



Analytical Literacy Summary

The Analysis Function

- ▲ The Analysis Function is a cross-government network bringing together a range of analysts including Statisticians, Data Scientists, Economists etc. There are many different roles within the Analysis Function, each of which who produce different types of analysis.
- ▲ The Government Functional Standard for Analysis outlines a standard expectation for any analysis produced across government and applies to anyone involved in

Asking analytical questions

- ▲ The Analysis Lifecycle describes the iterative process whereby analysis is scoped, designed, collected, and delivered. This should be refined throughout the process as new information is uncovered.
- ▲ The entire analysis process should be collaborative between users and analysts to ensure requirements are balanced with resources and capabilities. This is particularly true during the scoping and design stages.
- ▲ Key requirements of analytical work are that it should be repeatable, impartial, well-documented and robust to survive challenges.

Methods of analysis

- ▲ **Sample:** a sample is a smaller subset of the entire population, usually aiming to represent data of the entire population with less resources.
- ▲ **Census:** collects information from the entire population.
- ▲ **Administrative data:** data collected as the by-product of an organisational process, usually for operational reasons rather than primarily research ones.
- ▲ **In-depth interviews:** a qualitative method of data collection, using a structured and thorough conversation to collect detailed information on experiences and perceptions.
- ▲ **Focus groups:** a method of qualitative data collect using conversations between groups.
- ▲ **Statistical Significance:** a statistically significant result is one unlikely to have occurred due to change and is therefore likely to represent the true figure in the population.
- ▲ **Confidence intervals:** a range of values that the true value of the population is estimated to fall between.
- ▲ **Relative risk:** the likelihood of a given event occurring, in relation to another event, rather than the probability of it occurring overall.



Analytical Literacy Summary

▲ **Absolute risk:** The chance/probability of a given event happening, often in percentage form.

▲ **Time series:** a set of time ordered data, usually collected at regular intervals such as daily or monthly, such as the Consumer Prices Index.

▲ **Data linkage:** the process of trying to establish whether two records from two different databases relate to the same entity.

▲ Percentage point change shows the differences in two already calculated percentages while percentage change measures the differences between raw figures.

▲ Uncertainty

Quality assurance

▲ High quality at every stage of the analysis process is essential to ensuring that the final outputs and results are of high quality.

▲ There are many standards, codes and guidance documents which apply to various analytical processes across government to ensure high standards and build trust in government analysis.

▲ Users should be able to access information on quality and uncertainty and can ask producers for more detail or reassurance on measures taken to ensure quality.

Drawing and communicating insight

▲ Analytical outputs support decision-makers in making robust, evidence-based decisions. It is important for this process to be collaborative throughout, between analysts and users to ensure expectations are achievable based on resource and explanatory power.

▲ Using a range of analytical outputs is the best way to ensure the evidence-base is strong and accurate.

▲ Make sure that any uncertainty or limitations of the analysis is communicated when sharing evidence.

Data Visualisation

▲ Data visualisations are useful for exploring data or to communicate messages. They can make data much more digestible than through a block of text. All visualisations should follow the best practice guidelines.

▲ However, it is important that users ensure they think critically when drawing insights from visualisations and use multiple sources of evidence to draw conclusions.