Variations of the Data Life Cycle

Generic Framework

1. Plan:
    - Decide what kind of data is needed, how it will be managed, and who will be responsible for it.
2. Capture:
    - Collect or bring in data from a variety of different sources.
3. Manage:
    - Care for and maintain the data. This includes determining how and where it is stored and the tools used to do so.
4. Analyze:
    - Use the Data to solve problems, make decisions, and support business goals.
5. Archive:
    - Keep relevant data stored for long-term and future reference.
6. Destroy:
    - Remove data from storage and delete any shared copies of the data.

Examples of Data Life Cycles

US Fish and Wildlife Service

1. Plan
2. Acquire
3. Maintain
4. Access
5. Evaluate
6. Archive

The US Geological Survey (USGS)

1. Plan
2. Acquire
3. Process
4. Analyze
5. Preserve
6. Publish/Share.

- Several “Cross-Cutting” or “Overarching” activities are also performed during each state of their life cycle:
    - Describe (Metadata and documentation)
    - Manage Quality
    - Backup and Secure

Financial Institutions

1. Capture
2. Qualify
3. Transform
4. Utilize
5. Report
6. Archive
7. Purge

Harvard Business School (HBS)

1. Generation
2. Collection
3. Processing
4. Storage
5. Management
6. Analysis
7. Visualization
8. Interpretation

Summary

> Understanding the importance of the data life cycle will set you up for as a data analyst. Individual stages in the data life cycle will vary from company to company or by industry or sector. Historical data is important to both the U.S. Fish and Wildlife and the USGS, so their data life cycle focuses on archiving and backing up data.. Harvard's interests are in research and teaching, so it's data life cycle includes visualization and interpretation even those these are more often associated with a data analysis life cycle. The "HBS" data life cycle also doesn't call out a stage for purging or destroying data. In contrast, the data life cycle for finance clearly identifies archive and purge stages. To Sum up, although data life cycles vary, one data management principle is universal. ***Govern how data is handled so that it is Accurate, Secure, and Available to meet your organization's needs***