CS360
Business Information Systems
Analysis and Modeling

Problem Identification
Basic Requirements

* Useful IS support is
  * relevant
  * accurate
  * timely
  * usable
  * affordable
  * adaptable
  * accessible

* Failures in any of these domains result in IS opportunities

* Symptom-Problem-Solution analysis
  * Symptoms: experience of user is unsatisfactory
  * Problem: system lacks user synchronization
  * Solution: realign system functions with user needs
It isn’t always easy!

I’ll need to know your requirements before I start to design the software.

First of all, what are you trying to accomplish?

I’m trying to make you design my software.

I mean what are you trying to accomplish with the software?

I won’t know what I can accomplish until you tell me what the software can do.

Try to get this concept through your thick skull: the software can do whatever I design it to do!

Can you design it to tell you my requirements?
Common IS Problems

* **Source Data Input Deficiencies**
  * capture
  * edit
  * input
  * process
  * output
  * evaluate

* **Breakdowns in Subsystem Integration**
  * functions require specific data
  * data collected for one function may not serve another well
  * “piggy-back” information use saves data entry and improves data accuracy and timeliness
  * multiple tools may require “converters” to pass data from one to another
Sleuthing

* Start by understanding the user
  * Get orientation/authorization in writing
  * All analysis projects need a champion
    * you cannot be the champion!
  * Nurture a “we” approach to understanding the situation

* Close in on the issue from all sides
  * How does this situation relate to similar situations in the related industry?
  * Visit the concerns where they live
  * Talk to the individuals directly involved through interviews
  * Gather opinions and perspectives off line through questionnaires
  * Visit the site itself and “walk a mile in their shoes”
  * Keep careful notes on who/when/where information was gathered for later reference
Developing the “Odds”

- Complex problems may require significant expense even during analysis
  - Pick a point during the investigation to sit back and consider the odds of finding a cost/effective solution
  - Hypothesize
    - The root issues in the situation
    - The time required to fully expose the full situation detail
    - Possible/Probable system responses to the situation
    - The benefits of achieving the hypothetical system solution
  - Formulate a prospective “cost vs. benefit” based on current information: (a feasibility analysis)
- Lay out the known facts to the user
- Get a decision to stop/continue and “how far” until another review
A Typical Project Scenario

1. Industry Experience and Standards
2. Stake Holders (Interviews, Surveys)
3. Analysists
4. Project Contract

Champion

Feasibility Report

LJ Waguespack, Ph.D. 2017
Unit 03: 7
The Importance of Documentation

"Writing down" your position

- clarify your thinking
- forces you to "commit" to a position
- records the circumstances for your position
- records your logic in reaching conclusions
- makes systematic thinking and problem solving a virtue rather than an accident of your actions
- makes your thoughts available to many others without your presence
- saves you the time needed to "retell" your story over and over again
- enables others to constructively criticize and improve your thinking and conclusions
- invariably contributes to better overall solutions
Starting on the “Right Foot”

* Project Contract “marching orders”
  * Problem Summary
    * issues, shortcomings, desired improvements in functional terms
  * Scope
    * the boundaries for determining problem content, relationships, and potential responses
  * Constraints
    * gives that limit the range or extent of response
  * Objectives
    * “MEASURABLE” outcomes that identify success for the project given the scope and constraints

* Written specifications
  * decrease the chance for misunderstandings
  * produce a record for later project assessment
  * force the client/user to be explicit particularly in the area of “objectives”
Feasibility Reporting

- Restate the project contract
  - repeating what you’ve “heard” reinforces trust
  - state your interpretation of the details
  - state your interpretation of the objectives

- Summarize the sources of information
  - industry research
  - interviews / surveys
  - existing system documentation
  - append any important “formal” documents

- Summarize potential solution pieces

- Present cost / benefit calculations as per the “measurable” goals

- Lay out the alternatives based on your opinion of their merits