Measuring the Level of HRIS Governance Capability in the Automotive Financing Company Using COBIT 2019

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Abstract

In response to the imperative advancements in information technology, companies strive to leverage it for a competitive edge. An automotive financing entity with over 4,000 employees encounters challenges in governing its Human Resources Information System (HRIS). Difficulties include employee service being negatively impacted by delayed HRIS computations, budgets growing faster than regulations, and branch employees not understanding HRIS. The organization intends to use the COBIT 2019 framework to assess its IT governance to address these issues. Based on qualitative interviews and literature reviews, data collection will identify relevant domain processes—APO03, APO06, APO011, APO07, and DSS06—to address the issues. The research reveals that APO03 (79.4%), APO06 (71.9%), APO011 (75%), and APO07 (83.5%) are "Largely Achieved" but with identified gaps, while DSS06 (89.3 %) is "Fully Achieved." These findings, derived from audit document analysis, will inform recommendations to address process gaps. The company will be presented with these recommendations to enhance its IT governance and management in alignment with COBIT 2019.

Keywords: Capability Level, COBIT 2019 Framework, Human Resources, Information Technology Governance,

1. INTRODUCTION

Technology in the era of Industry 4.0 is essential for business development, with companies investing in Internet infrastructure forming a solid foundation for building innovative business ecosystems. This strategic groundwork positions them to enhance efficiency, flexibility, and innovation capabilities through technology [1], [2]. It is important to acknowledge that the need for information technology in a corporate environment is essential and plays a significant role in accelerating various business and managerial processes. By relying on the riprocesses andn technology, companies can improve their operational efficiency, streamline internal processes, and support faster and more accurate decision-making. Thus, information technology is not just a tool but a driving force enabling companies to achieve their goals more efficiently and be responsive to rapid changes in the business environment [3], [4].

Some of the problems faced include the slow calculation process in the HRIS which hampers service to employees, the ballooning budget due to the management and development of the HRIS which is required due to rapid changes in regulations, and the lack of understanding of existing HRIS by branch employees.

According to Andry Reseacrh about Assessment IT Governance of Human Resources Information System Using COBIT 5, it's explained about the objective of IT implementation is to increase effectivity and performance in organization. To get maximum results good IT Governance is needed in order to align IT with business, the better IT Governance the greater outcome that the organization will get and thanks to information technology, businesses may make decisions and procedures more productively and effectively than they could using traditional techniques. Information technology, especially with the HRS Information System in place, aids in improving workflow in the Human Resources department, which plays a crucial role in the company [5], [6]. It is a designed information system to manage HRM data such as employee's personal information, salary administration, performance management, training, and human resource development. The efficient and effective use of HRIS is crucial for smooth HRM operations, ensuring compliance with labor regulations, and protecting employees' data. In a competitive business context, a robust HRIS can provide a competitive advantage for companies in human resource management [7], [8].

One of the companies that uses HRIS to support its business processes is an automotive financing company with thousands of employees scattered across almost all of Indonesia, which faces increasing demands in human resource management. In the dynamic landscape of evolving technology and regulations, along with the presence of hundreds of branches and thousands of employees nationwide, a proficient HRIS is necessary for companies like an automotive financing company. A solid and adaptive HRIS is crucial to keep up with these developments and ensure the company's compliance with ever-changing labor regulations. Currently, an automotive financing company is experiencing challenges with its HRIS system, including slow calculation processes hindering employee service, increased budget due to necessary HRIS management and development caused by rapid regulatory changes, and a lack of understanding among branch employees about the existing HRIS[9], [10].

Measuring the capability of the HRIS system plays a crucial role in maintaining its quality and effectiveness. COBIT 2019, an internationally recognized framework for IT governance, can assist companies like an automotive financing company in enhancing the capability of their HRIS system, ensuring compliance with regulations, and optimizing their contribution to the company's business goals [11], [12].

2. METHODS

The research method developed by Gallegos encompasses a series of straightforward activities. This approach provides a clear framework for conducting research that can be tailored to the needs of the research object, whether a company or another institution, and emphasizes various domain processes. This approach includes the dissemination of questionnaires, interviews, and observation as means of gathering data [13][14][15]. Planning, field investigation, reporting, and follow-up are the four primary phases of the Gallegos technique.
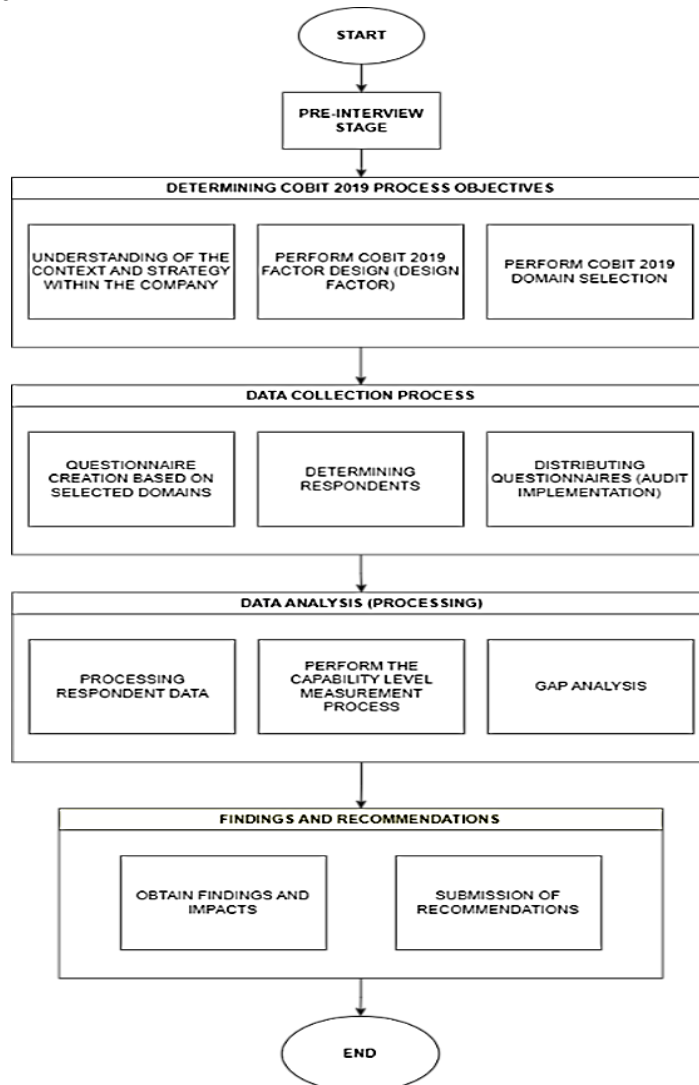

Fig 1. Gallegos Research Method

This research aims to engage in the financial sector, specifically focusing on the human resources (HR) division. This company is characterized as a relatively large economic entity, with approximately 4,500 to 5,000 active employees scattered across almost all regions of Indonesia. The company's business processes are related to financial management and financial services, with the HR department playing a crucial role in executing human resources-related functions. The company has integrated Information Technology (IT) into various aspects of its business to enhance operational effectiveness and efficiency. Specifically, the research will focus on implementing the COBIT 2019 framework in the HR department. The goal of this is to guarantee that the HR division's use of IT, particularly regarding services, can be optimized per the guidelines and standards offered by COBIT 2019. By utilizing information technology to its fullest extent, the organization can enhance its operational performance in human resources management.

3.   RESULTS AND DISCUSSION

3.1   Planning

COBIT 2019 provides clear guidelines and references through its book published by ISACA. One method to determine the appropriate domain is using the "COBIT 2019 goals cascading" concept. In this context, interviews were conducted with the head of the relevant department team to understand the department's overall overview, current conditions, challenges faced, expectations, and goals within the company. COBIT 2019 allows companies to determine their enterprise goals according to stakeholder needs and map them to aligned objectives. This ensures that the selected processes are relevant and beneficial to the company. The following steps are taken to identify and choose suitable process domains for an automotive financing company.

1)   Mapping Enterprise Goals
By conducting interviews with the head of the HR Services department team as a stakeholder in this research, the above-mentioned enterprise goals will be formulated and selected according to the following needs.

Figure 2. Mapping Enterprise Goals

The company's selection of Enterprise Goals (EG) aligns with the HR Services division's objectives. The chosen enterprise goals are EG01 (Portfolio of Competitive Products and Services), which is concerned with maintaining a high standard of employee support through ongoing system and service evaluation, and EG10 (Staff skills, motivation, and productivity), which aims to increase staff productivity. After corporate goals are identified, the next step is to map them to alignment-related goals.

Enterprise Goals
EG01 : Portfolio of competitive products and services
EG10 : Staff skills, motivation and productivity

Figure 3. Enterprise Goals

2)   Mapping Enterprise Goals to Alignment Goals

Mapping to the alignment targets provided by COBIT 2019 is the next step in the process. Enterprise Goals EG01 (Portfolio of competitive products and services) and EG10 (Staff skills, motivation, and productivity) are two instances of selected goals that correspond with the alignment objectives in the COBIT 2019 framework. This approach makes sure that the department's or company's goals are well integrated into the COBIT framework by guaranteeing optimal alignment between business and information technology objectives.

Figure 4. Alignment Goals

The selected alignment goals based on the organizational objectives from Table 4.1 are AG02, AG07, and AG12. In the COBIT 2019 Mapping Table: Enterprise Goals-Alignment Goals, only alignment goals marked with the symbol P (Primary) are taken, while the symbol S (Secondary) is not prioritized and, therefore, not selected. The mapping process is then executed, starting with the COBIT 2019 Alignment Goals and ending with The COBIT 2019 Goals for Governance and Management. Following mapping these alignment-related goals, the next step will be mapping alignment-related goals into COBIT 2019 processes.

3) Mapping Alignment-Related Goals to COBIT 2019 Process

It can be concluded that the most suitable Governance and Management Objectives, based on alignment-related goals, are APO03, APO06, APO07, APO11, and DSS06. This decision is based on the COBIT 2019 Table of Maps: Alignment of Goals for Governance and Management, which only chooses goals designated with the P (Primary) symbol; the S (Secondary) symbol is not selected because it is considered non-dominant. In this context, process domains EDM04, APO02, APO08, BAI01, BAI02, BAI03, BAI05, BAI08, and BAI011 with the symbol P are not selected as they are deemed irrelevant to the current urgency and issues faced by the company.

Figure 5. Mapping Alignment-Related Goals to COBIT 2019 Process

4)   COBIT 2019 Process

The processes to be evaluated will use capability and maturity levels to gain an in-depth understanding of the readiness of the HRIS system. This process aims to identify the extent of the system's development and to conduct a gap analysis to find potential improvements and provide relevant advice or recommendations for the organization.
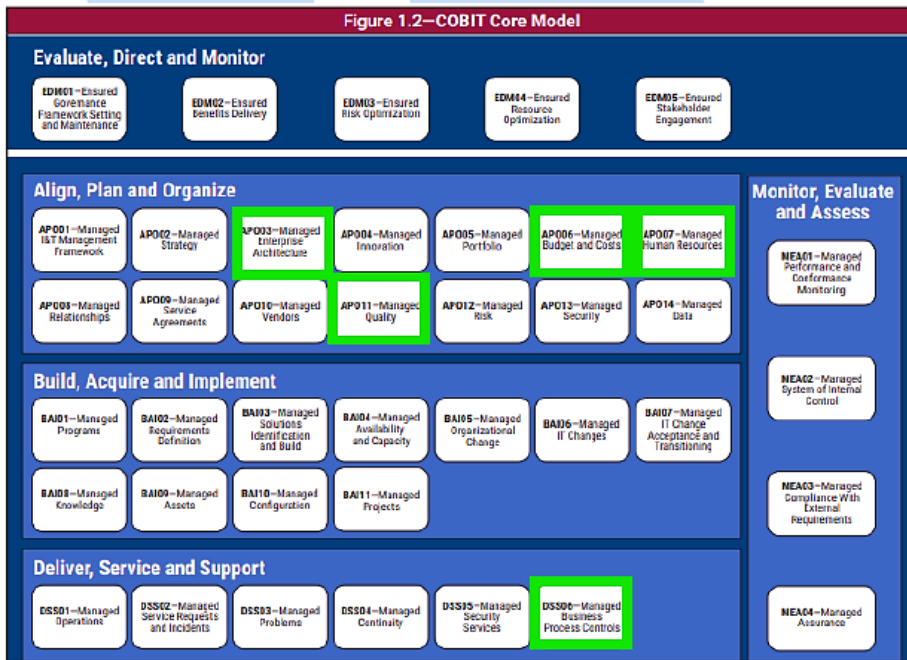
Figure 6. COBIT 2019 Process

5)   Selected Domain

APO03 Managed Enterprise Architecture: This domain emphasizes the importance of enterprise architecture management, particularly information technology (IT) architecture. APO06 Managed Budget and Costs: This domain's primary focus is managing budgets and costs related to IT investments. APO07 Managed Human Resources: This domain focuses on human resource management (HRM) in the IT department, including planning, recruitment, development, and maintenance of quality IT staff. APO11 Managed Quality. In IT services and procedures, this topic is connected to quality management. Managed Business Process Controls (DSS06): The management of business process controls inside the framework of IT is covered by this domain, which also includes internal control identification, design, and implementation.

3.2 Creation of RACI Chart

The processes in these domains have their critical tasks and activities that can be linked to an organizational structure. The main activities in each process reflect the responsibilities or tasks generally carried out by the division or PIC (person in charge) who is responsible for that activity. To ensure the main activities are carried out correctly, interviews are conducted with the division or PIC accountable for the selected processes.

Based on the findings of the HR Services team leaders' interviews, Table 1 presents a RACI chart representation for the APO03 - Managed Enterprise Architecture process. As a result of the interviews, all key process activities in the APO03 domain are carried out and supervised by the HR Management Systems department. Therefore, the symbol R is given to the head of the HR Management System. The individual designated with the symbol R in this RACI chart will be the primary source for analyzing audit documents related to the process.

Table 1. RACI Chart APO03

No	Activities	CEO	Head of HRD	Team Leader HR Services	HR Management System
1	APO03.01 *Develop the enterprise architecture vision.*	I	A	C	R
2	APO03.02 *Define reference architecture.*	I	A	C	R
3	APO03.03 *Select opportunities and solutions.*	I	A	C	R
4	APO03.04 *Define architecture implementation.*	I	A	C	R
5	APO03.05 *Provide enterprise architecture services.*	I	A	C	R

Based on the findings of interviews with the HR Services team leader, Table 2 presents a RACI chart representation for the APO06 - Managed Budget and Costs process. As a result of the interview, all key process activities in the APO06 domain are carried out and supervised by the HR Services team leader. Therefore, the symbol R is given to the head of the HR Services team leader. The individual

designated with the symbol R in this RACI chart will be the primary source for analyzing audit documents related to the process.

Table 2. RACI Chart APO06

No	Activities	CEO	Head of HRD	Team Leader HR Services	HR Management System
1	APO06.01 *Manage finance and accounting.*	I	A/C	R	A
2	APO06.02 *Prioritize resource allocation.*	I	A/C	R	A
3	APO06.03 *Create and maintain budgets.*	I	A/C	R	A
4	APO06.04 *Model and allocate costs.*	I	A/C	R	A
5	APO06.05 *Manage costs.*	I	A/C	R	A

Based on the information gathered from interviews with the HR Services team leader, Table 3 represents the APO07 - Managed Human Resources process using a RACI chart. As a result of the interview, all key process activities in the APO07 domain are carried out and supervised by the HR Services team leader. Therefore, the symbol R is given to the head of the HR Services team leader. The individual designated with the symbol R in this RACI chart will be the primary source for analyzing audit documents related to this process.

Table 3. RACI Chart APO07

No	Activities	CEO	Head of HRD	Team Leader HR Services	HR Management System
1	APO07.01 *Acquire and maintain adequate and appropriate staffing.*	I	A/C	R	A
2	APO07.02 *Identify key IT personnel.*	I	A/C	R	A

No	Activities	CEO	Head of HRD	Team Leader HR Services	HR Management System
3	APO07.03 *Maintain the skills and competencies of personnel.*	I	A/C	R	A
4	APO07.04 *Assess and recognize/reward employee job performance.*	I	A/C	R	A

Based on the findings of interviews with the HR Services team leader, Table 4 presents a RACI chart representation for the APO011 – Managed Quality process. As a result of the interviews, all key process activities in the APO011 domain are carried out and supervised by the HR Management Systems department. Therefore, the symbol R is given to the head of the HR Management System team. The individual designated with the symbol R in this RACI chart will be the main source for analyzing audit documents related to the process.

Table 4. RACI Chart APO11

No	Activities	CEO	Head of HRD	Team Leader HR Services	HR Management System
1	APO11.01 *Establish a quality management system (QMS).*	I	A/C	A/C	R
2	APO11.02 *Focus quality management on customers.*	I	A/C	A/C	R
3	APO11.03 *Manage quality standards, practices and procedures and integrate quality management into key processes and solutions.*	I	A/C	A/C	R
4	APO11.04 *Perform quality monitoring, control and reviews.*	I	A/C	A/C	R
5	APO11.05 *Maintain continuous improvement.*	I	A/C	A/C	R

Based on the findings of the HR Services team leaders' interviews, Table 5 presents a RACI chart representation for the DSS06 procedure. As a result of the interview, all key process activities in the DSS06 domain are carried out and supervised by the HR Services team leader. Therefore, the symbol R is given to the head of the HR Services team leader. The individual designated with the symbol R in this RACI chart will be the primary source for analyzing audit documents related to the process.

Table 5. RACI Chart DSS06

No	Activities	CEO	Head of HRD	Team Leader HR Services	HR Management System
1	DSS06.01 *Align control activities embedded in business processes with enterprise objectives.*	I	A/C	R	C
2	DSS06.02 *Control the processing of information.*	I	A/C	R	C
3	DSS06.03 *Manage roles, responsibilities, access privileges, and levels of authority.*	I	A/C	R	C
4	DSS06.04 *Manage errors and exceptions.*	I	A/C	R	C
5	DSS06.05 *Ensure traceability and accountability for information events.*	I	A/C	R	C
6	DSS06.06 *Secure information assets.*	I	A/C	R	C

3.3 Results of Audit Document Assessment and Analysis

The prepared audit documents will serve as the basis for conducting interviews with relevant employees. These interviews aim to evaluate and assess the capability and maturity levels of the selected domain processes. The employees to be interviewed are those identified in the RACI chart, especially those marked with the R symbol in the RACI chart for each domain process. The audit documents will be the basis for analysis to determine whether these domain processes can advance to the next level or not. In this regard, the COBIT 2019 guidelines provide values to be followed to achieve the next level at Table 6.

Table 6. Achieved Level

Scala	Information
<15%	(N) Not Achieved
15-50%	(P) Partially Achieved
50-85%	(L) Largely Achieved
>85%	(F) Fully Achieved

The values above 85% for each domain are required to go on to the next stage of examination of the capability and maturity levels in each process. This allows for an in-depth analysis of the next level. The evaluation and assessment of methods in this research using COBIT 2019 encompasses five domains: APO03, APO06, APO07, APO11, and DSS06. The following are the evaluation and assessment results for each of these processes:

1. APO03

Table 7. Audit Document Results APO03

Activity	Point
APO03.01 *Develop the enterprise architecture vision.*	79,4%
Average	**79,4%**

2. APO06

Table 8. Audit Document Results APO06

Activity	Point
APO06.01 *Manage finance and accounting.*	55%
APO06.02 *Prioritize resource allocation.*	78,8%
APO06.03 *Create and maintain budgets.*	68,8%
APO06.05 *Manage costs.*	85%
Average	**71,9%**

3. APO07

Table 9. Audit Document Results APO07

Activity	Point
APO07.01 *Acquire and maintain adequate and appropriate staffing.*	76,7%
APO07.02 *Identify key IT personnel.*	80%
APO07.03 *Maintain the skills and competencies of personnel.*	75%
APO07.04 *Assess and recognize/reward employee job performance.*	82,5%
APO07.05 *Plan and track the usage of IT and business human resources.*	90%
APO07.06 *Manage contract staff*	97%
Average	**83,5%**

4. APO011

Table 10. Audit Document Results APO011

Activity	Point
APO11.03 *Manage quality standards, practices and procedures and integrate quality management into key processes and solutions.*	90%
APO11.05 *Maintain continuous improvement.*	60%
Average	**75%**

5. DSS06

Table 11. Audit Document Results DSS06

Activity	Point
DSS06.01 *Align control activities embedded in business processes with enterprise objectives.*	80%
DSS06.02 *Control the processing of information.*	97,5%
DSS06.03 *Manage roles and responsibilities, access privileges, and levels of authority.*	100%
DSS06.04 *Manage errors and exceptions.*	78,4%
DSS06.05 *Ensure traceability and accountability for information events.*	85%
DSS06.06 *Secure information assets.*	95%
Average	**89,3%**

3.4 GAP Analysis

The gap analysis aims to understand to what extent the company's expectations obtained through interviews can be measured against the actual conditions revealed in the audit document analysis. The analysis results indicate gaps in several selected domain processes, namely APO03, APO06, APO011, and APO07. Meanwhile, the DSS06 domain meets expectations.

Table 12. GAP Analysis Result

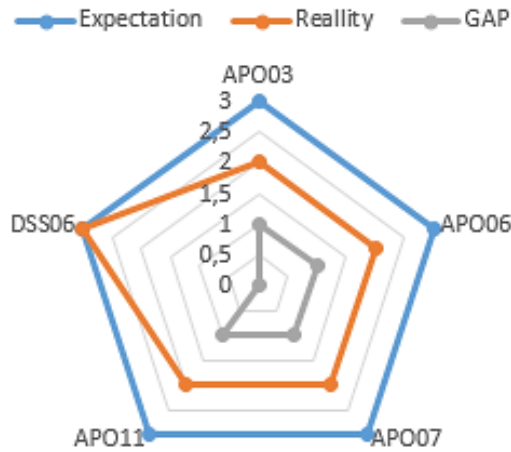| *Domain*	Ekspetasi	Realita	*Gap*
APO03	3	2	1
APO06	3	2	1
APO07	3	2	1
APO11	3	2	1
DSS06	3	3	0

Figure 7. GAP Analysis

3.5 Findings and Impact

The next step after assessing and evaluating the capability, maturity, and gap analysis is the findings and impact stage. Various findings have been identified through interviews and analysis of audit documents. These findings are not only facts or results of the assessment process but also significantly impact current conditions. These findings are the main reason for a gap in the capability and maturity values of the evaluated processes. Further analysis of the findings will provide an in-depth understanding of the true causes behind the discrepancy between company expectations and the reality revealed through the valuation.

Table 13. Findings and Impact

Domain	Findings	Impact
APO03 *Managed Enterprise Architecture*	Lack of analyzing in detail what architecture is needed to support the business goals of the HR Services department.	The existing IT architecture cannot help the existing information system to run optimally, thus hampering business processes in the HR Services department.
APO06 *Managed Budget and Costs*	Not understanding and formulating the budget well. Not knowing the process of recording and making a budget especially for IT.	Experiencing budget overruns to make system changes.
APO07 *Managed Human Resources*	Not a few management levels in branch offices are people who are new to using information systems.	It is hampering business processes due to a lack of understanding of the information system used.

APO11 *Managed Quality*	It does not have a unique platform to record information about things lacking in IT in the HR department. Services.	I do not know what needs to be improved for system development.
DSS06 Managed Business Process Controls	Business process control is reasonable so that it can be carried out assessment to the next level	Business process control is reasonable and can be assessed at the next level.

3.6 Improvement Recommendations

After analyzing the gap in results, it was revealed that this condition was caused by several findings that had been identified. Several recommendations were made in compliance with the 2019 COBIT guidelines. The aim of these recommendations is so that companies can overcome the gaps that occur, approach, or achieve the expected results, and overcome the findings that have been identified. By following the COBIT 2019 guidelines, it is hoped that companies can effectively bridge existing gaps, achieve desired results, and respond appropriately to findings that emerge during the evaluation and analysis process.

Table 14. Improvement Recommendations

Domain	Recommendation
APO03 *Managed Enterprise Architecture*	Create specific details for the IT architecture required to support existing information systems.
APO06 *Managed Budget and Costs*	Participate in budgeting, especially for IT in HR Services.
APO07 *Managed Human Resources*	We are carrying out mass outreach to all users in branch offices to provide comprehensive information on how to use the newly implemented system.
APO11 *Managed Quality*	Create a unique platform to record if there are problems with the system and carry out regular evaluations.
DSS06 *Managed Business Process Controls*	Business process control is reasonable so assessments can be carried out to the next level.

The use of COBIT 2019 goals cascading in this research aims to identify company goals more accurately to overcome the problems faced. After determining the domain processes, a capability and maturity level assessment is carried out followed by a gap analysis. It was revealed that the selected domain processes, namely APO03, APO06, APO11, and APO07 experience gaps, while DSS06 already meets the desired standards. Recommendations are formulated to address

gaps in each selected process domain, with the aim of enabling the company to achieve the desired results. This recommendation will be submitted to the company as the final stage of this research.

4. CONCLUSION

In conclusion, the study on information technology governance at an auto finance company using the COBIT 2019 framework highlights problems, particularly in the HR Services division. Domain processes APO03, APO06, APO11, APO07, and DSS06 were identified through COBIT 2019 goals cascading to address these challenges. Audit document analysis indicates varying achievement levels, with DSS06 reaching "Fully Achieved" status, while others fall under the "Largely Achieved" category but haven't met set targets. The gap analysis highlights deficiencies, forming the basis for recommendations. A set of suggestions submitted to the company aims to enhance information technology governance, striving for desired capability and maturity levels. Recommendations include improving stakeholders' understanding of COBIT 2019, reinforcing employee training, aligning IT governance with the business strategy, conducting periodic evaluations, and fostering collaboration with external parties. These measures are anticipated to address existing gaps and elevate an automotive financing company's information technology governance to the desired level, aligning it effectively with broader business objectives.

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