Title

security index-definition for estimation of the level of arbitrary IT-security constellations

https://miau.my-x.hu/bprof/2023/thesis02\_a1\_c1.docx

Abstract

* Problems: The increasing usage of technology has made organizations vulnerable ([https://www.symantec.com/security-center/threat-report)](https://www.symantec.com/security-center/threat-report) to cyber threats (like…). The IT-security measures (like …) put in place are not always adequate[[1]](#footnote-1) to protect against these threats.
* Goals: The main goal of this thesis is to investigate ways Like (develop an aggregated risk/security index) to enhance IT-security measures in organizations to better[[2]](#footnote-2) (than…?) estimation of the level of arbitrary IT-security constellations and protect against cyber threats.
* Tasks: This will involve conducting a thorough review (What is the frequency and nature of cyber-attacks faced by the organization?) of existing IT-security measures and identifying areas like (development of the aggregated risk/security index) for improvement Development of an aggregated risk/security index-definition for estimation of the level of arbitrary IT-security constellations. The study/documentation and the application will also involve conducting interviews (c.f. footnote#1: https://miau.my-x.hu/bprof/2023/thesis02\_a1\_c1.docx) with experts (the number of involved experts and their specific domains would depend on the nature and scope of the study, professionals, IT managers, information security), in the field to gather their insights.
* Targeted groups/customers: This study is aimed at organizations of all sizes, from small businesses to large corporations.
* Utilities: The results of this study will be useful for organizations to improve their IT-security measures and better (than …?) protect against cyber threats1.
* Characteristics of the solution: The solution proposed in this thesis will be based on the latest best practices like (security controls implementation) and technologies like (AI, machine learning) in the field of IT-security.
* Results: The results of this study will provide organizations with a roadmap[[3]](#footnote-3) (as output of the expert system) for enhancing their IT-security measures and protecting against cyber threats with quasi exact estimation about the reduction of the aggregated risk-index concerning each roadmap-item. Parallel, the costs of each roadmap-item should also be estimated/derived.
* Discussions: The findings of this study + application will be discussed in detail, including the advantages and disadvantages of different approaches (see each potential roadmap-items in the generalized combinatorial space of the potential customers). The thesis will also provide recommendations (see optimized set of roadmap-items) for organizations to improve their IT-security measures (incl. quasi exact estimation of the reduced risk-potential).

Future: The results of this study will have implications implementation of more effective IT-security measures in organizations, thus improving their protection against cyber threats for the future of IT-security and provide a foundation for further research like (Developing new technologies and best practices in IT-security.

* ) In this field.

1. How can be measured? [↑](#footnote-ref-1)
2. Each thesis has to deliver benchmarking solution and it is important to be better than these benchmarks of the literature… [↑](#footnote-ref-2)
3. Is appropriate data available? [↑](#footnote-ref-3)