Crafting a Project Proposal

Choose a Data-Related Example Project

- Get practice!

- You'll use this for:
  - Planning your final project
  - Discussing new initiatives at your future job
  - Winning data contracts

Executive Summary

- Explain WIIFM: What's in it for me?

- Keep it brief (3 paragraphs or less)

- Discuss the problem you're trying to solve and how you will solve it

Business Objectives

- An objective is a goal

- What are your goals with this project?
- What business need will you meet?

- What value does this project provide?

- Remember, objectives must be measurable
- Be as specific as you can!

Background

- Couple paragraphs

- What does someone who has no knowledge of the problem or topic need to know to make a decision?

- Cite references if applicable

Scope

- What is a part of this project?

- What is definitely NOT a part of this project?

- Defining scope prevents "scope creep"

- Especially important for:
  - Long-running projects
  - Projects / companies with high turnover

Functional Requirements

- What should your project do?

- How should your project work?

- Be as specific as you can

Details to Provide in Functional Requirements

- Programming language

- Analyses

- Description of the data
  - Where is it located?
  - Variables and data types
  - Who owns the data
  - Any limitations to using the data (privacy, clearances, etc.)

Personnel Requirements

- Personnel = People

- Who will work with you on this?
  - Job titles
  - Specific names if you have them
  - What skills do they need?
  - What role do they fulfill?
  - How many people do you need?
  - Do they all work full time?

Delivery Schedule

- Timeline
- Easiest to put in a table or bullet points

- What are the major phases / milestones of a project?
- When will they be completed?

Estimating Delivery

- Describe every task that needs to be done

- Estimate how long each task will take with the people that are available

- Don't forget to account for weekends, holidays, and vacation times

- Create an end-date by adding up the time for all the tasks

Practice Makes Perfect

- Estimating timelines is tricky

- Consult experienced fellows & check in with those completing the tasks for their estimates

- Keep track of what you estimate and when it actually gets done for each project

- Allows you to improve for next time

Other Requirements

- Catch all

- Anything that doesn't fit in function, personnel, or schedule goes here

- Accessibility requirements, styling, etc.

Assumptions

- Things your project relies upon that must be working

- Examples
    - Data available
    - People healthy
    - Programming languages working smoothly
    - Receiving timely feedback from your boss

Limitations

- Internal to your project / company

- Related to:
    - Time
    - Personnel
    - Scope
    - Cost
    - Technical details

- Mention any circumstances that are not ideal

Risks

- External to your company / project

- Anything that can cause issues – delay, failure

- Examples
  - Customer no longer wants product
  - COVID-19
  - Weather issues – loss of power / internet

Mitigating Risk

- Your goal is to plan for and therefore contain risk

- Every risk you list should have a plan to reduce the impact of those risks

- Examples:
  - List out other customers who might be interested
  - Create a work-from-home plan
  - Get a backup generator

Questions?