



# INFORMATION SECURITY EVALUATION

## A HOLISTIC APPROACH

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Igli Tashi, Solange Ghernaouti-Hélie

Information systems have become a critical element of every organization's structure. A malfunction of the information and communication technology (ICT) infrastructure can paralyse the whole organization and have disastrous consequences at many levels (e.g., finances and reputation, to name just two). On the other hand, modern businesses and organizations collaborate increasingly with companies, customers, and other stakeholders by technological means. This emphasizes the need for a reliable and secure ICT infrastructure for companies whose principal asset and added value is information.

This book proposes a global and systemic multidimensional integrated approach to the holistic evaluation of the information security posture of an organization. The Information Security Assurance Assessment Model (ISAAM) presented in this book is based on, and integrates, a number of information security best practices, standards, methodologies and sources of research expertise, in order to provide a generic model that can be implemented in organizations of all kinds as part of their efforts towards better governing their information security.

This approach will contribute to improving the identification of security requirements, measures and controls. At the same time, it provides a means of enhancing the recognition of evidence related to the assurance, quality and maturity levels of the organisation's security posture, thus driving improved security effectiveness and efficiency.

The value added by this evaluation model is that it is easy to implement and operate, and that through a coherent system of evaluation it addresses concrete needs in terms of reliance on an efficient and dynamic evaluation tool.

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What is Information Security? • Risk Management versus Security Management • Information Security Assurance: An Assessment Model • Evaluating the Organizational Dimension • Evaluating the Functional Dimension • Evaluating the Human Dimension • The Assessment of the Compliance Dimension • Conclusions • Annexes • Bibliography

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