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Reflection Paper 1

CYSE 368 Cybersecurity Internship

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During the past 50 hours of my internship and under the mentorship of Dr. John Baaki the last three sessions of class focusing on the Design Thinking approach, I have gained a new perspective in approaching cybersecurity risk management. I had the opportunity to work with my group, Suffolk B, acting as cybersecurity consultants assisting the city of Wilmer, Texas to enhance their cybersecurity defenses in a realistic scenario involving a ransomware attack on the small city.

One of the new challenges I am reflecting on is learning to apply the Design Thinking model – define, ideate, empathize, prototype, and test. After learning and discussing the define, ideate, and empathize phases with Dr. Baaki and the entire class, our group's exercise was to create a prototype of a cybersecurity risk management plan. Our group followed the NIST Cybersecurity Framework for this exercise. Before we could get started, we needed to open our head space to empathize in understanding the needs of Wilmer, Texas as well as the importance of ideating a practical solution so we could design a prototype. By getting out of our own heads and listening to each other while collaborating, I found it easier to get started and think about our objective.

However, while working through the exercise of creating a cybersecurity risk management plan for the city of Wilmer, Texas I noticed that some aspects of the initial scenario discussions on day 1 were beyond the intended scope. For example, there were narratives about

private institutions like banks and grocery stores being affected in a nonrealistic way by the ransomware attack on the city. However, given the nature of the attack, it seems only city-managed entities, such as public works, the court system, or municipal services would be impacted because grocery stores and bank systems are not usually directly connected to a city's IT infrastructure. Nevertheless, it is possible that grocery stores or banks that rely on utilities like electricity and water, which are managed by city services could be impacted if there were to be an issue, so in a way, there is a ripple effect of a city-wide attack perhaps.

I think it was important to remember when moving onto the prototype phase in the Design Thinking approach of the exercise that the true focus was on the city of Wilmer, Texas in strengthening their cybersecurity posture. Policies such as FERPA for schools, and GLBA for banks, would be separate and outside the scope of protecting the city of Wilmer, Texas from another cyber-attack such as ransomware.

The exercise was still very beneficial in teaching us how to apply the Design Thinking approach and discuss it as a team and as a class. I appreciated the opportunity and knowledge Dr. Baaki provided to better understand the importance of maintaining a clear head space when diving into a design and in this case, a cybersecurity risk management plan using the Design Thinking approach.