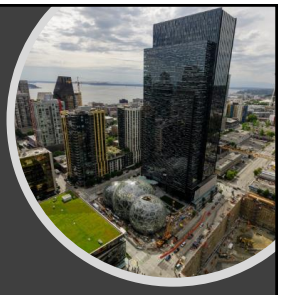
XYZ Corporation

Business GIS Semester Project Discussion

GEOG 4230/5230

XYZ Logistical Analysis: A Complex Problem

- Solving this kind of real-world problem takes an organized approach
- The best way to address a real-world problem is to break it down into stages that you complete one at a time
- If you identify the necessary stages first, you can build what we can call a workflow

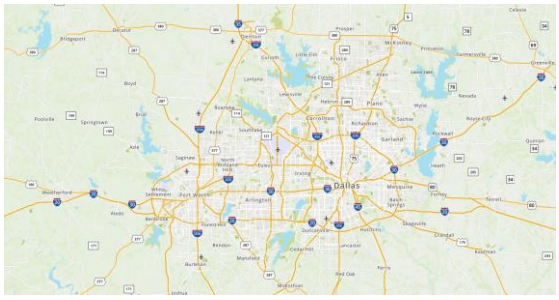


A Workflow Approach

- Many of the problems that can be addressed in business and retail geography can be solved using our four-step GIS exercise workflow approach
  - 1. Formulate the question
  - 2. Model the solution
  - 3. Perform the analysis
  - 4. Apply the results

1. The Question

- **Q:** What is the key question you need to answer to address the XYZ distribution center location problem?
  - Are there sub-questions you can answer first that can help you to solve the big question (or questions) later?



1. The Question

- Sub-problems are much easier to solve than trying to take on the entire project all at once

2. Modeling the Solution

- There are really two components to consider here
  - 1. The **methods** available to you
  - 2. The **datasets** available to you

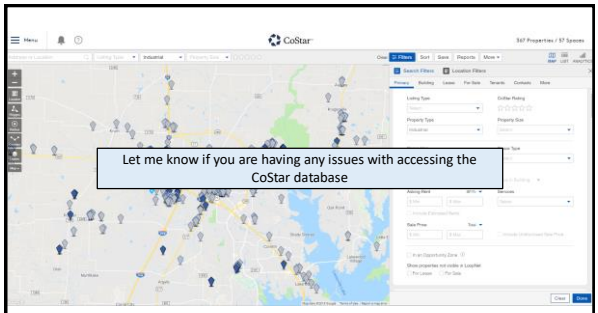
2. Modeling the Solution

- **Methods:** identify all of the GIS capabilities you have access to
  - List the kinds of GIS methods you are using this week and will use in this course (and in other courses, if applicable)
    - What are they: name them
    - What do they do: what are their results
  - Match these analytical options with the question(s) you need to answer
    - Which methods do some part of the overall analysis you need done

Q: What GIS capabilities do you know you have? Can you name some general analytical operations you can complete right now?

2. Modeling the Solution

- **Datasets:** identify all of the kinds of information you need to complete the needed analysis
  - Business data: information about individual businesses
  - Place data: information about places, including zip codes, census tracts, block groups, or other kinds of places (maybe even ones that you define) that are relevant to your needs
- Then, you need to think about where you can find this information
  - Do we have it? If so, where? Online? Via the library website? US Census?
  - Do you need to find it somewhere else? If so, the earlier you get started, the better



Let me know if you are having any issues with accessing the CoStar database

3. Perform the Analysis

- As we just said, the earlier you get started, the better
  - It will probably take you time to complete your analysis well
  - You may need to try the analysis multiple times with different options
  - You may need to try the analysis in multiple ways (maybe start with one GIS package, then try again in another)
  - Don't limit your options by waiting too long

4. Apply the Results

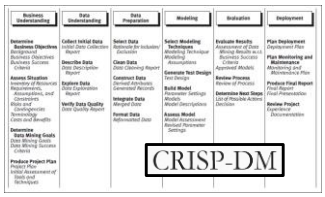
- **Do not think** that when you are done with your analysis, the project is complete
  - You need to carefully consider the application: how will your client use the analysis you provide?

4. Apply the Results

- You should starting thinking now
  - 1. What will the analytical results of your work look like? Will it be some maps, a table, a chart, or what?
  - 2. Put yourself in the position of a real estate investor using your distribution center location analysis: what does this person need to do their job?

Q: When are you done with this project?

Last thought: don't forget the full CRISP-DM framework we introduced this week



… and how CRISP-DM extends on the four-step workflow…

- 1. Formulate the question
- 2. Model the solution
- 3. Perform the analysis
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Q: What overall questions do you have now?