

Accepted Manuscript

Title: A model of the information security investment decision-making process

Author: Daniel Dor, Yuval Elovici

PII: S0167-4048(16)30104-3

DOI: <http://dx.doi.org/doi: 10.1016/j.cose.2016.09.006>

Reference: COSE 1038

To appear in: *Computers & Security*

Received date: 22-5-2016

Revised date: 29-8-2016

Accepted date: 14-9-2016



Please cite this article as: Daniel Dor, Yuval Elovici, A model of the information security investment decision-making process, *Computers & Security* (2016), <http://dx.doi.org/doi: 10.1016/j.cose.2016.09.006>.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

A Model of the Information Security Investment Decision-Making Process

Daniel Dor,¹ Yuval Elovici

Department of Information Systems Engineering, BGU Cyber Security Research Center, Ben-Gurion University of the Negev,
Beer-Sheva 84105, Israel

Abstract

Following recent developments affecting the information security threat landscape, information security has become a complex managerial issue. Using grounded theory, we present a conceptual model that reflects the most up-to-date decision-making practices regarding information security investment in organizations for several industries. The framework described in this article generalizes the current decision-making processes, while taking into consideration that organizations may differ in many respects, including: the stakeholder that administers the information security budget, the Chief Information Security Officer's (CISO) role in the organization, the organization's industry sector, the organizational structure, and so on. Our findings indicate that the information security investment decision-making process contains 14 phases and 16 concepts that affect and are affected by these phases. The study shows that the decision-making process is heavily biased by different organizational and psychological factors. The conceptual model derived can assist decision makers/stakeholders in performing, reviewing, and manipulating the decision-making process in their organizations. It can also assist vendors and consultants in understanding and prioritizing various aspects of their sales cycle.

Keywords Information Security Investments, Decision-Making, Grounded Theory, Multi-Criteria Decision Making, Decision-processes, Information Security

Funding This research did not receive any specific grant from funding agencies in the public, commercial, or nonprofit sectors.

¹ Corresponding author.

Email addresses: dod@bgu.ac.il (D. Dor), elovici@bgu.ac.il (Y. Elovici).

Download English Version:

<https://daneshyari.com/en/article/4955589>

Download Persian Version:

<https://daneshyari.com/article/4955589>

[Daneshyari.com](https://daneshyari.com)