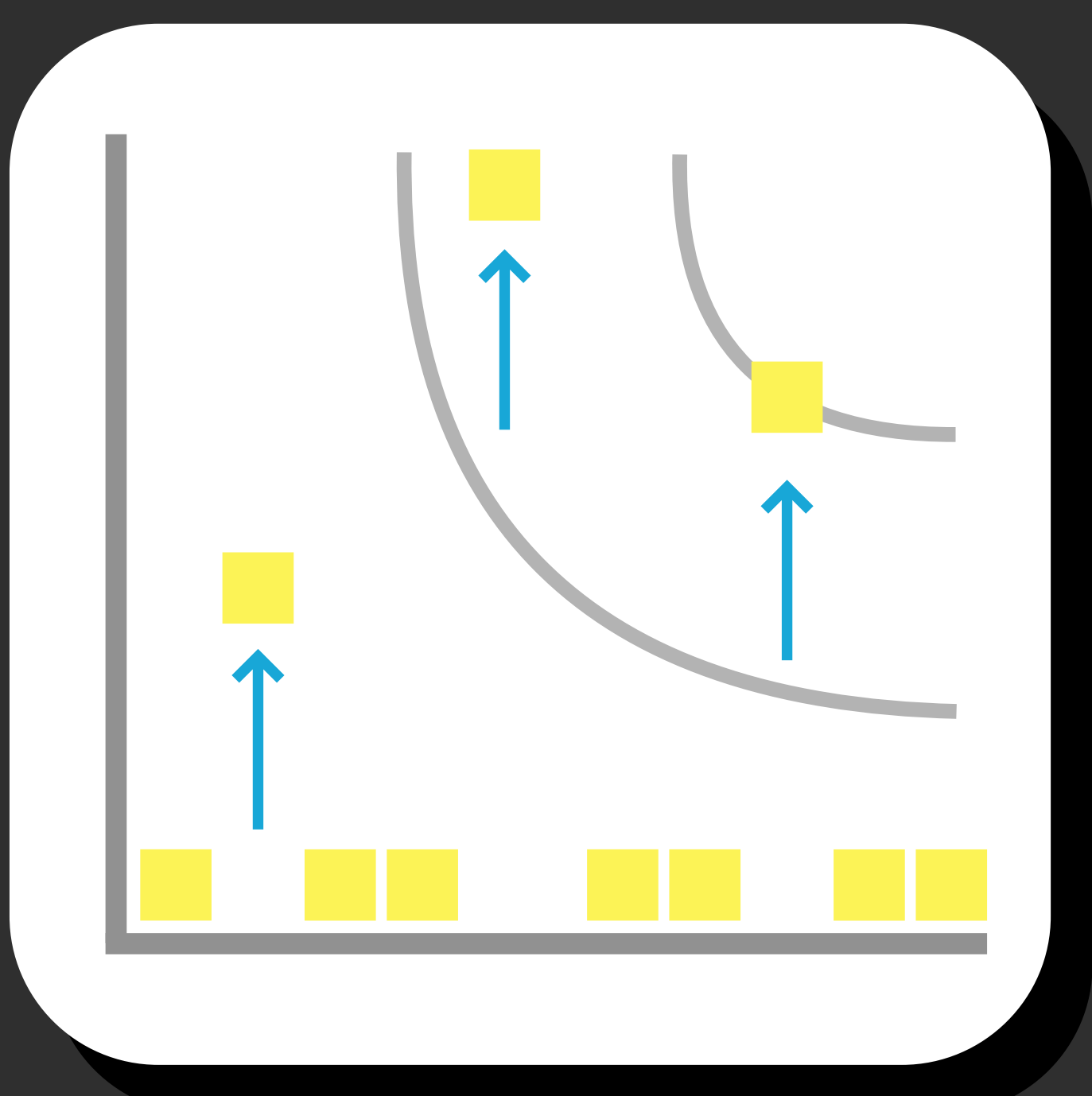
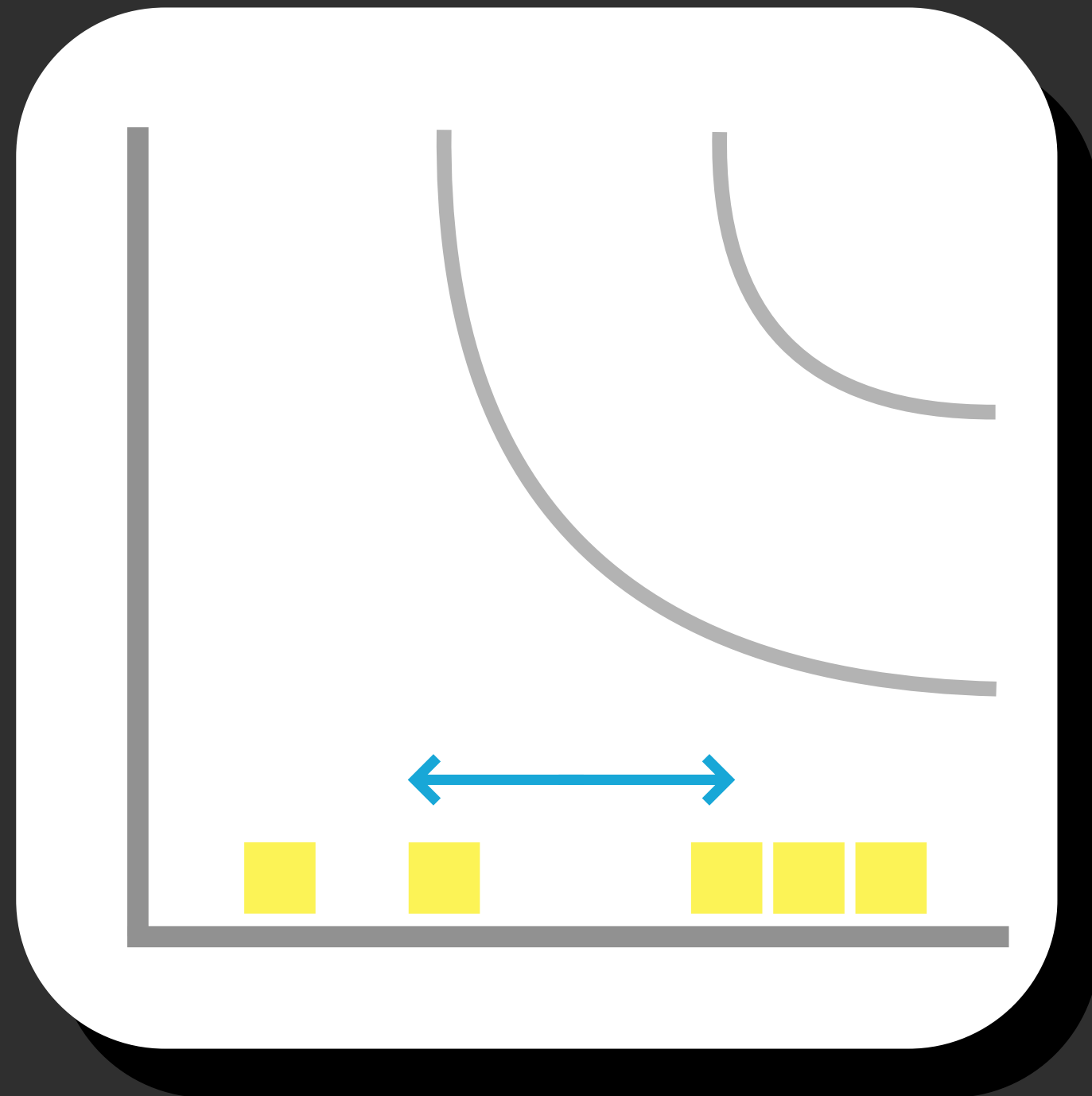


Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the **H** key on the keyboard.



Feasibility

Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)





### After you collaborate

You can export the mural as an image or pdf to share with members of your company who might find it helpful.

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### Quick add-ons

- A

**Share the mural**  
**Share a view link** to the mural with stakeholders to keep them in the loop about the outcomes of the session.
- B

**Export the mural**  
Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or save in your drive.

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### Keep moving forward

- Strategy blueprint**  
Define the components of a new idea or strategy.  
[Open the template →](#)
- Customer experience journey map**  
Understand customer needs, motivations, and obstacles for an experience.  
[Open the template →](#)
- Strengths, weaknesses, opportunities & threats**  
Identify strengths, weaknesses, opportunities, and threats (SWOT) to develop a plan.  
[Open the template →](#)

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