Data Readiness 101

Ready - Set - Go!

Welcome!

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Data Management

Agenda

1. Objectives
2. Data through the years
3. Uses of data across organisations
4. Decision-making with data
5. Break
6. Application

Objective - General

1. **Raise awareness** of the key role that data plays in today's organisations.
2. Understand the importance of **data collection methods**.
3. Show you how to implement **data management tools**.
4. Learn and have fun!

Objective - Particular

Ready: Talk about the importance of data for our daily lives (Today).

Set: Explore data collection and sources (Fri July 22).

Go!: Develop each participant’s data agenda (Fri July 27)

1. Data through the years

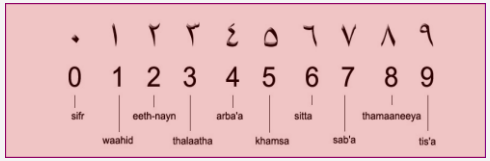
1.Data through the years – a world of information

Numbers are everywhere

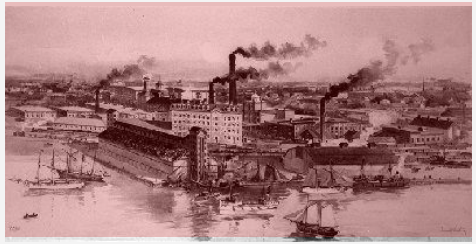
1.Data through the years – a little history

When did the number invasion begin?

Hindu-Arabic numbers made easier to count and do simple arithmetic (around a thousand years ago)



Industrialisation of cities - commerce, monetary wages, rent, budget earnings.



Government relies highly in numbers to collect taxes and pay for other expenses.

1.Data through the years – something curious

Curiously! We didn't start to systematically collect social phenomena data like births, deaths and marriages until the 17th century.

WHY?

David's sin

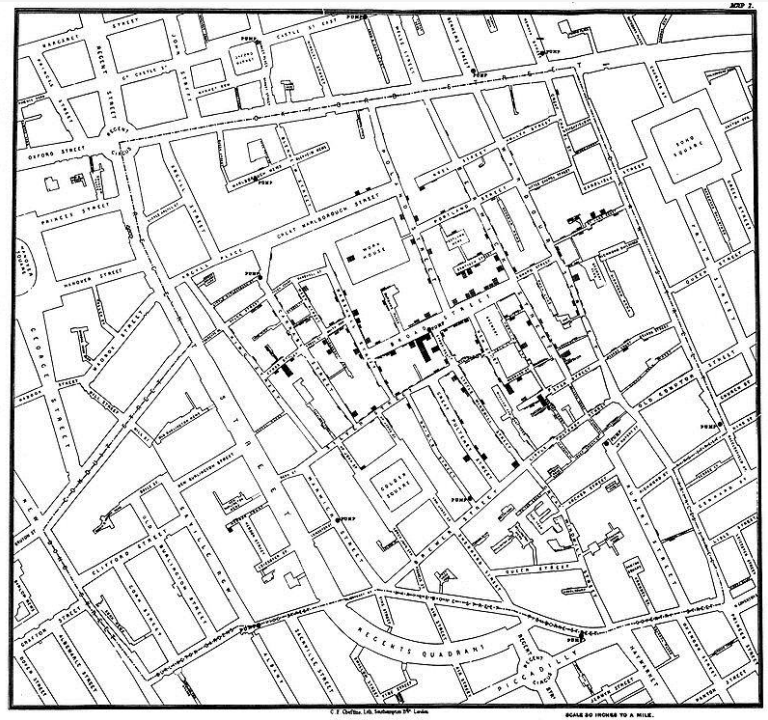
1.Data through the years – history changers

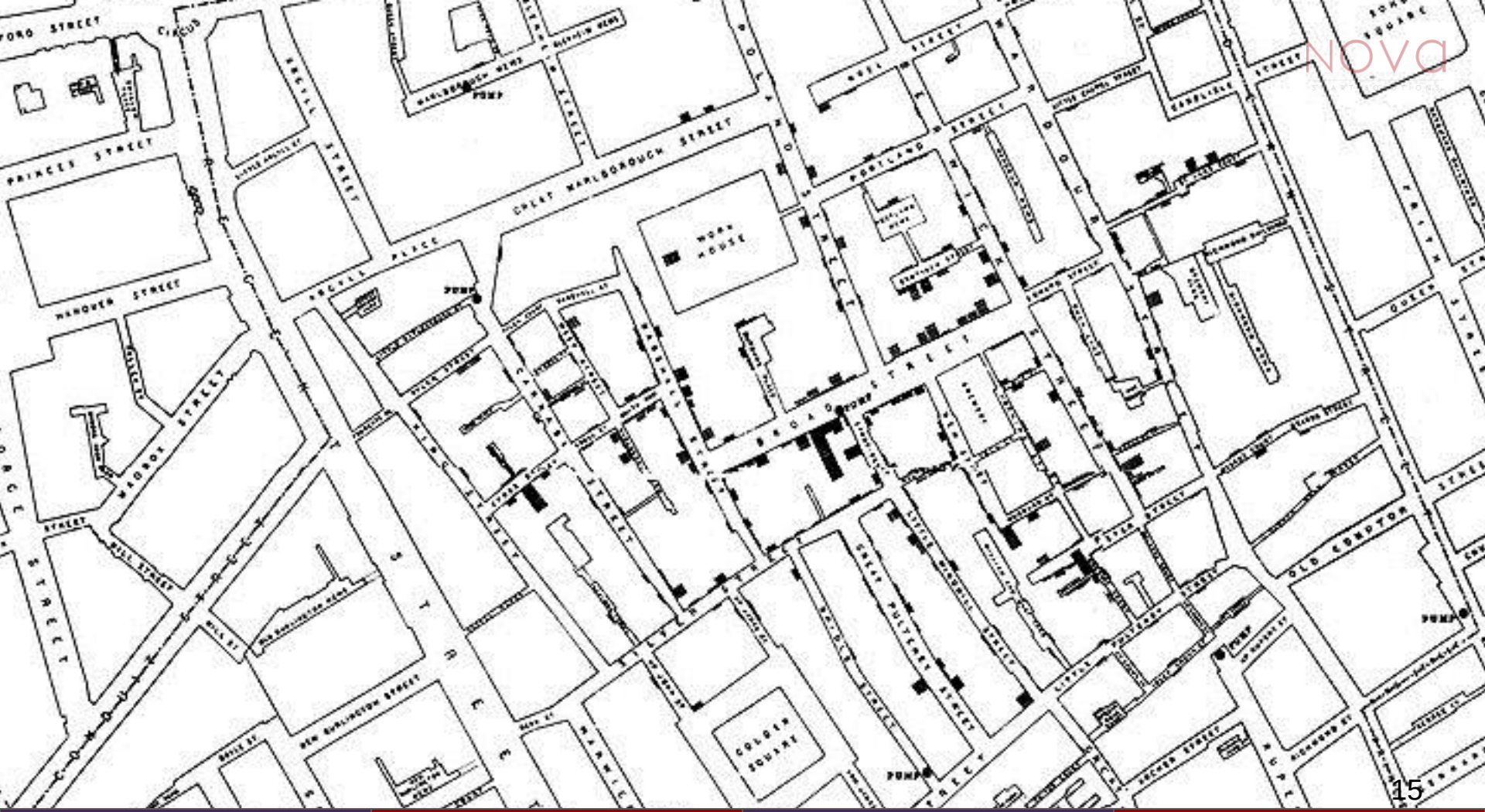
London’s cholera outbreak

1.Data through the years – history changers

John Snow

1.Data through the years – John Snow’s map

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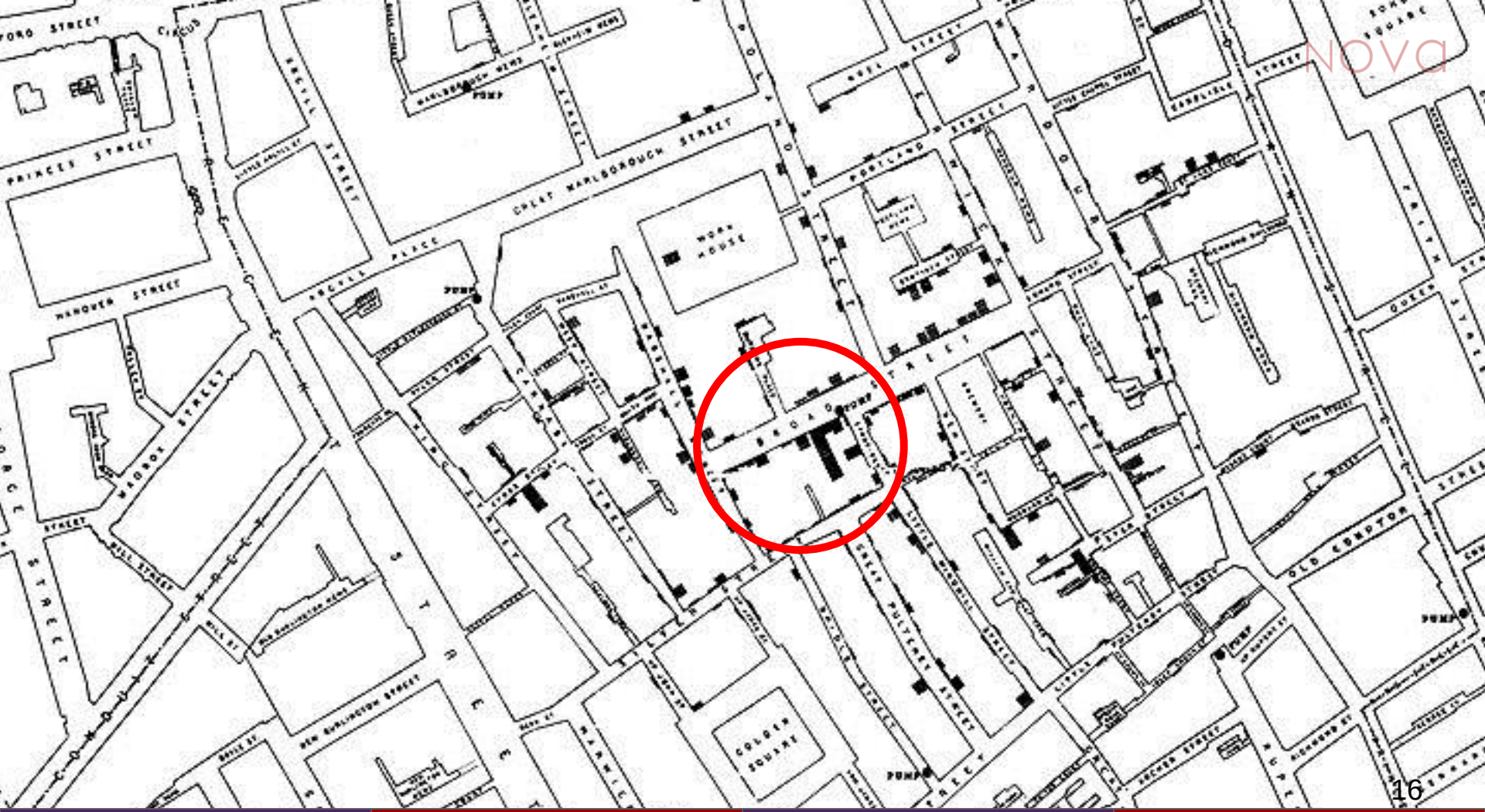
WORK HOUSE
BROAD STREET
GREAT PULTENEY STREET
COLOGNE SQUARE
OLD COMPTON
PUMP

Nova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1. Collected and measured information

2. Found patterns in data collection

3. Made data visually friendly

4. Informed the decision-making process

5. He improved his community

1.Data through the years – John Snow’s Legacy

- **Mapping** spread of disease.
- Birth of **epidemiology** and **statistical analysis**.
- **Collect** information and **connect the dots**
- **Improve conditions** with statistical surveys.

The John Snow pub

1.Data through the years – The Athletics' story

An event that changed the way we do business in sports today:

MLB 2002 season - Oakland Athletics

https://youtu.be/yGf6LNWY9AI?t=27s

" People are overlooked by a variety of biased reasons and perceived flaws"

1.Data through the years – AFL statistics

Player	Club	Marks		Goals		Behinds	
		TOT	AVG	TOT	AVG	TOT	AVG
1 Lance Franklin	SYD	84	5.6	53	3.5	35	2.3
2 Josh J. Kennedy	WCE	88	6.3	49	3.5	22	1.6
3 Tom J. Lynch	GCFC	104	6.9	48	3.2	18	1.2
4 Josh Jenkins	ADEL	77	5.5	40	2.9	15	1.1
5 Jesse Hogan	MELB	107	7.1	38	2.5	22	1.5

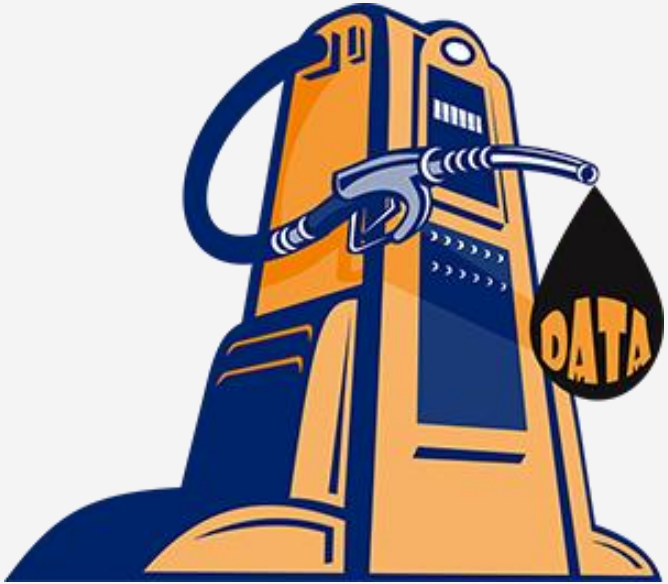
1.Data through the years – Data today

- Data collection tools and techniques have evolved.
- Data is being generated as we speak
- The technology to collect it is simpler to use and more accessible

1.Data through the years – Data, the new oil

Why some call data the new oil:

- If you know how to extract it and store it, you can use it in your favour.
- BUT if you don’t know what to do with it, then it’s useless!
- If you know how to process it, analyse it, refine it and adapt it for different purposes, then it can be very valuable.



Buzz

What data do you use in every day life to help you make decisions?

2. Uses of Data

2. Uses of data

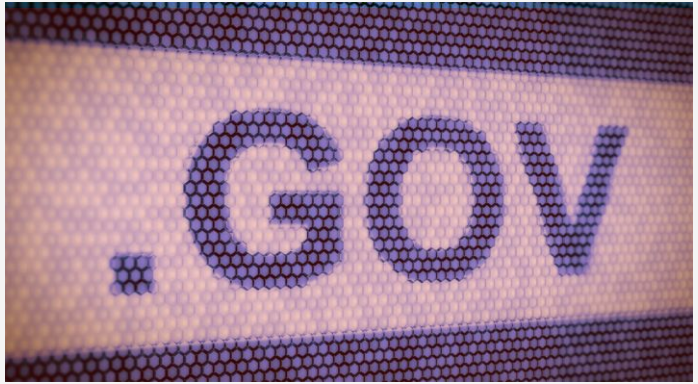
Businesses:

- Understand customer preferences
- Product development (music, fashion, e.g. the Shazam effect, Spotify)
- Sell tailored products (Amazon, Netflix, Google)
- Financial and operational health

2. Uses of data

Government:

- Understand public issues (health, transport, tax collection)
- Evaluate processes
- Improve outcomes
- Benchmark internally and internationally



2. Uses of data

NGOs – Importance of data

- Improve management and efficiency
- Provide more critical and honest feedback to donors, funders, sponsors
- Government is more strict about evidence-based reports (e.g. outcomes measurement reports)
- Improve collective impact & demonstrate partnerships

2. Uses of data

NGOs – uses of data

- Get results for clients
- Improve grants submissions
- Comply with regulations
- Monitor and evaluate programs
- Understand communities
- Improve programs
- Financial sustainability
- Information about organisation's culture
- Inform policy
- Advocate for change

3. Decision making with Data

3. Decision Making with data

How data helps the decision-making process

- Plan strategically
- Ask and answer key questions
- Lead to insights and actions
- Identify gaps

3. Decision Making with data

Six Key Steps

3. Decision Making with data

Step 1:

Frame the issue

Step 2:

Review previous findings

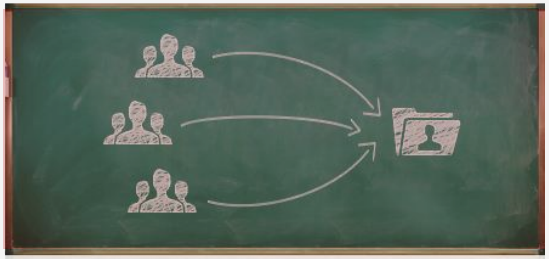
3. Decision Making with data

Step 3:

Design the solution and define the variables

Step 4:

Collect the data



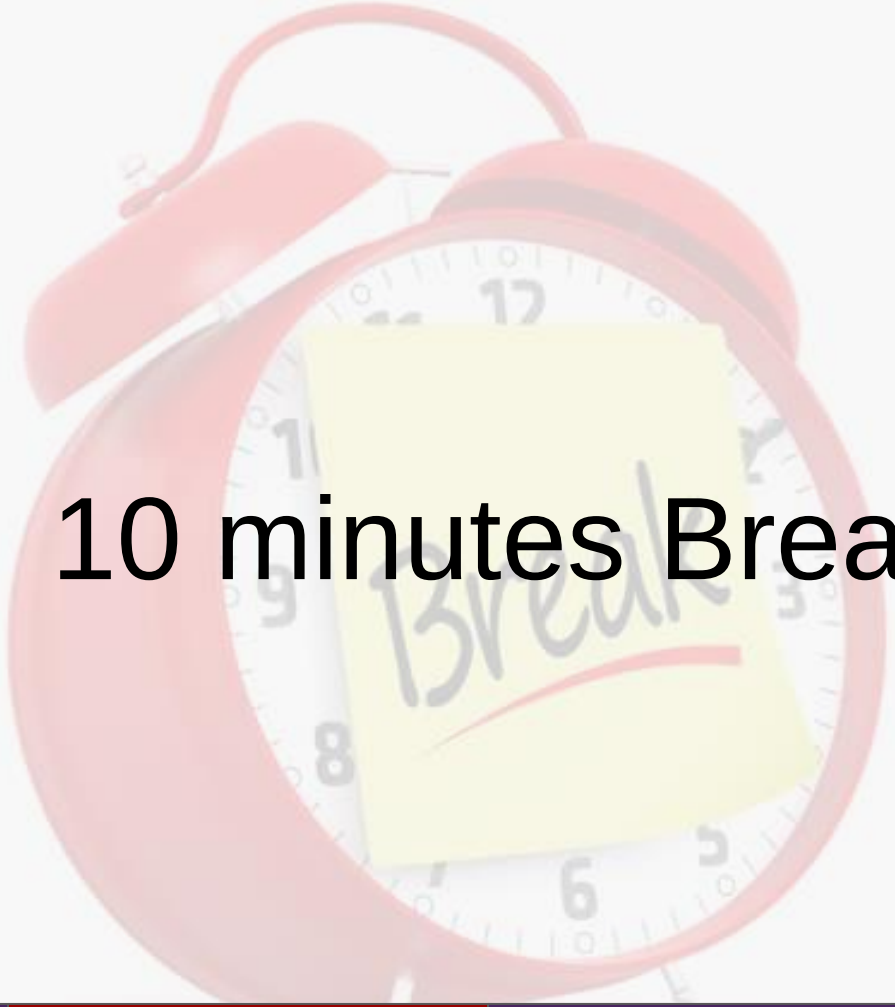
3. Decision Making with data

Step 5:

Analyse the data

Step 6:

Present and act on the results



10 minutes Break

5. Application

5. Application

Is there a compelling story behind the numbers?

Case study: Global Island Partnership in the Pacific

https://www.youtube.com/watch?v=Gi-laJxqpW4

Demonstrating progress https://impact.glispa.org/dashboards/glispa

5. Application

Together in the South Pledge

“Every child is safe, healthy, active, ready to learn and getting along with others.”

5. Case studies

Together SA's case study

- Understand government expenses
- Overview of stakeholders intervention
- Summary of resources origin
- Visual presentation of results

5. Case studies

Together SA's case study

Goal: Have the evidence to advocate for a better allocation of resources and generate positive impact on South Australian Children.

5. Case studies

Together SA's case study

- Collected data from external sources
  - Australian Bureau of Statistics
  - Federal Budget
  - State Budget
- Extraction of data
  - Manually
- Software used
  - Excel
- Target audience
  - NGOs, Government agencies
- Presentation
  - Infographics

What did we learn today ?

Next week

- Types of data
- Data collection tools & Methodology
- Data sources

References

Books

- Cohen, I.B, 2005 *The triumph of Numbers, How counting shaped modern life,* W.W. Norton & Company
- Johnson, S, *How we got to now*
- Devlin, K, 2011 *The Man of Numbers, Fibonacci's Arithmetic Revolution,* Bloomsbury

Online Articles:

Data driven decisions for managers who dont like math

Three things great data storytellers do differently

Data driven decision making

Keep up with your quants

Five steps for making data-driven decisions

Three things data storytellers do differently