

Career Paper: Cybersecurity Managers & Their Importance

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Introduction

Cybersecurity managers have a wide scope of responsibility. According to the Tulane University School of Professional Advancement a cybersecurity manager's jobs including: "observing all of the operations occurring across the network and managing the infrastructure that facilitates those operations," "Keeping track of changes to internal and external policies," and "mitigating the risk by adapting their strategies," (cite). This means their duties exceed typical computer maintenance; it also means they must have good social skills. Communicating to their team, higher ups, and others in different departments.

Social Science Principles Application

Cybersecurity managers need a range of social science principles to deal with their day-to-day tasks. One of the biggest principles stressed is parsimony. Managers need to have parsimony because they are reporting to other departments outside the tech world about their operations. For example, one of their duties could be to "Consult and provide technical guidance and advice" (State of Oregon, n.d.). This could mean informing others about online safety, implementing cybersecurity training, and more. This means managers need to have parsimony, or simple explanation, in order to achieve their goal of communicating.

Cybersecurity managers also use empiricism to implement things such as cyber policies and guidelines. They use it because they need to take actual risk factors into account when making them, not just a hunch declared by a higher up or coworker.

Cybersecurity managers also use social science research tools in order to better understand their systems. For example, there was a study done that showed learning other languages, specifically Russian, would give managers better chance at identifying sophisticated hacking assets (Ebrahimi et al., 2023, p. 1209). This study displays researchers making a study in order to make managerial duties more efficient.

Class Concepts Application

Cybersecurity managers are key to the importance of cybersecurity culture through their projection of cybersecurity meaning. Because their duties include educating the rest of their organization, they guarantee employees know the importance of their technology and its processes. This can also be tied to the concept of providing an education and training road map as their job duties also include “[Providing] overall strategic direction and highest-level technical guidance to assigned project or other personnel (State of Oregon, n.d.).

In their daily routines, managers can expect to display leadership as they are in a managerial position and are required to manage the teams under them. Also, participating in these teams’ discussions on policies, activities, etc. shows a need for managers to build community with those around them to have good outcomes in their work. Finally, they also apply to the individual’s area of a good culture as they are the ones others depend on to apply frameworks, draft policies, and more!

Marginalized Groups & Society

Unfortunately, according to the (ISC)²’s Global Information Security Workforce Study, 26% of the cybersecurity workforce represents a minority identity. While 23% of those hold a director role or something above, when it comes to racial/ethnic minorities most tend to be in non-management positions – despite having impressive education (Reed & Acosta-Rubio, 2018, p. 3). This means most cybersecurity managers are not in a marginalized racial group, but could be marginalized through gender, disability, etc.

Overall, there are 533,220 cybersecurity (or cybersecurity adjacent) managers employed in the U.S. (National Center for Science and Engineering Statistics, 2024, p. 13). They have a median pay of \$164,070 (National Center for Science and Engineering Statistics, 2024, p. 13). They also are more likely to have a bachelor’s or above than other positions like architects or administrators (National Center for Science and Engineering Statistics, 2024, 16). Despite the large number of managers employed, it is

estimated that there are 29,496 managerial job openings in the field (National Center for Science and Engineering Statistics, 2024, p. 32).

References

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