**Data has a life cycle of its own too.**

The life cycle of data is:

1. plan,
2. capture,
3. manage,
4. analyze,
5. archive and
6. destroy.

**1.** Let's start with the first phase, **planning**.

This happens well before starting an analysis project.

During planning, a business decides what kind of data it needs,

how it will be managed throughout its life cycle,

who will be responsible for it, and the optimal outcomes?

For example, let's say an electricity provider wanted to gain insights into how to save people energy.

In the planning phase,

* they might decide to capture information on how much electricity its customers use each year,
* what types of buildings are being powered, and
* what types of devices are being powered inside of them.
* The electricity company would also decide which team members will be responsible for collecting, storing, and sharing that data.

All of this happens during planning, and it helps set up the rest of the project.

**2.** The next phase is when you **capture data**.

This is where data is collected from a variety of different sources and brought into the organization.

With so much data being created every day, the ways to collect it are truly endless.

One common method is getting data from outside resources.

For example,

* if you were doing data analysis on weather patterns, you'd probably get data from a publicly available dataset like the National Climatic Data Center.
* Another way to get data is from a company's own documents and files, which are usually stored inside a database.

A database is a collection of data stored in a computer system.

In the case of our electricity provider, the business would probably measure data usage among its customers within a database that it owns.

As a quick note, when you maintain a database of customer information, ensuring data integrity, credibility, and privacy are all important concerns.

**3.** we'll move on to the next phase of the data life cycle, **manage**.

Here we're talking about how we care for our data, how and where it's stored, the tools used to keep it safe and secure, and the actions taken to make sure that it's maintained properly.

**4**. Next, it's time to **analyze your data**.

This is where data analysts really shine.

In this phase, the data is used to solve problems, make great decisions, and support business goals.

For example, one of our electricity company's goals might be to find ways to help customers save energy.

**5.** Moving along the data life cycle now evolves to the **archive phase**.

Archiving means storing data in a place where it's still available but may not be used again.

**6.** And finally, the last step of the data life cycle, the **destroy phase**.

So, let's get back to our electricity provider example. They would have data stored on multiple hard drives. To destroy it, the company would use a secure data erasure software.

If there were any paper files, they would be shredded too.

This is important for protecting a company's private information, as well as private data about its customers.

And there you have it, the data life cycle.