ABSTRAK

Penelitian ini bertujuan untuk mengidentifikasi penerapan keamanan informasi, menganalisis tingkat kesesuaian terhadap standar ISO/IEC 27001:2022, mengidentifikasi kesenjangan implementasi keamanan informasi, serta menyusun rekomendasi perbaikan pada Sistem Rumah DataKu yang dikelola oleh Pusat Data dan Teknologi Informasi (Pusdatin) BKKBN. Metode penelitian yang digunakan adalah metode deskriptif kualitatif dengan pendekatan PDCA *(Plan-Do-Check-Act).* Pengumpulan data dilakukan melalui observasi, wawancara, studi pustaka, dokumentasi, dan pengisian checklist berbasis ISO/IEC 27001:2022 Annex A yang mencakup 93 kontrol keamanan informasi pada domain *Organizational Controls* (A.5), *People Controls* (A.6), *Physical Controls* (A.7), dan *Technological Controls* (A.8). Analisis data dilakukan melalui pengukuran tingkat kesesuaian kontrol, penilaian tingkat kematangan *(maturity level),* serta gap analysis antara kondisi aktual dan kondisi yang diharapkan berdasarkan standar ISO/IEC 27001:2022, Hasil penelitian menunjukkan bahwa dari 93 kontrol yang dievaluasi, sebanyak 53,76% kontrol telah sesuai, 38,71% belum sesuai, dan 7,53% tidak diterapkan. Tingkat kematangan pada Annex A.5 *(Organizational Controls)* memperoleh nilai 54% dengan kategori *Repeatable but Intuitive*, Annex A.6 *(People Controls)* sebesar 75% dengan kategori *Managed and Measurable*, Annex A.7 *(Physical Controls)* sebesar 72% dengan kategori *Defined Process*, dan Annex A.8 *(Technological Controls*) sebesar 73,52% dengan kategori *Managed and Measurable*. Hasil gap analysis menunjukkan bahwa masih terdapat kesenjangan implementasi pada beberapa kontrol keamanan informasi, terutama pada aspek tata kelola keamanan informasi, pengelolaan aset informasi, manajemen insiden keamanan informasi, pengendalian hak akses, keamanan endpoint, secure development, dan pengujian keamanan sistem. Beberapa kontrol tersebut belum mencapai target tingkat kematangan yang diharapkan dan masih memerlukan penguatan dokumentasi, prosedur formal, serta mekanisme monitoring dan evaluasi yang berkelanjutan. Berdasarkan hasil evaluasi, disusun rekomendasi perbaikan yang difokuskan pada penyusunan kebijakan dan prosedur operasional standar (SOP), penguatan pengelolaan aset informasi, peningkatan mekanisme penanganan insiden keamanan informasi, penguatan pengendalian akses, penerapan praktik secure development, serta pelaksanaan pengujian keamanan secara berkala. Penelitian ini menyimpulkan bahwa penerapan keamanan informasi pada Sistem Rumah DataKu telah berjalan cukup baik, namun masih diperlukan peningkatan pada beberapa kontrol prioritas agar tingkat kematangan keamanan informasi dapat meningkat dan lebih selaras dengan standar ISO/IEC 27001:2022.

Kata Kunci: ISO/IEC 27001:2022, keamanan informasi, *maturity level, gap analysis,* PDCA, Rumah DataKu.

ABSTRACT

This study aims to identify the implementation of information security, analyze its level of compliance with the ISO/IEC 27001:2022 standard, identify implementation gaps, and develop improvement recommendations for the Rumah DataKu Information System managed by the Center for Data and Information Technology (Pusdatin) of BKKBN. This research employed a qualitative descriptive method using the Plan-Do-Check-Act (PDCA) approach. Data were collected through observation, interviews, literature review, documentation, and a checklist based on ISO/IEC 27001:2022 Annex A, which consists of 93 information security controls covering Organizational Controls (A.5), People Controls (A.6), Physical Controls (A.7), and Technological Controls (A.8). Data analysis was conducted by measuring the level of control compliance, assessing the maturity level, and performing a gap analysis between the current condition and the expected condition based on the ISO/IEC 27001:2022 standard. The results show that, out of the 93 controls evaluated, 53.76% were compliant, 38.71% were not compliant, and 7.53% were not implemented. The maturity level assessment indicates that Annex A.5 (Organizational Controls) achieved a score of 54% and was categorized as Repeatable but Intuitive, Annex A.6 (People Controls) achieved 75% and was categorized as Managed and Measurable, Annex A.7 (Physical Controls) achieved 72% and was categorized as Defined Process, while Annex A.8 (Technological Controls) achieved 73.52% and was categorized as Managed and Measurable. The gap analysis revealed that several information security controls still have implementation gaps, particularly in information security governance, information asset management, information security incident management, access control, endpoint security, secure development, and security testing. These controls have not yet achieved the expected maturity level and still require improvements in documentation, formal procedures, monitoring, and continuous evaluation mechanisms. Based on the evaluation results, improvement recommendations were developed focusing on the establishment of information security policies and standard operating procedures (SOPs), strengthening information asset management, enhancing information security incident handling mechanisms, improving access control management, implementing secure development practices, and conducting periodic security testing. This study concludes that the implementation of information security within the Rumah DataKu Information System has been carried out reasonably well; however, improvements are still required in several priority controls to enhance the maturity level of information security and achieve better alignment with the ISO/IEC 27001:2022 standard.

Keywords: *ISO/IEC 27001:2022, information security, maturity level, gap analysis, PDCA, Rumah DataKu.*