MIS5102
In-class Exercise for Week 2: Systems Thinking and Process Boundaries

Objective: Understand the mechanics of systems thinking.

Learning Outcomes

• Identify inputs and outputs of a process.
• Put the process in the context of a larger system.
• Explore how changes to inputs and outputs can impact the larger system.

Step 1: Individual Work: Define process boundaries (15 minutes)

• Consider the following processes:
  o A customer places an order at Amazon.com
  o A guest makes a reservation at a hotel

• For each process, determine the inputs and outputs. In other words, what information does the process require, and what information does the process produce?
  o What systems, or entities, provide the process’ inputs and receive its outputs
  o *Do not worry about the specific mechanics of the process itself, just the inputs and outputs.*

Step 2: Group Work: Diagramming the System (15 minutes)

• In groups, compare your notes for the scenarios. Arrive at consensus for inputs and outputs.
• Create a diagram of those inputs and outputs for each scenario.

There’s no specific format, but it could look something like this example for Order Entry (note that “Entity” and “information” are generic labels – you’d make them specific to your process, and there could be more or less than what’s listed here):

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Step 3: Group Work: Influencing the System (15 minutes)

- Analyze the diagrams you’ve created. For each process:
  - What are the consequences of bad or missing information coming into the process?
  - What are the consequences of bad or missing information produced by the process?
  - How sensitive is the larger system to the successful execution of the process?

Step 4: Class Debrief and Discussion (15 minutes)

Questions for discussion:

- What are the key inputs and outputs of each process?
- What are the differences in how the processes relate to their larger system?
- Are there any potential feedback loops? In other words, how might the processes that follow Order Entry (or Hotel Reservations) provide input back into those processes?