

Corporate Communication Strategy Based on Co-Creation and the Growth Zone in Optimizing Healthcare Service Performance: A Case Study at BKPP, Ministry of Transportation

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ABSTRACT

Keywords:

corporate communication; co-creation; growth zone; healthcare service performance; MICMAC analysis.

This study addresses the persistent challenges in Indonesia's healthcare services, particularly those related to ineffective organizational communication, limited coordination, and suboptimal service performance. These issues are increasingly critical within institutions undergoing transformation, such as the Maritime Occupational Health Center (BKPP) under the Ministry of Transportation. Therefore, this study aims to develop a corporate communication strategy model based on co-creation and the growth zone to optimize healthcare service performance. This research employs a semi-quantitative approach using the MICMAC (Matrix of Cross-Impact Multiplications Applied to Classification) method. Data were collected from 85 respondents, consisting of internal staff and service users, through structured questionnaires. The analysis focuses on identifying the driving power and dependence among 18 variables categorized into co-creation, growth zone, and service performance aspects. The results indicate that communication transparency, user needs adaptation, two-way dialogue, and communicative leadership are the key variables with high driving power in shaping an effective communication strategy. In particular, user needs adaptation emerges as the most influential variable, acting as a central node in the system. Furthermore, variables such as user participation and public trust are projected to increase in importance in the future. In conclusion, integrating co-creation and growth zone approaches within corporate communication strategies significantly enhances healthcare service performance. Strengthening transparency, adaptive services, and participatory communication is essential to building a responsive, innovative, and sustainable healthcare organization.

INTRODUCTION

Healthcare services in Indonesia continue to face a range of structural challenges that significantly affect the performance of public service institutions. The complexity of the national health system extends beyond medical aspects to encompass organizational governance, system integration, and the effectiveness of inter-unit communication. The Ministry of Health has identified at least seven major constraints within the national healthcare system, particularly related to weak data integration and limited interoperability of information systems, such as the absence of real-time data, system fragmentation, and non-standardized data formats (Ministry of Health, 2023). This condition indicates that issues of communication and coordination constitute fundamental challenges in improving the quality of healthcare services in Indonesia (Argenti, 2017).

These challenges are further reinforced by empirical evidence showing that inefficient administrative processes and service flows often hinder public access to healthcare. Complicated registration procedures and the lack of clear information frequently lead to delays in patient treatment, ultimately affecting the overall quality of service delivery (Klikdata.com, 2023). This suggests that weaknesses in communication systems not only impact internal organizational performance but also directly influence user experience and satisfaction. Several tragic cases in Indonesia's healthcare services reflect these deficiencies in organizational coordination and communication. One notable case occurred at Dr. M. Djamil General Hospital in Padang in November 2023, where a critically ill patient died due to delayed treatment during a staff shift change (Kompas.id, 2023). This incident highlights gaps in communication and coordination among medical personnel, who are expected to operate in an integrated manner, particularly in emergency situations. Such phenomena demonstrate that challenges in healthcare services are not solely caused by resource limitations but also by inadequate communication management and suboptimal collaboration among stakeholders.

In this context, the co-creation approach becomes relevant in explaining the importance of involving multiple actors in jointly creating service value (Prahalad & Ramaswamy, 2004). Without meaningful dialogue and active participation, healthcare organizations will struggle to achieve optimal effectiveness and responsiveness. Moreover, disparities in the quality of healthcare services across regions in Indonesia remain a critical issue requiring serious attention. A former senior official of the World Health Organization highlighted the imbalance in service quality, ranging from drug pricing to weak inter-agency coordination (Health.detik.com, 2023). This indicates that the primary challenges within the healthcare system are not merely technical in nature but are also closely linked to corporate communication strategies based on co-creation and the growth zone that have not yet been capable of bridging the complexity of inter-organizational relationships.

Within this framework, Balai Kesehatan Kerja Pelayaran (BKPP) under the Ministry of Transportation holds a strategic role as an institution providing healthcare services for maritime workers and the general public. BKPP is responsible for conducting assessments, evaluations, and maintenance of the health of maritime personnel, as well as supervising maritime work environments (BKPP, 2023). This role positions BKPP as an institution with significant responsibility in ensuring the delivery of professional and high-standard occupational healthcare services.

Currently, BKPP is undergoing a significant institutional transformation, particularly through the implementation of the Public Service Agency (BLU) financial management model. This shift requires the organization to be more flexible in financial management while enhancing efficiency and performance-based service professionalism (Ministry of Finance, 2020). Such transformation not only affects administrative aspects but also necessitates fundamental changes in organizational communication patterns, which have traditionally been bureaucratic and top-down.

The urgency of communication transformation within BKPP is further reinforced by various national regulations, such as Presidential Regulation No. 96 of 2021, which promotes cross-sectoral synergy in the development of healthcare human resources. This regulation underscores the importance of optimizing communication systems across all healthcare institutions. Additionally, Minister of Transportation Regulations No. PM 40 of 2019 and PM

73 of 2021 emphasize the need for effective and integrated organizational governance in supporting maritime occupational health services. Collectively, these regulatory frameworks indicate that corporate communication within BKKP must no longer function merely as a tool for information dissemination but must evolve into a strategic instrument for fostering collaboration, participation, and organizational innovation. In the context of dynamic modern organizations, conventional communication approaches are no longer sufficient to address increasingly complex challenges.

On the other hand, the concept of the Growth Zone introduced by Rhenald Kasali (2017) provides a new perspective on organizational development. The Growth Zone emphasizes the importance of organizations moving beyond their comfort zones and embracing innovation and change. In this context, communication functions as a catalyst that fosters an adaptive, collaborative, and continuously learning organizational culture. In line with this, Organizational Learning theory proposed by Senge (1990) asserts that effective organizations are those capable of collective learning through open and participatory communication processes. This suggests that communication strategies based on the growth zone not only serve as a medium for information exchange but also act as mechanisms for sustained organizational learning.

To understand the actual state of communication within BKKP, an internal survey was conducted involving 85 respondents from various service units. The survey employed a Likert scale-based questionnaire to measure employees' perceptions of internal communication effectiveness, including information flow, coordination, and decision-making processes. The results indicate the persistence of several fundamental issues within the organizational communication system. Approximately 42% of respondents reported frequently experiencing delays in inter-unit information exchange, indicating barriers in horizontal communication. Furthermore, 35% of respondents stated that decision-making processes remain unclear, reflecting a lack of transparency and participation within the organization. These findings suggest that BKKP's internal communication system has not yet been able to optimally support work effectiveness.

Another issue identified is weak coordination between medical and administrative units, with 48% of respondents indicating that such coordination has not functioned optimally. In addition, 53% of respondents emphasized the need to strengthen the role of the public relations function in managing internal organizational communication. This condition demonstrates that strategic communication functions have not yet been maximized in bridging information needs across units. From the perspective of service users, these internal communication weaknesses also affect the service experience. Unclear information, inconsistencies in communication among staff, and a lack of communication uniformity contribute to confusion and reduce public trust in BKKP's services. In this regard, service quality is determined not only by medical aspects but also by the effectiveness of organizational communication.

These issues can be analyzed through the lens of Service Quality theory (Parasuraman et al., 1988), which emphasizes that service quality is determined by the gap between user expectations and perceptions. Weak internal communication has the potential to undermine key service quality dimensions, particularly reliability, responsiveness, and assurance in healthcare delivery. Therefore, a corporate communication strategy based on co-creation and the growth zone is required to enhance overall service performance.

Based on the foregoing discussion, this study is essential for developing a corporate communication strategy based on co-creation and the growth zone model to optimize the performance of healthcare services at BKKP. This model is expected to foster participation, innovation, and cross-functional collaboration, thereby creating an organization that is adaptive, responsive, and sustainable in addressing the dynamic challenges of public healthcare service delivery at BKKP.

METHOD

This study employed a semi-quantitative approach using MICMAC (Matrix of Cross-Impact Multiplications Applied to Classification) structural analysis to identify and map key variables within a corporate communication strategy model based on co-creation and the growth zone that influenced healthcare service performance at the Maritime Occupational Health Center (BKKP) of the Ministry of Transportation. The MICMAC approach was selected for its ability to reveal the levels of driving power and dependence among variables within a complex organizational system, particularly in the context of healthcare corporate communication, which involves multiple actors and cross-functional interactions.

The research was conducted at the Maritime Occupational Health Center (BKKP), a Technical Implementation Unit under the Directorate General of Sea Transportation, Ministry of Transportation. The selection of this research site was purposive, based on BKKP's strategic role in delivering maritime occupational healthcare services, as well as its ongoing institutional transformation toward the Public Service Agency (BLU) financial management model, which required improvements in organizational communication quality, service efficiency, and performance-based professionalism.

The data used in this study consisted of both primary and secondary data. Primary data were collected through the distribution of structured questionnaires to respondents comprising BKKP internal staff and service users (patients). Respondents were selected purposively based on criteria including employees involved in service delivery and organizational communication processes, as well as users with direct experience of healthcare services at BKKP. A total of 85 respondents participated in this study, representing various service units and user groups. Secondary data were obtained from multiple supporting sources, including official BKKP documents, government regulations (from the Ministry of Transportation and the Ministry of Finance related to BLU), institutional performance reports, and relevant academic publications on corporate communication, co-creation, the growth zone, and healthcare service quality. These secondary data served to strengthen the theoretical foundation, provide empirical context, and support the interpretation of analytical results.

The variables employed in this study consisted of indicators that constructed the corporate communication strategy model based on co-creation and the growth zone in optimizing BKKP's healthcare service performance. The selection of variables was grounded in relevant theoretical frameworks, including corporate communication theory, co-creation, the growth zone, and service quality (SERVQUAL). In total, 18 variables were analyzed in this study, categorized into three main aspects: co-creation, the growth zone, and healthcare service performance. The variables utilized in this study are presented in Table 1 below:

Table 1. Analytical Variables

Code	Variable	Aspect
Var1	Stakeholder engagement	Co-Creation
Var2	Service user participation	Co-Creation
Var3	Cross-unit collaboration	Co-Creation
Var4	Communication transparency	Co-Creation
Var5	Two-way dialogue	Co-Creation
Var6	Trust and partnership	Co-Creation
Var7	Organizational learning	Growth Zone
Var8	Service innovation	Growth Zone
Var9	User needs adaptation	Growth Zone
Var10	Strengthening communication culture	Growth Zone
Var11	Communication technology	Growth Zone
Var12	Communicative leadership	Growth Zone
Var13	Medical service quality	Service Performance
Var14	User satisfaction	Service Performance
Var15	Service efficiency	Service Performance
Var16	Responsiveness	Service Performance
Var17	Accessibility	Service Performance
Var18	Public trust	Service Performance

Source: Primary data processed from research questionnaire

The MICMAC analysis technique employed in this study was based on the Strategic Foresight approach introduced by Michel Godet, which focuses on identifying key variables within complex and dynamic systems (Fauzi, A., 2019). In this context, MICMAC was utilized to map the relationships among variables within a corporate communication strategy model based on co-creation and the growth zone, as well as to identify the most influential key factors in optimizing the healthcare service performance of BKKP. The application of this method enabled a systematic understanding of the structural interrelationships among variables, both in terms of driving power and dependence power.

The MICMAC analytical procedure in this study followed the stages proposed by Stratigea (2013), namely: (1) formulation of the research problem related to the effectiveness of corporate communication in healthcare services, (2) identification of variables based on theoretical review and survey results, (3) analysis of inter-variable relationships by examining direct linkages among indicators, and (4) weighting of influence and dependence levels using a defined assessment scale. The relationships among variables were analyzed by considering the degree of influence and dependence, resulting in a direct influence matrix that served as the basis for further analysis (Benjumea, Castañeda, & Valencia-Arias, 2016; Fauzi, A., 2019). Based on these results, the variables were subsequently classified into four main quadrants as proposed by Ahmad et al. (2019), namely:

- 1) Quadrant I: Key or critical variables that possessed a strong capacity to drive change within the system, yet were minimally influenced by other variables. These factors functioned as primary drivers and served as the foundation for strategic transformation.
- 2) Quadrant II: Relay variables that were dynamic and sensitive to change, exhibiting strong influence while also being highly dependent on the system or other variables.

Small changes in these variables could generate widespread consequences, often producing cascading effects.

- 3) Quadrant III: Output variables that represented the outcomes or consequences of change drivers. These variables had limited influence on the system but were highly affected by the conditions of variables in Quadrants I and II.
- 4) Quadrant IV: Autonomous variables that were relatively disconnected from the overall system. Changes in these variables had minimal impact on others and were likewise only marginally affected by the dynamics of the system.

Operationally, the MICMAC analysis in this study was conducted using a Boolean matrix to map both direct and indirect relationships among variables. These inter-variable interactions were subsequently examined through an iterative process to determine the quality and structure of their interdependencies. In practice, the calculation of relationships among elements in MICMAC generally employed a cross-impact matrix, as described by Fauzi (2019), and was presented in Table 2 below.

Tabel 2. Inter-Variable Relationship Matrix in MICMAC Analysis

	Var 1	Var 2	Var 3...	Var n	Influence (Y-Axis)
Var 1	0	(V1,2)	(V1,3)...	(V1,n)	$\sum_{j=1}^n (Var_{1,j})$
Var 2	(V2,1)	0			
Var 3					
.					
.					
Var n	(Vn,1)			0	
Dependence (X-Axis)	$\sum_{j=1}^n (Var_{1,j})$			

Source: Adapted from MICMAC analysis framework

In Table 2, each inter-variable relationship in the MICMAC matrix (Var n,j) was assessed using a scale ranging from 0 to 3, as incorporated in the research questionnaire instrument. A score of 0 indicated no relationship, 1 indicated a weak relationship, 2 indicated a moderate relationship, and 3 indicated a strong relationship between variables. This assessment reflected respondents' perceptions of the degree of influence among indicator variables within the corporate communication strategy model based on co-creation and the growth zone. The data obtained were subsequently processed using Microsoft Excel and further analyzed with MICMAC software to map the driving power and dependence among variables. The results of the analysis were then presented descriptively to identify the key factors that played a dominant role in optimizing healthcare service performance at BKKP.

RESULT AND DISCUSSION

The results of the MICMAC analysis of the variables in this study provide a structural overview of the driving power and dependence levels among variables within the corporate communication strategy model based on co-creation and the growth zone in optimizing healthcare service performance at BKKP. This analysis enables the identification of the

strategic position of each variable within a complex and dynamic organizational communication system.

Based on the data processing results, all variables analyzed in this study have reached a full stability level of 100% after three iterations. This iterative process was conducted to ensure the consistency of variable positions based on their levels of influence and dependence within the developed model. The results of this inter-iteration stability test indicate that the structure of relationships among variables has stabilized and can be used as a basis for further analysis in determining the key factors of BKKP’s corporate communication strategy. These results are subsequently presented in Table 3 below.

Tabel 3. MICMAC Stability Test Results

Iteration	Influence	Dependence
1	90 %	95 %
2	98 %	100 %
3	100 %	100 %

Source: Results of MICMAC data processing

Based on Table 3, the first iteration shows a stability level of 90% in terms of influence and 95% in terms of dependence. In the second iteration, the stability level increases to 98% for influence and reaches 100% for dependence. This improvement indicates that the relationships among variables within the corporate communication strategy model become more consistent through repeated analytical processes. Furthermore, in the third iteration, a stability level of 100% is achieved for both influence and dependence. These results suggest that the structure of inter-variable relationships in the co-creation and growth zone-based corporate communication model at BKKP has reached a stable and robust condition. Therefore, these findings are suitable to be used as a foundation for identifying key variables that play a dominant role in developing communication strategies aimed at optimizing healthcare service performance at BKKP.

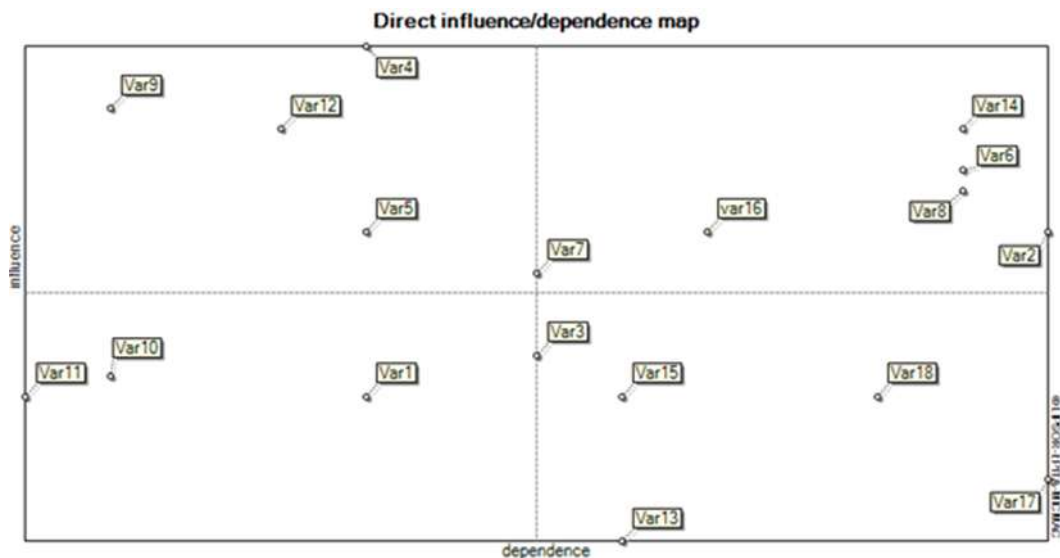


Figure 1. Quadrant Distribution of Direct Influence Analysis Results

Table 4. Mapping of Variables Based on MICMAC Analysis by Quadrant

Quadrant	Code	Variable	Aspect
Quadrant I Key/Critical Variables (Upper Left)	Var4	Communication transparency	Co-Creation
	Var9	User needs adaptation	Growth Zone
	Var5	Two-way dialogue	Co-Creation
	Var12	Communicative leadership	Growth Zone
Quadrant II Relay/Dynamic Variables (Upper Right)	Var7	Organizational learning	Growth Zone
	Var16	Responsiveness	Service Performance
	Var6	Trust and partnership	Co-Creation
	Var8	Service innovation	Growth Zone
	Var14	User satisfaction	Service Performance
Quadrant III Output Variables (Lower Right)	Var2	Service user participation	Co-Creation
	Var3	Cross-unit collaboration	Co-Creation
	Var15	Service efficiency	Service Performance
	Var13	Medical service quality	Service Performance
	Var17	Accessibility	Service Performance
Quadrant IV Autonomous Variables (Lower Left)	Var18	Public trust	Service Performance
	Var1	Stakeholder engagement	Co-Creation
	Var11	Strengthening communication culture	Growth Zone
	Var10	Communication technology	Growth Zone

Source: Processed data from MICMAC variable mapping

Based on the MICMAC analysis, the variables in this study are distributed into four main quadrants according to their levels of driving power and dependence in shaping a corporate communication strategy based on co-creation and the growth zone at the Maritime Occupational Health Center (BKPP). This mapping is conducted by referring to the direct influence among variables, thereby providing an accurate representation of the structural relationships within the communication dynamics. The visualization of the direct influence mapping among variables is presented in Figure 1 and Table 4.

Based on Table 4, the mapping of variables into four quadrants provides a comprehensive overview of the strategic position of each factor within the system. Variables in Quadrant I exhibit high driving power with low dependence, thereby functioning as the primary drivers within the model. This condition indicates that interventions targeting these variables will generate broad impacts on the overall communication strategy.

The variable of communication transparency (Var4) is positioned within this quadrant due to its strong driving force in fostering trust and openness of information among actors. Transparency ensures a clear flow of information, reduces uncertainty, and strengthens the legitimacy of healthcare services at BKPP. This variable is relatively independent, as it can be initiated through robust internal policies. Therefore, transparency serves as a fundamental basis for developing co-creation-based communication. Strategic initiatives may include the development of open digital communication systems and real-time service reporting mechanisms. In addition, it is essential to establish standardized operational procedures for transparency that are integrated across all levels of healthcare services at BKPP.

The variable of user needs adaptation (Var9) is also categorized within the key quadrant, as it exerts a significant influence on the relevance of healthcare services. Its position reflects that BKKP's ability to adapt services plays a decisive role in the success of the communication strategy. Adaptation is not entirely dependent on other variables but rather on the organization's sensitivity to the dynamic needs of users. This positions adaptation as a key driver of innovation within the growth zone framework. Strategic actions that can be implemented include periodic mapping of user needs through surveys and service data analysis. Furthermore, integrating user feedback into decision-making processes is essential. Through these efforts, healthcare services can continuously evolve in alignment with public expectations.

The variable of two-way dialogue (Var5) is also positioned within the key quadrant, as it plays a significant role in fostering active interaction between the organization and service users. Two-way dialogue enables constructive information exchange, thereby strengthening communication relationships. This variable is relatively independent, as it can be directly implemented through participatory communication policies. Its presence is central to the co-creation approach, which emphasizes collaboration. Strategies that can be developed include providing interactive communication channels such as digital forums, social media platforms, and responsive complaint-handling services. In addition, it is essential to establish follow-up mechanisms for every input provided by users. This will enhance user engagement and strengthen trust in BKKP's services.

The variable of communicative leadership (Var12) is also located in Quadrant I due to its substantial influence in shaping BKKP's communication culture. Communicative leadership serves as a role model in promoting open and collaborative communication practices. This variable is not highly dependent on others, as it originates from the individual capacity of leaders within the organization. Its role is crucial in driving the implementation of growth zone-based communication strategies. Strategic efforts may include enhancing leadership capacity through strategic communication training. Furthermore, leaders within BKKP should be encouraged to actively engage in both public and internal communication. This will enable the organization's communication direction to become more adaptive and responsive.

Quadrant II (relay/dynamic variables) reflects variables with high influence and high dependence, making them highly sensitive to changes within the system. The variable of organizational learning (Var7) is positioned in this quadrant because it depends on various other variables, such as leadership and transparency. At the same time, organizational learning at BKKP exerts a strong influence on internal capacity building. This variable functions as a bridge between policy and implementation. Strategies that can be applied include developing a digital-based knowledge management system. Additionally, routine evaluations of existing communication practices are necessary. Through these efforts, the organization can continuously adapt and evolve.

The variable of responsiveness (Var16) is also categorized as a dynamic variable, as it is highly influenced by the quality of communication and service systems. Responsiveness reflects the organization's ability to address user needs promptly and accurately. This variable has a strong impact on perceptions of service quality. Strategies that can be implemented include improving service speed through digitalization and system automation. Moreover, it is

important to establish clear response-time standards. These measures will enhance user satisfaction with healthcare services. High responsiveness will also contribute to strengthening the organization's positive image.

The variable of trust and partnership (Var6) is positioned within the relay/dynamic quadrant, as it is influenced by transparency, dialogue, and service quality. At the same time, this variable has a significant impact on the sustainability of relationships with stakeholders. Trust is the result of consistent and open communication processes. Strategies that can be implemented include building collaboration with various stakeholders through a co-creation approach. In addition, a strong commitment to maintaining service integrity is essential. This will strengthen long-term relationships with users and partners. Trust thus becomes a key social capital in the development of healthcare services.

The variable of service innovation (Var8) is also categorized within the dynamic quadrant, as it is highly influenced by organizational learning and user needs. Innovation plays a crucial role in improving the quality of healthcare services. This variable requires support from multiple aspects, including technology and leadership. Strategies that can be implemented include fostering an innovation culture driven by ideas from users and healthcare professionals. Furthermore, it is important to provide spaces for experimentation in service development. Such efforts will accelerate adaptation to evolving needs. Innovation is therefore a key factor in addressing the challenges of modern healthcare services.

The variable of user satisfaction (Var14) is located in Quadrant II, as it is influenced by nearly all variables within the system. Satisfaction is a critical indicator of service success and has a strong impact on user loyalty. Strategies to enhance this variable include improving the quality of service interactions through a human-centered communication approach. Additionally, periodic monitoring of user satisfaction is necessary. This will enable the organization to implement continuous improvements. User satisfaction thus serves as a primary benchmark for evaluating the success of communication strategies.

The variable of service user participation (Var2) is also classified within the dynamic quadrant, as it is influenced by dialogue and transparency. Participation has a strong impact on fostering co-creation and reflects the level of user involvement in service processes. Strategies that can be applied at BKKP include providing participatory platforms in service-related decision-making. Moreover, it is important to educate users about the significance of their involvement. These efforts will enhance overall service quality. Participation thus becomes a vital element in creating inclusive services.

Quadrant III (output variables) represents variables with high dependence but low influence. The variable of cross-unit collaboration (Var3) is positioned in this quadrant because it is highly influenced by other variables, such as leadership and dialogue. Collaboration is essentially an outcome of an effective communication system. Strategies that can be implemented include strengthening coordination among units through integrated communication systems. In addition, fostering a collaborative work culture is essential. These efforts will improve service effectiveness.

The variable of service efficiency (Var15) is categorized within the output quadrant, as it depends on innovation and responsiveness. Efficiency reflects the optimization of resources in healthcare service delivery. Strategies that can be implemented include the digitalization of service processes. In addition, it is necessary to evaluate inefficient workflows. These efforts

will enhance organizational productivity. Efficiency thus becomes an important indicator of service performance, as improved efficiency contributes to better service quality.

The variable of medical service quality (Var13) is also positioned within the output quadrant, as it is influenced by various factors such as innovation and organizational learning. Service quality represents the final outcome of a complex process. Strategies to improve this variable include enhancing the competencies of medical personnel through continuous training. Furthermore, the standardization of medical services is essential to ensure consistent quality. Service quality is a primary determinant of user satisfaction, and high-quality services will ultimately strengthen public trust.

The variables of accessibility (Var17) and public trust (Var18) are likewise located in the output quadrant, as they are highly dependent on other variables within the system. Accessibility reflects the ease with which the public can obtain healthcare services, while public trust represents the cumulative outcome of overall service performance. Strategies that can be implemented include expanding service reach through digital technologies. In addition, consistent and transparent public communication is necessary. These efforts will improve service accessibility, while public trust will be strengthened through positive user experiences.

Quadrant IV (autonomous variables) represents variables with both low influence and low dependence, indicating that their connection to the core dynamics of the system is relatively limited and indirect. The variable of stakeholder engagement (Var1) is positioned in this quadrant because, within the context of BKKP, such engagement tends to be situational and does not automatically trigger significant changes in other variables without intermediary mechanisms such as two-way dialogue or communication transparency. In other words, stakeholder engagement only becomes impactful when facilitated by key variables, and therefore does not structurally function as a primary driver of the system.

Similarly, the variable of strengthening communication culture (Var11) is classified as autonomous, as communication culture is a long-term, latent construct that does not directly influence performance outcomes in the short term. Instead, it functions as a contextual environment that reinforces the effectiveness of other variables without exerting strong direct driving power within BKKP. Meanwhile, the variable of communication technology (Var10) is also categorized as autonomous, as its role within BKKP is primarily as a supporting infrastructure that does not automatically enhance service performance without an appropriate communication strategy. Technology serves merely as a tool, and its impact depends heavily on how it is utilized by other variables, such as communicative leadership or service innovation.

Therefore, these three variables are classified as autonomous because their roles are more enabling and contextual rather than being primary determinants within the system. Strategies that can be implemented include integrating these variables selectively and progressively as reinforcing elements of the communication ecosystem—positioning technology as an enabler, communication culture as a value foundation, and stakeholder engagement as a supporting element activated through key variables in Quadrant I.

The complex interrelationships among variables in the MICMAC analysis are illustrated through a visual model that depicts cause-and-effect relationships based on both direct and indirect influences among the variables used in constructing the communication strategy at BKKP. These relationships are presented in Figures 2 and 3 below.

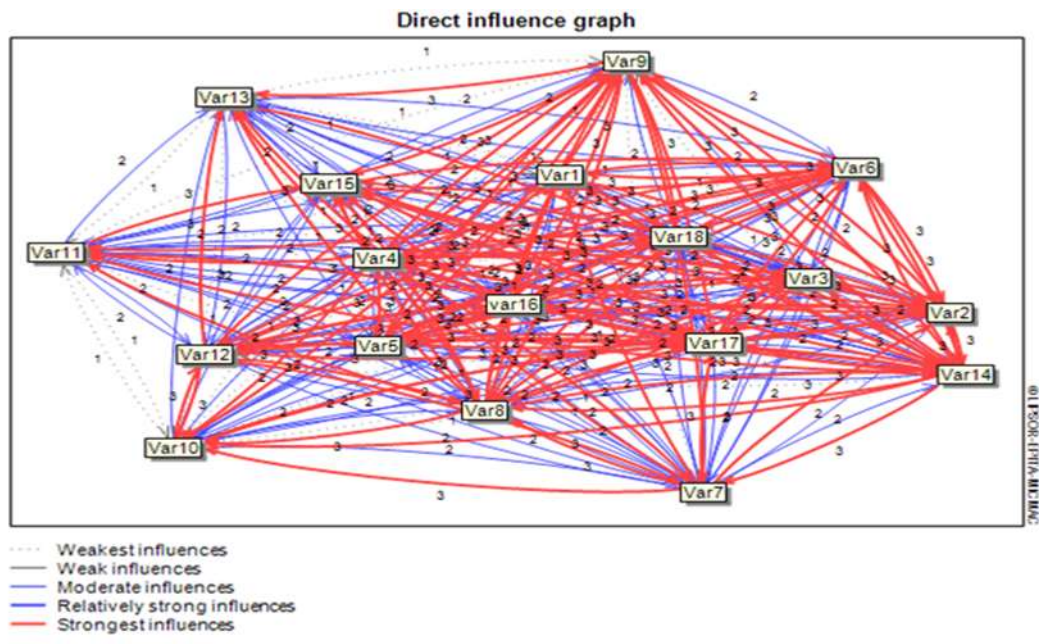


Figure 2. Complex Interrelationships of Direct Influence Among Variables

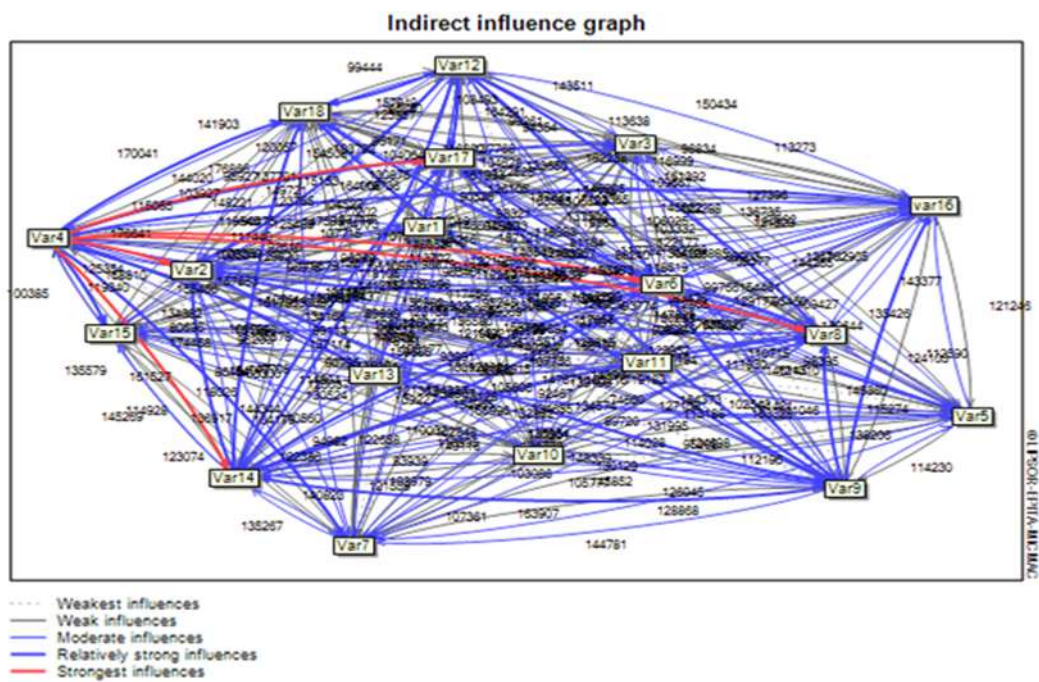


Figure 3. Complex Interrelationships of Indirect Influence Among Variables

In Figures 2 and 3, the visualization of the complex interrelationships among variables within the co-creation and growth zone-based communication strategy at BKKP illustrates the direction of relationships based on the levels of influence and dependence. Outward-pointing arrows indicate that a variable functions as an influencing variable toward others, while inward-pointing arrows signify that the variable is dependent on others within the communication model. Red lines represent strong relationships among variables, whereas blue lines with lighter intensity indicate weaker relationships, whether in the form of direct or indirect influence. These variations in line intensity reflect the differing strengths of inter-variable

relationships in shaping communication strategies aimed at improving healthcare service performance at BKKP.

Based on the MICMAC analysis presented in Figure 2, the variable of user needs adaptation (Var9) occupies a highly strategic position, as it demonstrates the most dominant number of direct relationships, both as an influencing and as a dependent variable. The abundance of red lines entering and exiting this variable indicates that user needs adaptation functions as a central interaction node within the co-creation and growth zone communication strategy at BKKP. This finding suggests that BKKP's ability to understand, respond to, and adjust healthcare services in accordance with user needs is a critical determinant of the success of both the co-creation and growth zone approaches. Within the co-creation framework, such adaptation fosters active user involvement in service improvement processes, while in the growth zone perspective, it serves as a driver of continuous innovation. Strategically, BKKP needs to develop a data-driven user needs mapping system based on real-time information, strengthen feedback mechanisms, and integrate user evaluations into decision-making processes. This approach will result in more responsive, relevant, and user experience-oriented services. Therefore, user needs adaptation is not merely a technical variable but serves as the central orchestrator of a dynamic communication strategy.

Meanwhile, based on the indirect influence analysis shown in Figure 3, the variable of communication transparency (Var4) demonstrates a significant level of indirect influence on other variables in shaping the communication strategy. The dominance of outward red lines indicates that transparency functions as a key driving variable affecting multiple aspects, even when not through direct relationships. Communication transparency creates a conducive environment for fostering trust, participation, and collaboration among stakeholders, which are fundamental elements of the co-creation approach. In the context of the growth zone, transparency also facilitates organizational learning and innovation, as information becomes more accessible and comprehensible. Strategically, BKKP should develop open communication systems through the digitalization of service information, periodic publication of performance outcomes, and the provision of accessible communication channels for the public. Consistent transparency will strengthen organizational legitimacy while encouraging user engagement in service improvement. Thus, communication transparency serves as a catalyst that accelerates the overall effectiveness of the communication strategies implemented.

To facilitate the identification of priority variables within the complexity of inter-variable relationships depicted in Figures 2 and 3, the MICMAC analysis provides a classification of variable importance based on the magnitude of their driving power in developing a Co-Creation and Growth Zone-based communication strategy at BKKP. In addition to illustrating the current prioritization of variables based on direct influence, this analysis also presents a projection of future changes in priority determined by the indirect influence among variables.

In Figure 4, the left section indicates the ranking of variable priorities based on current direct influence, while the right section illustrates the projected changes in these priority rankings in the future. The green lines represent variables predicted to experience an increase in priority, whereas the red lines indicate variables expected to decline in priority within the dynamics of Co-Creation and Growth Zone-based communication at BKKP.

Based on the results presented in Figure 4, the current priority variables in developing a Co-Creation and Growth Zone-based communication strategy to enhance healthcare service performance at BKKP: communication transparency (Var4), user needs adaptation (Var9), and communicative leadership (Var12). These findings indicate that the effectiveness of the communication strategy is largely determined by BKKP's ability to maintain consistent information transparency, thereby fostering trust and strengthening the legitimacy of healthcare services. Communication transparency serves as the primary foundation, as it ensures a clear, accountable, and easily accessible flow of information for service users. Furthermore, user needs adaptation acts as a key driver in ensuring that services remain relevant to the evolving needs of the community. The ability to capture, understand, and respond appropriately to user needs enhances the quality of interactions and promotes the creation of shared value within the co-creation framework. Meanwhile, communicative leadership functions as a guiding factor that ensures all communication processes are carried out strategically, adaptively, and in a well-coordinated manner. Collectively, these three variables reinforce one another in shaping a responsive communication system oriented toward improving healthcare service performance

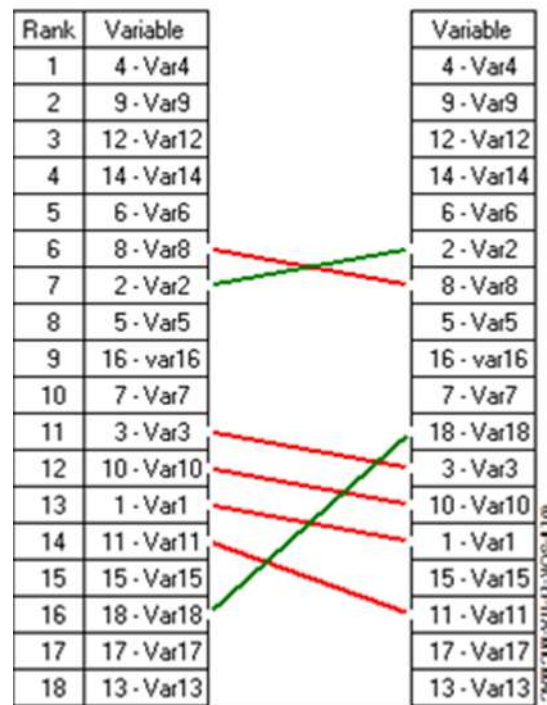


Figure 4. Current and Future Variable Priorities

Meanwhile, the variables projected to experience an increase in priority in the future are service user participation (Var2) and public trust (Var18). This indicates that the future direction of corporate communication strategy development at BKKP will increasingly emphasize strengthening active user engagement and building the social legitimacy of healthcare services. Service user participation is expected to rise in importance as the co-creation approach requires broader interactive spaces, where users are no longer positioned as passive recipients but as partners in the value creation process. Such engagement will generate more contextual and experience-based input, thereby enhancing the quality of continuous service improvement. At the same time, public trust becomes increasingly critical as it

represents the cumulative outcome of consistent service performance, communication transparency, and positive user experiences. Therefore, the growing priority of these two variables reflects a strategic shift from merely disseminating information toward fostering long-term, trust-based relationships.

Conversely, several variables are predicted to decline in priority in the future, namely service innovation (Var8), cross-unit collaboration (Var3), communication technology (Var10), communication infrastructure (Var1), and the strengthening of communication culture (Var11). This trend indicates a shift in the strategic focus of corporate communication development at BKKP. The decline in priority does not imply that these variables are unimportant; rather, it suggests that their roles are more supportive than as primary driving forces in the phase of strengthening Co-Creation and Growth Zone-based communication strategies. For instance, service innovation and cross-unit collaboration tend to function as outcomes of the optimization of key variables such as transparency and user needs adaptation, thereby reducing the intensity of direct intervention required. Similarly, communication technology is no longer a central focus, as it is assumed to be an established and readily available infrastructure, shifting attention toward its strategic utilization. Meanwhile, stakeholder engagement and the strengthening of communication culture tend to evolve gradually and do not produce immediate short-term impacts. Therefore, future strategies should position these variables as reinforcing elements integrated systemically rather than as primary intervention priorities. Through this approach, BKKP can more effectively allocate resources toward variables with high leverage in improving the quality of healthcare services.

CONCLUSION

The study concluded that the development of a co-creation and growth zone-based corporate communication strategy at BKKP, Ministry of Transportation, was primarily driven by four key variables: communication transparency (Var4), user needs adaptation (Var9), two-way dialogue (Var5), and communicative leadership (Var12), with user needs adaptation emerging as the central and most influential variable and communication transparency acting as a systemic driver of trust and collaboration. Current strategic priorities emphasized communication transparency, user needs adaptation, and communicative leadership, while service user participation (Var2) and public trust (Var18) were projected to become increasingly important, signaling a shift toward more participatory and relationship-oriented communication approaches. Meanwhile, variables such as service innovation, cross-unit collaboration, communication technology, stakeholder engagement, and communication culture were positioned as supporting enablers rather than primary drivers. Overall, the strategy should integrate transparency, adaptability to user needs, participatory mechanisms, and leadership within a systemic and digitally supported framework that promotes continuous organizational learning and user engagement to enhance healthcare service performance and public trust. Future research is recommended to empirically test this model across different healthcare institutions or sectors and to incorporate longitudinal or mixed-method approaches to better understand the dynamic interactions among variables over time.

REFERENCE

Argenti, Paul A. (2017). Strategic communication in the c-suite. *International Journal of*

- Business Communication*, 54(2), 146–160.
- Azhar, I. N., Prasetyo, A., & Lestari, D. (2025). Corporate communication strategy in building organizational loyalty and reputation. *Journal of Marketing Communication*, 11(2), 145–160.
- Basuki, R. S., Saleh, M., & Nugroho, A. (2025). The role of organizational communication and control systems on hospital performance. *International Research Journal of Economics and Management Sciences*, 4(8), 117–128.
- Benjumea, A., Castaneda, L., & Valencia-Arias, A. (2016). Structural analysis of strategic variables through MICMAC use: Case study. *Mediterranean Journal of Social Sciences*, 7(4), 11–19. <https://doi.org/10.5901/mjss.2016.v7n4p11>
- Boulianne, S., & Theocharis, Y. (2020). Young people, digital media, and engagement: A meta-analysis of research. *Social Science Computer Review*, 38(2), 111–127. <https://doi.org/10.1177/0894439318814190>
- Colladon, A. F., Gloor, P. A., & Grippa, F. (2023). Boosting advice and knowledge sharing among healthcare professionals. *arXiv preprint arXiv:2302.00073*. <https://arxiv.org/abs/2302.00073>
- Colladon, A. F., Grippa, F., & Innarella, R. (2018). Standardization of work: Co-constructed practice. *International Journal of Health Care Quality Assurance*, 31(8), 684–695.
- Constantin, N., Popescu, A., & Ionescu, M. (2024). Corporate communications and public relations in the era of digital transformation. *Journal of Leadership and Management in Insurance*, 6(1), 23–37.
- Cornelissen, J. (2017). *Corporate communication: A guide to theory and practice* (5th ed.). Sage Publications.
- Fauzi, A. (2019). *Teknik analisis keberlanjutan*. Jakarta: PT Gramedia.
- Febriantoro, S., & Taufiq, D. (2024). Co-creation strategy in digital product development to enhance value creation. *International Journal of Science, Technology, and Management*, 5(3), 211–223.
- Grippa, F., Gloor, P. A., & Giacomozzi, C. (2021). Measuring information exchange and brokerage capacity of healthcare teams. *Information Systems Frontiers*, 23, 325–338. <https://doi.org/10.1007/s10796-020-10018-4>
- Hele, M., & Maela, R. (2018). Peningkatan pelayanan berbasis strategi komunikasi. *Jurnal Komunikasi Profesional*, 2(1), 45–53.
- Kasali, R. (2017). *Self Driving: Menjadi Driver atau Passenger?* Jakarta: Penerbit Mizan.
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (2nd ed.). Wiley.
- Kitchen, P. J., & Schultz, D. E. (2001). *Raising the corporate umbrella: Corporate communication in the 21st century*. Palgrave Macmillan.
- Kreps, G. L. (1990). *Organizational communication: Theory and practice*. Longman.
- Kurniawan, J. S., Kholil, K., & Sugiarto, S. (2019). The effect of implementation SMK P (occupational health and safety management system) and safety leadership to safety performance. *International Journal Public Health & Safety*, 4, 173.
- Lewin, K. (1947). Frontiers in group dynamics: II. Channels of group life; social planning and action research. *Human Relations*, 1(2), 143–153. <https://doi.org/10.1177/001872674700100201>

- Mahendra, I. P. A., & Putri, I. A. S. (2019). *Decision Support Systems: Theory and Applications*. Yogyakarta: Deepublish.
- Mahmood Ahmad, S., Khan, F., & Li, X. (2019). *MICMAC methodology: Mapping cross-impact of variables in complex urban systems*. *Complexity*, 2019, 1–13. <https://doi.org/10.1155/2019/4567890>
- Ministry of Finance of the Republic of Indonesia. (2020). *Minister of Finance Regulation No. 129/PMK.05/2020 on Procedures for the Management of Public Service Agencies*. Jakarta: Ministry of Finance of the Republic of Indonesia.
- Ministry of Transportation of the Republic of Indonesia. (2019). *Minister of Transportation Regulation No. PM 40 of 2019 on Medical Examinations for Seafarers, Maritime Safety Support Personnel, and the Maritime Work Environment*. Jakarta: Ministry of Transportation of the Republic of Indonesia.
- Ministry of Transportation of the Republic of Indonesia. (2021). *Minister of Transportation Regulation No. PM 73 of 2021 on the Organization and Work Procedures of the Maritime Occupational Health Center (BKKP)*. Jakarta: Ministry of Transportation of the Republic of Indonesia.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
- Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing*, 18(3), 5–14. <https://doi.org/10.1002/dir.20015>
- Presiden Republik Indonesia. (2021). *Peraturan Presiden Nomor 96 Tahun 2021 tentang Rencana Induk Pengembangan Sumber Daya Manusia Kesehatan*. Jakarta: Sekretariat Negara RI.
- Purnami, N. M., & Nurcaya, I. N. (2024). Value co-creation in healthcare services: A systematic literature review. *Journal of Business and Management Studies*, 6(2), 98–112.
- Saaty, T. L. (1980). *The analytic hierarchy process*. McGraw-Hill.
- Shoemaker, P. J., & Vos, T. (2009). *Gatekeeping theory*. Routledge.
- Stratigea, A. (2013). Participatory policy making in foresight studies at regional level: A methodological approach. *Regional Science Inquiry Journal*, 5(1), 145–161.
- Wahyuningsih, S., & Firmanda, H. (2025). The role of interprofessional communication in enhancing health service quality. *Journal of Medical and Medical Research*, 9(1), 72–84.
- Widaningsih, T. T., Kusumaningrat, M. M., & Marta, R. F. (2023). The influence of tiktok content creator on consumptive behavior of teenagers in online shopping. *Jurnal Aspikom*, 8(2), 213-224.
- Zarkasi, I. R., Hidayat, D., & Raharjo, T. (2025). Collaboration as a co-creation strategy to create a market niche. *Jurnal Komunikasi: Malaysian Journal of Communication*, 41(1), 89–104.