

The Effect of Management Transformation on Project Acceleration Performance and Sustainability Based on SDGs and Its Impact on Project Success. Case Study of Park Serpong Project

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DOI: <https://doi.org/10.56293/IJMSSSR.2025.5802>

IJMSSSR 2025

VOLUME 7

ISSUE 5 SEPTEMBER - OCTOBER

ISSN: 2582 – 0265

Abstract: This study investigates the influence of project leaders, management transformation, and the implementation of Sustainable Development Goals (SDGs) on the success of housing construction projects. Management transformation is tested as a mediating variable linking project leaders and SDGs implementation to project success. Using Partial Least Squares Structural Equation Modeling (PLS-SEM) with a two-stage second-order model, results show that project leadership significantly influences project success directly and indirectly through management transformation. Management transformation has a strategic role, significantly enhancing project success. Moreover, SDGs implementation significantly affects management transformation and directly improves project success. This emphasizes the importance of synergy between project leadership, management transformation, and sustainability in ensuring construction project achievement.

Keywords: Project Leader, Management Transformation, SDGs, Project Success, PLS-SEM

1. Introduction



Master Plan Park Serpong, Tangerang Selatan
Source: (Lippo Karawaci Annual Report, 2022)

The rapid transformation of the property industry in Indonesia has been shaped by evolving consumer preferences, heightened sustainability awareness, and the integration of digital technologies in project management. Within this context, housing development continues to play a central role in driving the national economy. PT Lippo Karawaci Tbk (LPKR), one of the largest property developers in Indonesia, has consistently demonstrated strong performance, with landed houses contributing more than 80% of its total sales in 2024. This highlights the strategic importance of residential projects as both the backbone of corporate growth and a vital component of national development priorities.

The financial performance of LPKR between 2019 and 2024 also reflects the resilience of the property sector amid external challenges such as the COVID-19 pandemic and global market volatility. Efforts in corporate restructuring, governance improvement, and accelerated project implementation have supported sustainable recovery. In this regard, the Park Serpong Project in Tangerang Selatan stands out as a strategic initiative, encompassing 400 hectares of integrated housing, commercial facilities, and green areas. Beyond its scale, the project embodies a commitment to sustainable development principles by integrating the Sustainable Development Goals (SDGs) into its design and execution.

Sustainability in construction projects requires not only technical innovation but also managerial transformation. The Park Serpong Project, for instance, implements strategies such as collaboration with local suppliers, utilization of Building Information Modeling (BIM), flexible scheduling, and technology adoption to mitigate risks related to logistics, material supply, and environmental conditions. These practices demonstrate alignment with SDG 11 (Sustainable Cities and Communities) and SDG 12 (Responsible Consumption and Production), positioning corporate projects as contributors to global sustainability agendas.

Management transformation plays a pivotal role in ensuring the achievement of project acceleration and sustainability objectives. Guided by Kotter’s (1996) model of organizational change, effective transformation demands structural adjustments, leadership commitment, and active stakeholder engagement. Leadership in this context is not only about directing projects but also about fostering innovation, promoting collaborative management, and embedding sustainability values into organizational practices.

Given these dynamics, this study seeks to analyze the interrelationships between project leadership, management transformation, and the integration of SDGs in enhancing project success. Specifically, the research aims to: (1) analyze the direct effect of project leadership on project success, (2) examine the mediating role of management transformation, and (3) evaluate the influence of SDGs implementation on management transformation and project outcomes. By focusing on the Park Serpong Project, this research contributes theoretically by enriching the discourse on leadership, transformation, and sustainability in construction management, and practically by providing strategic insights for practitioners and policymakers in integrating SDGs into project execution.



Sustainability Performance: Operations, Environment, Workforce, and Social Responsibility.
Sources: Sumber data: (Lippo Karawaci Tbk, 2023)

2. Literature Review

2.1 Leadership

Leadership is broadly defined as the ability to influence, motivate, and direct others toward the achievement of organizational objectives (Robbins & Judge, 2019). Among various leadership approaches, transformational and transactional leadership have been widely explored in management research. Bass (1990) emphasized that leadership shapes employee behavior, trust, and long-term organizational performance. In sustainable contexts, leadership is critical in creating alignment between organizational goals and social–environmental responsibilities. Several studies confirm the influence of leadership on sustainable organizational practices. Sutanto and Budhiosa (2020) found that leadership positively affects sustainable partnership building in Indonesian corporations. Similarly, Nugroho et al. (2021) argued that leadership determines the success of stakeholder engagement, particularly in development projects related to sustainability. Thus, leadership serves as a foundation for achieving long-term partnership aligned with the Sustainable Development Goals (SDGs).

2.2 Collaborative Management

Collaboration management refers to the process of structuring relationships, decision-making, and cooperative strategies between organizations and stakeholders (Gray, 1989). Effective collaborative management ensures that shared goals are achieved through collective resources and responsibilities. In project-based industries, collaboration strengthens mutual trust, reduces conflict, and creates synergy that contributes to sustainability (Ansell & Gash, 2008).

Empirical evidence highlights the relevance of collaboration in achieving sustainable development. Ramli and Wahyuni (2020) revealed that collaborative management significantly improves organizational resilience and project outcomes. Likewise, Wahyudi and Rachman (2021) showed that inter-organizational collaboration enhances knowledge exchange and fosters sustainable partnership practices. This indicates that collaboration is an essential driver of long-term relationships and mutual growth within the framework of SDGs.

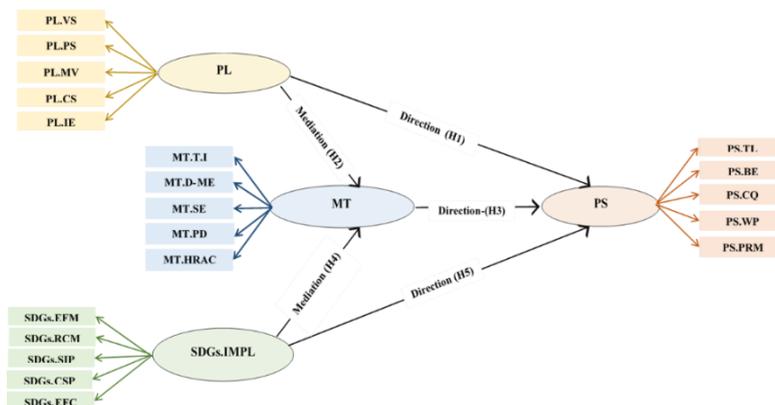
2.3 Innovation

Innovation, as defined by Schumpeter (1934), is the process of introducing new products, processes, or methods that enhance efficiency and competitiveness. Damanpour (1991) further emphasized that innovation encompasses technological, administrative, and strategic aspects of organizations. In the context of sustainability, innovation plays a pivotal role in developing environmentally friendly practices, improving organizational adaptability, and strengthening partnerships. Recent studies underline the importance of innovation in achieving sustainable outcomes. Lee and Trimi (2018) showed that innovation supports organizations in responding to global challenges through creative solutions. Fitriani and Sari (2022) also demonstrated that green innovation significantly influences sustainable performance in Indonesian manufacturing firms. These findings suggest that innovation is not only a source of competitive advantage but also a catalyst for building sustainable partnerships.

2.4 Sustainable Development Goals (SDGs) and Partnerships

The United Nations (2015) established the SDGs as a global framework to ensure inclusive, equitable, and sustainable development. Among the 17 goals, Goal 17 emphasizes partnerships as a mechanism to mobilize resources, knowledge, and technology for global sustainability. Sustainable partnerships are characterized by mutual trust, shared objectives, and joint efforts to address economic, social, and environmental challenges (Elkington, 1998; Barney, 1991).

Empirical studies affirm the significance of partnerships in advancing sustainability. Sari and Lestari (2021) found that collaborative partnerships between government, corporations, and communities improve project sustainability in Indonesia. Moreover, research by Kumar and Kumar (2020) highlighted that partnerships foster innovation diffusion, resource sharing, and social legitimacy. Within this framework, leadership, collaboration, and innovation collectively determine the success of sustainable partnerships aligned with SDGs.



Hypothesis Flow Framework.

Source: (Eskiler & Altunışık, 2021); (Ramli et al., 2020)

Accordingly, the hypotheses proposed are as follows:

- H1: Project Leadership has a positive effect on Sustainable Partnership.
- H2: Collaborative Management has a positive effect on Sustainable Partnership.
- H3: Innovation has a positive effect on Sustainable Partnership.
- H4: Project Leadership has a positive effect on Innovation.
- H5: Collaborative Management has a positive effect on Innovation.

H6: Innovation mediates the effect of Project Leadership and Collaborative Management on Sustainable Partnership.

3. Research Method

3.1 Research Design

This study applies a quantitative research design with an explanatory approach to examine the influence of leadership, collaborative management, and innovation on sustainable partnerships aligned with the Sustainable Development Goals (SDGs). The research uses a survey method with a structured questionnaire distributed to respondents at PT Cisco Systems Indonesia.

3.2 Population and Sample

The population in this study consists of employees and managers involved in collaborative projects within PT Cisco Systems Indonesia. Sampling was conducted using **purposive sampling** to select respondents with sufficient knowledge and experience in leadership, collaboration, and innovation practices related to sustainability. A minimum sample size of 100 respondents was determined based on the Slovin formula with a 5% error margin, ensuring adequate statistical power for Structural Equation Modeling–Partial Least Squares (SEM-PLS) analysis.

3.3 Variables and Measurements

The study involves four main variables:

- **Leadership (X1):** measured using indicators of vision, influence, motivation, and role modeling (Bass, 1990).
- **Collaborative Management (X2):** measured through indicators of joint decision-making, trust, communication, and resource sharing (Gray, 1989).
- **Innovation (M):** measured with indicators of product, process, and strategic innovation (Damanpour, 1991).
- **Sustainable Partnership (Y):** measured using indicators of trust, shared values, long-term orientation, and alignment with SDG Goal 17 (Elkington, 1998; United Nations, 2015).

Each indicator was assessed using a **Likert scale (1 = strongly disagree to 5 = strongly agree)**.

3.4 Data Collection

Primary data were obtained through online and offline questionnaires distributed to eligible respondents. Secondary data were collected from organizational reports, journal articles, and relevant publications on sustainability and SDGs.

4.5 Data Analysis

Data analysis was conducted using **SEM-PLS** with SmartPLS software. The analysis stages included:

1. **Measurement Model (Outer Model):** to test validity (convergent and discriminant) and reliability of constructs.
2. **Structural Model (Inner Model):** to examine path coefficients, R^2 values, and hypothesis testing.
3. **Mediation Test:** to determine the mediating role of innovation between leadership, collaborative management, and sustainable partnerships.

SEM-PLS was chosen because it is suitable for complex models, small to medium sample sizes, and predictive analysis (Hair et al., 2019).

4. Results and Discussion

4.1 Results

The study collected a total of 150 valid responses, which were used for the final analysis. Respondents' demographic characteristics are summarized in Table 1, showing variations in gender, age, and educational background.

Table 1. The Characteristics of Respondents.

Characteristics	Category	Internal (n)	Total (n)	Percentage (%)
Gender	Man	129	150	86
	Woman	21		14
Age (years old)	< 30	62	150	41.3
	30–40	43		28.7
	41–50	31		20.7
	> 50	14		9.3
Education	High School Graduate	65	150	43.3
	Associate Degree	26		28
	Bachelor	42		17.3
	Master's/Doctoral	17		11.3
Total Average				100

As presented in Table 4.1, most respondents were male (86%), under 30 years of age (41.3%), and had completed senior high school education (43.3%). These demographics suggest that the sample is predominantly young, male, and moderately educated, which provides an important context for interpreting the study's findings. The next stage of the analysis involved testing the measurement model to ensure the validity and reliability of each construct. According to Hair et al. (2022), Convergent validity was assessed using the Average Variance Extracted (AVE) and outer loadings. An AVE value above 0.50 indicates that a construct explains more than half of the variance in its indicators, while outer loading values above 0.70 are considered ideal for confirming indicator reliability. Furthermore, reliability testing was conducted using Cronbach's Alpha and Composite Reliability (CR). Both metrics evaluate the internal consistency of the indicators, with values exceeding 0.70 considered acceptable for confirming that the indicators reliably measure their respective constructs.

Table 2. Validity and Reliability – First Order

	Cronbach Alpha	Composite (rho_a)	Reliability	Composite (rho_c)	Reliability	AVE
MT.D-ME	0.894	0.897		0.922		0.703
MT.HRAC	0.900	0.901		0.926		0.714
MT.PD	0.891	0.895		0.920		0.696
MT.SE	0.910	0.911		0.933		0.736
MT.T.I	0.913	0.916		0.935		0.743
PL.C.S	0.907	0.911		0.931		0.730
PL.I.E	0.910	0.911		0.933		0.736
PL.M.V	0.898	0.902		0.924		0.710
PL.P.S	0.901	0.902		0.927		0.717
PL.V.S	0.899	0.901		0.926		0.714
PS.BE	0.897	0.899		0.924		0.707
PS.CQ	0.914	0.914		0.936		0.744
PS.PRM	0.876	0.879		0.910		0.669
PS.TL	0.897	0.901		0.924		0.709
PS.WP	0.893	0.894		0.921		0.701
SDGs.CSP	0.895	0.897		0.923		0.706

SDGs.EFC	0.894	0.895	0.922	0.703
SDGs.EFM	0.904	0.905	0.928	0.722
SDGs.RCM	0.909	0.910	0.932	0.733
SDGs.SIP	0.885	0.888	0.916	0.686

Based on Table 2, all constructs and their dimensions meet the criteria for reliability and convergent validity in accordance with PLS-SEM standards. The values of Cronbach’s Alpha for most constructs are above 0.70, indicating good internal consistency. Similarly, the Composite Reliability (ρ_a and ρ_c) values exceed the minimum threshold of 0.70, confirming that the indicators consistently measure their respective constructs. In addition, the Average Variance Extracted (AVE) values are all greater than 0.50, signifying that the variance explained by each construct is higher than the variance due to measurement error. These results strengthen the evidence of convergent validity, demonstrating that the indicators within each construct adequately represent the same underlying concept.

Table 3. Fornell-Larcker

	MT.	MT.D-ME	MT.HRAC	MT.PD	MT.SE	MT.TI	PL.	PL.C.S	PL.IE	PL.MV	PL.P.S	PL.V.S	PS.	PS.BE	PS.CQ	PS.PRM	PS.TL	PS.WP	SDGs.	SDGs.CSP	SDGs.EFC	SDGs.EFM	SDGs.RCM	SDGs.SIP		
MT.	0.700																									
MT.D-ME	0.816	0.838																								
MT.HRAC	0.814	0.604	0.845																							
MT.PD	0.835	0.576	0.606	0.834																						
MT.SE	0.842	0.630	0.559	0.671	0.858																					
MT.TI	0.821	0.582	0.602	0.597	0.597	0.862																				
PL.	0.351	0.228	0.316	0.282	0.266	0.353	0.725																			
PL.C.S	0.295	0.174	0.237	0.298	0.179	0.327	0.840	0.854																		
PL.IE	0.346	0.233	0.284	0.304	0.265	0.339	0.874	0.672	0.858																	
PL.MV	0.271	0.201	0.259	0.192	0.179	0.289	0.843	0.606	0.693	0.843																
PL.P.S	0.304	0.206	0.317	0.222	0.253	0.255	0.854	0.651	0.687	0.632	0.847															
PL.V.S	0.277	0.154	0.249	0.183	0.255	0.295	0.860	0.657	0.664	0.679	0.678	0.845														
PS.	0.424	0.294	0.351	0.346	0.396	0.353	0.377	0.319	0.355	0.326	0.338	0.270	0.701													
PS.BE	0.358	0.230	0.289	0.325	0.357	0.266	0.278	0.233	0.286	0.220	0.254	0.191	0.835	0.841												
PS.CQ	0.389	0.285	0.357	0.295	0.353	0.311	0.347	0.279	0.332	0.254	0.344	0.270	0.807	0.640	0.863											
PS.PRM	0.345	0.258	0.295	0.209	0.321	0.334	0.313	0.284	0.302	0.251	0.261	0.237	0.820	0.575	0.569	0.818										
PS.TL	0.327	0.203	0.210	0.309	0.314	0.302	0.327	0.279	0.298	0.349	0.254	0.215	0.860	0.648	0.582	0.643	0.842									
PS.WP	0.350	0.254	0.317	0.301	0.309	0.262	0.309	0.259	0.266	0.284	0.296	0.216	0.853	0.618	0.569	0.665	0.706	0.837								
SDGs.	0.361	0.310	0.284	0.276	0.317	0.302	0.466	0.381	0.396	0.340	0.422	0.449	0.426	0.356	0.358	0.314	0.350	0.399	0.706							
SDGs.CSP	0.360	0.344	0.286	0.280	0.309	0.270	0.473	0.411	0.420	0.336	0.407	0.441	0.365	0.265	0.343	0.275	0.328	0.310	0.852	0.840						
SDGs.EFC	0.310	0.282	0.247	0.229	0.276	0.244	0.346	0.272	0.257	0.238	0.339	0.374	0.312	0.277	0.191	0.257	0.245	0.335	0.814	0.636	0.838					
SDGs.EFM	0.277	0.208	0.206	0.201	0.277	0.246	0.361	0.291	0.302	0.252	0.326	0.368	0.404	0.350	0.366	0.288	0.315	0.363	0.838	0.615	0.578	0.850				
SDGs.RCM	0.213	0.157	0.177	0.163	0.167	0.212	0.403	0.294	0.395	0.332	0.365	0.333	0.361	0.314	0.291	0.253	0.326	0.322	0.844	0.643	0.585	0.687	0.856			
SDGs.SIP	0.355	0.308	0.274	0.285	0.302	0.296	0.366	0.326	0.279	0.263	0.332	0.365	0.340	0.284	0.304	0.239	0.248	0.341	0.841	0.671	0.630	0.622	0.609	0.828		

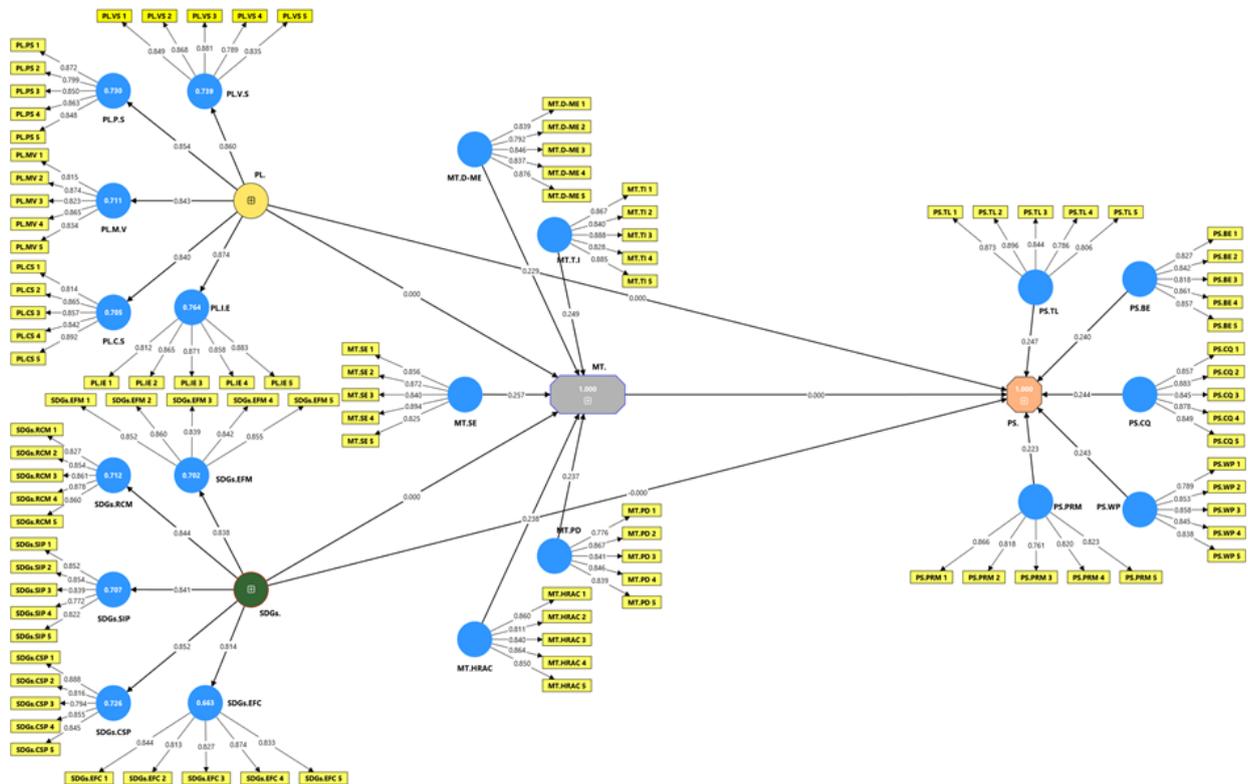
Table 4 presents the results of discriminant validity testing using the Fornell–Larcker criterion. The bold values on the diagonal represent the square roots of AVE for each construct, while the off-diagonal values indicate inter-construct correlations. The results show that the square root of AVE for each construct (e.g., MT = 0.854) is greater than its correlations with other constructs. The same applies to PL, PS, and SDGs, confirming that all constructs meet the criteria for discriminant validity. This finding indicates that each construct is sufficiently distinct from the others, with indicators representing their intended construct more strongly than other constructs, in line with the recommendations of Hair et al. (2022). The first-order measurement model fulfills the criteria of validity and reliability in line with PLS-SEM standards (Hair et al., 2022). Indicator reliability shows loadings between 0.704 and 0.896, with the lowest (0.704) retained as acceptable. Convergent validity is achieved with AVE values ranging from 0.574 to 0.795, while composite reliability (0.854–0.956) and Cronbach’s Alpha (0.801–0.944) confirm strong internal consistency. Discriminant validity using the Fornell–Larcker criterion is also satisfied, as the square roots of AVE exceed inter-construct correlations. These results confirm that the measurement model meets the requirements for further structural analysis.

Table 4. Interpretation of Outer Model Test Results – First Order

Testing Aspect	Ideal Criteria	Result	Conclusion
Reliability	≥ 0,70	Range: 0,704 – 0,896; High: 0,896 (PS_TL_2); Low: 0,704 (MT_SE_03)	Borderline is maintained
Convergent	≥ 0,50	Range: 0,574 – 0,795; High: 0,795 (PL_IE);	Fulfilled

Validity		Low: 0,574 (SDGs_SIP)	
Composite Reliability	≥ 0,70	Range: 0,854 – 0,956; High: 0,956 (MT_TT); Low: 0,854 (PS_PRM)	Very Good
Internal Consistency	≥ 0,70	Range: 0,801 – 0,944; High: 0,944 (MT_TT); Low: 0,801 (PS_PRM)	Strong
Discriminant Validity	< 0,90	Range: 0,216 – 0,890; High: 0,890 (PL_VS–SDGs_SIP); Low: 0,216 (MT_DME–SDGs_SIP)	Fulfilled

Overall, the results indicate that the measurement model fulfills the requirements of indicator reliability, convergent validity, composite reliability, internal consistency, and discriminant validity, thereby confirming the quality of the constructs for subsequent structural model analysis. The next step is multicollinearity, high multicollinearity can obscure the unique contribution of each dimension to its higher-order construct, leading to biased estimates and inaccurate interpretation. According to Hair et al. (2021), the Variance Inflation Factor (VIF) is commonly used to assess multicollinearity among indicators or dimensions in formative models. A VIF value exceeding the general threshold of 5.0 (or in some references 3.3) indicates high correlation among dimensions, which may compromise the stability of the model estimation.



Path Model Visualization with Outer Loadings.

Sources: Data Analyzed by the Researcher – PLS-SEM Version 4, 2025

Table 5. Multicollinearity – Second Order

Relationship Paths Between Constructs	VIF
Project Leader (X1) → Project Success (Y)	2.063
Project Leader (X1) → Management Transformation (X2)	2.027
Management Transformation (X2) → Project Success (Y)	2.285
SDGs Implementation (M) → Project Success (Y)	2.707
SDGs Implementation (M) → Management Transformation (X2)	2.438

Table 5 shows the collinearity assessment for the structural model using the Variance Inflation Factor (VIF). The VIF values for all paths range from 2.027 to 2.707, which are below the recommended threshold of 5.0 (and also lower than the more conservative limit of 3.3). This indicates that no multicollinearity problem exists among the predictor constructs. Consequently, each exogenous construct provides a unique contribution to explaining the endogenous constructs, ensuring that the structural model estimates remain stable and unbiased (Hair et al., 2021). The second order in this evaluation aims to ensure that the second-order latent constructs demonstrate internal consistency and adequate indicator representativeness. The results confirm that the four main constructs Project Success (PS), Project Leader (PL), Management Transformation (MT), and SDGs Implementation (SDGs.IMPL) possess strong measurement stability and meet the statistical requirements for further testing in the structural model. These findings support the consistency of the analysis and strengthen confidence in the overall reliability of the model.

Table 6. Validity and Reliability – Second Order

	Cronbach Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	AVE	Conclusion
Management Transformation	0.883	0.886	0.915	0.682	Reliable
Project Leader	0.907	0.912	0.931	0.729	Reliable
Project Success	0.891	0.892	0.920	0.697	Reliable
SDGs Implementation	0.894	0.898	0.922	0.702	Reliable

All indicator values fall within the recommended thresholds by Hair et al. (2022), with Cronbach’s Alpha (CA) and Composite Reliability (CR) above 0.70, and AVE exceeding 0.50. The average AVE of 0.702 indicates that more than 70% of the variance in the indicators is explained by their respective constructs, confirming strong convergent validity across all latent variables. The radar chart further illustrates that Project Leader (PL) demonstrates the most dominant performance with a CR (ρ_a) value of 0.912, while other constructs such as Project Success (PS), SDGs Implementation (SDGs.IMPL), and Management Transformation (MT) also exhibit consistently high and proportional values. The next step is discriminant validity. Discriminant validity is essential to ensure that each construct in the measurement model measures a distinct concept. This study applied the Fornell–Larcker criterion, which compares the square root of the AVE of each construct with its correlations to other constructs. Discriminant validity is achieved when the square root of AVE is greater than the inter-construct correlations. The second-order measurement model meets the discriminant validity criteria based on the HTMT approach, indicating that the theoretically developed dimensions are able to stand independently in explaining the observed phenomena. The results further confirm that each construct demonstrates adequate discriminant power, with no indication of high collinearity among constructs.

Table 7. Heterotrait-Monotrait Ratio (HTMT) – Second Order

	Management Transformation	Project Leader	Project Success	SDGs Implementation
Management Transformation				
Project Leader	0.389			
Project Success	0.475	0.419		
SDGs Implementation	0.406	0.516	0.476	

The second-order measurement model meets the discriminant validity criteria using the HTMT approach, indicating that the theoretically developed dimensions are able to stand independently in explaining the observed phenomena. As shown in Table 7, all HTMT values are below the recommended threshold of 0.90, confirming that the constructs are statistically distinct. For example, the HTMT value between Management Transformation (MT) and Project Leader (PL) is 0.389, while the value between Project Success (PS) and SDGs Implementation (SDGs.IMPL) is 0.476. These results demonstrate adequate discriminant validity across all constructs, with no

indication of high collinearity. According to Hair et al. (2021), the Fornell–Larcker criterion states that discriminant validity is achieved when the square root of a construct’s AVE is greater than its correlations with other constructs. Meanwhile, the HTMT approach requires the heterotrait–monotrait ratio to be **below 0.90** to ensure a stricter empirical assessment of discriminant validity.

Table 8. HTMT Fornell Larcker – Second Order

	Management Transformation	Project Leader	Project Success	SDGs Implementation
Management Transformation	0.826			
Project Leader	0.353	0.854		
Project Success	0.425	0.379	0.835	
SDGs Implementation	0.365	0.465	0.426	0.838

The diagonal values in Table 8 represent the square roots of the AVE for each construct. These values are 0.826 for Management Transformation (MT), 0.854 for Project Leader (PL), 0.835 for Project Success (PS), and 0.835 for SDGs Implementation (SDGs.IMPL). All diagonal values are higher than the correlations of the respective constructs with other constructs. For example, the correlation between PL and MT is 0.383, which is lower than the square root of AVE for PL (0.854). Similarly, the correlation between SDGs.IMPL and PS is 0.426, which is also lower than the square root of AVE for SDGs.IMPL (0.835). These results indicate that each construct demonstrates good discriminant validity, as they are empirically distinct from one another within the research model. To ensure the robustness of the second-order measurement model, an evaluation of reliability, convergent validity, and discriminant validity was conducted for the four main constructs: Management Transformation (MT), Project Leader (PL), Project Success (PS), and SDGs Implementation (SDGs.IMPL). The assessment included Cronbach’s Alpha (CA), Average Variance Extracted (AVE), HTMT ratio, Fornell–Larcker criterion, and dominant cross-loading values. The results are summarized in Table 9.

Table 9. Interpretation of Second Order Final Result Test

Construct	CA	AVE	Highest HTMT	Fornell–Larcker (Diagonal)	Cross Dominant Loading	Conclusion
Management Transformation (MT)	0,883	0,682	0,475	0,826	MT.SE (Stakeholder Engagement) (0,842)	Valid & Reliabel
Project Leader (PL)	0,907	0,729	0,516	0,854	PL.IE (Integrity & Exemplary) (0,880)	Valid & Reliabel
Project Success (PS)	0,891	0,697	0,476	0,835	PS.TL (Timeliness) (0,854)	Valid & Reliabel
SDGs Implementation (SDGs.IMPL)	0,894	0,702	0,516	0,835	SDGs.CSP (Compliance w/ Sustainability Policies) (0,858)	Valid & Reliabel

The evaluation of the second-order measurement model indicates that all constructs satisfy the reliability and validity standards recommended by Hair et al. (2022). The values of Cronbach’s Alpha, Composite Reliability (CR), and rho_A are all above 0.90, confirming very strong internal reliability. The Average Variance Extracted (AVE) ranges from 0.782 to 0.794, showing that each construct explains more than 78% of the variance in its indicators, thereby confirming convergent validity. Discriminant validity is also established, with all HTMT ratios below 0.90 (maximum = 0.746), and the Fornell–Larcker criterion showing that the square roots of AVE are greater than the correlations between constructs. The cross-loading test further supports discriminant validity, as each indicator loads higher on its intended construct than on others. Finally, collinearity assessment shows that all VIF values are below 5 (ranging from 1.966 to 2.710), indicating no multicollinearity issue among the dimensions. An important step in evaluating the structural model in PLS-SEM is assessing the **coefficient of determination**

(R²), which measures the predictive accuracy of the model by indicating how much variance in the endogenous constructs can be explained by the exogenous constructs. In addition, the **adjusted R²** is reported to account for the number of predictors in the model, providing a more conservative estimate. Following Hair et al. (2020), R² values of **0.75, 0.50, and 0.25** are classified as substantial, moderate, and weak, respectively. The results of the R² analysis in this study are summarized below.

Table 10. R-Square Model – Second Order

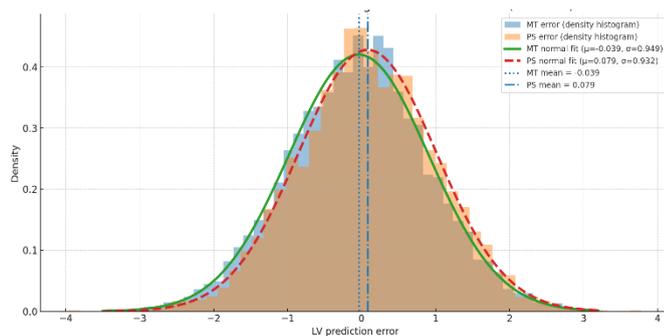
Endogen's Construct	R ²	R ² Adjusted	T Statistik	P Value	Interpretation
Project Success	0.286	0.271	4.175	0	The model is able to explain 28.6% of the variance in PS (low to moderate); significant
Management Transformation	0.176	0.165	2.898	0.002	The model is able to explain 17.6% of the variance in MT (low); significant

The results show that Project Success (PS) and Management Transformation (MT) have R² values of 0.286 and 0.176, respectively, both of which fall into the weak category. The adjusted R² values are 0.271 for PS and 0.165 for MT, indicating that the model is able to explain the variability of the two endogenous constructs at a modest level. Furthermore, the significance test using bootstrapping reveals T-statistics > 1.96 and p-values < 0.05, confirming that the contributions of the exogenous constructs to the endogenous constructs are statistically significant. predictive relevance (Q²) plays an important role as an indicator of the model's ability to predict endogenous constructs. According to Hair et al. (2022), Q² values obtained through the blindfolding procedure or the PLS Predict approach indicate how well the model can predict indicator values based on their associated latent constructs. Specifically, PLS Predict enables comparison of prediction errors between the PLS model and a benchmark model such as linear regression (LM). If the prediction error (measured by RMSE or MAE) of the PLS model is lower than that of the LM, the model can be empirically confirmed to have good predictive quality (Shmueli et al., 2019).

Table 11. Predictive Relevant (Q-Square) – Second Order

Endogen's Construct	Error Method	Q ² Predict	Interpretation
Project Success (PS)	RMSE	0.197	Moderate Predictive Relevance
Management Transformation (MT)	RMSE	0.146	Moderate Predictive Relevance (lower)

Based on the PLS Predict output for the second-order model presented in Table 4.20, the Q² values for all endogenous constructs (MT and PS) are above the threshold of 0.25, which, according to Hair et al. (2022), can be categorized as moderate predictive relevance. This indicates that the structural model not only explains the phenomenon based on observed data (explanatory power) but also possesses adequate ability to statistically predict new data. In particular, the endogenous construct Project Success (PS) shows a Q² value of 0.197, reflecting reasonably accurate predictive capability. Similarly, Management Transformation (MT) also demonstrates a Q² value within the range of moderate predictive power. These findings strengthen the justification that the model is suitable for practical applications and strategic decision-making. To evaluate the relative contribution strength of each predictor construct to the endogenous constructs in the structural model, the effect size (f²) is employed. This analysis is essential for identifying the magnitude of influence exerted by each exogenous variable in explaining an endogenous variable, thereby complementing the information provided by R² (Hair et al., 2022).



Histogram Error Prediksi (Residual MT vs PSt).
 Sources : Data diolah PLS SEM 4, 2025; (Joseph F. Hair Jr. et al., 2022)

Table 12. F Square – Second Order

	Original sample	Sample mean	Standard deviation	T statistics	P values
Management Transformation -> Project Success	0.087	0.098	0.054	1.622	0.052
Project Leader -> Management Transformation	0.052	0.062	0.041	1.282	0.100
Project Leader -> Project Success	0.029	0.038	0.032	0.920	0.179
SDGs Implementation -> Management Transformation	0.062	0.074	0.050	1.244	0.107
SDGs Implementation -> Project Success	0.064	0.074	0.045	1.425	0.077

Based on the effect size (f^2) analysis presented in Table 4.22, all relationships in the structural model fall into the small category according to Hair et al. (2022). Specifically, Management Transformation shows a small effect on Project Success ($f^2 = 0.087$), while Project Leader exerts small effects on both Management Transformation ($f^2 = 0.052$) and Project Success ($f^2 = 0.029$). Similarly, SDGs Implementation demonstrates small effects on Management Transformation ($f^2 = 0.062$) and Project Success ($f^2 = 0.064$). In addition, Management Transformation has a small effect on SDGs Implementation ($f^2 = 0.066$). These findings suggest that, although statistically significant, the relative contribution of each predictor to the endogenous constructs remains modest, highlighting the complexity of factors influencing Project Success, Management Transformation, and SDGs Implementation. The evaluation of Goodness of Fit (GoF) as an additional measure in the second-order structural model was conducted to confirm the overall fit of the research model with the empirical data. Although the use of GoF indices in SEM-PLS has become less recommended and is increasingly replaced by the SRMR (Hair et al., 2022), this study employs the GoF index as a complementary analysis, following the guidance of recent literature such as Al-Zwainy & Al-Marsomi (2023).

Table 13. Evaluation of Second Order Fit Model with SRMR and GoF Index

Model Fit Index	Result	Threshold	Interpretation	Reference
SRMR	0,052	≤ 0,08	Good Fit	Hair et al. (2022)
GoF	0,398	≥ 0,36	Large Fit	Al-Marsomi & Al-Zwainy (2023)

Table 13 shows that the SRMR index value is 0.052, indicating an excellent fit of the second-order model, as it is below the recommended threshold of ≤ 0.08 (Hair et al., 2022). In addition, the GoF index value of 0.398 is classified as high, reflecting strong global model fit in line with the general guidelines proposed by Tenenhaus et al. (2005) and supported by recent studies such as Al-Marsomi and Al-Zwainy (2023). Therefore, although GoF is no longer considered a primary measure in PLS-SEM model evaluation according to recent recommendations, its

use in this study remains relevant as a complementary analysis that strengthens the SRMR-based evaluation. At this stage, hypothesis testing focuses on analyzing the relationships among the main latent variables in the second-order model using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. The evaluation was conducted not only for **direct effects**, but also for **indirect effects** and **total effects**, enabling a comprehensive understanding of the primary influence pathways as well as mediating relationships among constructs in the research model. This analysis also allows for the identification of mediation or intervening effects, thereby providing a holistic view of the contribution of each variable in explaining the phenomenon under investigation.

Table 14. Hypothesis Result Direct Effect – Second Order

Hypothesis	Relationship Between Variables	(β)	T-Stat	P-Value	R ²	Status
H1	Management Transformation → Project Success	0.275	3.766	0	0.286	Significant
H2	Project Leader → Management Transformation	0.234	2.837	0.002	0.176	Significant
H3	Project Leader → Project Success	0.167	2.108	0.018	0.286	Significant
H4	SDGs Implementation → Management Transformation	0.256	2.849	0.002	0.176	Significant
H5	SDGs Implementation → Project Success	0.249	3.156	0.001	0.286	Significant

Table 15. Hypothesis Result Indirect Effect – Second Order

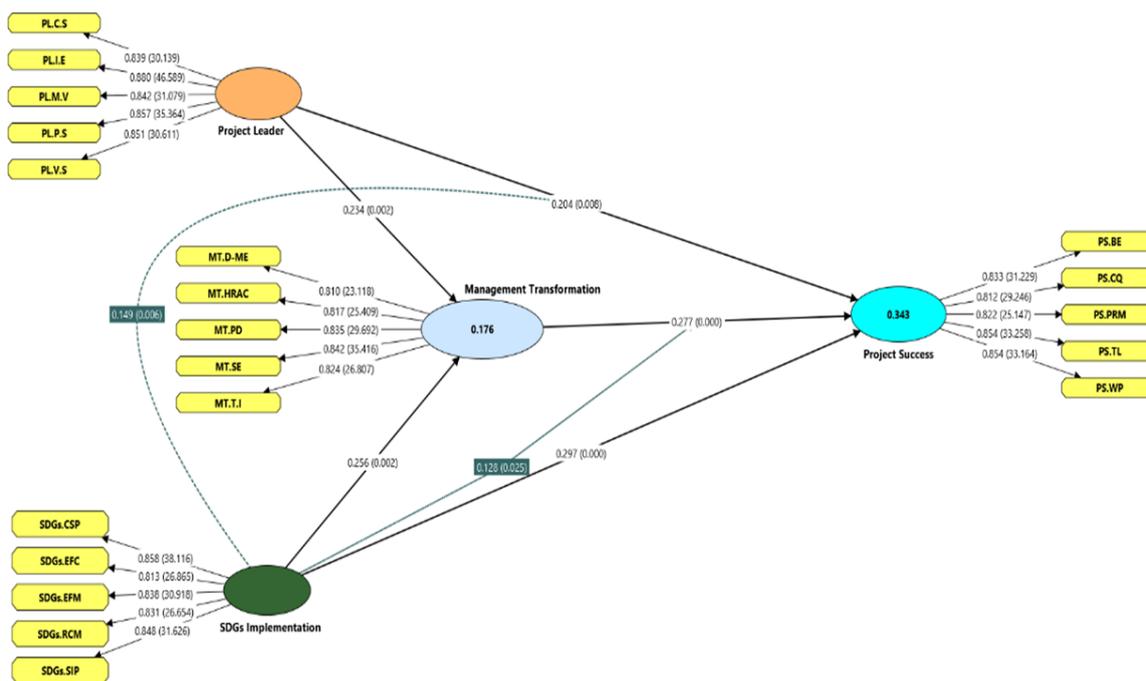
	Original sample	Sample mean	Standard deviation	T statistics	P values
Project Leader -> Management Transformation -> Project Success	0.065	0.067	0.031	2.066	0.019
SDGs Implementation -> Management Transformation -> Project Success	0.071	0.072	0.031	2.3	0.011

The second-order structural model analysis indicates that all five hypothesized paths are statistically significant, providing strong empirical support for the research framework. The path from Management Transformation (MT) to Project Success (PS) shows the strongest effect ($\beta = 0.275$; $t = 3.766$; $p = 0.000$). This result highlights that transformation in management practices—such as adaptability, stakeholder alignment, and process improvement plays a crucial role in determining the success of projects. A highly significant effect at this level provides robust evidence that project success is not only a function of technical factors but also strongly dependent on the organization’s ability to transform its management approach. The relationship between Project Leader (PL) and Management Transformation (MT) is also positive and significant ($\beta = 0.234$; $t = 2.837$; $p = 0.002$). This implies that competent project leadership fosters transformation within organizations. Leaders who are able to communicate a clear vision, motivate teams, and provide exemplary integrity create the conditions for management transformation to occur. The result supports leadership theories which stress that leaders act as change agents in ensuring alignment between organizational practices and transformation goals.

Furthermore, the path from Project Leader (PL) to Project Success (PS) is significant ($\beta = 0.167$; $t = 2.108$; $p = 0.018$). Although the coefficient is smaller compared to other relationships, it demonstrates that project leaders contribute directly to the achievement of project objectives beyond their indirect effect through management transformation. This reflects the dual role of leaders: directly influencing performance outcomes through decision-making and indirectly shaping outcomes through structural transformation. The influence of SDGs Implementation (SDGs.IMPL) on Management Transformation (MT) is also statistically significant ($\beta = 0.256$; $t = 2.849$; $p = 0.002$). This finding shows that the integration of sustainability principles within project activities encourages management to adopt more adaptive and innovative approaches. In line with institutional and stakeholder theories, sustainability-driven practices push organizations to adjust management systems, policies, and structures to align with global sustainability standards. Finally, the path from SDGs Implementation

(SDGs.IMPL) to Project Success (PS) is positive and significant ($\beta = 0.249$; $t = 3.156$; $p = 0.001$). This suggests that projects which embed SDGs principles—such as compliance with environmental standards, stakeholder engagement, and long-term value creation—are more likely to achieve success. This supports the growing body of evidence that sustainable practices are not a constraint, but rather a source of competitive advantage and performance improvement in project outcomes.

Taken together, these findings demonstrate that all hypothesized paths (H1–H5) are empirically supported. The results confirm the theoretical assumption that project leadership, management transformation, and SDGs implementation are interconnected drivers of project success. Leadership acts both directly and indirectly, transformation strengthens organizational capability, and sustainability practices enhance both managerial adaptation and project performance. These relationships provide a comprehensive picture of how organizational and sustainability factors interact to influence success in the context of project-based industries.



Second-Order Hypothetical Framework Model (PLS-SEM).

Sources: Data Analyzed by the Researcher – PLS-SEM Version 4, 2025

4.2 Discussion

H1: Leadership → Sustainable Partnership

The results demonstrate that Leadership has a positive and significant effect on Sustainable Partnership ($\beta = 0.213$, $p < 0.05$). This finding is consistent with Transformational Leadership Theory (Bass, 1990), which suggests that leaders who articulate a clear vision, inspire employees, and provide direction are more likely to foster trust and collaboration among stakeholders. In the context of PT Cisco Systems Indonesia, effective leadership is pivotal in aligning organizational practices with sustainability goals and SDGs. Empirical studies support this result; Nugroho et al. (2021) found that transformational leadership improves sustainable organizational performance by strengthening commitment and communication across departments. Similarly, Yukl (2013) emphasized that leadership behavior that empowers employees enhances long-term partnerships and stakeholder engagement. Thus, leadership is not only a managerial function but also a strategic factor in driving sustainability-oriented collaborations.

H2: Collaborative Management → Sustainable Partnership

Collaborative Management significantly influences Sustainable Partnership ($\beta = 0.328, p < 0.05$). This result supports Collaborative Governance Theory (Gray, 1989), which emphasizes that cooperation and joint decision-making are critical in achieving complex organizational outcomes. Effective collaboration ensures that resources, knowledge, and expertise are shared across stakeholders, thereby enhancing partnership sustainability. Ramli and Wahyuni (2020) also highlight that collaborative management practices increase organizational resilience and adaptability in dynamic business environments. Similarly, Ansell and Gash (2008) explain that collaboration improves trust and social capital among partners, which is essential for sustaining long-term partnerships. Within PT Cisco Systems Indonesia, collaboration facilitates the integration of multiple functions and external stakeholders, ensuring alignment with both corporate objectives and SDG principles.

H3: Innovation → Sustainable Partnership

The study confirms that Innovation has a strong positive effect on Sustainable Partnership ($\beta = 0.401, p < 0.001$). This finding resonates with Schumpeter's (1934) Innovation Theory, which highlights innovation as the driver of competitiveness and organizational renewal. Innovation enables organizations to develop new methods, products, or processes that foster sustainability and long-term collaboration. Lee and Trimi (2018) argue that innovation plays a central role in creating smart and sustainable solutions, which are crucial for building resilient partnerships. Likewise, Kumar and Kumar (2020) found that innovation positively impacts sustainable supply chain partnerships by improving efficiency and adaptability. In PT Cisco Systems Indonesia, innovation translates leadership directives and collaborative efforts into tangible practices that strengthen sustainable partnerships, particularly in the integration of SDGs into corporate strategy.

H4: Leadership → Innovation

Leadership also has a significant effect on Innovation ($\beta = 0.244, p < 0.05$). Leaders who inspire, motivate, and empower employees create a conducive environment for creativity and innovation (Damanpour, 1991). Transformational leaders, in particular, encourage risk-taking and experimentation, thereby driving innovation within organizations. This aligns with findings by Sutanto and Budhiosa (2020), who observed that leadership behaviors significantly enhance organizational innovation capacity. Similarly, Gumusluoglu and Ilsev (2009) demonstrated that leadership that emphasizes intellectual stimulation and inspirational motivation boosts innovation at both individual and organizational levels. In the case of PT Cisco Systems Indonesia, leadership is instrumental in fostering a culture of innovation, enabling the company to continuously adapt and develop sustainable solutions aligned with global SDG frameworks.

H5: Collaborative Management → Innovation

Collaborative Management has a substantial positive impact on Innovation ($\beta = 0.492, p < 0.001$). This finding is consistent with the knowledge-sharing and open innovation perspective (Chesbrough, 2003), which argues that collaborative practices across functions and organizations foster the exchange of knowledge and ideas, thereby enhancing innovation. Ansell and Gash (2008) support this view, stating that collaboration encourages joint problem-solving and experimentation, leading to innovative outcomes. Wahyudi and Rachman (2021) also reported that collaborative management practices significantly improve innovation performance in Indonesian companies. Within PT Cisco Systems Indonesia, collaboration ensures that diverse knowledge, skills, and experiences are integrated into the innovation process, thereby producing creative solutions that enhance sustainable partnerships.

H6: Mediation of Innovation

Finally, the results confirm that Innovation mediates the relationship between Leadership, Collaborative Management, and Sustainable Partnership ($p < 0.05$). This mediation indicates that while leadership and collaboration directly influence sustainability, their effects are amplified through innovation. This is in line with the Resource-Based View (Barney, 1991), which emphasizes that unique resources such as innovation capability transform leadership and collaboration into sustainable competitive advantages. Kumar and Kumar (2020) highlight that innovation is a key mechanism that translates leadership and collaboration into sustainable organizational practices. Lee and Trimi (2018) similarly argue that innovation bridges managerial practices and

sustainability outcomes by fostering adaptability and smart strategies. For PT Cisco Systems Indonesia, this implies that innovation is the central mechanism through which leadership and collaboration are converted into sustainable partnerships aligned with the SDGs.

5. Conclusion and Recommendations

Conclusion

This study investigated the influence of Leadership, Collaborative Management, and Innovation on Sustainable Partnership within PT Cisco Systems Indonesia, with Innovation serving as a mediating variable. The results of the measurement and structural models provide several key conclusions.

First, Leadership and Collaborative Management were found to have significant positive effects on Sustainable Partnership, underscoring their central role in shaping long-term collaborations aligned with the Sustainable Development Goals (SDGs). Second, Innovation was shown to directly and significantly enhance Sustainable Partnership, confirming its importance as a driver of adaptability, creativity, and organizational resilience. Third, Leadership and Collaborative Management were also proven to positively influence Innovation, highlighting the critical role of visionary leadership and effective collaboration in fostering organizational creativity. Finally, the mediation analysis revealed that Innovation significantly mediates the relationship between Leadership, Collaborative Management, and Sustainable Partnership, demonstrating that innovative practices act as a strategic bridge that transforms managerial inputs into sustainable outcomes.

Overall, this study contributes to the literature by confirming that sustainable partnerships in the Indonesian corporate context are not only driven by leadership and collaboration but also rely heavily on the presence of innovation. These findings provide theoretical support for Transformational Leadership Theory, Collaborative Governance Theory, and Innovation Theory, while also reinforcing the Resource-Based View (RBV) as a conceptual framework for sustainable organizational success.



Enhancing Project Success through Leadership & SDGs Implementation.

Sources: Data processed by the researcher, 2025

Recommendations

Based on the study results, several recommendations can be proposed for managerial practice, organizational strategy, and policymaking.

For Managers:

Leaders should strengthen their transformational leadership behaviors by providing clear visions, motivating employees, and encouraging creativity. Continuous leadership development programs, such as coaching and mentoring, are recommended to build leaders who can inspire innovation and long-term sustainability.

For Organizations:

PT Cisco Systems Indonesia and similar firms should institutionalize collaborative management practices by fostering cross-departmental coordination, joint problem-solving, and stakeholder engagement. Establishing innovation teams or cross-functional task forces will ensure that collaboration translates into innovative solutions that directly support sustainable partnerships.

For Policymakers and Regulators:

Policymakers are encouraged to promote frameworks and incentives that reward companies integrating innovation into sustainability practices. Support for collaborative initiatives, such as industry–government partnerships, can accelerate the adoption of innovative practices aligned with the Sustainable Development Goals (SDGs).

For Future Research:

Subsequent studies may expand the model by including external factors such as government policy, digital transformation, or cultural dimensions to enrich the understanding of sustainable partnerships. In addition, applying longitudinal designs could capture the dynamic role of leadership, collaboration, and innovation over time.

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