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Survey on cyber security measures and their applicability in digital business ecosystem

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This paper evaluates the cyber security, attributes and culture which are critical for today business transactions. World is moving to sustainable digital business transformation. Therefore, we need to think the key important attributes of the digital maturity and modern organization culture as it definitely creates a delightful customer experience. Changes in cyber security definitely requires a new type of process and skills. Particularly, the software development process based on the security framework. Adaptive skills and innovation processors are key to the next phase of cyber security. Therefore, the main objective of this research is to suggest more suitable and proper approach to capitalize the cyber security for digital business ecosystem. As entry criteria for the main objective, a survey has been conducted to measure the effectiveness of the factors, which have been identified based on literature review on cyber security. The conclusion is derived based on the collected data. The research started with a literature survey to identify the factors that affect the security in global business ecosystem. A structured questionnaire was used as the research instrument to collect data from projects in IT companies in Sri Lanka. To gather data, 30 IT professionals were interviewed from 5 different companies. Survey participants were selected by using random sampling technique. According to the result shown in the survey 80% of the IT professionals are ready to capitalize the cyber security and receive information and upgrade their products. 70% of the response indicate that, they are using security as nonfunctional requirement. 100% of professionals aware about the importance on cyber security. The results of the study shows that 90% of the clients are expecting security feature in their products. 40% of clients are not aware on the level of security they need. The cost for security enhancement is very high and due to this, 60% of clients are not willing to pay high amount of money for security establishment. Therefore they are satisfied with the low cost security tools or open source tools. The most highlighted barrier is that it discourages IT professionals using the commercialized security tool due to the fear to embrace new tool or process and lack of knowledge. The high cost of the tools and no define process to develop secure applications are the other main issues to be addressed in order to enhance cyber security in the global business ecosystem. Results have shown that the younger generation is willing to adopt and interested in the new technology. It also found that there is a gap in security expectations and software development process.

Keywords: Business ecosystem, cyber security, digital transformation, software development process, sustainable development