Understanding the Role of Strategic Security Management in Mitigating Cybersecurity Risk in Industrial Internet of Things (IIoT)

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Abstract—**The impact of cybersecurity risk in an IIoT environment cannot be underestimated. The rapid adoption of 'Things' to enhance existing technology stack or implement anew, demonstrate that the threat landscape expands and becomes overly sophisticated to manage. Despite the technology advancement in the case of IoT, cybersecurity management has been discussed in fragments rather than holistically in academic work. This paper takes a comprehensive literature survey to review approaches in cybersecurity management and identify the current challenges of cybersecurity management. The outcome is used to understand the current state of cybersecurity in IIoT. This provides the opportunity to identify improvements to existing approaches and leverage the full potential of cybersecurity management in dealing with the ever-changing cybersecurity threats within IIoT.**

Keywords—cybersecurity, risk, strategic leadership, security management, IIoT