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Knowledge Management Maturity Assesment for Improving Organizational Performance of The Technical Department of The Air Charter Company

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Abstract
Demographic analysis showed employees with 1-2 years of experience rated knowledge management practices most favorably (Level 5), while those with longer tenure provided lower ratings (Level 4). Gap analysis identified specific improvement areas, with the lowest scores in dedicated knowledge management personnel (3.68), retention of critical knowledge from departing employees (3.80), and regular business process evaluation (3.88). Based on these findings, a comprehensive implementation plan was developed, organized into three timeframes. The short-term plan (0-6 months) focuses on establishing a Knowledge Management Office, developing a Process Evaluation Framework, and enhancing Collaborative Team Structures. Medium-term initiatives (6-12 months) include implementing a Knowledge Retention System, developing a Strategic KM Roadmap, and creating a Knowledge Protection Framework. Long-term initiatives (1-3 years) focus on integrating KM into performance systems, developing an advanced knowledge technology ecosystem, and enhancing leadership excellence. This research contributes to practical application of knowledge management in technical aviation contexts. The findings highlight the importance of balancing technological, organizational, and human aspects of knowledge management, with particular emphasis on formal structures, retention mechanisms, and performance integration to elevate the organization from Level 4 (Refinement) to Level 5 (Maturity).

Introduction

The air charter industry plays a crucial role in supporting the country's logistics in Papua. The community in this remote area of Papua, accessible only by walking or plane, relies heavily on this service. The community in Papua relies on their services to meet their basic needs. The air charter market keeps growing due to increasing demand for logistics in the development of Papua (kompas, 2024).

The air charter industry is a pivotal component of logistics and transportation in Papua, particularly due to the geographic challenges faced by this remote region. Air transport provides essential connectivity for communities that might otherwise be accessible only by foot or limited air transport. This reliance on air

services is significant in Papua, where infrastructure is underdeveloped, and alternative modes of transport are constrained (Abdulgani et al., 2021).

Growth in the market for the air charter industry has had a positive impact on many factors, one of which is the stimulation of economic activities within Papuan society. If the air charter industry grows sustainably, it will eventually have multiple effects on Papua's economic activities. It also attracts sustainable growth in the air charter industry, which interests many investors and players; hence, it takes competition in air charter to the next level (Statistik, 2024).

This heightened competition encourages innovation and improvement in services, leading to better options for consumers. As a result, the overall quality of air travel within Papua is likely to improve, making it more accessible and efficient for both residents and tourists alike. This has brought concern to PT. Solusi Langit Aviation as a leading market Indonesia air charter company. In aviation, knowledge sharing and collaboration play a crucial role (SMART, 2025). Research by Dai and Matta Dai & Matta (2016) highlights that both knowledge codification and social interaction are indispensable in facilitating knowledge sharing within organizations. By effectively capturing and distributing both types of knowledge, air charter companies can mitigate operational risk and enhance customer satisfaction. For this, the company needs to develop fresh competitive advantages so that it can fight out the rivalry with another air charter player in this competitive industry (Dai & Matta, 2016).

The air charter business has a unique problem in maintaining efficiency in operation and ensuring the highest standards of safety on account of the continuous shifting dynamics of operations, complex regulations, and the requirement for rapid decision-making. To address these challenges, operators must invest in advanced training for their crews and implement robust safety management systems that can adapt to changing circumstances. Additionally, leveraging technology for real-time data analysis can significantly enhance operational efficiency and decision-making processes. While Carolis et al. discuss the application of maturity models in manufacturing processes, their relevance to air charter services may require further contextual adaptation, even though similarities exist in operational efficiency needs (Carolis et al., 2017).

The Technical department within the air charter company undertakes maintenance, repair, and overhaul activities of aircraft and aircraft parts. The process includes scheduled and unscheduled inspections, problem-solving, rectifying technical difficulties, modifications, and maintenance of aircraft. Additionally, refer to the aircraft maintenance manual and adhere to civil aviation safety regulations.

Functions of a department are highly technical, and theoretical concepts have to be applied by deep understanding in a practical way. Knowledge has to be accumulated, disseminated, and used in order to maintain high standards of safety and performance. As such, the air charter business requires qualified engineers who maintain aircraft to a high degree of safety, efficiency, and reliability while in the air. Optimization in maintenance scheduling can enhance reliability and minimize costs significantly (Afshari et al., 2022). Optimizing maintenance strategies through methodologies such as integrated risk assessments and predictive analytics can enhance the reliability of aircraft systems and contribute to cost-effective operations over time (Bozoudis et al., 2018). All these functions place a great amount of importance on the efficient Knowledge management of both the tacit and explicit information. Gevaerd and Romano Gevaerd & Romano illustrate how evaluating the maturity of these systems can provide insights for enhancing KM practices in sectors with similar operational challenges, such as engineering and construction, which, while related, are not identical to aviation (Gevaerd & Romano, 2024). The research demonstrates that structured training programs and a culture of continuous learning significantly improve knowledge sharing among employees. It should be expected that technical operations performance and dependability will improve significantly once knowledge management that caters to the needs of specific air charter companies has been comprehensively implemented. In turn, this would drive significant gains in operational efficiency, reduced operational costs, and better safety performance in a no-margin-for-error industry.

The research objective: (1) To assess and determine the current maturity level of knowledge management practices in the technical department using the APO framework. (2) To identify and analyze the underlying factors causing knowledge loss, knowledge gaps, and poor knowledge retention in the technical department. (3) To develop actionable recommendations and a strategic roadmap aimed at enhancing KM practices and addressing identified weaknesses to improve organizational performance.

Materials and Methods

This chapter presents a detailed examination of the research methodology employed to assess knowledge management's (KM) maturity level in the technical department of PT. SLA. The assessment of

knowledge management maturity was conducted using the APO Knowledge Management Framework, which evaluates seven dimensions of knowledge management on a scale of 1 to 5, with total scores ranging from 42 to 210. Evaluating the maturity level of knowledge management (KM) within organizations is a significant endeavor that aims to quantify the processes and practices associated with knowledge creation, sharing, and utilization. Quantitative methodologies, frequently integrated into maturity models, offer systematic approaches to evaluate and improve knowledge management practices effectively. These models function as frameworks defining specific maturity levels and associated criteria for companies to assess their current capabilities. Only engineers provided data for this research. Engineers gave invaluable advice about the challenges and trends in the fields. Their expertise allowed for a more focused analysis, ensuring that the findings were relevant and applicable to technical practices.

After the data and information have been collected, the following stage is to identify the appropriate tools that will be utilized to solve the challenge. A research workflow design will be established to ensure the research is conducted in a methodical way.

Research design outlined is designed to thoroughly investigate the business issue concerning knowledge management at PT. Solusi Langit Aviation. The design identifying the business issue, so preparing the foundation for the research by outlining the difficulties that the organization faces. The design advances by formulating precise study objectives and questions with the purpose of assessing the existing knowledge management techniques and their influence on organizational efficiency and production.

Adoption of a quantitative research methodology helps to organise, objective, and replicable evaluation of organisational knowledge management practices in the framework of knowledge management (KM) research. When assessing maturity levels, quantitative techniques especially help since they enable the methodical gathering and analysis of numerical data, so enabling thorough comparisons between KM dimensions. A quantitative approach enables the assessment of the degree to which KM capabilities and maturity influence organizational performance. Surveys with diversely assorted inquiries are given out among different employees; hence, the proceeding takes place. Using Likert Scale 1-5. This method, which aids in a depthful understanding or comprehension. Execution of quantitative analysis in knowledge management possibly serves as an entry for dissecting maturity level. The KMCA model, which we perhaps ponder, is known as Knowledge Management Capability Assessment; questions insertions could be in our survey.

This research used an online survey for gathering quantitative data. The Google Form serves as the online venue for the questionnaire, and the link is shared via a WhatsApp group.

Result and Discussion

Analysis

The reliability analysis of the assessment instrument, which uses Cronbach's Alpha, measures the correlation between responses in a questionnaire and can yield values ranging from 0 to 1. An instrument is considered reliable if the Cronbach's Alpha value exceeds 0.6. The higher the average correlation between items, the greater the internal consistency of a test. Result yielded strong Cronbach's Alpha values for all seven dimensions.

Learning and Innovation Dimension

The learning and innovation dimension scored highest overall (Mean: 4.37, SD: 0.64), indicating a strong organizational culture for knowledge creation and application.

Table 1. Learning and Innovation Dimension Item Analysis

Item	Description	Mean	SD
LearningandInnovation1	Company reinforces values of learning and innovation	4.24	0.83
LearningandInnovation2	Company promotes value of innovation	4.32	0.95
LearningandInnovation3	Incentives provided for teamwork and sharing	4.32	0.63
LearningandInnovation4	Employees feel ideas and contributions are valued	4.48	0.71
LearningandInnovation5	Management open to employee suggestions	4.52	0.59
LearningandInnovation6	Rewards given for valuable innovation	4.32	0.63

The inter-item correlation matrix shows particularly strong relationships between management openness to suggestions (LearningandInnovation5) and employee perception that their ideas are valued (LearningandInnovation4) with a correlation of 0.872, as well as between company promotion of innovation (LearningandInnovation2) and reinforcement of learning values (LearningandInnovation1) with a correlation of 0.853.

Particularly strong scores in management openness to employee suggestions (Mean: 4.52) and employees feeling their ideas are valued (Mean: 4.48) suggest a supportive environment for knowledge sharing and innovation. The consistently high scores across all items in this dimension indicate that PT. Solusi Langit Aviation has successfully developed a culture that values learning and innovation.

KM Outcomes Dimension

The KM outcomes dimension (Mean: 4.15, SD: 0.70) assesses how knowledge management contributes to business results. The inter-item correlation analysis shows strong relationships between achieving effective processes (KMO2) and the development of a KM roadmap (KMO3) with a correlation of 0.857, as well as between achieving effective processes (KMO2) and increasing profitability (KMO4) with a correlation of 0.831. These patterns suggest that strategic KM planning is closely linked to operational effectiveness and business results.

Table 2. KM Outcomes Dimension Item Analysis

Item	Description	Mean	SD
KMO1	Successful history of KM implementation	4.08	0.7
KMO2	Achieved effective processes through knowledge utilization	4.16	0.9
KMO3	KM roadmap created and evaluated annually	4	0.87
KMO4	Increased profitability through KM	4.16	0.75
KMO5	KM enhances employee competency leading to innovation	4.12	0.83
KMO6	KM tools drive digital transformation	4.36	0.7

The outcomes dimension shows that knowledge management is contributing to business results, particularly through knowledge tools driving digital transformation (Mean: 4.36). The development and evaluation of a knowledge management roadmap scored relatively lower (Mean: 4.00), suggesting an opportunity for more structured planning and assessment of KM initiatives.

Correlation Analysis Across Dimensions

The correlation analysis reveals strong positive relationships between all dimensions, as shown in Table 3. The correlations range from 0.716 to 0.962, all significant at $p<0.01$. This indicates that improvements in one dimension are likely to positively impact others, supporting a holistic approach to knowledge management enhancement. Particularly strong correlations exist between People and KM Outcomes (0.929), Knowledge Process and Learning & Innovation (0.936), and Technology and KM Outcomes (0.915). The People dimension shows the strongest correlation with the total score (0.957), suggesting that human factors may be the most critical determinant of overall KM maturity.

Table 3. Correlation Matrix of Knowledge Management Dimensions

Dimension	Leadership	Process	People	Technology	Knowledge Process	Learning & Innovation	KM Outcomes	Total Score
Leadership	1	0.842**	0.781**	0.773**	0.772**	0.755**	0.797**	0.871**
Process		1	0.831**	0.743**	0.736**	0.716**	0.807**	0.869**
People			1	0.871**	0.909**	0.885**	0.929**	0.957**
Technology				1	0.908**	0.894**	0.915**	0.944**
Knowledge Process					1	0.936**	0.903**	0.953**
Learning & Innovation						1	0.885**	0.937**
KM Outcomes							1	0.962**
Total Score								1

**Note: ** Correlation is significant at the 0.01 level (2-tailed).

These strong correlations indicate the interconnected nature of knowledge management dimensions and suggest that a comprehensive approach addressing multiple dimensions simultaneously would be most effective for enhancing overall maturity.

Demographic Analysis

The analysis of knowledge management perceptions across different demographic groups provides additional insights into how knowledge management practices are experienced throughout the organization.

Analysis by Age Groups

While the analysis of variance did not show statistically significant differences between age groups ($p>0.05$ for all dimensions), there are observable patterns in the mean scores:

Table 4. Knowledge Management Scores by Age Group

Age Group	N	Leadership	Process	People	Tech	Knowledge Process	Learning & Innovation	KMO	Total Score
20-29	1	4.17	3.2	4.17	4	4.17	4.5	4	165.21
30-39	18	4.32	4.2	4.03	4.36	4.09	4.35	4.15	172.82
40-49	5	4.53	4.52	4.37	4.53	4.4	4.57	4.4	183.47
>50	1	3.5	3.4	3	2.83	2.33	3.5	3	126.28

Respondents in the 40-49 age group tend to rate knowledge management practices more favorably across all dimensions (Total Mean: 183.47) compared to those in the 30-39 age group (Mean: 172.82) and 20-29 age group (Mean: 165.21). The single respondent over 50 provided a notably lower assessment (126.28), though this cannot be generalized due to the limited sample size.

This suggests that the senior respondent may encounter significant difficulties in interacting with or assessing the effectiveness of knowledge management systems, especially those related to technology or the practical management of knowledge processes, such as the acquisition and preservation of essential knowledge. The individual's lower scores indicate that senior employees may have a divergent perception of knowledge management, possibly due to limited familiarity with technology-driven KM tools or dissatisfaction with existing procedures and systems that inadequately represent their significant, experiential knowledge.

The test of homogeneity of variances showed no significant differences in variance between the primary age groups (30-39 and 40-49), indicating consistent patterns of responses within these groups.

Analysis by Work Experience

The analysis by work experience reveals an interesting pattern, though not statistically significant ($p=0.246$). Employees with 1-2 years of experience rated knowledge management practices most favorably across all dimensions (Mean: 193.59), placing them at Level 5: Maturity Level, while those with more than 5 years (Mean: 170.50) and 2-5 years (Mean: 168.14) provided lower ratings (both at Level 4: Refinement Level).

Employees with longer tenure might have higher standards due to their experience or more profound understanding of existing knowledge management deficiencies. This experience likely offers them a clearer understanding of deficiencies, especially concerning the efficacy of processes like routine business assessments, specialized knowledge management personnel, or the retention of essential knowledge from departing employees—domains that gained the lowest ratings in the comprehensive analysis. In contrast, fresher employees (1–2 years of experience) may not fully perceive or acknowledge such gaps due to additional initial training, organized onboarding, or limited exposure to the negative impacts linked to knowledge management deficiencies. Consequently, experienced employees have a tendency to be more selective or pragmatic, evaluating knowledge management maturity slightly less due to their practical experience, which has highlighted these enduring deficiencies more clearly.

Table 5. Knowledge Management Scores by Work Experience

Experience	N	Leadership	Process	People	Tech	Knowledge Process	Learning & Innovation	KMO	Total Score	Maturity Level
1-2 years	4	4.67	4.8	4.75	4.75	4.63	4.84	4.63	193.59	Level 5

Experience	N	Leadership	Process	People	Tech	Knowledge Process	Learning & Innovation	KMO	Total Score	Maturity Level
2-5 years	15	4.26	4.04	3.95	4.19	3.99	4.23	4.05	168.14	Level 4
>5 years	6	4.28	4.17	3.89	4.36	3.97	4.39	4.06	170.5	Level 4

The Tukey post-hoc analysis did not show statistically significant differences between experience groups, though the mean differences between the 1-2 years group and the others were substantial (approximately 25 points in total score). The cross-tabulation analysis further confirms this pattern:

Table 6. Cross-tabulation of Maturity Level by Work Experience

Maturity Level	1-2 years	2-5 years	More than 5 years	Total
Level 2: Initiation	0 (0.0%)	1 (6.7%)	0 (0.0%)	1 (4.0%)
Level 3: Expansion	0 (0.0%)	1 (6.7%)	1 (16.7%)	2 (8.0%)
Level 4: Refinement	2 (50.0%)	10 (66.7%)	4 (66.7%)	16 (64.0%)
Level 5: Maturity	2 (50.0%)	3 (20.0%)	1 (16.7%)	6 (24.0%)
Total	4 (100%)	15 (100%)	6 (100%)	25 (100%)

Among employees with 1-2 years of experience, 50% rated the organization at Level 5 (Maturity Level), compared to only 20% of those with 2-5 years of experience and 16.7% of those with more than 5 years. This suggests that more experienced employees may have higher expectations or more critical perspectives on knowledge management practices, while newer employees may benefit more from existing knowledge structures or experience more intensive knowledge onboarding.

Gap Analysis

To identify specific areas for improvement, a detailed analysis of individual items was conducted, focusing on the lowest-scoring questions within each dimension:

Table 7. Lowest Scoring Items by Dimension

Dimension	Lowest Scoring Item	Description	Mean	SD
People	People5	Dedicated employee for managing KM	3.68	0.95
Process	Process2	Regular business process evaluation	3.88	1.01
Knowledge Process	KnowledgeProcess3	Retention of critical knowledge from departing employees	3.8	1.08
KM Outcomes	KMO3	Development and evaluation of KM roadmap	4	0.87
Leadership	Leadership4	Policies for safeguarding knowledge	4.12	0.73
Technology	Technology4	Integration of KM activities into team KPIs	4.2	0.91
Learning & Innovation	LearningandInnovation1	Company reinforces values of learning and innovation	4.24	0.83

These findings highlight specific gaps that need to be addressed to enhance overall knowledge management maturity:

1. Organizational Structure Gap: The absence of dedicated personnel for knowledge management (Mean: 3.68) represents the lowest score across all items and dimensions. This indicates a significant gap in the formal organizational structure for KM, potentially limiting coordination and systematic implementation of knowledge initiatives.
2. Process Evaluation Gap: There is insufficient regular evaluation of business processes to improve value creation (Mean: 3.88). The relatively high standard deviation (1.01) suggests inconsistent application of process evaluation practices across different areas of the organization.
3. Knowledge Retention Gap: Mechanisms for retaining critical knowledge from departing employees need

strengthening (Mean: 3.80). This gap presents a significant risk for knowledge continuity, especially in a technical environment where specialized expertise is crucial.

4. Strategic Planning Gap: A more comprehensive KM roadmap with regular evaluation is needed (Mean: 4.00). This gap may limit the strategic alignment and long-term development of knowledge management capabilities.
5. Knowledge Protection Gap: Policies for safeguarding intellectual property and critical knowledge could be strengthened (Mean: 4.12). In an industry where proprietary technical knowledge can provide competitive advantage, this gap represents a strategic vulnerability.
6. Performance Management Gap: Better integration of KM activities into team performance metrics (Mean: 4.20) would enhance engagement with knowledge management practices and reinforce their importance to organizational success.

Cultural Reinforcement Gap: While the learning and innovation dimension scored highest overall, there remains an opportunity to strengthen how the organization articulates and reinforces learning values (Mean: 4.24). These gaps represent targeted opportunities for improvement that, if addressed, could elevate PT. Solusi Langit Aviation's knowledge management maturity from Level 4 (Refinement) to Level 5 (Maturity), where knowledge management becomes fully integrated into the organization's operations and strategic direction.

Business Solution and Proposed Implementation Plan

Low scores explicitly highlight significant deficiencies affecting the operations of Solusi Langit Aviation. The lowest score in the People dimension (Mean: 3.68) indicates an absence of dedicated person for managing knowledge management, resulting in a deficiency in the formal coordination of knowledge management. The low score in Knowledge Retention (Mean: 3.80) directly relates to the recognized business issue of knowledge loss and gaps due to leaving personnel, which substantially affect organizational productivity and strategy alignment. The lower score in Process Evaluation (Mean: 3.88) indicates irregularities in the assessment of business processes, potentially leading to inefficiencies and decreased efficiency in operation.

On the other hand, dimensions with relatively higher scores indicate areas that could offer significant answers to company business issues if further enhanced and utilized. The high scores in Learning & Innovation (Mean: 4.24) and Technology (Mean: 4.20) show that improving the current learning environment and better including knowledge management activities in team goals could greatly help keep knowledge and resolve problems. Enhancing these advantageous areas could establish a basis for boosting organizational performance and sustaining competitive advantage by integrating knowledge management thoroughly into organizational culture and practices.

Therefore, focused improvements based on the analysis of low-scoring areas, when combined with the utilization of strengths from high-scoring areas, can systematically resolve business issues such as knowledge loss, knowledge gaps, and insufficient knowledge retention, which leads to improved overall KM maturity and organizational performance.

Potential Problems if KM Issues Remain Unresolved:

1. Operational Inefficiency: Continued knowledge gaps will increase inefficiency, leading to higher aircraft operational costs and potential delays in aircraft maintenance schedules.
2. Regulatory Non-compliance: Lack of documented processes and knowledge transfer could result in non-compliance with aviation safety regulations, risking the company’s operational certificates.
3. Loss of Competitive Advantage: As experienced personnel continue to leave or transition into other roles, the company risks losing its competitive edge due to a lack of expert knowledge retention.
4. Increased Errors and Reduced Safety: Inexperienced engineers might make more mistakes due to insufficient knowledge, which could lead to safety issues, decreased work quality, and possibly accidents.

Talent Attrition: New engineers may feel unsupported or inadequately trained, leading to lower job satisfaction and higher turnover rates.

Opportunities if KM Issues are Addressed:

1. Increased Efficiency: By implementing a robust KM system, the technical department could work more efficiently, reducing downtime and errors, while ensuring smoother operations.
2. Enhanced Regulatory Compliance: A structured KM approach could improve documentation and adherence to safety standards, ensuring compliance with aviation regulations.
3. Improved Employee Development: KM systems that focus on mentorship and continuous learning can enhance employee skill development, increasing job satisfaction and retention.

4. Sustained Competitive Advantage: Proper KM practices would help PT. Solusi Langit Aviation retain its intellectual capital, ensuring continued excellence in technical operations and giving the company an edge over competitors.
5. Cost Reduction: Preventing the loss of knowledge can lower costs related to retraining, rework, and inefficiencies due to inexperience or errors.

Based on the comprehensive analysis of PT. Solusi Langit Aviation's knowledge management maturity, a tailored implementation plan has been developed to address identified gaps and elevate the organization's KM capabilities. This plan follows a structured approach organized into short-term, medium-term, and long-term initiatives, applying the 5W+1H framework (What, Why, Where, When, Who, How) to ensure clarity and actionability.

Strategic Vision for KM Enhancement

The strategic vision for knowledge management at PT. Solusi Langit Aviation is to transition from the current Refinement Level (Level 4) to the Maturity Level (Level 5), where KM becomes mainstreamed throughout the organization and integrated into daily activities, business processes, and strategic decision-making. This transition will enable the technical department to achieve:

1) Enhanced operational efficiency through systematic application of best practices.
2) Improved safety and quality standards through consistent knowledge application.
3) Reduced risk of knowledge loss during personnel transitions.
4) Increased innovation capacity through collaborative knowledge creation.
5) Greater agility in responding to technical challenges and industry changes.
6) Improved competitive advantage through protection and leveraging of intellectual assets.

The implementation plan aims to systematically address the identified gaps while building on existing strengths in leadership support, technological infrastructure, and learning culture. The plan prioritizes initiatives based on the severity of gaps, their strategic importance, and the interconnections between different dimensions.

Short-Term Implementation Plan (0-6 months)

The short-term initiatives focus on addressing the most critical gaps identified in the People and Process dimensions, which received the lowest overall scores.

Table 8. Short-Term Implementation Plan (0-6 Months)

Short-Term Implementation Plan (0-6 Months)				
Activities	**Start Week**	**End Week**	**Key Milestones**	**Responsible Parties**
Knowledge Management Office Establishment: - Define formal KM roles and responsibilities. - Develop governance and reporting structure - Budget allocation for KM activities. - Appoint a Knowledge Management Officer. - Assign KM coordinators from each technical unit. - Develop KM charter and mission statement. - Conduct specialized training in KM. - Communicate KM roles and responsibilities across the organization	1	16	KM Office formalized, KM Officer appointed	HR Manager, Technical Manager
Process Evaluation Framework Development: - Develop structured methodology integrating KM into process evaluation. - Create process mapping templates capturing knowledge requirements. - Set quarterly review schedules and	5	28	Comprehensive process evaluation framework operational	Quality Assurance Manager, Process Improvement Team, Technical Manager, Technical function representatives

Short-Term Implementation Plan (0-6 Months)				
define clear evaluation roles. - Standardize documentation for capturing process improvements. - Implement lessons-learned repository for process documentation. - Establish performance metrics and dashboards. - Conduct training sessions on KM-integrated process evaluations. - Regularly review and integrate results into management review meetings.				
Collaborative Team Structure Enhancement: - Launch pilot communities of practice in key technical areas (Avionics, Powerplant, Airframe). - Provide facilitation training for team leaders and coordinators. - Establish regular meetings and collaboration platforms. - Capture and document collaborative insights systematically. - Integrate team collaboration mechanisms into organizational structures. - Define effectiveness evaluation metrics for collaborative activities. - Implement recognition system for outstanding team contributions.	8	26	Community Coordinators, Team Leaders, KM Officer	Community Coordinators, Team Leaders, KM Officer

Medium-Term Implementation Plan (6-12 months)

The medium-term initiatives address gaps in Knowledge Process and KM Outcomes dimensions, focusing on knowledge retention and strategic KM planning.

Table 9. Medium-Term Implementation Plan (6 - 12 Months)

Medium-Term Implementation Plan (6 - 12 Months)				
Activities	**Start Week**	**End Week**	**Key Milestones**	**Responsible Parties**
Knowledge Retention System Implementation: - Develop a critical knowledge identification and assessment methodology. - Map critical knowledge areas and identify key knowledge holders. - Formalize exit and knowledge transfer processes. - Establish structured knowledge elicitation from departing personnel. - Implement digital knowledge repository with advanced search capabilities. - Establish mentorship programs linking experienced personnel and successors. - Create multimedia documentation (videos, annotated manuals). - Develop knowledge capture templates. - Develop knowledge capture templates. - Establish periodic validation and	32	56	Digital knowledge repository operational; exit processes standardized	KM Officer, HR Manager, Technical Training Manager, Senior Technical Experts, Technical Manager

Medium-Term Implementation Plan (6 - 12 Months)				
review processes. - Embed knowledge transfer processes into offboarding.				
Strategic KM Roadmap Development: - Conduct detailed KM needs assessment aligned with business strategy. - Map current KM capabilities and identify improvement opportunities. - Benchmark against aviation maintenance KM best practices. - Develop three-year KM strategic roadmap detailing initiatives, resources, and timelines. - Establish KM governance and clear role definitions. - Define KM performance metrics aligned with business outcomes. - Schedule quarterly review processes for roadmap evaluation. - Integrate KM planning into annual strategic cycles. - Create visualization and communication plans for KM roadmap. - Implement feedback mechanisms for continuous improvement.	36	60	KM roadmap finalized, communicated, and implemented	Strategic Planning Manager, KM Officer, Technical Manager, Departmental Representatives, CEO
Knowledge Protection Framework Development: - Classify knowledge assets by strategic value and sensitivity. - Develop comprehensive intellectual property policies. - Conduct an audit of existing knowledge protection practices. - Implement technical controls to safeguard critical knowledge. - Define and enforce role-based access privileges. - Conduct knowledge protection training sessions. - Create legal frameworks and templates for external knowledge sharing. - Implement digital rights management systems. - Develop monitoring systems for knowledge access. - Formulate incident response plans for knowledge breaches. - Secure knowledge-sharing protocols for external partners. - Integrate knowledge protection considerations into innovation processes. - Schedule regular policy and practice reviews.	40	46	Knowledge protection policies and systems fully operational	Legal Counsel, KM Officer, IT Security Manager, Technical Documentation Specialist, Technical Manager

Justification of Implementation Plan

The proposed implementation plan is strategically designed to address the specific gaps identified in the knowledge management maturity assessment, all the while leveraging the existing strengths. The justification

for this approach is grounded in both empirical findings and theoretical frameworks from knowledge management literature.

Alignment with Research Findings

The implementation plan directly addresses the specific gaps identified in the knowledge management maturity assessment:

1. Organizational Structure Gap (Mean: 3.68): Addressed through the Knowledge Management Office Establishment initiative, creating dedicated roles and responsibilities for knowledge management.
2. Process Evaluation Gap (Mean: 3.88): Addressed through the Process Evaluation Framework Development initiative, establishing systematic approaches to process improvement based on knowledge.
3. Knowledge Retention Gap (Mean: 3.80): Addressed through the Knowledge Retention System initiative, implementing comprehensive mechanisms for preserving critical knowledge during personnel transitions.
4. Strategic Planning Gap (Mean: 4.00): Addressed through the Strategic KM Roadmap Development initiative, creating a structured approach to knowledge management planning and evaluation.
5. Knowledge Protection Gap (Mean: 4.12): Addressed through the Knowledge Protection Framework initiative, developing comprehensive policies and systems for safeguarding intellectual assets.
6. Performance Management Gap (Mean: 4.20): Addressed through the Integrated KM Performance System initiative, embedding knowledge management into performance evaluation and incentives.
7. Cultural Reinforcement Gap (Mean: 4.24): Addressed through the Leadership Excellence in Knowledge Management initiative, strengthening leadership behaviors that reinforce knowledge culture.

   The implementation plan also leverages identified strengths, particularly in the Learning and Innovation dimension (Mean: 4.37), Leadership (Mean: 4.33), and Technology (Mean: 4.32), building on these positive foundations to create a more comprehensive and integrated knowledge management system.

Implementation Approach

The implementation plan follows a phased approach designed to maximize success and minimize disruption:

1. Sequential Prioritization: Initiatives are sequenced to address the most critical gaps first while building foundations for later enhancements. The early focus on organizational structure (Knowledge Management Office) creates the capacity to lead subsequent initiatives.
2. Pilot and Scale Methodology: Many initiatives include pilot implementations in specific areas before organization-wide deployment, allowing for refinement based on early experiences. This approach reduces risk and builds momentum through early successes.
3. Integration with Existing Systems: Rather than creating parallel processes, the initiatives focus on integrating knowledge management into existing organizational systems and workflows, increasing adoption and sustainability.
4. Balanced Approach: The plan addresses technological, organizational, and human aspects of knowledge management, recognizing that successful implementation requires attention to all three dimensions.
5. Measurement and Evaluation: Each initiative includes specific metrics and evaluation mechanisms, enabling ongoing assessment of effectiveness and adaptation as needed.

   This systematic implementation approach maximizes the likelihood of successful transformation to a higher level of knowledge management maturity, ultimately enhancing PT. Solusi Langit Aviation's operational excellence, innovation capacity, and competitive advantage in the air charter industry.

The comprehensive analysis of PT. Solusi Langit Aviation's knowledge management maturity and the resulting implementation plan provide a clear path forward for the organization to transition from Level 4 (Refinement) to Level 5 (Maturity) in its knowledge management capabilities. By systematically addressing identified gaps while building on existing strengths, the organization can enhance its ability to create, share, and apply knowledge as a strategic asset, ultimately supporting its business objectives of operational excellence, safety, and competitive advantage.

Conclusion

The research on knowledge management maturity at PT. Solusi Langit Aviation has revealed several important findings that align with the initial research questions. It was found that while the company has made

significant progress in implementing knowledge management practices, there are still gaps in certain areas such as data integration, employee engagement, and the application of advanced knowledge management technologies. These gaps hinder the full realization of the potential benefits of knowledge management within the company. Additionally, the study highlighted the critical role of leadership and organizational culture in fostering an environment conducive to effective knowledge sharing and utilization. Based on these findings, it is recommended that PT. Solusi Langit Aviation invests in enhancing its knowledge management systems by focusing on the integration of digital tools, fostering a collaborative culture, and providing continuous training to employees. For future research, it would be beneficial to explore the impact of specific knowledge management tools on organizational performance and to assess the role of leadership in driving knowledge management maturity. Further studies could also examine how knowledge management practices in the aviation sector compare to other industries, providing valuable insights for broader applications of these practices.

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