**Assignment 3**

**Service System**

**Introduction**

Perhaps the most essential skill of system analysis is the ability to convert observations of a given environment into a simple model for the purpose of discussion and analysis. The key to doing this well lies in a focus on simplicity, communication value and the humbling but true observation that “all models are wrong, but some are useful.”

**Assignment**

The assignment is create a diagram that explains the workings of a specific service business in terms of stocks, flows, inputs, outputs and feedback loops operating through time.

The service business you choose can be of any sort as long as it is local and easily accessible to you, as you will need to visit it to accomplish this assignment. Food-oriented businesses will probably be the easiest to model, but you are free to follow your interests.

Your are not expected to diagram every process you observe, but you need to provide enough detail to distinguish the aspects of the operation that make it unique. In addition to the activity that directly affects customers (e.g. paying for goods) try to capture indirect processes as well (e.g. ordering new stock).

The format of the diagram is open to your interpretation but you must communicate:

* the actors or entities in the system
* the relationships between those entities
* the boundaries of the system
* the stocks moving within the system
* the stocks entering or leaving the system
* the feedback loops, including sources of delay

Note that you will need to represent several loops, each possibly involving a different stock, to communicate effectively the dynamic within the business.

**Submission**

On the day the assignment is due, bring tabloid sized output of your diagram and be prepared to spend no more than 5 minutes explaining it to the class.

**Your diagram must be done in grayscale. Focus on communication via lines, symbols and text, not imagery. Be sure that your diagram contains a title, your name and the date.**

In addition to the in-class presentation, submit a PDF version of your diagram to Coursekit by 9 am the day the assignment is due.

**Discussion & Resources**

This assignment really has three parts:

1. Observe a complex system
2. Develop a model for that system
3. Express that model visually

**Observing**

As you observe the business, here are some questions to ponder:

1. What makes the business you observed different from others like it?
2. What makes it similar to other businesses like it?
3. What opportunities do you see for improving the service?
4. Within the context of this service, what makes for a good or bad experience? Where is the variability the greatest?
5. If you consider different levels of scale, say moving from the experience of one customer to that of many customers, or moving from the front of the store to the back and then considering the entire store, do you see the same systems at work, or different ones?
6. How much of the service experience is embedded in the process, and how much in the employees?
7. How does the behavior or needs of different customers influence their experience of the system?

**Modeling**

Your first decision, after your initial observation, will be to identify the perspective you will use to model what you have observed. Here are several possibilities:

1. the customer journey
2. the technology used to offer and execute the service
3. the business model for the service
4. the management and accounting systems used to maintain the service
5. the architecture of physical space in which the service is delivered

Compelling models can come from comparing or contrasting multiple perspectives, but be cautious about making your model too complicated.

**Expressing**

There is no standard format for expressing process, but a great place for you to start will be to consult Chapter 6, Flowcharts, in Dan Brown’s Communicating Design.

Here are some other references:

* http://adaptivepath.com/ideas/the-anatomy-of-an-experience-map
* http://nform.com/blog/2010/02/experience-maps-cross-channel-experiences-deliverable-for-gamers
* http://uxmag.com/articles/experience-maps-identify-inefficiencies-and-opportunities
* http://www.servicedesigntools.org/tools/8
* http://www.uxmatters.com/mt/archives/2011/09/the-value-of-customer-journey-maps-a-ux-designers-personal-journey.php
* http://www.uxforthemasses.com/scenario-mapping/

I also strongly recommend you finish this week’s reading assignment (Models of Models and What Is Interaction) BEFORE beginning to draw your diagram.

**Grading Rubric**

| Quality | Poor (1) | Good (2 - 3) | Excellent (4) | Weight (%) |
| --- | --- | --- | --- | --- |
| Graphic Design | Is difficult to parse visually, does not use layout, scale or position effectively to enhance communication, or lacks aesthetic sense | Has a pleasing appearance, use of typography supports meaning, uses layout, scale and position to enhance meaning, and communicates well the process entities, relationships and flow | Is particularly attractive, uses graphic techniques to communicate layers of meaning, develops a clear visual language | 20% |
| Information Architecture | The diagram is disorganized, it is difficult to understand the differences and hierarchy of importance between the represented entities and relationships | The diagram is well-organized with a clear structure; system entities and relationships are clearly communicated; complex relationships are shown, the conceptual model is apparent | The information architecture is insightful, the choice of elements and their arrangement on the page communicates meaning that exists in the system but is not at all obvious to a casual observer, the architecture draws focus on the essential elements of the complex system | 30% |
| Analytic Utility | Diagram does not communicate a system clearly, does not show process, does not represent a clear model or has no narrative flow | The diagram expresses a clear model of the system and how the represented entities and relationships are part of the model, the important inputs/outputs, feedback, and flows are easily discerned | The model represented in the diagram is particularly elegant, and clarifies how the system changes over time, or in the face of other variations in input or environment; cause and effect can be understood as well as sources of error or risk | 50% |