From data to insight: Interviewing and Simplifying Data

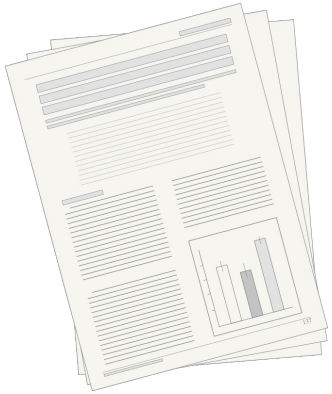
How to get information from data and process it so that people can relate

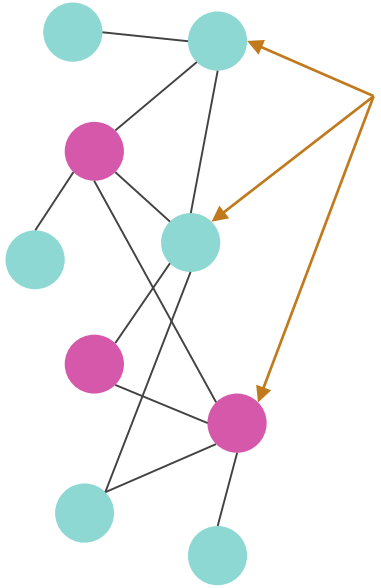
What we will cover…

- Interviewing data
  - What is interviewing data and why?
  - How is the process look like?
- Simplifying data
  - Why simplifying data
  - How it work?
- What to keep in mind…

Interviewing Data

Story is made up of information



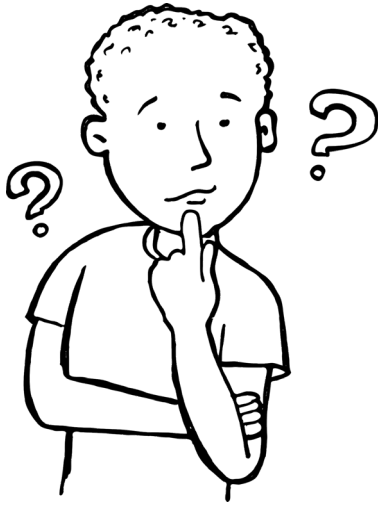


Story

Where information come from?

Document

Human



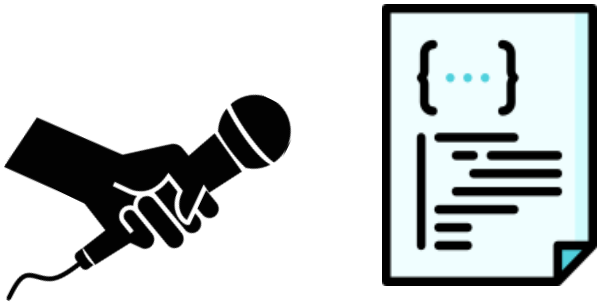
What else???

Where information come from?

Where information come from?

We interview a person to get information from that person

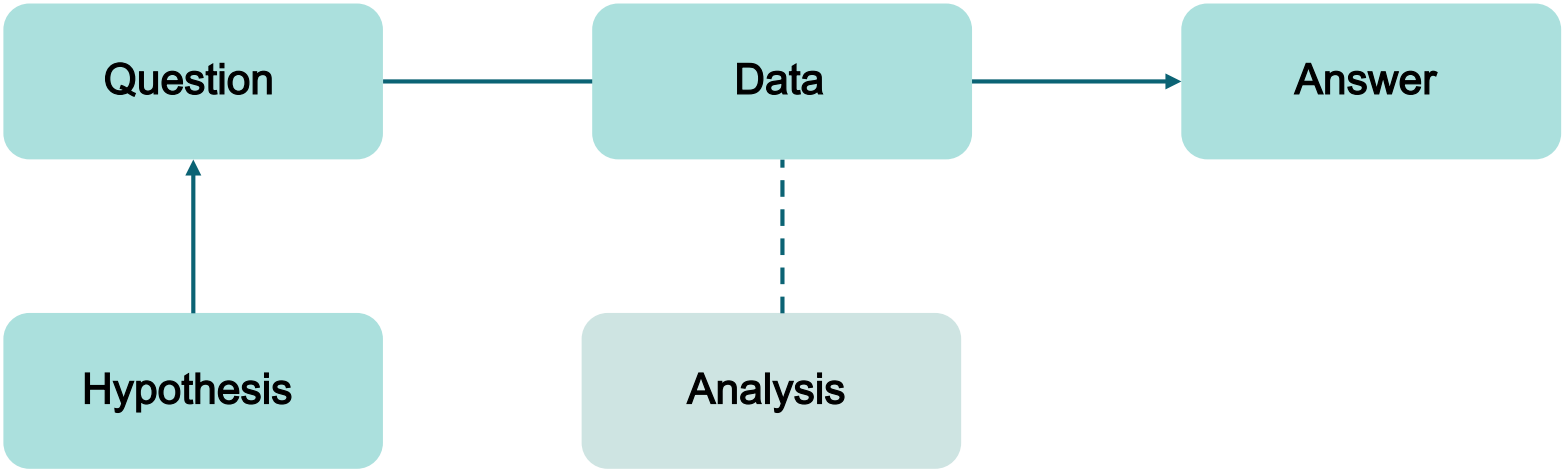
Where information come from?



We interview data to get

information from data

How the process look like?



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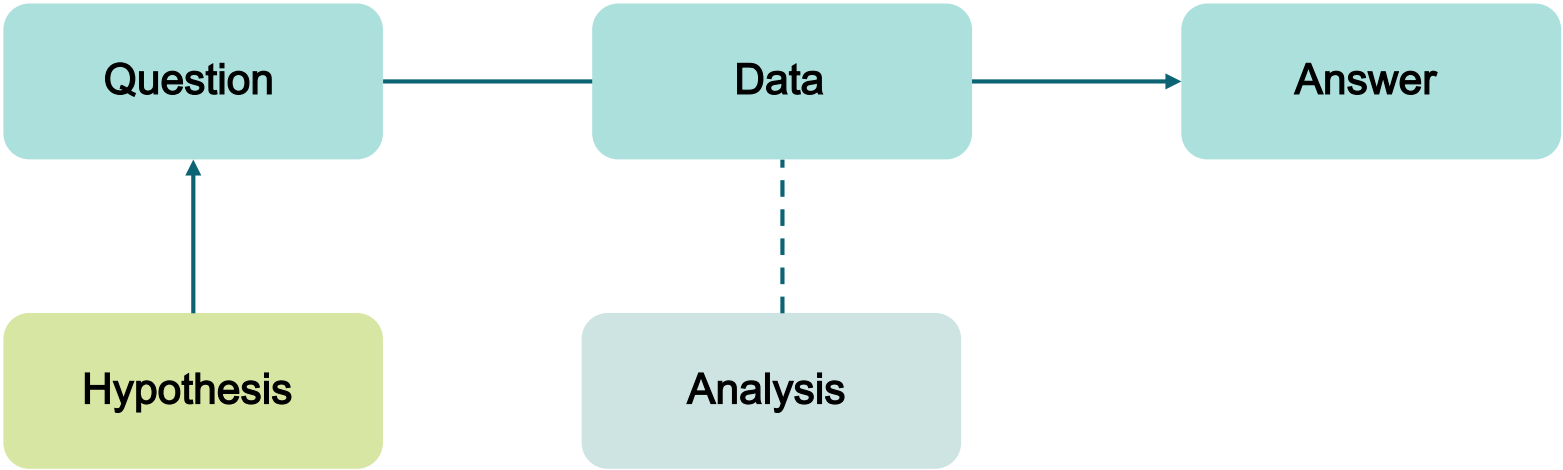


Why hypothesis?

- Hypothesis is what you assume to be true based on background of the problem and the topic.
- It give you something to verify in seeking for the truth.
- It set the scope of your story, so you can handle it better .

Hypothesis: Examples

Education Quality

“Students perform poorly due to teacher’s lack of skills and support on capacity building and teaching materials”.

What you measure?

Problem: How big is the problem? Is it getting worse or better?

Impact: Who is affected by the problem? Which group is affected the most?

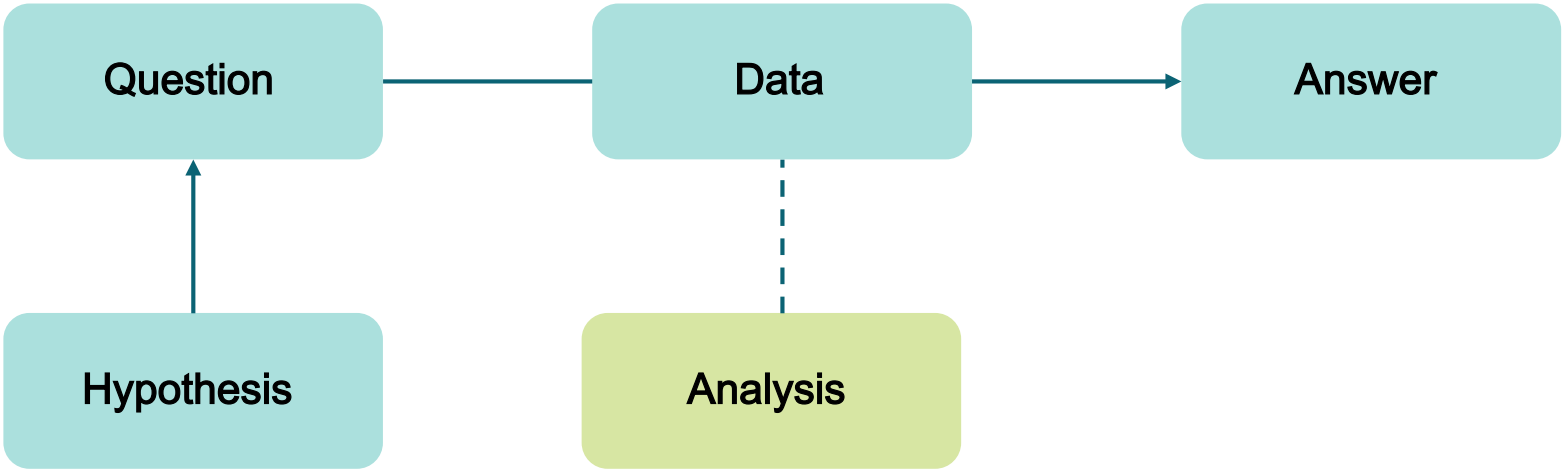
Cause: What factors contribute to causing the problem?

Solution: What is the existing solution to the problem? Is it effective or in opposite, cause more problem?

Forming data -driven question

- Your questions must be answerable with data
- Avoid forming a question that is too broad
- Make sure your question is formed based on the hypothesis and available data
- Ask questions to measure problem, impact, cause, and solution.

How the process look like?



Analyzing data

Data analysis is about answering specific questions from data

You need to have data skill; comfortable with statistic and enjoy working with spreadsheet.

What you need to know about the process analyzing data?

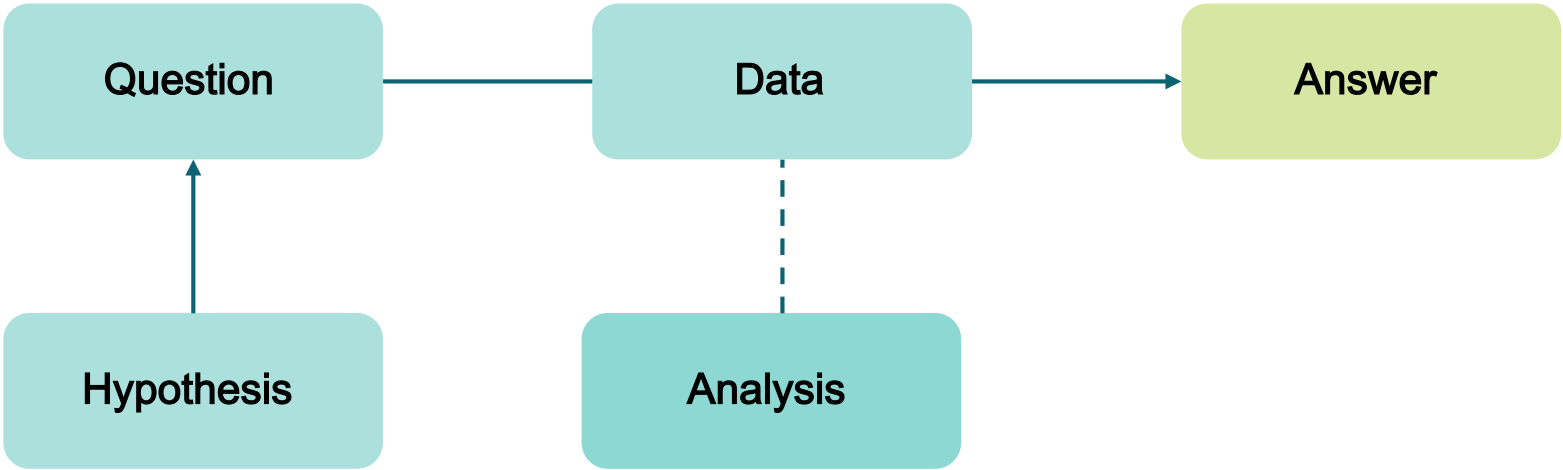
- **Basic operation** : Sum, Minus, Multiply and Divide.
- **Aggregate** : Total, Min, Max, Average.
- **Query**: filtering for a specific category or group.
- **Visualization** : Bar chart, Pie chart, Line chart,...

Data analysis tools

Spreadsheet tools:

Advanced analytic tools:

How the process look like?



What’s Next???

Get your data findings into your story right the way?

Do you really understand your findings?

Well, Your data findings need further refinements in order to extend their full potential.

Simplifying Data

Why it matters?

- Your audiences pay attention to only what is interesting and easy to understand.
- It helps you to understand your findings deeper.
- It allows you to quickly generate insight out of your findings.
- You will help your audiences to see and feel your story the way you do.

Why it matters?

> *“Don’t just throw numbers at people. That’s the worst way to go about it.”*

Technique of simplifying data

- Make your data findings relatable to people
- Use simple words and cut the jargons
- Percentage and ratio: reporting number wisely

Make your data findings relatable to people

A total of 314,042ha of the rice crop had been affected or damaged by rain-induced flooding.

How large is 314,042ha? Is it good or bad? How I could make sense?

Rain flooding damaged rice fields of **more than 4.5 times the size of Phnom Penh capital** .

Make your data findings relatable to people

Electricity consumption per capita of Thailand in 2014 is 2,539 kWh.

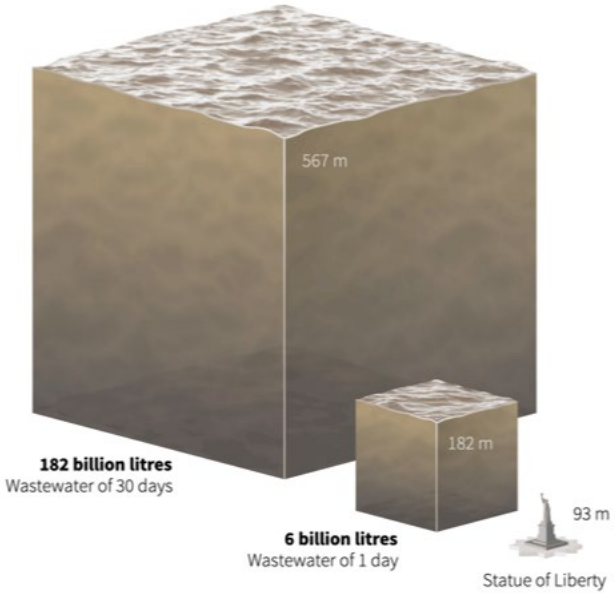
What does 2,539 kWh mean? It is good or bad? How I make sense of this?

How is it compared to other neighboring countries?

The amount of electricity a Thai individual consumed in 2014 for a whole year **can light up a light bulb nonstop for nearly 5 years** . Compared to the neighboring countries, a Thai consume electricity nearly 2 times more than a Vietnamese and 9 times more than a Cambodian.

Make your data findings relatable to people

If just one day's wastewater was pumped into the river was packed into half litre soda bottles, they would stretch to the moon and back nearly four times. If it was formed into a cube, it would be twice the height of the Statue of Liberty.



Use simple words and cut the jargons

Please do not:

- Copying and pasting terms directly from a dataset. Try to write it the way you would explain it to a friend.
- Being unsure whether the number you are reporting is “good” or “bad” since you aren’t sure of the finding.
- Writing very long sentences.
- Trying to put multiple findings in one sentence.

Use simple words and cut the jargons

Less than 1% of teachers do not receive **pedagogical training** .

VS

Less than 1% of teachers are not trained on **how to teach students** .

Use simple words and cut the jargons

There are 11 provinces that meet the ISAF recommended student to teacher ratio of 35-40.

VS

There are 11 provinces that meet the goal of having one teacher teaching no more than 35 to 40 students .

Use simple words and cut the jargons

Seven in ten pre-primary schools do not have access to WASH facilities , and one in two rural healthcare facilities does not have sufficient water all year around.

VS

Seven in ten pre-primary schools do not have access to a safe and accessible water supply and facilities , and one in two rural healthcare facilities does not have sufficient water all year around.

Percentage and ratio: reporting number wisely

Drop out rate of secondary school students is 36%.

VS

One in three high school student drop out.

Percent and ratio: reporting number wisely

Percent is used to report proportion of part to the whole.

Ratio is used to report individual category comparing to the whole individual.

40% of

population do not have access to electricity

VS

Two out of five people do not have access to electricity

Which one more engaging to the audiences?

Percentage and ratio: reporting number wisely

10% of primary schools are located in urban area.

VS

For every one primary school in urban area, there are nine in rural area.

What to keep in mind

Simplifying is not just making your finding more simple.

You need to humanizing your finding, put the audience in the center.

So that they can relate your story.

People hear statistics, but they feel stories.
—Brent Dykes | Director of Data Strategy, Domo

If a story is not about the hearer, he will not listen. And here I make a rule—a great and interesting story is about everyone or it will not last.

— John Steinbeck —

AZ QUOTES

Small assignment

Fill this survey: bit.ly/interviewdatacamp

This survey is aimed to understand how the participants in the session of Interviewing Data satisfy with the session.

Suppose you produce a story about this session

What would be your hypothesis?

Suppose you produce a story about this session

What are the questions for interviewing with data?