Writing About Operations Research – Overview

- A OR project report typically contains the following sections:

  1. **Introduction.**
     - What is the system that you are studying?
     - What is the decision or prediction problem you are trying to analyze?
     - Why is it important?
     - What operations research or statistical models did you use to analyze your problem?

  2. **Data.**
     - What information does your input data contain? How much input data did you use?
     - Where does your input data come from?
     - How did you wrangle or analyze your input data in order to use it in your model?

  3. **Model.**
     - What are the components of your model, both mathematically and in plain English?

  4. **Results.**
     - How did you run or solve your model?
     - What software or programming language did you use?
     - What model variants did you run, or what alternatives did you test?
     - What were the results of your model, in tables, graphs, and plain English?
     - What do the results mean in the context of your problem?
     - Are there any interesting or surprising trends or trade-offs?

  5. **Conclusion.**
     - What are the key takeaways from your results?
     - What courses of action do you recommend, based on your study?
     - What are the assumptions and limitations of your study?

- As we work through Project 1 together, we will discuss how to write these sections in more detail.

- Writing is an <u>iterative</u> and <u>nonlinear</u> process.

  - You probably won't get things right the first time around.
  - Your problem, data, model and results may evolve as you work on your project.
  - This is natural! You can always go back and revise it.
  - Experienced analysts do this all the time.