Lab 01: Systems Thinking and Infrastructures

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BACKGROUND

Infrastructures often blend into the background until there is a problem. The two videos presented two different challenges facing the infrastructure of the US. This activity will have you apply your systems thinking skills to infrastructure on campus.

This exercise was inspired by Danya Glabau's STS syllabus (Glabau, 2019).

Note about your submission

The submission is only an artifact of your engagement with the material and not the product of your efforts. What is the difference? The product of your efforts is the learning of the material and application of the module's skills. Labs are meant to be relatively low-stakes, formative assessments to allow you to develop skills and apply concepts. You are graded on the accuracy and completeness of your answers (see the rubric for more details), but if you focus just on the score and do not engage in discussion, then you are not going to get the most out of the activity.

Activity Instructions

As a team, you will take a walk around campus until you identify an item that represents a university infrastructure that you wish to examine for this activity.

Questions For Reporting Back

Please fill in these questions with the responses that you came up with as a team or that we discussed as a class.

> **1.** **Provide *two or more* photos of the university infrastructure you have identified. (These should not be the same item, but rather two different items that are part of the same infrastructure. Preferably different aspects of that infrastructure)**
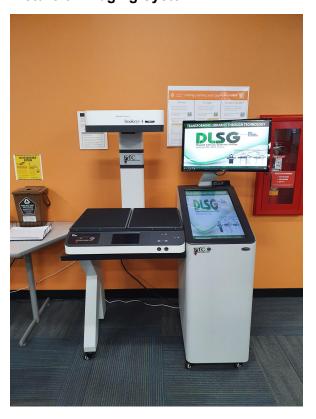
The Entrance of STEM library:

Picture of Printers:

Picture of Imaging System:

2.   What university infrastructure is your team examining? Explain how you believe it fits the definition "university infrastructure".

The university infrastructure our team is examining is UMD University Libraries. It fits the definition of an infrastructure because all of UMD's libraries and materials are centralized to the same checkout, computer login, and book transfer system.

3.   Explain the purpose this university infrastructure serves and how it does that.

The libraries serve as major information sources for students and also provide a quiet place to study or do homework. Librarians stock the shelves with books that are organized by author, genre, and catalog number in sections. The libraries house different subsystems that work together such as the checkout system and book transfer system.

4.   Describe one system that is enabled by the infrastructure you have chosen and how it is enabled.

UMD's databases are a system enabled by the libraries on campus. The website provides services to find and access scholarly articles, books, etc. By partnering

with other libraries worldwide via WorldCat, the UMD libraries enable access to records elsewhere.

5.   Describe the effect to the university if this infrastructure were to be temporarily disabled.

Students who depend on this infrastructure will not be able to print their assignments for or checkout books that are needed for their classes. A buffer in the system can be detrimental to the success of a student. If students don't have printed materials, they may not be able to focus on their classes.

6.   Who owns this infrastructure? If you needed it to change, who would you have to talk to?

The UMD University Libraries are owned by the University of Maryland. If we needed it to change we would probably have to talk to the university divisions that are in charge of the libraries. Like the Division of Administration, who are in charge of the projects and facility maintenance carried out at UMD.

Citations

Glabau, D. (2019, January 25). Science, Technology, and Society Syllabus. *Danya Glabau*. https://danyaglabau.com/2019/01/25/science-technology-and-society-syllabus/