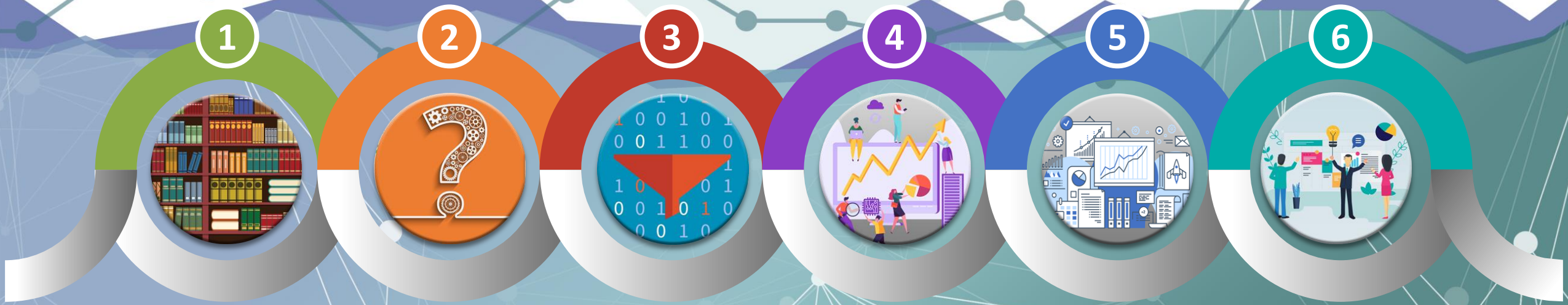
PRASC

Project for the Regional Advancement of Statistics in the Caribbean

Projet régional pour l'avancement de la statistique dans les Caraïbes

In partnership with Canada

Analysis 101:
Steps of the analytical process



March 29, 2022

STATISTICS CANADA TRAINING INSTITUTE

Delivering insight through data for a better Canada

Welcome!

Evelyne Bougie

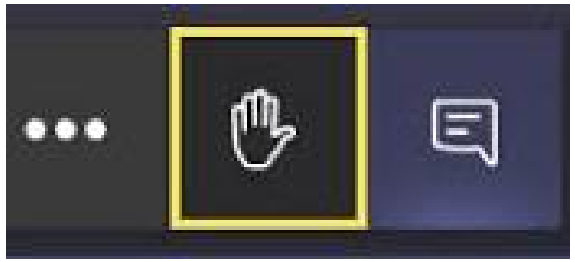
- PhD in social psychology
- StatCan since 2006
- Area of expertise: Indigenous health

Engagement

Analysis 101 is meant to be a very interactive course.

Much of the classroom version of this course was dedicated to sharing stories as we worked through the content.

When you see the chat/hands up icons, please engage via the chat or raise your hand to share a story or example.



Share your ideas/questions

Take notes [active listening]

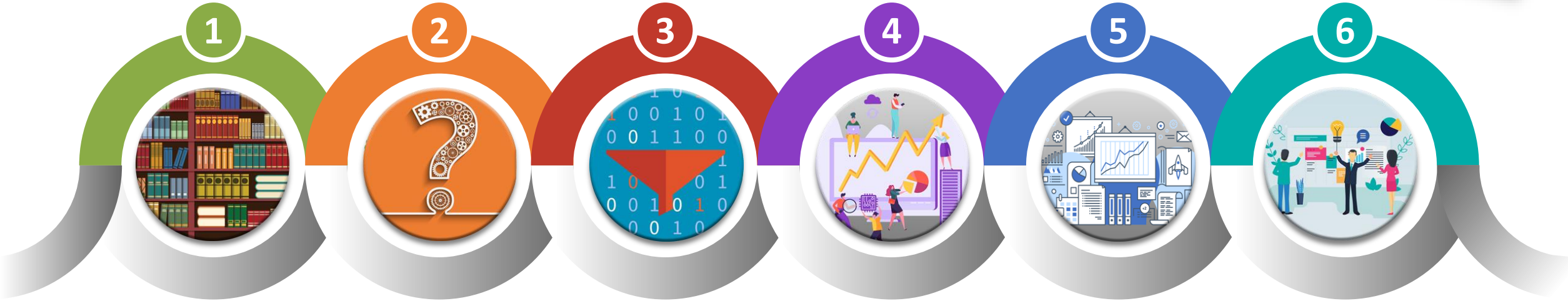
When you see the slido icon, please enter the code provided to engage in the discussion!

slido

Enter Code: 2400

Course Content

Analysis 101



MAKE
AN ANALYTICAL PLAN
(CONTEXT AND ANALYTIC QUESTION)

IMPLEMENT
YOUR PLAN
(PREPARE AND ANALYZE YOUR DATA)

SHARE
YOUR FINDINGS
(SUMMARIZE AND DISSEMINATE)

Course Objectives

Upon completion of this course, participants will understand the analytical process.

1. **Planning your analysis**: how to define an analytical question, how to create a formal analysis plan;

2. **Performing your analysis**: how to best prepare, organize, and examine your data;

3. **Sharing your findings**: best practices for reviewing your work and presenting your findings to an audience

This process applies to many different analytical projects – social, business, health, economic

Data Literacy Training Initiative

Check out this free resource!

Self-study suggestions

Data literacy training

statcan.gc.ca/eng/wtc/data-literacy

Français

Statistics Canada | Statistique Canada

Search website

Subjects | Data | Analysis | Reference | Geography | Census | Surveys and statistical programs | About StatCan | Canada.ca

Home > Workshops, training and conferences

Data literacy training

As Canada's national statistical organization, Statistics Canada is committed to sharing our knowledge and expertise to help all Canadians develop their data literacy skills. The goal is to provide learners with information on the basic concepts and skills with regard to a range of data literacy topics.

The training is aimed at those who are new to data or those who have some experience with data but may need a refresher or want to expand their knowledge. We invite you to check out our Learning catalogue to learn more about our offerings including a great collection of short videos. Be sure to check back regularly as we will be continuing to release new training.

What is data literacy?

Data literacy is the ability to derive meaningful information from data. It focuses on the competencies involved in working with data including the knowledge and skills to read, analyze, interpret, visualize and communicate data as well as understand the use of data in decision-making.

Data literacy also means having the knowledge and skills to be a good data steward including the ability to assess the quality of data, protect and secure data, and their responsible and ethical use.

Data literacy competencies
Data literacy competencies are the knowledge and skills you need to effectively work with data.

Data journey
The data journey represents the key stages of the data process starting with finding and exploring data through to telling the data story.

Learning catalogue
Check out the data literacy training available from Statistics Canada

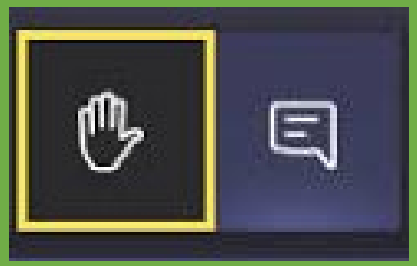
Report a problem or mistake on this page

Share this page

Data Literacy Learning Catalogue: https://www.statcan.gc.ca/eng/wtc/data-literacy/catalogue

Short videos on a variety of topics

Canada



Analysis is central to all national statistical offices' mandate

- At Statistics Canada we have three guiding principles for analysis:

?

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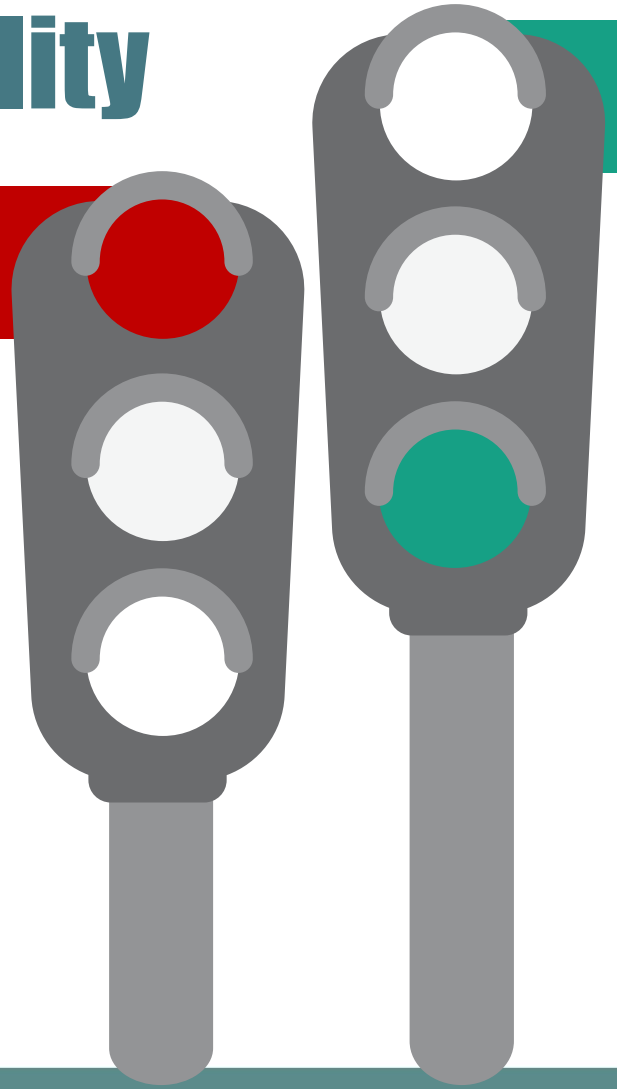
Neutrality

- Neutrality means we **inform** policy through analysis
  - We don’t comment. We don’t “take sides”.
  - We don’t critique or evaluate policy.
- Aim for an **impartial** presentation of results.
- **We let the data speak for themselves.**

Maintain neutrality

Subjective

- ☒ Massive
- ☒ Alarming
- ☒ Only



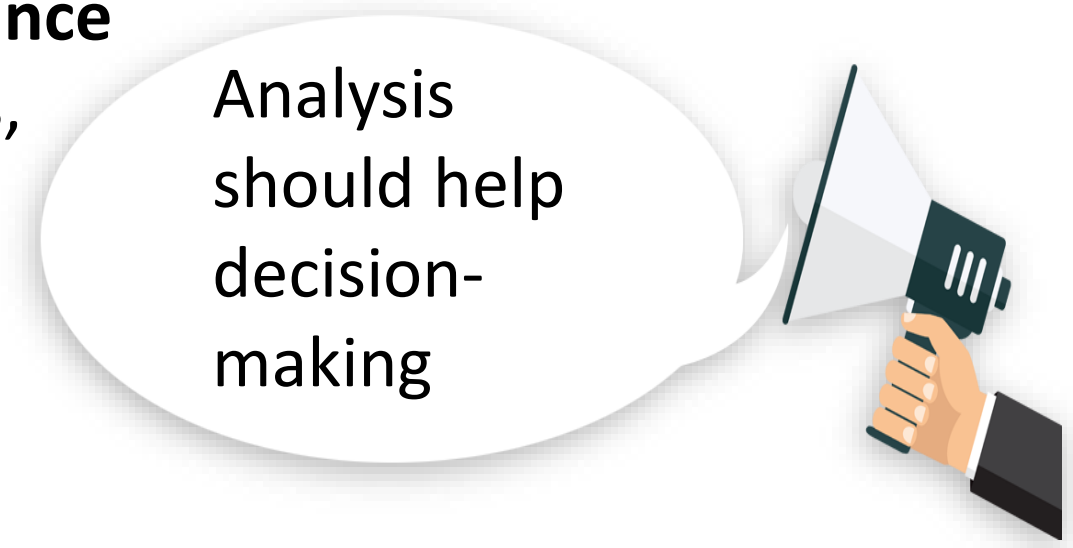
Neutral

- ☑ Increased or decreased by X%
- ☑ Higher or lower by X times

Relevance

- Analysis should address **issues of importance** to policy-makers, stakeholders, data users, and the general population.

- Analysis should contribute to a **better understanding** of current and emerging economic or social issues.



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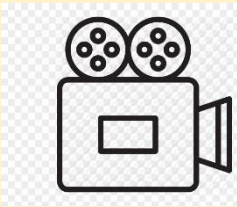
Rigour

- Analysis should be statistically defensible and supported by the data.
- Methodology is transparent.
- Conclusions are fact-based or evidence-based.
- Data go through an extensive quality assurance process (quality control).



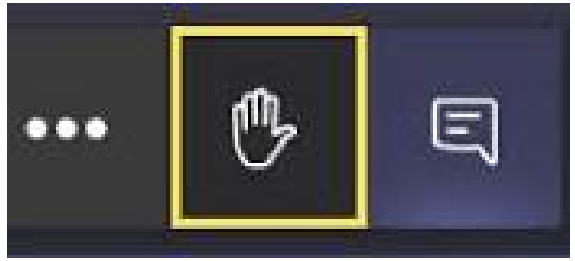
Self-study:
Data Quality in Six Dimensions

Data Quality in Six Dimensions

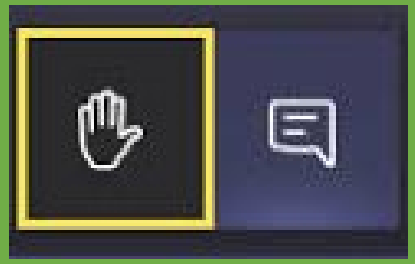
Relevance	• Degree to which the information meets the needs of users and stakeholders
Timeliness	• Delay between the time when the data are meaningful and when they are available
Accuracy	• Degree to which what is being measured is in line with what is actually true
Accessibility	• Degree to which people are aware of and have access to the data
Coherence	• The same concepts, definitions and methods are used overtime and across statistical programs
Interpretability	• Metadata is provided to allow users to interpret the data properly

Analysis at your organization

- Are there some other guiding principles for your organization or in your department that we haven’t covered?



Share your ideas/questions



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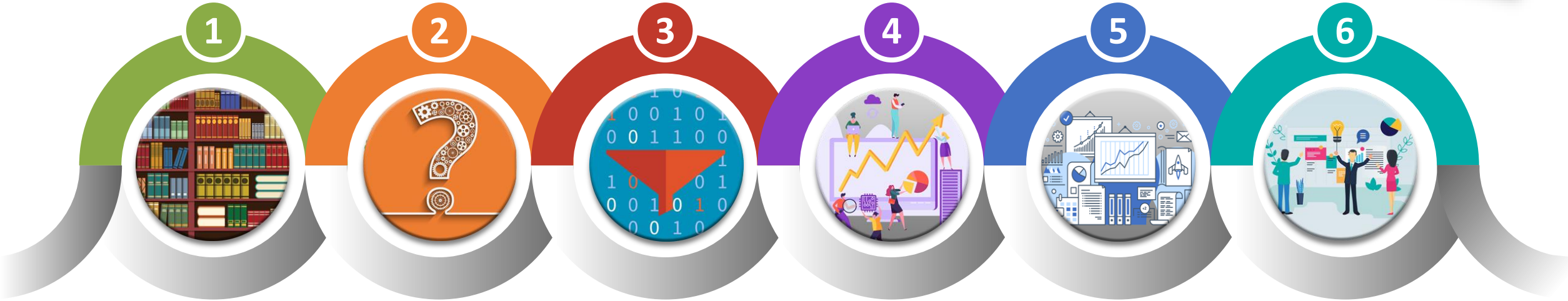
Analysis 101



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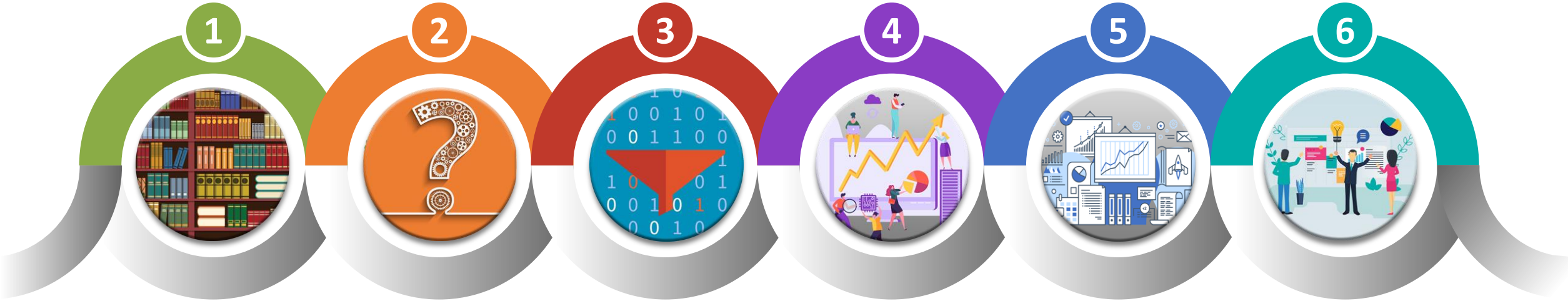
Planning your analysis

How to define an analytical question and how to create a formal analysis plan



PLANNING YOUR ANALYSIS

Step 1: What do we already know?

Step 1: What do we already know?

- Understand the context and previous work on the topic.
- What are the knowledge or information gaps?
- What are the issues of interest or concern to stakeholders?

Look for previously published information

- Government publications
- Reports from reputable organisations (e.g., WHO)
- Peer-reviewed publications
  - Systematic reviews
  - Meta analyses
- *Media reports
- *Websites
- …

***Ask yourself…**

✓ Is the organization behind the report reputable?

✓ Is the journal reputable? (beware of pay to publish journals)

✓ Does the news story cite the original source? Can you find the original source?

✓ Beware of websites. Again, who is the organization putting out the information?

✓ Beware of forums and opinions that can be packaged nicely to look like ‘facts’

Step 1: What do we already know?

Literature review or environmental scan

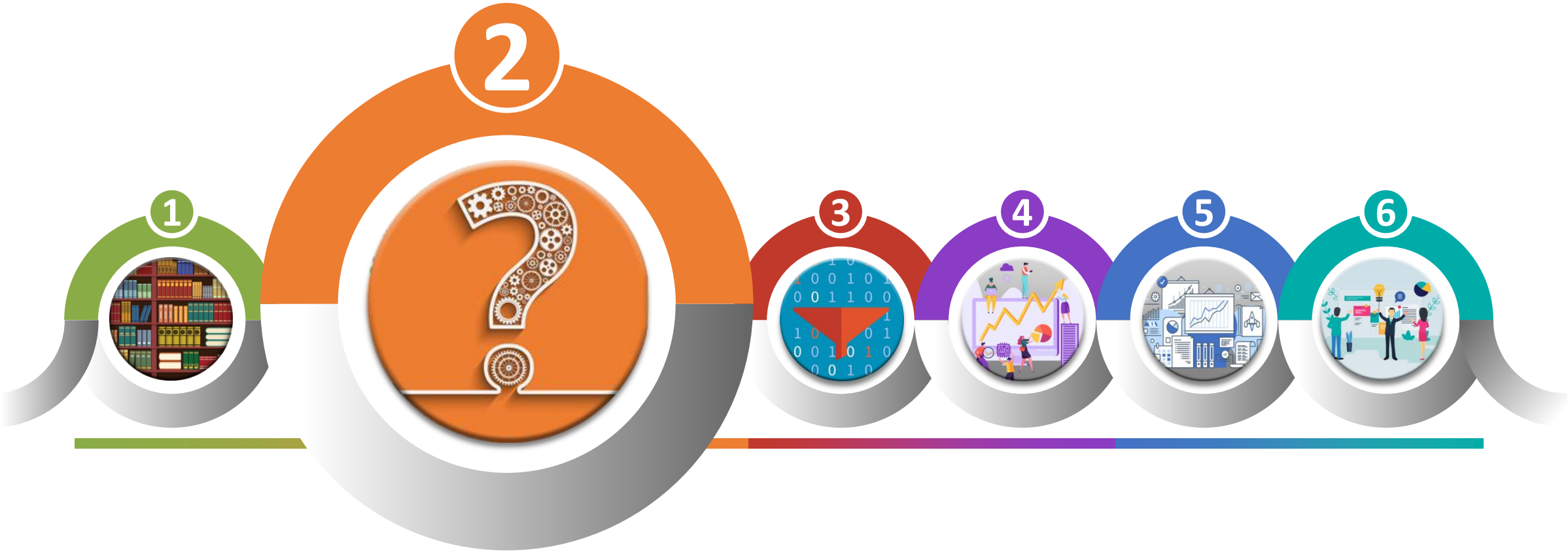
What do we already know?

What are the research gaps or needs?

Question

Relevant contribution

Step 2: What is your analytical question?



What is your analytical question?

- What are you trying to find out?
- Why is this question relevant?
  - Why should we care?
- What is the value added?
  - To your organization, your client, our understanding of the topic.

Plan your analysis

- Put together a one page plan
  - ✓ Context
  - ✓ Analytical question
  - ✓ Data and methodology
  - ✓ How will you communicate your results?
  - ✓ Know your audience

Timelines

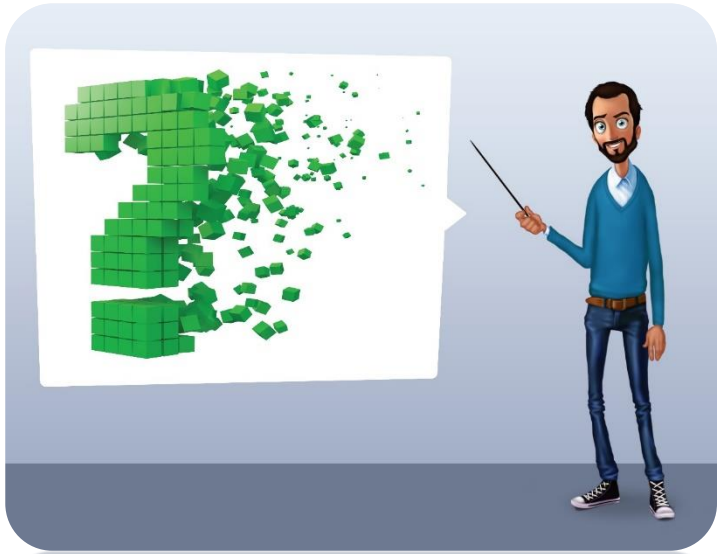
Seek feedback

- Can I benefit from feedback or expertise from colleagues?
  - ✓ Ongoing feedback, from the beginning
  - ✓ Subject matter
  - ✓ Data
  - ✓ Methodology
  - ✓ Terminology

Stakeholders, organizations?

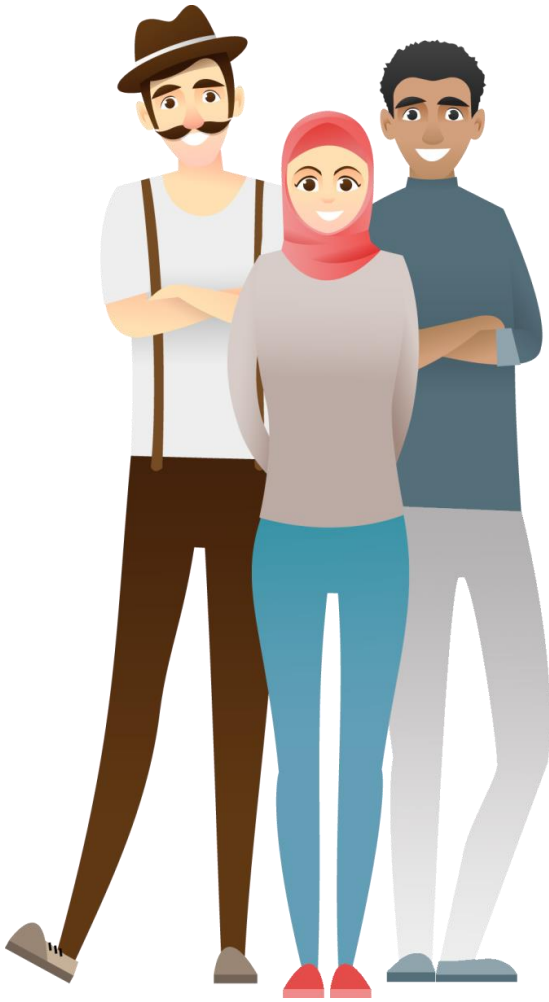
Summary of key points

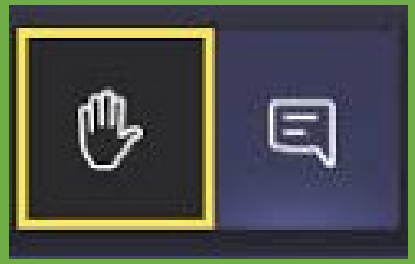
- The analytical process can be viewed as a series of steps designed to answer a **well-defined question**.
- Once the topic has been defined and the **value-added** determined, the next step is to create an analytical **plan**.
- Incorporating **feedback** is an important part of planning an analytical project.
- Make sure that your analysis involves a **purposeful**, objective and rigorous examination of data.



Remember...

- You are in the best position to understand the context surrounding your project.
- A literature review is not always necessary or relevant. However, it is rare that a project does not fit into a more global context. Try to understand this context.
- In doing so, you will ensure the relevance of your analytical questions.
- Make an analysis plan and get feedback before you even dive into the analysis.





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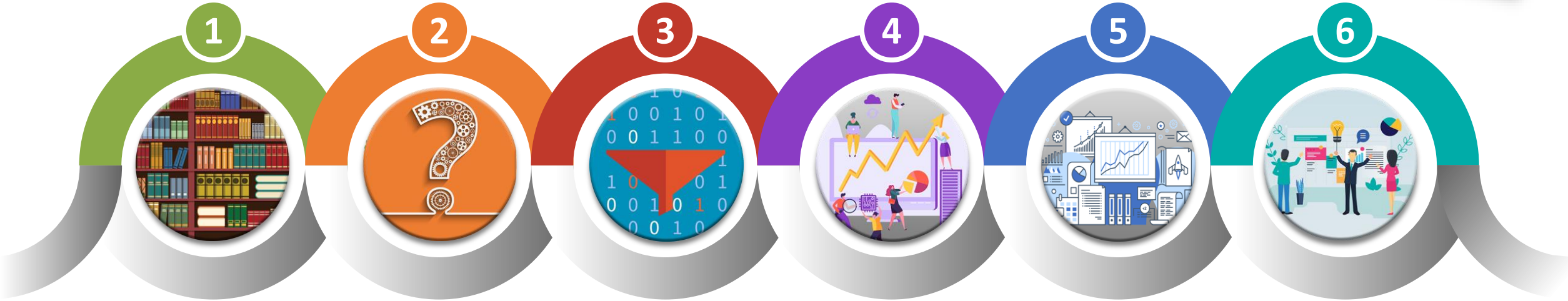

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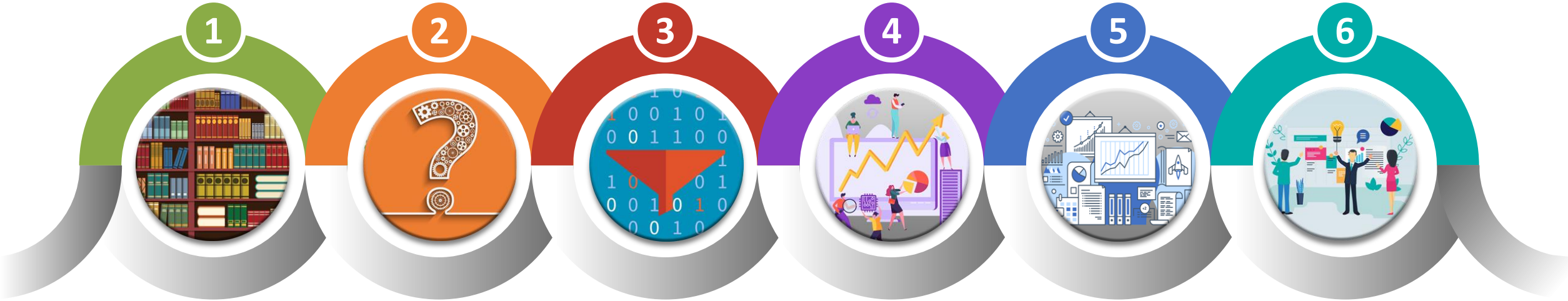
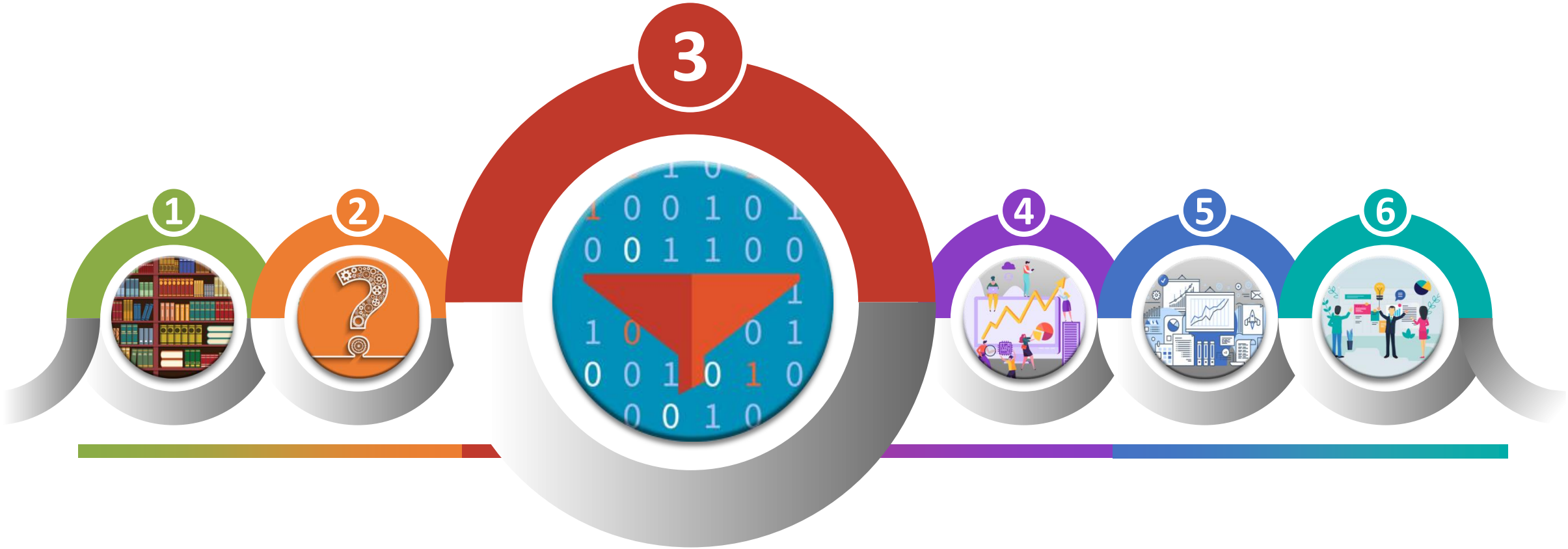
Performing your analysis

How to best prepare, organize, and verify your data



PERFORMING YOUR ANALYSIS

Step 3: Prepare and check your data



Prepare and check your data

Put the data in a format suitable for analysis

If you're using *micro-data files*, you will likely have to:

- Select variables you need for your analysis and restrict your sample to your population of interest
- Double-check how variables were coded; if needed, create and derive variables and recode existing ones
- Merge micro-data files (e.g. different survey cycles)

Prepare and check your data

Put the data in a format suitable for analysis

If you're using *micro-data files*, you will likely have to:

- Run basic frequency tables, compute means and medians, to look at your data and detect errors/inconsistencies early on
- Check for sample size (i.e., minimum cell counts)

Prepare and check your data

Put the data in a format suitable for analysis

If you're using *aggregate data* you will likely have to:

- Extract data from several tables
- Create a data file with all the series you need for your analysis
- Make sure you have a clear understanding of what every series is measuring
- Look graphically at key series in your dataset. Are there any inconsistencies?

Prepare and check your data

Best practice:

- Try to reproduce numbers that have been previously published (previous reports from your organization, other studies)
  - Differences may indicate errors in your data manipulations
- It is common for the analysis to identify issues that may limit your analysis or warrant further investigation
  - Be prepared to make adjustments to your plan
  - Be prepared to look for additional sources of data, or to look at data at a different level (more or less detailed)

Define your concepts

Is a hot-dog a sandwich?

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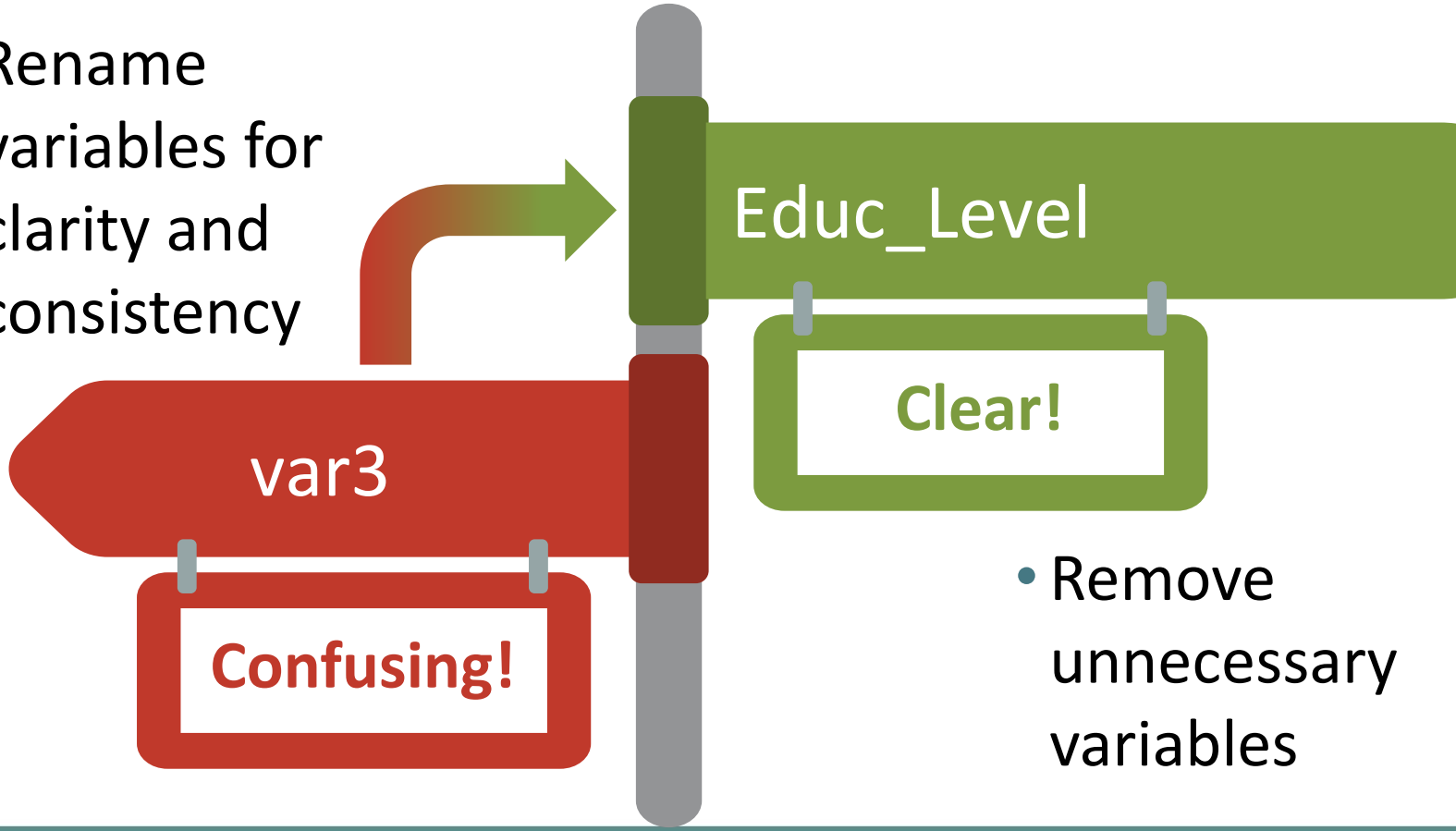
Code 2400

Clean up the variables and the dataset

- Rename variables for clarity and consistency



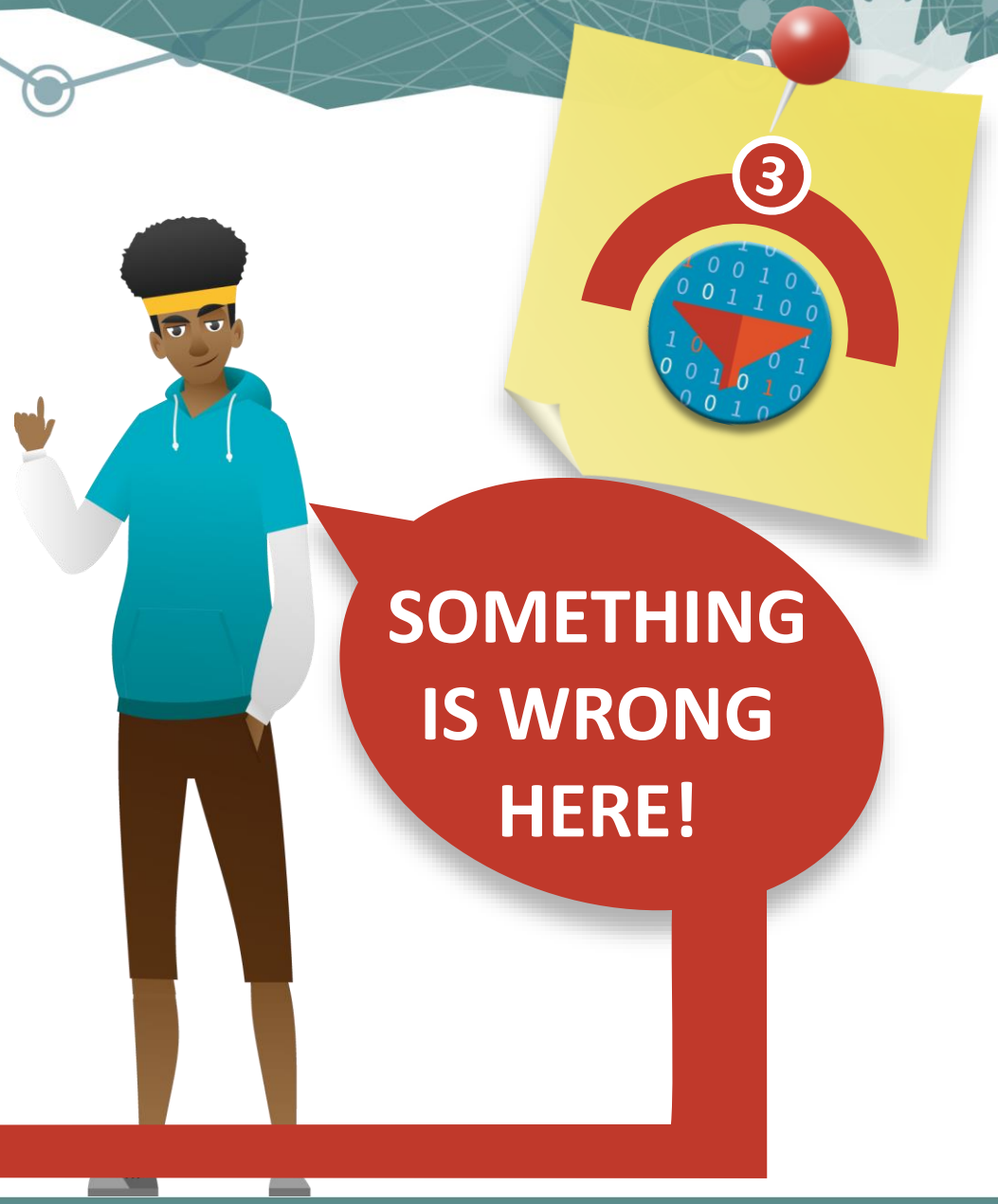
- Remove unnecessary variables

Check your data

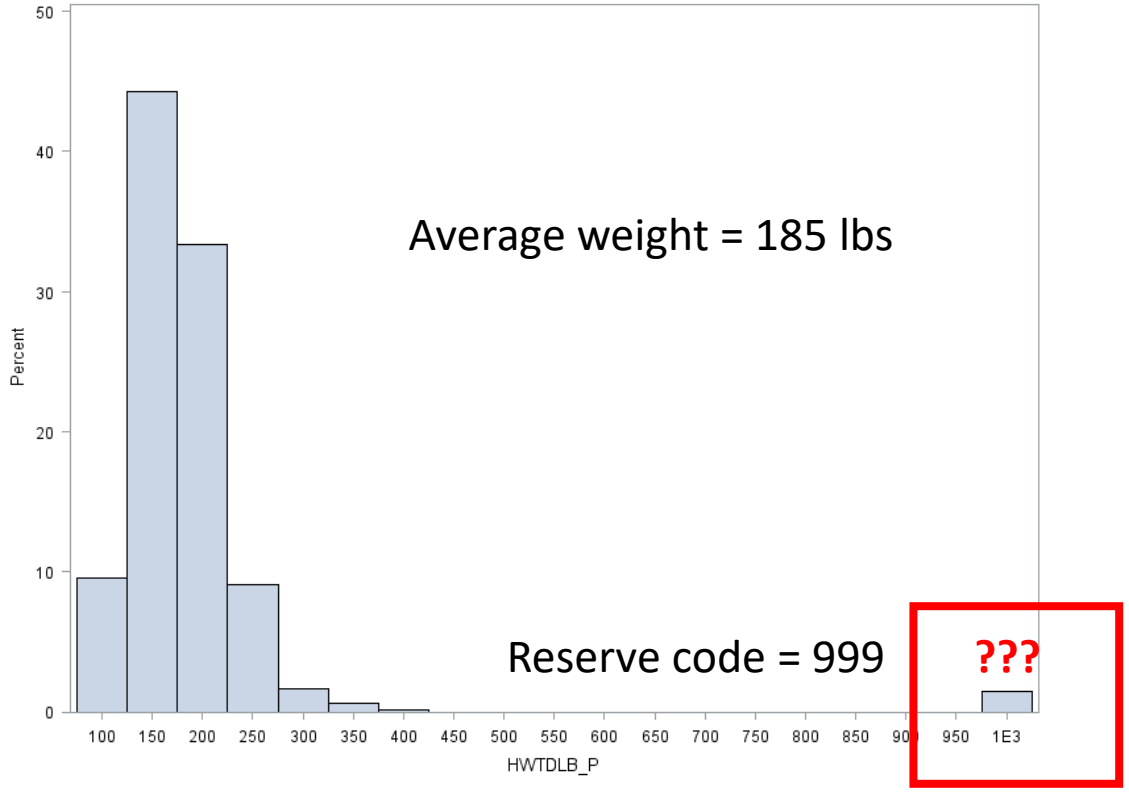
For example:

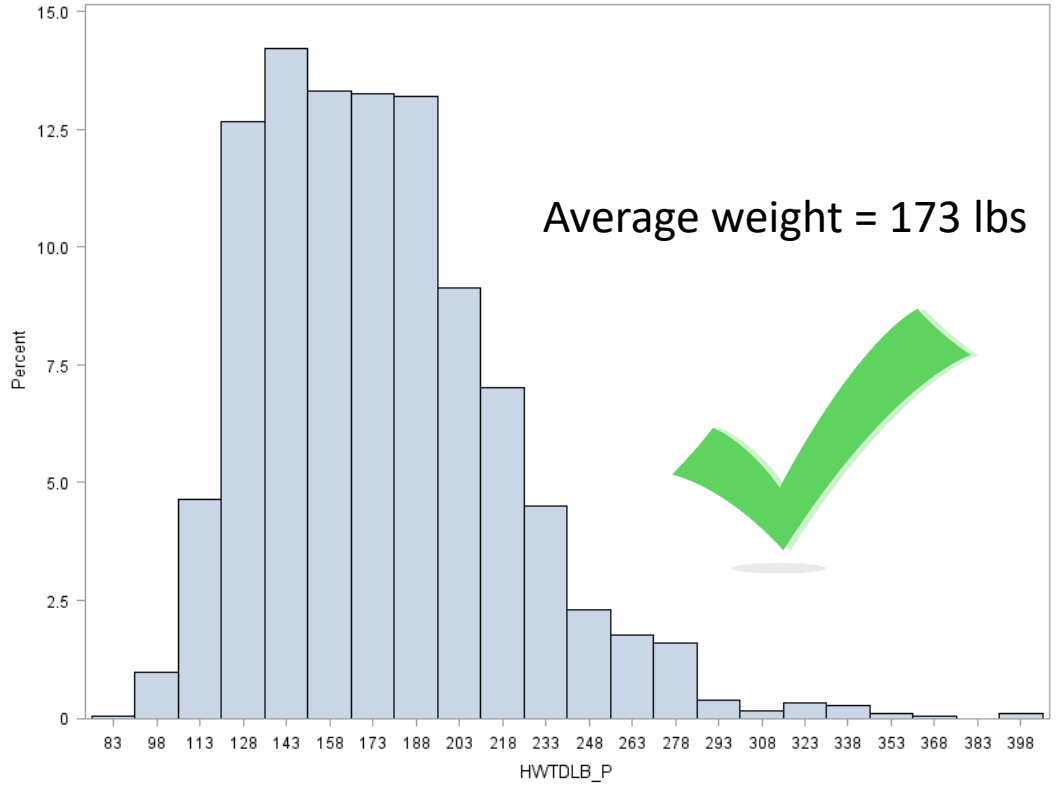
Sub-sample of youth aged 11 to 15 years

Group	Average age
Boys	13
Girls	17

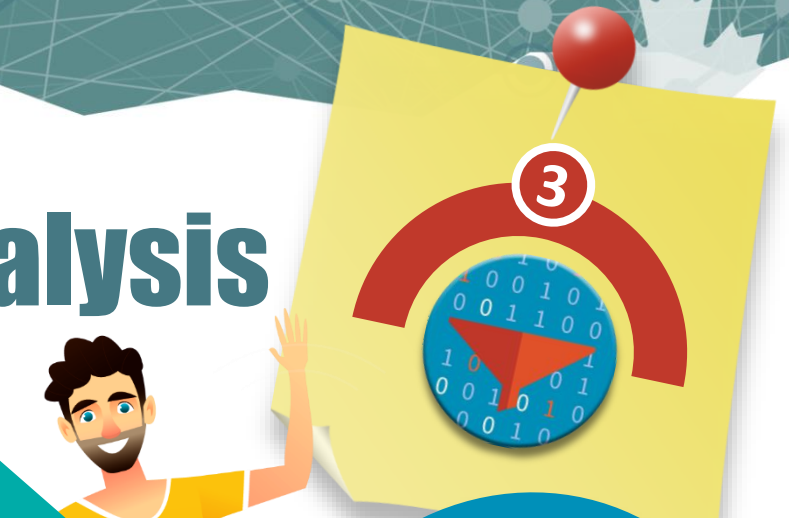


Visualize your data





Data checks throughout your analysis



Check the DATA

Check the DISTRIBUTIONS

Check your RESULTS

CLEAN and READY?

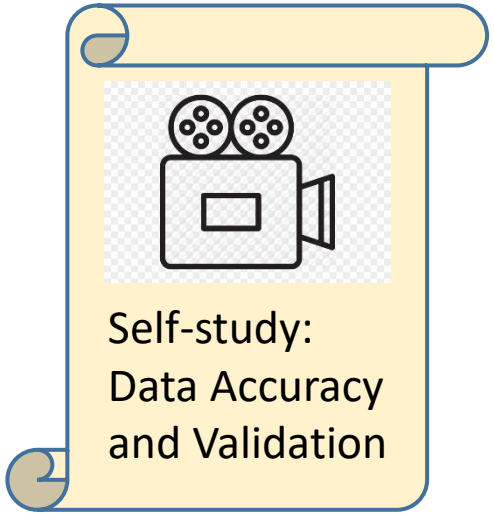
Consistent with other DATA?

Consistent with the LITERATURE?

DOCUMENT YOUR PROCESS!

Check list: Steps prior to data analysis

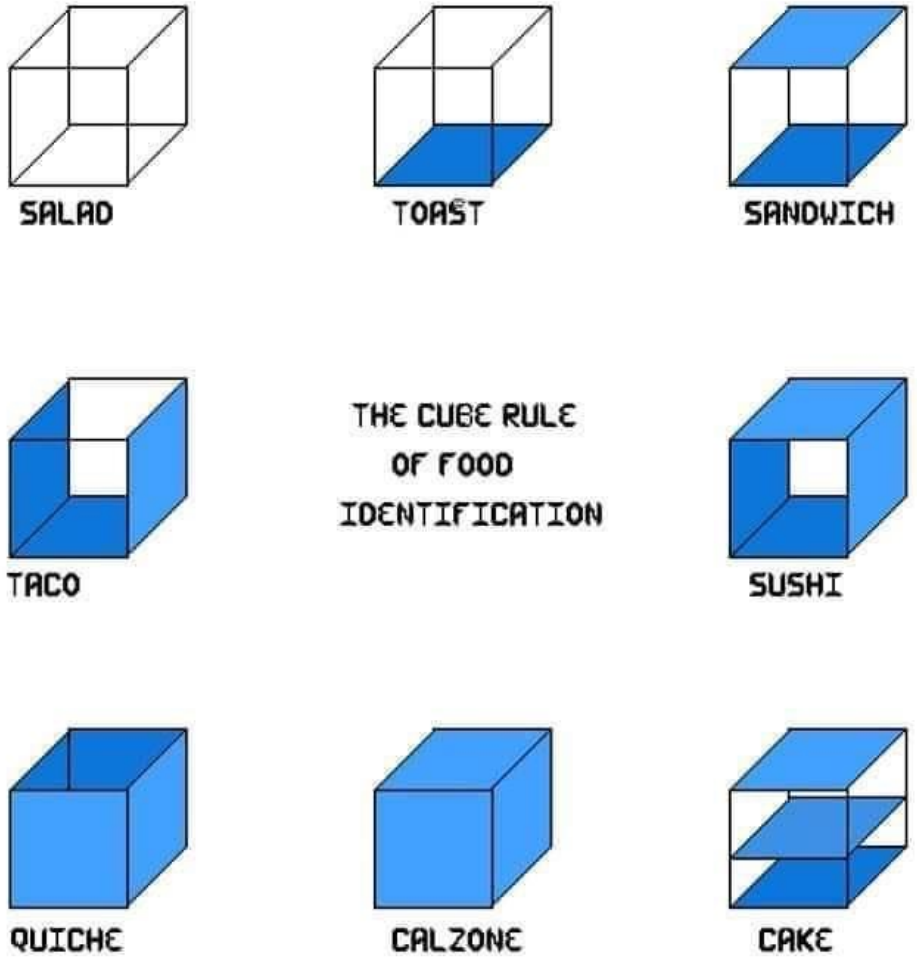
- Get familiar with the data
- Clean the data
  - VIMO (Valid, Invalid, Missing, Outlier)
- Play with the data
- Document every step!

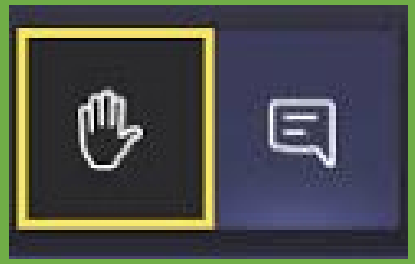


Define your concepts

Is a hot-dog a sandwich?

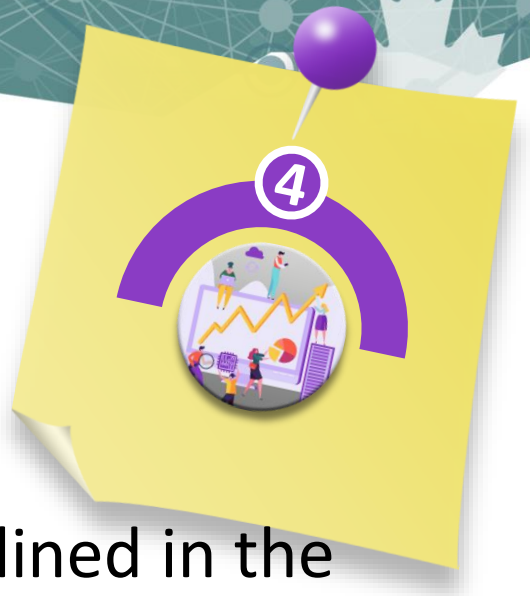
If you decide to conceptualize your hot-dog as a taco, you better document this decision with your source to back it up!





Step 4: Perform the analysis

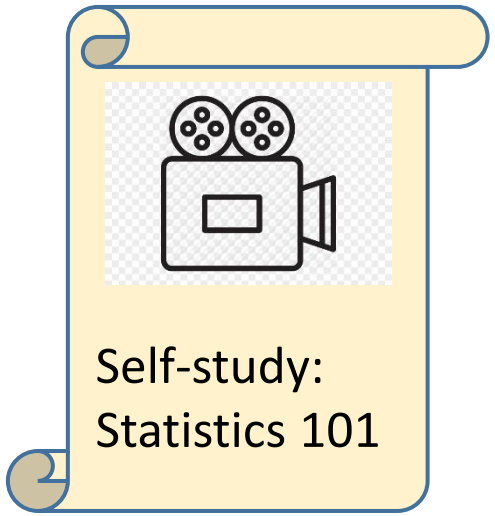
Perform the analysis



Look for answers to your analytical questions

- Proceed following a well thought-out methodology, as outlined in the analytical plan
- The analytical approach usually starts descriptive and always involves:
  - Basic data transformations (including derivation of new variables)
  - Computation of summary statistics
  - Selecting most relevant indicators
- Keep in mind you're looking to address **well-defined** analytical objectives

Perform the analysis



Self-study:
Statistics 101

Statistics 101 series:

Exploring measures of central tendency

Exploring measures of dispersion

Proportions, ratios and rates

Correlation and causality

Implementing your plan

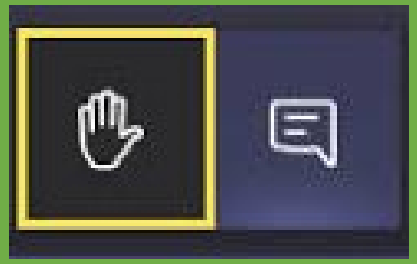
- Follow your clear and detailed analytical plan
- Use the clean, prepared dataset
- Conduct your analysis as you planned
- Check your results as you go:
  - Are they consistent? (other releases)
  - Are they robust?
  - Are they significant? (test of significance, confidence intervals)

Be flexible

- Unexpected results: error in data or true novel finding
- Be flexible and adjust your plan to investigate
- Consult! Obtain feedback on your change of plan

Key points

- ✓Prepare and check your data: **it takes time!**
- ✓Perform the analysis: **provide answers to your research questions**



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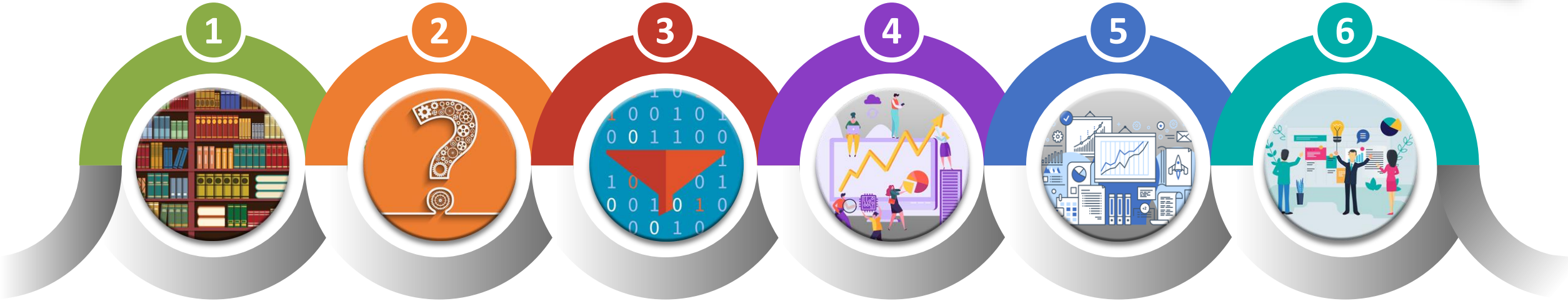

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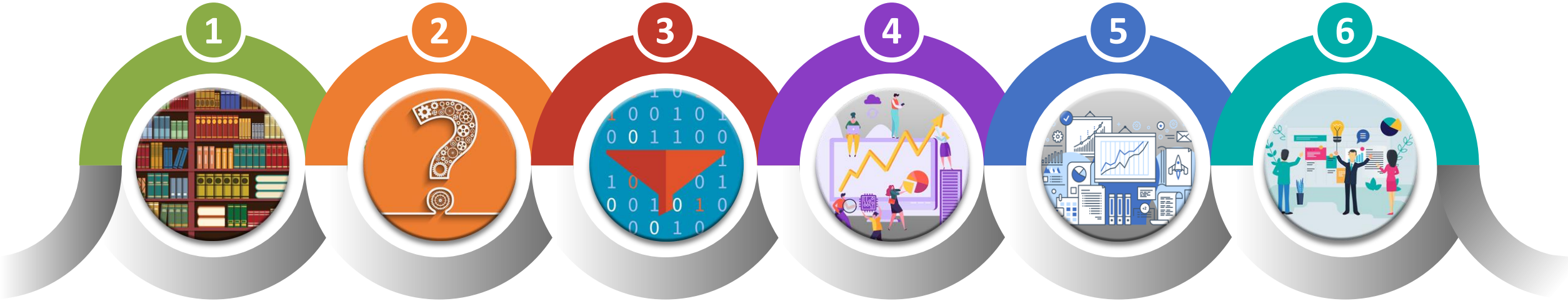
Sharing your findings

Best practices for summarizing and interpreting your results, reviewing your work, and presenting your findings to an audience



SHARING YOUR FINDINGS

Step 5: Summarize and interpret your results

Telling your data story

A data story is a **narrative** built around a set of **data** and its accompanying **visualizations** to help convey the meaning of the data.

Data → Narrative → Visualizations

A table is not a story! Walk your audience through your data story. Use visualizations to get your point across.

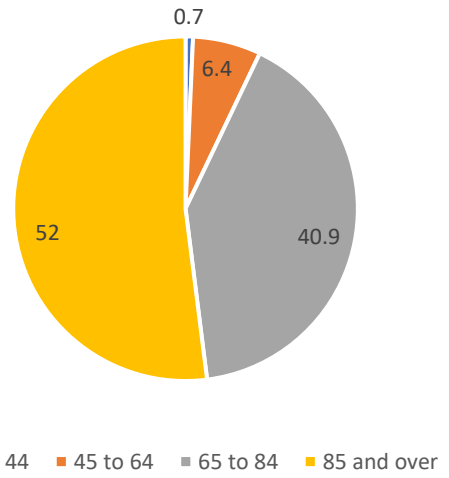
Table 1
Estimated numbers and percentages of expected, excess and total deaths and number of COVID-19 deaths, by age group and period, Canada, March 28, 2020 to May 15, 2021

	Expected deaths		Excess deaths		Total deaths		COVID-19 deaths	
Weeks ending:	estimated number	percent	estimated number	percent	estimated number	percent	estimated number	percent
March 28, 2020 to May 15, 2021								
0 to 44 years	15,749	4.7	3,110	15.6	18,868	5.3	165	0.7
45 to 64 years	47,182	14.2	4,120	20.7	51,330	14.5	1,470	6.4
65 to 84 years	145,534	43.7	7,264	36.5	152,885	43.3	9,430	40.9
85 years and older	124,876	37.5	5,390	27.1	130,342	36.9	12,000	52.0
Periods 1 to 4 total	**333,341**	**100.0**	**19,884**	**100.0**	**353,425**	**100.0**	**23,065**	**100.0**
March 28, 2020 to June 6, 2020								
0 to 44 years	2,903	4.8	404	4.7	3,307	4.8	40	0.5
45 to 64 years	8,620	14.2	925	10.7	9,545	13.8	455	5.3
65 to 84 years	26,312	43.5	3,044	35.3	29,356	42.4	3,300	38.7
85 years and older	22,701	37.5	4,252	49.3	26,953	39.0	4,730	55.5
Period 1 total	**60,536**	**100.0**	**8,625**	**100.0**	**69,161**	**100.0**	**8,525**	**100.0**
June 13, 2020 to September 19, 2020								
0 to 44 years	3,977	5.2	1,029	36.5	5,006	6.3	5	0.5
45 to 64 years	11,515	15.0	1,035	36.7	12,550	15.7	80	8.6
65 to 84 years	33,693	43.8	958	34.0	34,651	43.4	390	42.2
85 years and older	27,818	36.1	-204	-7.2	27,614	34.6	450	48.6
Period 2 total	**77,003**	**100.0**	**2,818**	**100.0**	**79,821**	**100.0**	**925**	**100.0**
September 26, 2020 to January 23, 2021								
0 to 44 years	4,646	4.5	1,045	10.2	5,691	5.0	60	0.6
45 to 64 years	14,257	13.9	1,505	14.7	15,762	14.0	500	5.2
65 to 84 years	44,752	43.7	3,596	35.1	48,348	42.9	3,785	39.7
85 years and older	38,845	37.9	4,094	40.0	42,939	38.1	5,195	54.5
Period 3 total	**102,500**	**100.0**	**10,240**	**100.0**	**112,740**	**100.0**	**9,540**	**100.0**
January 30, 2021 to May 15, 2021								
0 to 44 years	4,223	4.5	632	-35.1	4,855	5.3	60	1.5
45 to 64 years	12,790	13.7	655	-36.4	13,445	14.7	435	10.7
65 to 84 years	40,777	43.7	-334	18.6	40,443	44.2	1,955	48.0
85 years and older	35,512	38.1	-2,752	153.0	32,760	35.8	1,625	39.9
Period 4 total	**93,302**	**100.0**	**-1,799**	**100.0**	**91,503**	**100.0**	**4,075**	**100.0**

Note: Some age-specific estimates may differ from some all-ages estimates published elsewhere depending on whether the model was fitted using age groups or not.
Source: Canadian Vital Statistics Death Database, provisional data released August 9, 2021

During the first 15 months of the pandemic, seniors (65 years and over) represented 64% of excess deaths (or 12,654) and 93% (or 21,430) of excess deaths attributed to COVID-19.

COVID-19 deaths by age group (%), March 28, 2020 to May 15, 2021, Canada



Summarize your findings and present a logical storyline

- ✓ Review your results and identify your **key messages**
- ✓ **Contextualize** your findings

Identify your key messages

Key messages: Statistics and information you *choose* to include in your data story

- Identify your **key findings** as you go
  - Select only if quality is adequate
  - Beware of small sample sizes
- Clean up your findings as you go
  - Identify the findings that will matter to your audience.

Identify your key messages

- Allow you to focus your story around the **most important points** you want to deliver
- Help **structure** your story so you do not include unnecessary information
- Will contribute to answer the **research question** you set out to investigate

Contextualize your findings

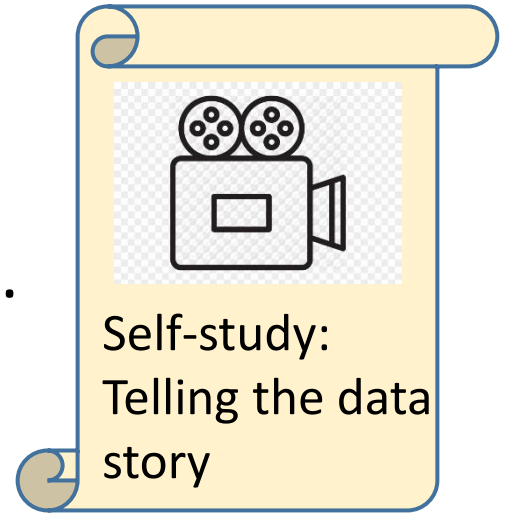
Examples of context:

- Comparisons
  - Other population groups
  - Time periods
  - Other geographies
  - Comparable products
  - Targets
  - Forecasts
  - Norm or standard
- Current knowledge on topic
- General economic environment
- General societal environment
- Improved methodology
- Improved timeliness of a program
- Improved efficiency of a program

Telling your data story

In its simplest terms a data story has…

… a beginning, a middle, and an end.



What? → So what? → Now what?

What?

So what?

Now what?

The topic:

- Context
- Question
- Relevance

The data:

- What are your key findings?
- How are you answering your question?

The conclusions and the next steps:

- Suggestions for future analysis
- Policy recommendations

Carefully select findings that are essential to your story

- ✓ Revisit your analytical questions
- ✓ Present **visuals** that answer your question

Self-study: Data Visualization

Visualizations

Key component of publications for the general public.

- Present numerical data in a **visual format**, including graphs, maps or pictures, to allow the reader to more **easily** and **quickly** see and understand information.
- Well formulated visualizations can communicate information, trends, relationships far more effectively than just large sets of numbers.
- Keep it simple! What is the message or information you want to communicate? Make it “stand alone”.

Tables

Tables are used to…

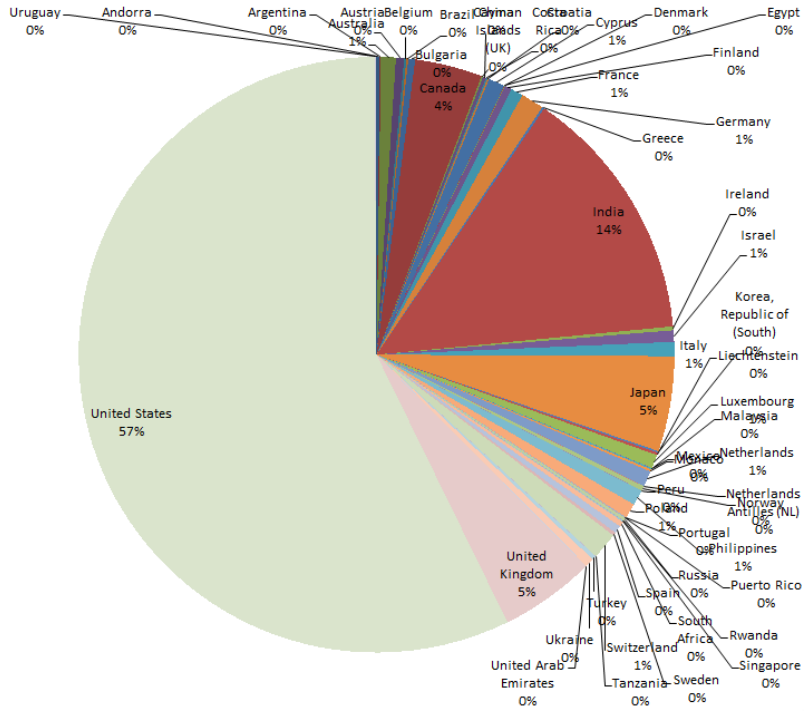
- Show more than a few data points and minimize the amount of data in text sections
- Display values in differing units (e.g., number, percent, percentage change)
- Display detailed information

Charts

Charts are used to…

- Communicate large amounts of data quickly
- Provide an effective visual overview of the patterns in the data (e.g., trends, differences between groups)

Good or bad?



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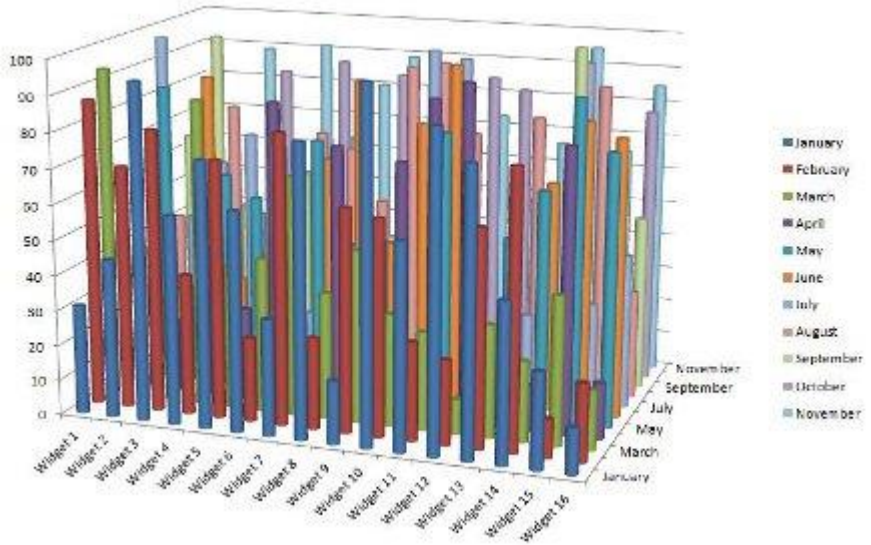
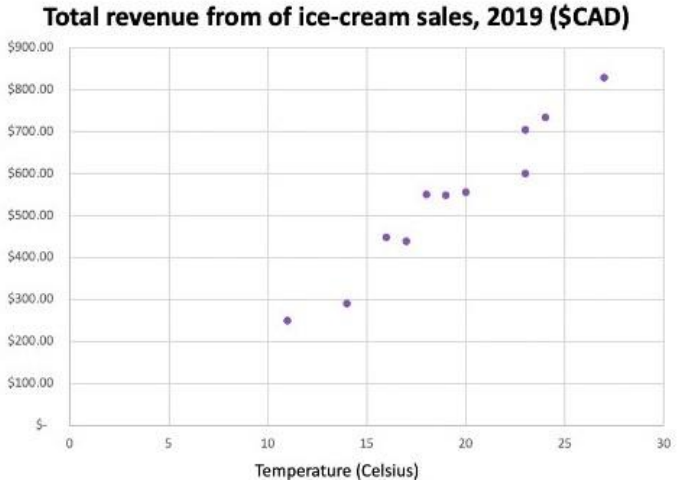


GRAPHS

Types of data visualization

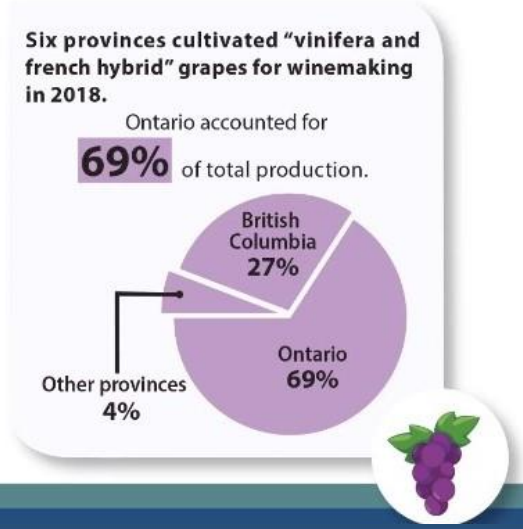


Scatter plot

Showing relationship between two values

CHARTS

Types of data visualization

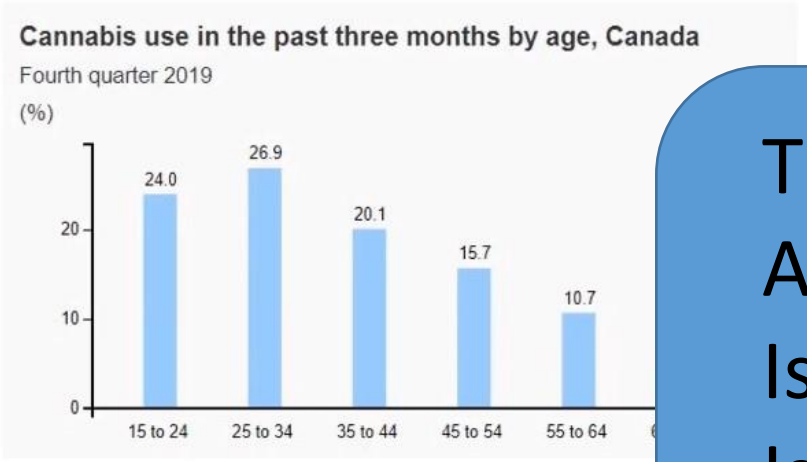


Pie chart

Showing the composition of a whole

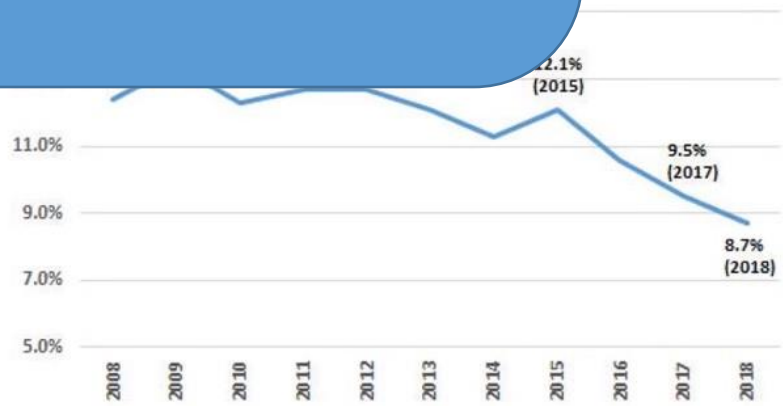
Types of data visualization

CHARTS



TIP!
A good visualization:
Is simple
Is decluttered
Makes the key message pop

GRAPHS



Line graph
Showing trends through time

Types of data visualization

MAPS

Maps
Putting data into geographical context

Telling your data story

CONTEXT

DATA & METHODS

KEY FINDINGS

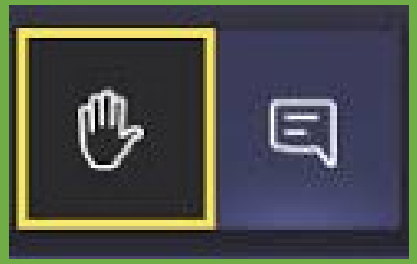
INTERPRETATION

Write in plain language

- Use simple terms
- Avoid unnecessary jargon
- Spell out acronyms
- Use short sentences
- Limit paragraphs to one or two ideas
- Put the most important idea first
- Avoid speculation and strive for authority; focus on what you <u>can</u> say with your data

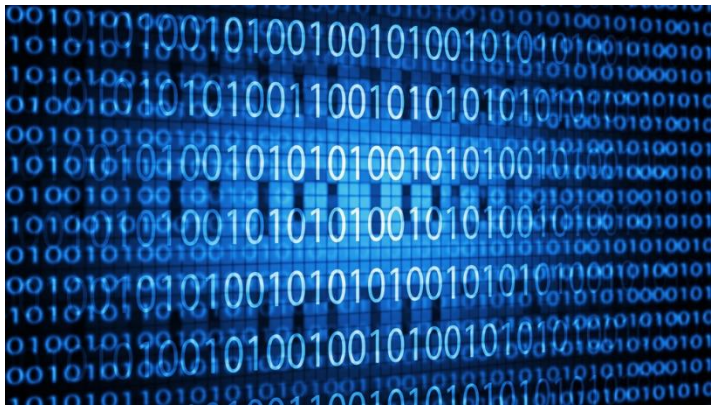
What makes a good data story?

- Has a clear **goal** or purpose
- Focused on the **key message(s)**
  - Highlights the main points
- Uses **context** to frame the story
  - Gives meaning to the numbers
- Has a clear **narrative** structure
- Uses appropriate **data visualizations** to highlight the key messages
- Is remembered
- Is accurate
- Is simple



Step 6: Disseminate your work

Disseminate your work



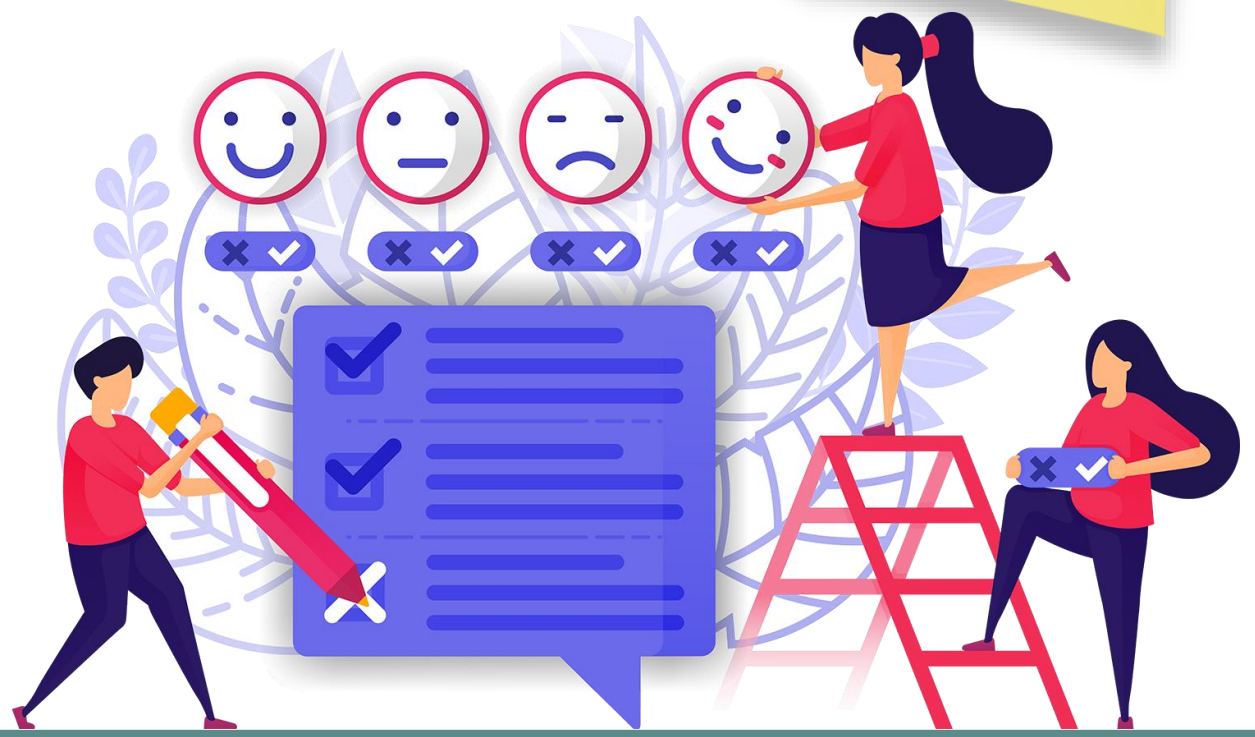
Data > Knowledge > Action

Ask others to review your work

- ✓Colleagues
- ✓Managers
- ✓Subject matter experts
- ✓Data or methodology experts
- ✓Stakeholders
- ✓Clients

Seek feedback on different aspects of your work

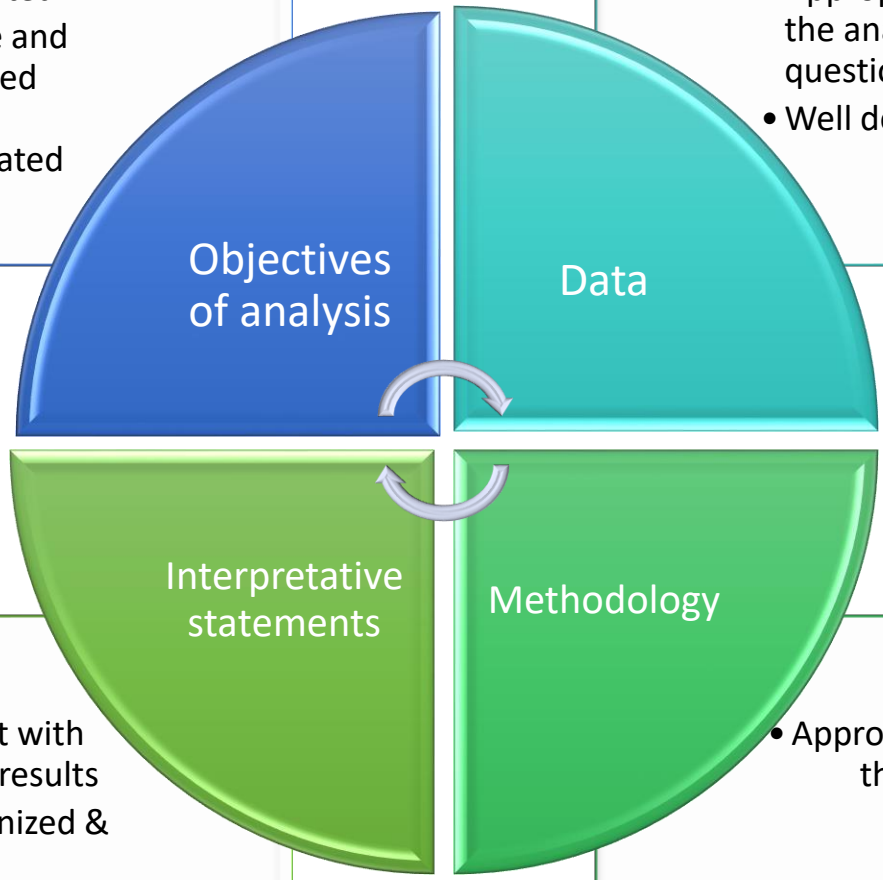
- Clarity of analytical objectives
- Appropriateness of data
- Definition of concepts
- Review of literature
- Methodological approach
- Interpretation of results
- Clarity of writing
- Neutrality



Elements of a peer review

- Clearly stated
- Relevance and value-added clearly demonstrated

- Appropriate given the analytical questions
- Well described



- Consistent with empirical results
- Well-organized & written

- Appropriate given the analytical questions

Organize and assess reviewers' comments

- Common concerns?
- Additional analysis required?
- What needs clarification?
- Keep your scope in mind – maybe you can't address *everything*

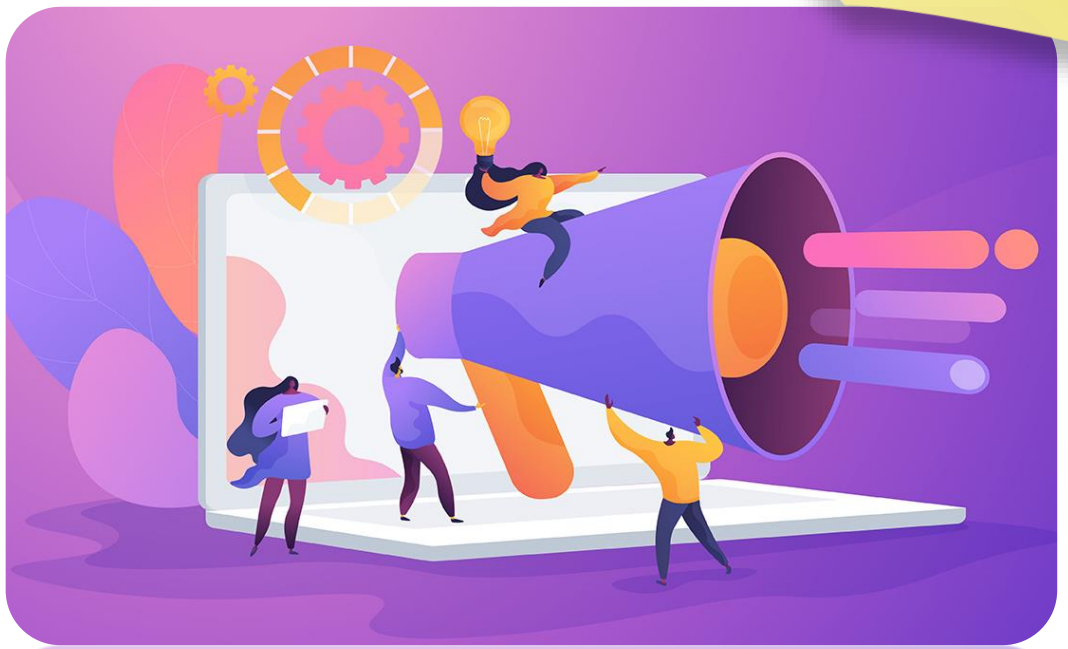
Document how you addressed reviewers' comments

- Write down your response to all comments
- Justify your decisions
- Formal response may be required

Preparing your work for publication involves many people and processes

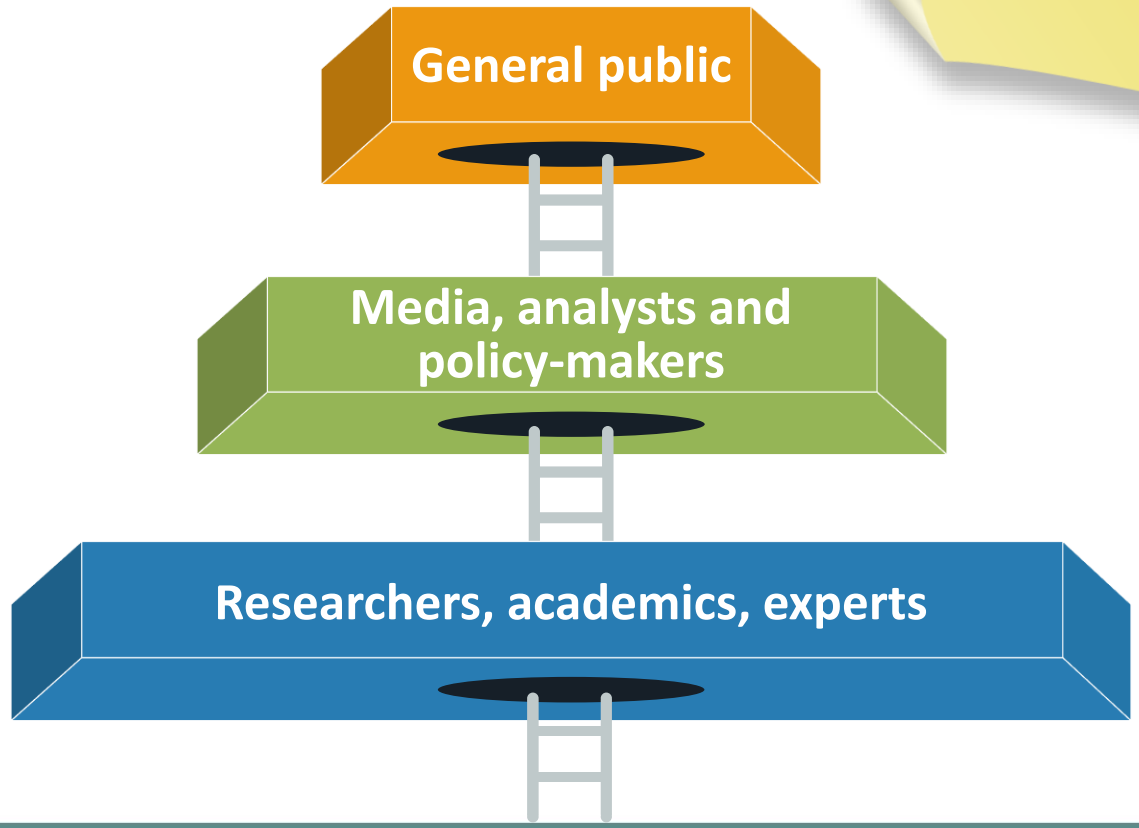
- Editing
- Formatting
- Translation
- Accessibility assessment
- Approval processes
- Press release

Allow plenty of time!



How your work is published depends on your intended audience

- **Who is the intended audience?**
- What do they know?
- What do they need or want to know?
- You may have **more than one** product for the same analysis to target different audiences



Who is your Data Story targeting?

Other scientists and analysts, your colleagues and managers: *All the details*

- Research report

Media, general public: *High-level key messages*

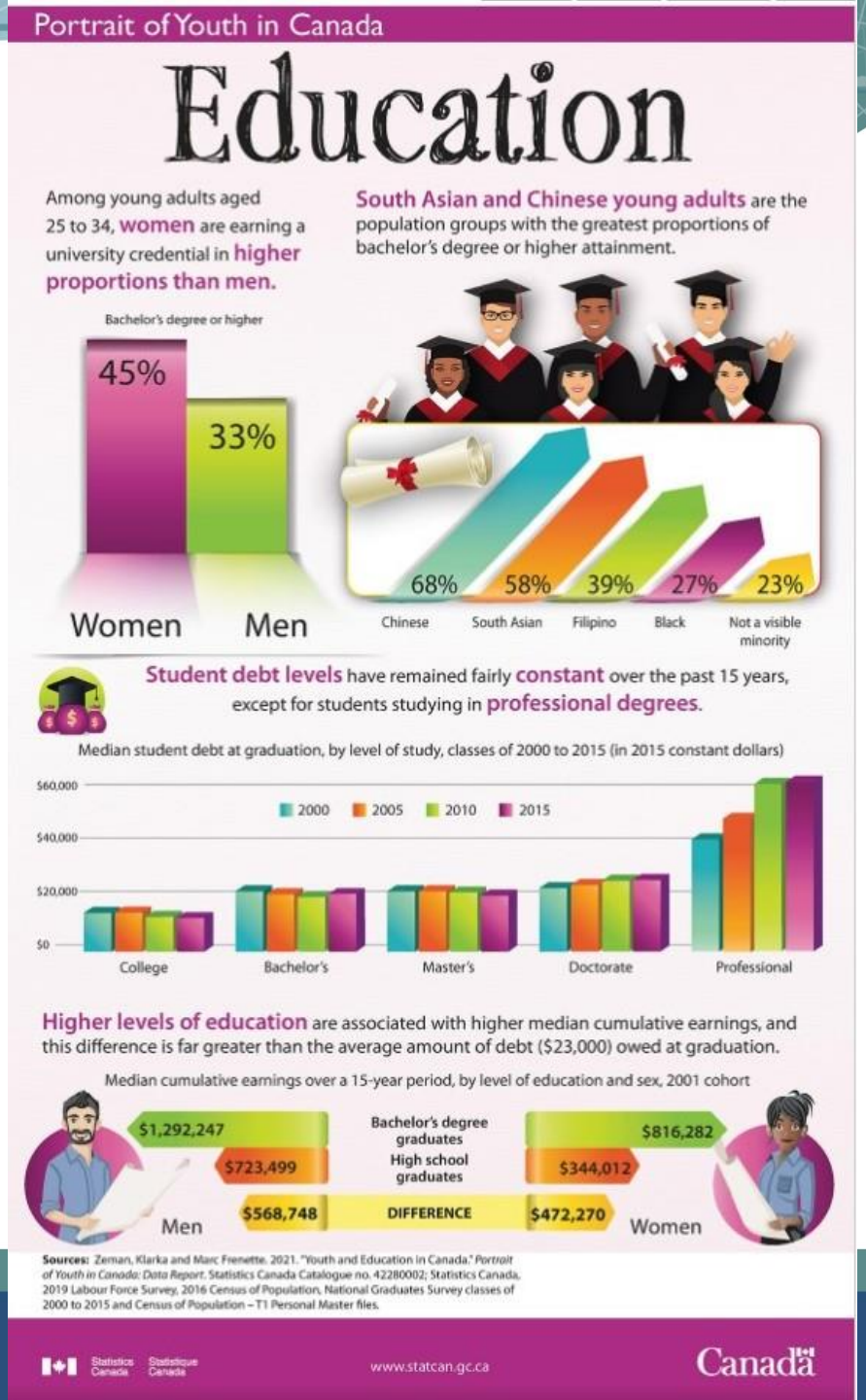
- Infographic, Fact sheet

Policy and decision makers: *Questions answered quickly*

- Dashboard, Briefing note

How your work is published depends on your intended audience

Media and the general public: Infographic



How your work is published depends on your intended audience

Media and the general public: Fact Sheet

Health
Fact Sheets

Statistics Canada, Catalogue no.82-625-X

Mental health care needs, 2018

Key Findings

- In 2018, roughly 5.3 million people in Canada mentioned they needed some help for their mental health in the previous year.
- Almost half of these Canadians either had their needs partially met with some help (1.2 million) or had needs that were fully unmet (1.1 million people).
- Canadians who needed help for their mental health, but were without a regular health care provider were more likely to report unmet or partially met needs (60.3%), compared to those who did have a regular health care provider (41.2%).
- The most frequently reported reasons for having unmet or partially met needs were related to not knowing where to go, being too busy or not being able to afford to pay.
- Almost one-quarter of respondents (22.6%) who had unmet or partially met needs reported that they preferred to manage their needs on their own.

The perception of needs for mental health care in the Canadian population, the degree to which those needs are met, and any perceived barriers to care are key elements in understanding help-seeking behaviour and treatment needs for mental health issues.[1] The 2018 Canadian Community Health Survey included questions about different kinds of mental health care that respondents received or felt they needed.

In 2018, 17.8% of Canadians aged 12 and older (roughly 5.3 million people) needed some help with their mental health, including for their use of alcohol or drugs, in the previous year.[2,3] Among the 5.3 million Canadians who reported needing some mental health care in 2018, 56.2% (around 3 million people) reported that all of their needs were fully met, that is they received some form of care or help and did not report needing any more. The remaining 2.3 million Canadians (43.8%) felt that their needs were either unmet (some care was needed but none was received), or only partially met (some care was received but was not sufficient). Unmet needs were reported by 1.1 million Canadians, and a similar number (1.2 million) reported partially met needs.

In terms of the type of care needed, the need for medication was the most likely to be met (85.4%). The need for counselling was the most likely to be fully unmet (34.1%; Table 1).

Table 1
Percentage distribution of mental health care need status, by type of need, population aged 12 and older who received or needed care, Canada, 2018

	Need status		
	Unmet	Partially met	Fully met
Type of need		%	
Any	21.4	22.4	56.2
Information about problems, treatments or available services	20.8	8.0	71.2
Medication	9.1	5.5	85.4
Counselling, therapy or help for problems with personal relationships	34.1	15.9	50.0
Other	...	15.0	85.0

... not applicable
Note: No estimate of unmet 'other' care needs can be determined. The category 'other' was not included in the question about types of care that were not received, but may have been needed.
Source: Canadian Community Health Survey, 2018.

Among the 5.3 million Canadians who received or felt they needed some help with their mental health, the number who reported unmet or only partially met needs varied by province, household income, and access to a regular health care provider.

The proportion of residents who reported unmet or only partially met mental health care needs was **lower** than the national average (43.8%) in:

- New Brunswick (35.9%)
- Quebec (38.9%)

The proportion of residents who reported an unmet or only partially met needs in the past year was **higher** than the national average in:

- Ontario (46.1%)
- British Columbia (51.1%)

The proportion of residents who reported unmet or partially met mental health care needs in the past 12 months was similar to the national average in all other provinces.

Unmet needs for mental health care also varied by income, as people in households from the lowest income quintile[4] were more likely to report unmet or partially met needs (50.5%) compared to Canadians in the highest income quintile (37.8%).

For many Canadians, the first point of contact for medical care is their regular health care provider. In 2018, those without a regular health care provider[5] were more likely to report unmet or only partially met needs (60.3%) compared to those who did have one (41.2%).

Perceived barriers to mental health care

The 2.3 million Canadians who reported unmet or partially met mental health care needs were asked to indicate the reasons why they didn't get the help they needed. Overall the most frequently mentioned barriers were related to personal circumstances[6] (78.2%), such as not knowing where to get help or not being able to afford to pay. Language problems and help not being readily available were cited as a barrier by 19.5% of those with an unmet mental health care need. Almost one-quarter of respondents (22.6%) reported that they preferred to manage the need on their own.[7]

Respondents who preferred to manage their needs themselves were asked to elaborate on the reasons why. The most commonly reported reasons were they relied on family and friends (21.6%), they did not feel ready to seek help (16.8%), or they were uncomfortable talking about these problems (17.2%).

Summary

Almost one-in-five (17.8%) Canadians needed mental health care in 2018, and half of them felt that their needs were fully met. Medication needs were the most likely to be fully met, while needs for counselling or therapy were the most likely to be unmet. Residents of Ontario and British Columbia were more likely to report unmet or partially met needs compared to the national rate. When Canadians didn't get the help they needed, the main reasons reported were because of personal circumstances, such as not knowing where to go or being too busy, or not being able to afford to pay for care.

References

Meadows, G., C. Harvey, E. Fossey, and P. Burgess. 2000. Assessing perceived need for mental health care in a community survey: development of the Perceived Need for Care Questionnaire (PNCQ). *Social psychiatry and psychiatric epidemiology*, 35(9), 427-435. (accessed September 24th, 2019).

Meadows, G., P. Burgess, I. Bobevski, E. Fossey, C. Harvey, and S.T. Liaw. 2002. Perceived need for mental health care: influences of diagnosis, demography and disability. *Psychological medicine*, 32(2), 299-309. (accessed September 24th, 2019).

Nelson, C. H., and J. Park. 2006. The nature and correlates of unmet health care needs in Ontario, Canada. *Social Science & Medicine*, 62(9), 2291-2300. (accessed September 24th, 2019).

Pearson, C., T. Janz and J. Ali. 2013. Mental and substance use disorders in Canada. *Health at a Glance*. Statistics Canada Catalogue no. 82-624-X. (accessed September 24th, 2019).

Sanmartin, C., C. Houle, S. Tremblay, J-M. Berthelot. 2002. Changes in unmet health care needs. *Health Reports*. Statistics Canada Catalogue no. 82-003-X, Vol. 13, no. 3. (accessed September 24th, 2019).

Sareen, J., B.J. Cox, T.O. Afifi, I. Clara, and B.N. Yu. 2005. Perceived need for mental health treatment in a nationally representative Canadian sample. *The Canadian Journal of Psychiatry*, 50(10), 643-651. (accessed September 24th, 2019).

Sareen, J., M.B. Stein, D.W. Campbell, T. Hassard, and V. Menec. 2005. The relation between perceived need for mental health treatment, DSM diagnosis, and quality of life: A Canadian population-based survey. *The Canadian Journal of Psychiatry*, 50(2), 87-94. (accessed September 24th, 2019).

Sunderland, A., L.C., Findlay. 2013. Perceived need for mental health care in Canada: Results from the 2012 Canadian Community Health Survey- Mental Health. *Health Reports*. Statistics Canada Catalogue no. 82-003-X, Vol. 24, no. 9. (accessed September 24th, 2019).

Data

Additional data from the Canadian Community Health Survey are available from table 13-10-0619-01.

How your work is published depends on your intended audience

Policy-makers

Français

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The Daily

In the news | Indicators | Releases by subject

Special interest | Release schedule | Information

Study: Youth and education in Canada

Text | Related information | PDF (138 KB)

Released: 2021-10-04

Younger Canadians generally have a higher level of education than their counterparts across Organisation for Economic Co-operation and Development (OECD) countries, and they are more likely than previous generations to have completed a postsecondary education.

In 2019, an all-time high of 73% of Canadians aged 25 to 34 had earned a postsecondary qualification, compared with 59% in 2000. However, the COVID-19 pandemic disrupted many students' education. Over half of students who participated in a crowdsourcing survey conducted at the beginning of the pandemic reporting that their courses or work placements were postponed or cancelled, and almost all students reporting that the classes that continued had moved online.

These findings are from Chapter 3: Youth and education in Canada of *Portrait of Youth in Canada: Data Report*, a publication that provides a comprehensive overview of Canadian youth. In the next few months, *Portrait of Youth in Canada* will continue to focus on themes like social engagement and well-being, the environment, and Indigenous youth.

Inverted pyramid model:

https://www150.statcan.gc.ca/n1/daily-quotidien/211004/dq211004c-eng.htm

How your work is published depends on your intended audience

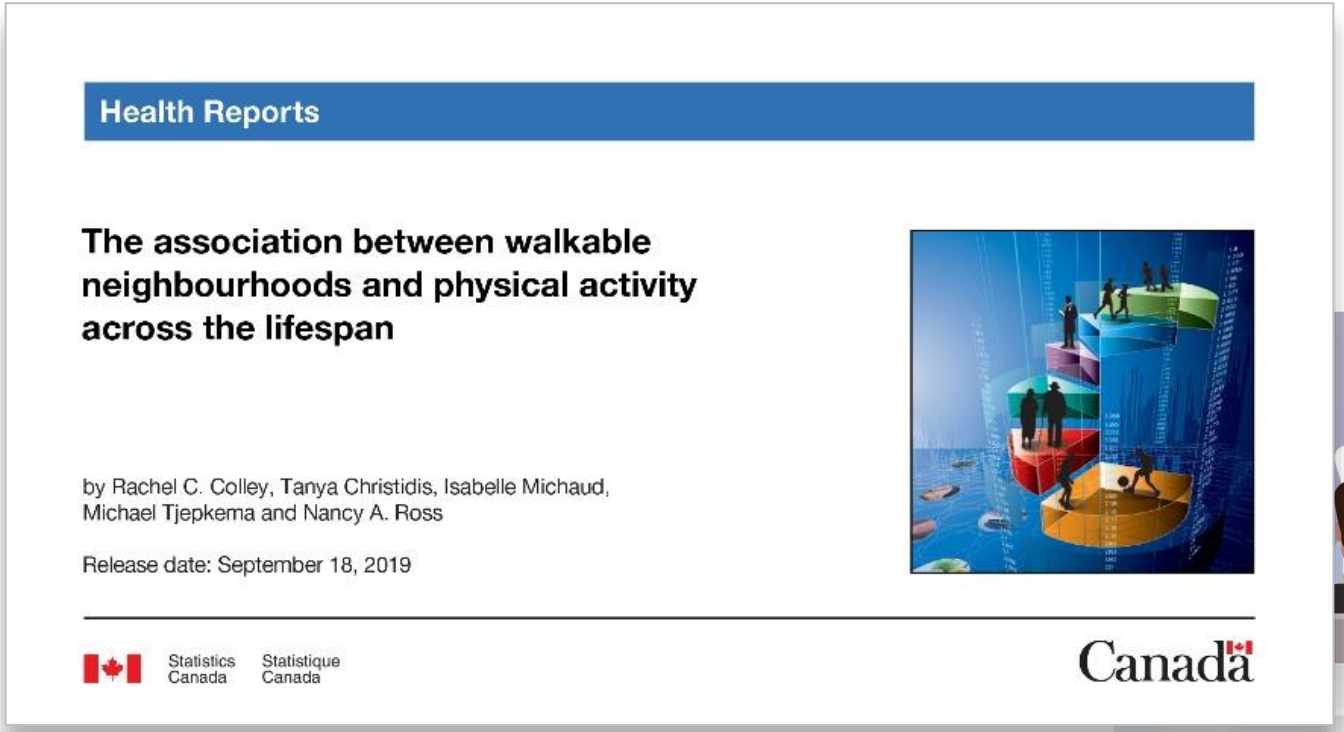
The Daily

- Concise
  - 500 to 1000 words
  - No introduction or conclusion
  - **Key messages right up front**

- Engaging
  - The title, first chart and first paragraph are the most important elements
  - Use of sub-headings with key messages

How your work is published depends on your intended audience

Researchers, academics, experts



What is already known on this subject?

- Physical activity is positively associated with health.
- Many Canadians do not meet the current physical activity guidelines.
- Features of the built environment such as street connectivity, proximity to services and residential density have been associated with increased physical activity.

What does this study add?

- Using a new Canadian measure of walkability or "activity friendliness", this study confirms previous research that has reported a positive association between walkability and physical activity in adults as well as a positive association between walkability and transportation-based physical activity.
- Walkability was not associated with physical activity in children aged 3 to 11. Children living in the least walkable neighbourhoods accumulated, on average, 10 minutes more unorganized physical activity per day than children living in the most walkable neighbourhoods.

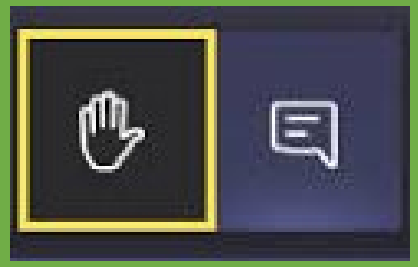
Communicating your work to the media requires preparation

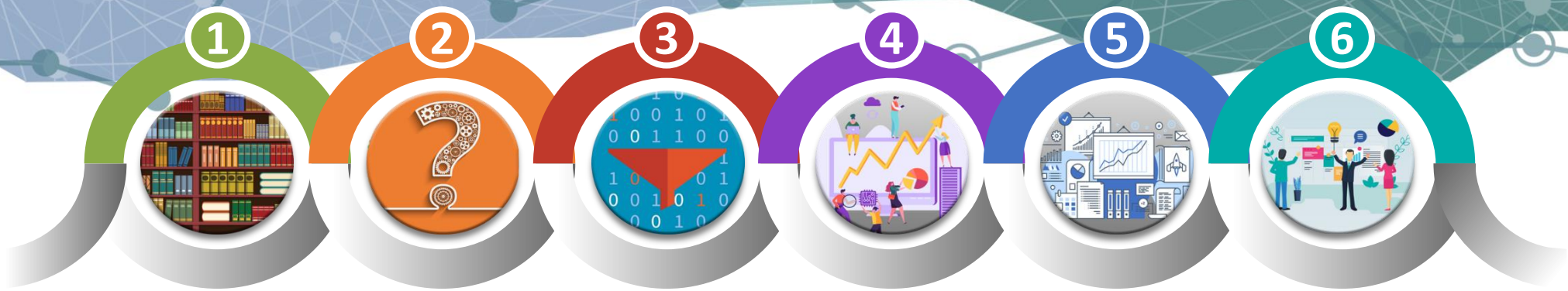
- Media training?
- Determine your **key messages**
- Think of how to communicate findings in **simple terms**
- Anticipate potential questions - create a mock Q&A document

With experience, you will write your papers with these tips in mind from the start

Key points

- ✓Tell the story of your data
- ✓Filter out the excess and leave only what is **most important** for your audience
- ✓Use clear and neutral language
- ✓Ask others to review your work
- ✓Preparation is key to communicating your findings





Analytical process: Key points

- Can be viewed as a series of steps designed to answer a well-defined question.
- Once the topic has been defined, the next step is to create an analytical plan.
- Incorporating feedback (early and often) is an important part of planning a project.
- Prepare and check your data!
- Document your decisions!
- Tell the story of your data (What? So what? Now what?)
- Use clear and neutral language
- Ask others to review your work

Thank you!

Evelyne Bougie, PhD

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