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Information Technology Governance Between Iso 38500, Risk It and Val It in Private University

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Abstract

This study explores the application of the ISO 38500, Risk IT, and Val IT frameworks in improving IT governance at the university. ISO 38500 provides general guidance for IT management by boards of directors, while Risk IT focuses on IT risk management and Val IT focuses on managing the value of IT investments. Qualitative research methods were used, including interviews with key stakeholders at Pamulang University. The research results show that the integration of the ISO 38500, Risk IT, and Val IT frameworks has helped universities optimize strategic decision-making regarding IT. Implementation of this framework increases transparency, accountability and holistic IT risk management across the university. However, challenges faced include a lack of deep understanding of the framework and the need to ensure consistency in implementation. Recommendations for the university include more intensive training for staff, strengthening communication between different units, and developing performance metrics that align with the university's strategic goals. This research makes an important contribution to the practical understanding of implementing effective IT governance in higher education environments, by highlighting the benefits and challenges of integrating the ISO 38500, Risk IT, and Val IT frameworks.

Keywords: iso 38500, risk it, val it, maturity level, cheese governance model.

INTRODUCTION

In an era where information technology (IT) plays a key role in organizational operations, the importance of effective IT governance cannot be overstated. Universities, as higher education institutions that continue to grow and depend on IT to support various aspects of their operations, are no exception to the need for good IT governance (Obaid, 2020). However, the challenges faced in managing IT effectively are not simple, especially given the complexity and dynamics involved in the academic environment.

The organization and management of the university are increasingly improving Through digital data and new, complex IT Infrastructure, both human and non-human Actors are all affected by the new economy and society Guide. In an effort to overcome these challenges, various frameworks have been developed to help organizations better manage

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their IT. Among them are ISO 38500, Risk IT, and Val IT, each of which offers guidance and best practices in different aspects of IT governance. ISO 38500 provides direction to the board of directors in strategic IT management, Risk IT emphasizes IT risk management, while Val IT focuses on managing the value of IT investments (Metin et al., 2024).

Pamulang University is one of the institutions educations in South Tangerang. In information technology operational activities have becomes a necessity that must exist for determine the existence of the institution. Invest in the field of information technology has been carried out by the leaders of Pamulang University but investment all that is done is investment in nature incidental. Therefore, technology governance Information is an important part of understood by educational institutions because it will bad impact if the organization only make investments incidentally. Impact Another thing that can happen is the result the use of information technology is no in line with expectations, where the investment is the bigger it turns out it is not followed by support for greater benefits (Toifur et al., 2022).

Research questions are created so that they can develop appropriate governance so that provide solutions to governance problems information technology in organizations namely how to integrate governance models manage information technology related to monitoring, evaluation and direction found at ISO 38500 using domains contained in Risk IT and Val IT framework and what are the current conditions and expectations of University Pamulang related to monitoring, evaluation, and guidance on governance risks and investments manage information technology.

Through this case study, we will investigate how Pamulang University applies the ISO 38500, Risk IT, and Val IT frameworks in their efforts to improve IT governance. Taking into account the unique context of these universities, we will explore the benefits, challenges and lessons to be learned from their experiences (Ilmudeen, 2021). It is hoped that this research will provide valuable insights into best practices in IT governance in higher education environments, as well as contribute to the literature on the integration of effective IT governance frameworks.

Information technology governance has become increasingly vital in contemporary organizational management, especially in the context of rapidly evolving technological landscapes (Porath, 2023). Several frameworks have been developed to guide organizations in effectively managing their IT governance practices. Among these frameworks, ISO 38500, Risk IT, and Val IT stand out as comprehensive guidelines for addressing various aspects of IT governance.

ISO 38500, titled "Corporate Governance of Information Technology," provides principles and guidelines for governing IT within organizations, emphasizing the role of the board of directors in setting strategic direction, monitoring performance, and ensuring accountability. It outlines responsibilities related to IT decision-making, risk management, and resource optimization, aiming to align IT with organizational goals and enhance overall governance practices (Aasi, n.d.).

Risk IT, developed by ISACA (Information Systems Audit and Control Association), focuses specifically on managing IT-related risks. It offers a framework for assessing, mitigating, and monitoring risks associated with IT-enabled initiatives, processes, and systems. By integrating risk management principles into IT governance processes, Risk IT helps organizations proactively identify and address potential threats to their IT assets and operations (Ayu et al., 2024).

Val IT, also developed by ISACA, complements Risk IT by addressing the value management aspect of IT investments. It provides guidance on how organizations can

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optimize the value generated from their IT investments throughout the investment lifecycle. Val IT emphasizes the importance of aligning IT investments with business objectives, measuring value realization, and making informed decisions to maximize returns on IT spending (Melaku, 2023).

In the context of higher education institutions like Pamulang University, the effective implementation of IT governance frameworks is essential for optimizing operational efficiency, ensuring data security, and supporting academic and administrative functions. However, there is limited research specifically examining the integration of ISO 38500, Risk IT, and Val IT within the higher education sector, particularly within the Indonesian context (Gómez Suárez, n.d.).

Some studies have explored the application of individual frameworks or similar IT governance models in educational settings, highlighting the benefits of enhanced decision-making, risk management, and value realization. However, there remains a need for empirical research that investigates the synergies and challenges associated with integrating multiple IT governance frameworks, such as ISO 38500, Risk IT, and Val IT, within higher education institutions like Pamulang University (Nachrowi et al., 2020).

By conducting a case study at Pamulang University, this research aims to contribute to filling this gap in the literature by examining how the university integrates these frameworks to enhance its IT governance practices. Through an in-depth analysis of the university's experiences, challenges, and lessons learned, this study seeks to provide insights into best practices for implementing comprehensive IT governance frameworks in higher education contexts (Zabolotniaia et al., 2020).

METHOD

Preparation Stage, at this stage, a literature review is carried out regarding disaster management and Push technology, identification, problem formulation, problem definition and the objectives of the research. Selection of literature review of Android and Google C2DM services due to its open-source nature, complete online documentation and consideration of the trend of increasing use of Android smartphones.

Needs Analysis Stage, at this stage, a needs analysis is carried out consisting of 1) User needs regarding disaster response information thoroughly by considering the functional requirements of the application effective and from the literature study carried out; 2) Application functional requirements, regarding application functions and limitations devices to be used, including hardware requirements and software on both the client and server sides.

Design Stage, based on the needs analysis above, system design is then carried out refers to the Rational Unified Process standard (Kroll & Kruchten, 2003) with using Unified Modeling Language - UML modeling (Eriksson et al,2004) and refers to ISO 9241-11. The following activities will be carried out Designing system architecture, Designing the class structure, designing sub systems and components that will be used, Designing the application interface and Implementation Stage. The design results will be applied to the Android platform version 2.2 and above that supports C2DM service. For implementation on the server side, the system runs Linux, Apache and PHP operations. Testing Phase, at this stage testing will be carried out consisting of Functional testing, including testing functions, features and handling error, Time and cost testing was carried out in several places with using multiple operators and User acceptance testing refers to ISO 9241-11. After finishing with this stage, the followed with test results analysis phase and conclusion and suggestion stage.

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RESULT AND DISCUSSION

Based on research and literature studies from each framework is produced an overview of the integration of technology governance models information between ISO 38500, Risk IT, and Val IT.

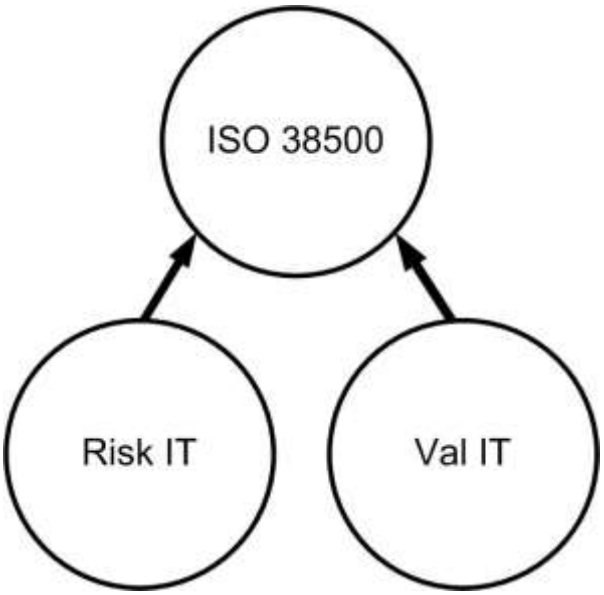

Figure 1. Relationship between ISO 38500, IT Risk and Val IT

To implement the Cheese Governance model The steps taken are:

1. Measure and assess maturity levels processes within the organization to help assess the current state of governance and expected conditions in the future will come by distributing questionnaires.
2. Provide a strategy for implementing the model Cheese Governance in organizations. In this thesis, a survey was conducted using the questionnaire method. Questionnaire structured in the form of questions about conditions now and hopes for the future.

In the questionnaire sheet, respondents must determine the level of maturity (0 to 5) based on the choice of conditions (a to f) which deemed most appropriate to the conditions of the organization now and hopes for the future.

Differentiation of terms between maturity values and the level of maturity shows that maturity value that describes the process achievement towards a level of maturity certain things can be expressed in numbers fraction. Meanwhile, the level of maturity is more shows the stage or class achieved in the process of maturity, which is expressed in whole numbers.

Remembering that ISO 38500 is the function of top-level leadership in an organization, then respondents from the implementation survey model is top level management, namely elements the head of the relevant University of Pamulang with information technology.

Based on the analysis that has been carried out of the survey results, then the conclusions are obtained shows the priority scale for continued in the improvement strategy. For see the scale of priorities and the magnitude of efforts in make improvements, then the average level the maturity obtained is in Table 1 as the conclusion of the survey results.

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Table 1. Conclusion of Survey Results Average Maturity Level

No	Prosess	At the Moment	Hope	Analysis Gaps
1	Monitoring to IT risks	1,75	4,5	2,75
2	Monitoring to IT investment	1,12	4,42	3,00
3	Evaluation to IT risks	2,0	4,83	2,83
4	Evaluation to IT investment	2,08	4,67	2,59
5	Briefing to IT risks	1,92	4,33	2,41
6	Briefing to IT investment	2,80	4,75	2,47
Average Total - Flat		1,91	4,58	2,67

Assessment of questionnaire results Overall shows that the average answers from respondents for current conditions value is 1.91 ≈ 2. This value shows answer c for the current condition. Meanwhile, average – average answer from respondents for that condition expected to be valuable in the future 4.58 ≈ 5. This value shows the answer f for expected conditions.

Based on the results of the analysis and conclusions obtained from the survey results, this section outlines the proposed achievement strategy maturity required, as follows:

1. Assessment of maturity level is part of the improvement process can be used to monitor evaluate, and direct risks and investment in technology information.
2. Balance of maturity levels can be achieved optimal value if this happens all attributes.
3. Fixes for level upgrades maturity is carried out in appropriate stages with a priority scale. Based on conclusion of the survey results, then the attribute with the gap value is higher gets higher priority for repairs. Priority repairs based on the scale is as follows:
   a. Monitoring of technology investments information
   b. Evaluation of technology risks information
   c. Monitoring technology risks information
   d. Evaluation of technology investments information
   e. Guidance on technology investment information, and
   f. Briefing on technology risks information.
4. With a gradual improvement process according to priority, then process learning towards process maturity evaluation, direction and monitoring in organization can run effectively.

Defining proposed corrective actions carried out by considering strategy achieving defined maturity. Defining proposed corrective actions is an action that needs to be taken each attribute of maturity that is directed at stages of achieving the maturity process expected.

The important thing in definition Solution design is that process Maturation is a process of improvement and natural, continuous improvement, and sustainable, and is a process learning that each must go through maturity level. With the improvement process which is carried out in stages in accordance with priority, then the learning process goes towards maturation of processes in the organization can take place effectively.

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CONCLUSION

Based on all the stages that have been done implemented in this thesis, obtained conclusion as follows: This research successfully integrates ISO 38500 with Risk IT framework and Val IT thus produces capital which is named Cheese Governance. This naming is an analogy of the form of cheese that looks intact but is present also the part with holes. Cheese Models Governance provides governance guidelines manage useful information technology to monitor, evaluate, and directs each process using process support provided by the framework Risk IT and Val IT work. At the testing, deployment and stage processing of questionnaires distributed in Pamulang University was originally planned totaling 20 respondents. But because the busyness factor of some respondents then when returning the questionnaire to be processed, the number of questionnaires Only 13 were collected. Assessment of the results of the questionnaire distributed in University of Pamulang based on answers from 13 respondents showed that the average value average answers from respondents for conditions currently worth 1.91 ≈ 2. That value shows answer c, namely level 2 repetitive but intuitive for current conditions. Meanwhile, the average value of the answers from respondents for the expected conditions in the future is worth 4.58 ≈ 5. This value shows the answer f for the expected condition is level 5 optimistic.

REFERENCES

Aasi, P. (n.d.). *Organizational Culture and Structure Influence on Information Technology Governance*.

Ayu, A. L., et al. (2024). Assessment of IT Risk Management at the Faculty of Industrial Engineering, Telkom University, Utilizing the COBIT 2019 Framework's APO12 Domain with LAM INFOKOM Standards Mapping. *Electronic Integrated Computer Algorithm Journal, 1*(2), 50–56. https://doi.org/10.62123/enigma.v1i2.21

Gómez Suárez, B. (n.d.). *Doctoral Thesis 2022 IT Governance Implementation for Higher Education Institutions in Developing Countries*.

Ilmudeen, A. (2021). A Review of IT Governance and IT Management in the Context of Business Value of IT. *In Journal of Information Systems & Information Technology (JISIT), 6*(1).

Melaku, H. M. (2023). A Dynamic and Adaptive Cybersecurity Governance Framework. *Journal of Cybersecurity and Privacy, 3*(3), 327–350. https://doi.org/10.3390/jcp3030017

Metin, B., Duran, S., Telli, E., Mutlutürk, M., & Wynn, M. (2024). IT Risk Management: Towards a System for Enhancing Objectivity in Asset Valuation That Engenders a Security Culture. *Information (Switzerland), 15*(1). https://doi.org/10.3390/info15010055

Nachrowi, E., Nurhadryani, Y., & Sukoco, H. (2020). (ARJUNA) Managed by Ministry of Research, Technology, and Higher Education. *Accredited by National Journal Accreditation, 4*(2), 764–774. http://jurnal.iaii.or.id

Obaid, L. (2020). *Business-It Alignment in U.S.-Based Global Organizations: A Qualitative Exploratory Case Study*.

Porath, U. (2023). Advancing Managerial Evolution and Resource Management in Contemporary Business Landscapes. *Modern Economy, 14*(10), 1404–1420. https://doi.org/10.4236/me.2023.1410072

Toifur, T., Kusrini, K., & Budi, A. (2022). Evaluation of Information Technology Governance Using COBIT 5 and ISO/IEC 38500. *Jurnal Online Informatika, 7*(1), 17. https://doi.org/10.15575/join.v7i1.814

DOI: https://doi.org/10.61487/jiste.v2i3.82

Zabolotniaia, M., Cheng, Z., Dorozhkin, E. M., & Lyzhin, A. I. (2020). Use of the LMS Moodle for an effective implementation of an innovative policy in higher educational institutions. *International Journal of Emerging Technologies in Learning, 15*(13), 172–189. https://doi.org/10.3991/ijet.v15i13.14945

DOI: https://doi.org/10.61487/jiste.v2i3.82