Group 2 Jurnal Review

" Using the Cobit 5 for E-health Governance "

Information Technology Governance Course Assignment

Lecturer : Mr. Farid Angga

Composed by :

Fakhira Zahrany N.	2341760199
Hanin Mariam A. H.	2341760154
Moch. Naufal Ardian. R.	2341760148
Safrizal Rahman	2341760151

© SIB 2G

2024

This journal focuses on applying COBIT 5 for IT governance in the healthcare sector, particularly in healthcare organizations in Croatia. It provides a step-by-step guide on how to use the COBIT 5 framework to enhance IT governance in e-health. Below is a detailed explanation of the journal's flow, the domains used, the processes and sub-processes, and the practical implementation.

Also, it focused on applying Cobit 5 in healthcare, offering relevant insights to improve e-health governance maturity. In addition, it emphasizes the importance of strategic alignment between IT and organizational goals and provides practical guidelines for IT decision-making and investment. Cobit 5 is a proven framework for IT governance, providing best practices. The IT audit provided insights into weaknesses and risks, which are crucial for continuous improvement.

1. **Introduction**

    Objective To explain the importance of applying IT governance in healthcare using the COBIT 5 framework. The goal is to improve e-health governance aligned with healthcare strategies.

    a. ***Reason:*** Future e-health will be the backbone of modern society, requiring effective and strategic IT governance.
    b. ***Relevant Domain***: This section introduces the necessity of a comprehensive IT governance framework but doesn't specify a domain yet.

2. **COBIT 5 Framework**
    a. **Description**

        In today's world, investing in technology and information systems is crucial. Organizing a robust IT infrastructure that aligns with business needs is essential. Cobit 5 allows us to monitor the development and management of information and communication systems while designing business processes. This section outlines the COBIT 5 framework, highlighting the five core principles that underpin IT governance :

- Meeting Stakeholder Needs

- Covering the Enterprise End-to-End

- Applying a Single Integrated Framework

- Enabling a Holistic Approach

- Separating Governance from Management

b. Reason

These principles create a holistic IT governance approach, enabling stakeholders to understand and influence IT-related decisions.

c. Domains

All COBIT 5 domains (EDM, APO, BAI, DSS, MEA) are relevant here, as they provide the structure for IT governance, from evaluation and planning to implementation and monitoring.

3. **Business-to-E-health Strategic Alignment**
   a. Objective

   Align the hospital's business objectives with IT objectives using the Balanced Scorecard (BSC) approach.

   b. Process
   - **Mapping Business Goals to IT Goals:** Identifying the hospital's business goals, such as increased employee productivity, reduced treatment costs, and improved patient flow.
   - **Mapping IT Goals to BSC:** Identifying IT goals that support business goals, such as reducing patient wait times, improving the invoicing system, and maintaining patient data.

   c. Reason

   COBIT 5 evaluates how IT can support the hospital's business strategy, ensuring that IT investments directly benefit healthcare services.

   d. Domains
   - **APO** (Align, Plan, Organize): This domain includes IT strategy and planning to ensure alignment with the healthcare organization's needs.

   - **DSS** (Deliver, Service, Support): This domain ensures that IT services support the hospital's daily operations.

e. **Real-life Implementation**

The Balanced Scorecard maps strategic business and IT needs, helping the hospital prioritize IT investments such as e-ordering applications to reduce patient wait times.

4. IT/IS Auditing with COBIT 5

a. **Objective**

Identify weaknesses and risks in the hospital's IT processes and provide recommendations for improvement.

b. **Processes Audited**
   - Ensure Risk Optimisation (Governance Process under EDM Domain): Focuses on IT risk management in the hospital.
   - Manage Quality (Management Process under APO Domain): This position focuses on IT process quality in the hospital, including the maintenance of hospital applications and training employees on new information systems.

c. **Reason**

IT risk management is critical in hospitals as IT system disruptions can affect patient services. Quality management ensures IT effectively supports business operations.

d. **Domains**
   - **EDM (Evaluate, Direct, Monitor)** = This domain ensures that IT risks are properly evaluated, directed, and monitored.
   - **APO (Align, Plan, Organize)** = This domain focuses on IT quality management.
   - Subprocesses and Real-life Implementation:
   - **Ensure Risk Optimisation Subprocess** = Identifies IT risks and evaluates their impact on hospital operations, such as frequent system outages. Real-life implementation includes recommendations for system troubleshooting during less busy hours (afternoon) rather than peak hours (morning).
   - **Manage Quality Subprocess** = Improves IT quality management by involving the IT department in the hospital's quality management plan. Real-life implementation includes improving software documentation and training employees on new systems.

5. Results Analysis

a. **Findings**

The audit revealed that the hospital's IT governance capability could be higher, with only around 15% of COBIT 5 standards implemented.

b. **Reason**

These results reflect IT risk management and quality management weaknesses that need improvement to prevent system disruptions and increase operational efficiency.

c. **Domains**

EDM and APO: These domains ensure that IT risk and quality management processes are implemented effectively.

d. **Real-life Implementation**

After the audit, the hospital can improve risk management by strengthening password security, increasing virus testing frequency, and ensuring that security systems are run more frequently to prevent data breaches.

6. Table Riview & Explanation

Title	Using the COBIT 5 for E-health Governance
Journal	Central European Conference on Information and Intelligent Systems
Volume & Pages	September 23-25, 2015, Varaždin, Croatia, pp. 203-209
Year	2015
Authors	1. Melita Kozina 2. Ines Sekovanić
Reviewer	**Fakhira Zahrany N.** **2341760199** **Hanin Mariam A. H.** **2341760154** **Moch. Naufal Ardian. R.** **2341760148** **Safrizal Rahman** **2341760151**
Date	9/18/2024
Research Objective	To demonstrate the application of the COBIT 5 framework in e-health governance in Croatia, and its impact on the maturity of e-health governance and strategic alignment with healthcare services
Research Subject	IT governance in the healthcare sector using the COBIT 5 framework

Research Method	This research is based on interviews with the Chief Information Officer (CIO) and process owners, as well as referencing IT management documentation in healthcare organizations.
Operational Definition of Dependent Variable	The maturity of e-health governance assessed using the COBIT 5 framework
Operational Definition of Independent Variable	The application of COBIT 5 in IT governance, focusing on risk management and IT quality
Therapeutic Steps	Using COBIT 5 processes such as Ensure Risk Optimisation and
Manage Quality	To audit and improve IT governance in the hospital
Research Results	It was found that the application of COBIT 5 in the hospital is very low (around 15%). The IT governance processes need improvement to minimize risks and enhance the security of information systems
Research Strengths	The COBIT 5 framework provides a comprehensive tool for evaluating and improving IT governance, with a holistic and structured approach
Research Weaknesses	The implementation of COBIT 5 in the hospital is not optimal, with many roles not clearly defined, as seen in the RACI matrix, leading to confusion in decision-making.

7. Explanation:

a. Research Objective

  The primary goal of the research is to demonstrate how COBIT 5, a framework designed for IT governance and management, can be applied to healthcare to improve e-health governance. The study also explores its role in aligning IT with healthcare strategies.

b. Research Method

  The study is based on interviews with key IT personnel in healthcare organizations in Croatia, analyzing documentation and processes related to IT governance. Specific management guidelines from COBIT 5 are applied to assess the maturity of e-health governance.

c. **Therapeutic Steps**
    Ensure Risk Optimisation (EDM Domain): Focuses on identifying and mitigating IT risks within healthcare organizations, ensuring that IT risks are managed effectively to avoid disruptions in patient care.

    Manage Quality (APO Domain): Focuses on improving the quality of IT processes, ensuring that IT solutions meet the needs of the hospital's stakeholders. The process **involves documenting and maintaining hospital applications.**

d. **Research Results**
    The research found significant gaps in IT governance maturity in the healthcare organization studied. Only about 15% of COBIT 5 standards were fully implemented. Recommendations were made to improve password security, conduct regular virus scans, and increase IT training for staff.

e. **Research Strengths**
    COBIT 5 provides a comprehensive and holistic approach to IT governance, making it an effective tool for improving the alignment of IT with business strategies in healthcare. The structured processes and clear metrics help identify weaknesses and areas for improvement.

f. **Research Weaknesses**
    One of the key weaknesses is the incomplete implementation of COBIT 5. The RACI matrix, used to define roles and responsibilities, revealed that too many individuals were accountable for certain IT processes, leading to confusion. This highlights the need for clearer role definitions and improved communication within the IT department.

8. Conclusion

a. **Objective**
    The paper concludes that applying COBIT 5 can help improve the maturity of e-health governance and align IT goals with business goals.

b. **Reason**
    COBIT 5 provides practical tools to improve IT governance in the healthcare sector, which is essential for supporting more efficient and secure healthcare services.

c. **Real-life Implementation**
    Hospitals can adopt the audit recommendations to improve their IT governance, enhance security, and increase IT services' quality while strengthening the alignment between IT investments and business strategy.

9. Overall Conclusion:

The journal follows a logical flow for applying COBIT 5 to improve e-health governance, starting from understanding COBIT 5 principles, mapping business and IT strategy, conducting IT system audits, and providing recommendations for improvement.

COBIT 5 domains are carefully chosen to cover critical aspects like risk management, quality management, and strategic alignment. The processes and subprocesses within COBIT 5 offer a structured framework for identifying weaknesses and risks while ensuring IT effectively supports hospital operations. The real-life implementation of these recommendations helps the hospital enhance the quality of services and ensure that IT investments deliver tangible value.