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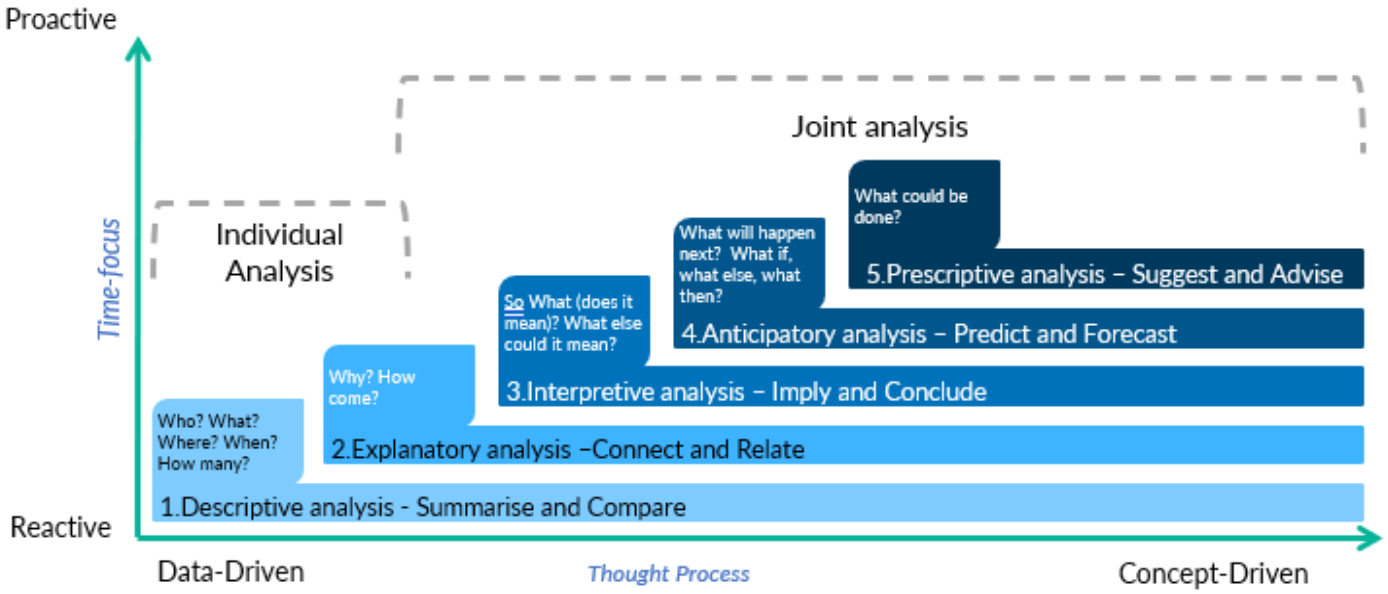
Types of analysis

When designing data analysis, it is important to decide the type(s) of data analysis that will be required given the purpose of the assessment or monitoring. The figure below shows **five common types of data analysis** by **time-focus** and **thought process**.

Based on the Design, different types of analysis may be required, that follows a logical sequence – for example, it is not possible to produce forecasts without having first described the data. The analysis requires **more collaborative approaches** moving **from description to prescription**. **Interpretive**, **anticipatory**, and **prescriptive** analysis are often conducted jointly between assessment or monitoring stakeholders, sometimes through a Joint Analysis Workshop.



1. **Descriptive analysis** is about **grouping**, **summarizing**, and **comparing** data to identify differences, similarities, patterns, trends, or anomalies within and between categories. Outputs from descriptive analysis answer questions about who, what, where, when, and how.

2. **Explanatory analysis** is about **connecting and relating the data**, as well as identifying **relationships** and **associations** such as causation, correlation, and other connections. It answers the analytical question: *Why?*

3. **Interpretive analysis** is about **identifying the implications** and **drawing conclusions** by assessing the strength and limitations of the evidence and contextualizing the findings. This type of analysis answers the question, "What does it mean?". Interpretative analysis is about using logic to interpret and make judgments about the value and meaning of the data.

4. **Anticipatory analysis** is about developing **predictions** and **forecasting scenarios** and **future trends** – as well as their likelihoods and impacts. It answers the analytical questions: What will happen next? What if, what else, what then?

5. **Prescriptive analysis** uses the conclusions and findings of the other types of analysis – along with additional relevant information – to develop recommendations and advice. This analysis **identifies available options**, assessing their appropriateness and feasibility, exploring objectives to plan for, and checking alignment with strategic and operational considerations.