Structure of your final report:

Section 1: Executive Summary (up to two pages)

In this section, you will provide an overview of the project including the goals, problems that you addressed, and a summary of the project deliverables.

Section 2: Introduction (up to four pages)

In this section, you will provide an overview of the client company and its BI-related processes, capabilities, and information systems. You can include the following components in the section:

- Client company background
  - e.g., name, industry, products and services that they offer, geographic market area, size in terms of number of employees, structure in terms of departments and business units, scope of your project (e.g., a department, a branch, a business unit, etc.).
- Current status of the use of reporting and BI and analytics in the client company
  - Do they primarily use MS Excel?
  - Are they using any data warehouses?
  - Do they use any seamless/integrated information systems such as an ERP?
  - Do they currently have a separate BI team?
  - Do they use any specific BI tools?
  - [Optional] If they use a BI tool/system, have they developed it in-house or have they bought a customizable system?
  - Where does the organization sit on the BI maturity model?
- A summary of the case studies that you have presented as part of your first presentation

Section 3: The Proposed BI Solution (flexible length)

In this section, you will first provide a brief yet concise description of BI. You can answer the following questions here:

- What is business intelligence?
- What are the main components of a BI solution?
- What is the role and value of each component?

You will tailor your discussions and explanations based on the context of your project and the following framework:

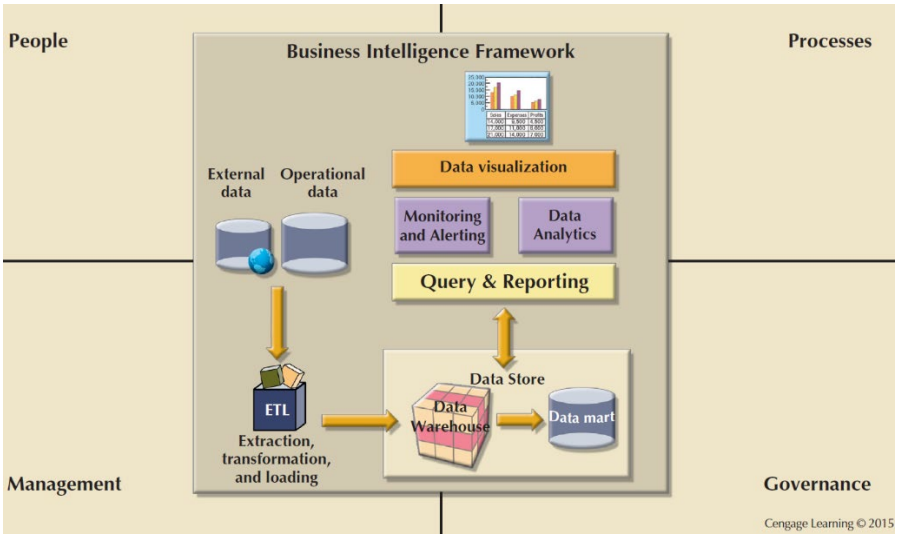

Figure 1: BI Framework

For example, if your client company is GEICO (an auto insurance company), you will discuss different types of operational databases and external data sources that GEICO can use and integrate to gain insight about customers, processes, and even employees. However, if you are working only on the risk assessment department of GEICO, you will mainly explain the operational databases that they use (or can use for the ETL process) in that department and related departments or units.

IMPORTANT: When discussing the data warehouse/data mart component(s) of the BI solution, you will need to provide an applicable, simplified data warehouse structure (multidimensional data model) for that specific company (or department). This great book contains various examples of star schema in different contexts (e.g., healthcare, education, and insurance): https://www.kimballgroup.com/data-warehouse-business-intelligence-resources/books/data-warehouse-dw-toolkit/. Its online version is available to you via WPI library website, so you do not need to buy it. You can use the most relevant model provided in the book, revise and simplify it, and adjust it to make it useful in the context of the client company. Do not merely copy the model and paste it into your final report.

When discussing the monitoring, data analytics, and data visualization functionalities of your proposed BI solution, provide an in-depth explanation of the ways that the company can get value from the BI solution. Be specific. Provide examples of the BI functionalities. For example, how can an operational dashboard help them monitor incidents and take actions accordingly? How can a strategic dashboard help them implement the BSC approach effectively? How can the BI solution generate value for the finance department? etc. (these are just examples, you do not have to cover all of them in your report). Then, you will mention that in the next section, you are providing three use cases or prototypes of the dashboards and analytics techniques as part of the comprehensive BI solution.

Section 4: Three Use Cases/Prototypes (flexible length)

In this section, you will use one or more datasets to show the client company what you exactly mean by using BI. Two of the three use cases should be prototypes of dashboards. For example, one can be related to sales and marketing, the other one related to human resources. Or one can be related to strategic decisions (i.e., a strategic dashboard), the other one a tactical or operational dashboard. The two dashboards should have different goals, directions, and themes. You can use the same dataset or different datasets for the two dashboards. When creating the dashboard, be creative; use interesting features (e.g., parameters, sets, interactive filters, drill-down/roll-up functionalities, etc.). On each dashboard, try to include at least five performance indicators. In your report, you will provide different screenshots of the dashboards along with explanations on who the users of each dashboard will be, what managerial questions can be answered using each dashboard, and how each functionality on the dashboard can help answering those questions. Your dashboards will be evaluated based on their usefulness, ease of use, creativity, and visual appeal as well as the explanations that you provide for each one.

Other than the two dashboards, you will perform some form of data analytics (e.g., social media analytics, customer analytics, predictive modeling, forecasting, etc.) to explain to the client company that data analytics (other than visual analytics and dashboards) can help them make better decisions and ultimately improve their performance. An example of data analytics for the third part of your project is performing social media analytics on tweets or online reviews to generate insights about the client's processes, products, customers' opinions, etc. Results may then be visualized using Tableau (or any other tools or platforms such as R or Python). However, you are not required to put the results of the analytics process on a dashboard. As another example, you can run different forms of customer analytics as part of the third component of your project (we will cover some of them this semester). Remember, what matters is how your analysis is potentially useful for the client company and how it can help you pitch your idea, which is implementing a comprehensive BI solution in that company. Note that for this part, you may not conduct the same analysis using the same datasets you have used in other class (e.g., DS501 and DS502). However, you can use the same datasets that you have used in those classes as long as your analysis is new and relevant to your current project. If you are coding in R, Python, or other languages, provide your code in an appendix. The body of your report should contain results of the analysis, some graphs (if applicable), some tables (if applicable), and implications of your analysis for the client company.

Section 5: Implementation (up to three pages)

Once you provide real examples of how BI can be realized and instantiated in the client company, you will explain the BI implementation process and provide recommendations to them in that regard. To do so, you will focus on the managerial, technical, and ethical implications and challenges of BI implementation. For the managerial side, you will use the Kotter's eight-step model for organizational transformation and data warehousing. For the technical side, you can discuss the issues related to data quality (that we have covered in class) and the way you, as a data management expert, would handle them. For the ethical challenges, you can discuss the privacy implications and/or other unintended consequences of using BI and analytics in the company and how you think those challenges should be mitigated.

Section 6: Summary and Conclusion (around one page)

At the end, you will provide a short summary on what you did and what you recommend the company to do.

References: Please use in-text citations and provide a list of references in the APA format.

Final Presentation: Each team's presentation should take about 15 minutes and include all members. (Everybody should speak during the presentation). In your presentation, you can use slides as well as Tableau to present your work.