

## **The Influence of Electronic Customer Relationship Management (E-CRM) Implementation on Customer Loyalty in the Technology and Communication Industry: A Study on B2B Customers of PT PLN Icon Plus in Indonesia**

**Rizki Okti Ariani<sup>1</sup>, Satria Bangsawan<sup>2</sup>, Yuniarti Fihartini<sup>3</sup>**

<sup>1,2,3</sup>Magister Management, University of Lampung

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**ABSTRACT:** This study aims to examine the influence of Electronic Customer Relationship Management (E-CRM) on customer loyalty in the technology and communication industry, with customer satisfaction as a mediating variable. The research was conducted on B2B customers of PT PLN Icon Plus in Indonesia. A quantitative approach was employed using a survey method, with data collected from 160 respondents selected through purposive sampling. The analysis was carried out using Structural Equation Modeling (SEM). The findings reveal that E-CRM has a positive and significant effect on customer satisfaction and customer loyalty. Furthermore, customer satisfaction was found to mediate the relationship between E-CRM and customer loyalty. This indicates that the successful implementation of E-CRM not only strengthens direct customer relationships but also enhances loyalty through improved satisfaction. The results suggest that companies in the telecommunications sector should optimize digital-based customer relationship strategies to maintain long-term loyalty and gain a sustainable competitive advantage.

**KEYWORDS:** E-CRM, customer satisfaction, customer loyalty,

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### **I. INTRODUCTION**

The rapid development of information and communication technology has made telecommunication services one of the most essential needs of modern society, both in urban and rural areas. The ease of accessing information and engaging in online communication has transformed the way people live, work, and interact (Rustam, 2017). Internet technology, which enables the transmission, processing, and reception of information through interconnected computer networks, has become a medium for communication, data exchange, entertainment, and business transactions. According to Sadjiarto (2015), the internet serves not only as a platform for information exchange and research dissemination but also as a means of communication, social interaction, and entertainment.

In Indonesia, the penetration of internet usage has grown significantly over the past decade. The Indonesian Internet Service Providers Association (APJII, 2024) reported that internet users reached 221 million people in 2024, representing a penetration rate of 79.5%. This figure marks a steady increase compared to 2018 when penetration was only 64.8%, and highlights the growing reliance on internet services across age groups and genders. The increasing accessibility of affordable internet services further accelerates this trend, creating vast opportunities for the telecommunication industry to develop new innovations and strengthen competitiveness. One of the key players in this sector is PT PLN Icon Plus (Icon+), a subsidiary of PT PLN (Persero) that focuses on telecommunication services. Established in 2000, Icon+ initially served PLN's internal operations before expanding its services to the public by leveraging excess network capacity. Over the years, Icon+ has developed a wide range of services, including corporate internet solutions and retail internet packages under the Iconnet brand, which has expanded to remote areas and supports the government's digital village program. Despite these efforts, Icon+ faces intense competition from established providers such as Telkom and Biznet, which often achieve stronger top-of-mind awareness and higher customer loyalty scores (CSI Icon+, 2023).

To remain competitive, Icon+ has continuously improved its service quality and customer engagement. Customer satisfaction surveys indicate progress in recent years, yet loyalty levels remain below those of major competitors (CSI Icon+, 2023). This underscores the importance of strengthening strategies that foster long-term customer relationships. Customer Relationship Management (CRM) has been widely recognized as a critical tool in this regard. CRM emphasizes building and maintaining strong

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customer relationships to enhance satisfaction and loyalty (Yang, 2022; Wijaya & Sahetapy, 2019). With the advancement of digital technology, Electronic Customer Relationship Management (E-CRM) has emerged as a strategic approach to integrating technology, people, processes, and customer knowledge in order to provide personalized and consistent experiences (Rahimi & Kozak, 2023; Payne & Frow, 2023).

Prior studies have shown that effective CRM implementation can significantly increase customer loyalty (Alam, Karim, & Habiba, 2021; Almotairi, 2020). However, other research suggests that CRM does not always directly translate into loyalty without deeper emotional engagement (Wang et al., 2022). Similarly, customer satisfaction, while often serving as a mediator between CRM and loyalty, may not always guarantee long-term retention, as some customers may still switch brands for reasons such as price competitiveness or promotional offers (Zhang & Kim, 2023). This highlights the importance of examining how E-CRM influences loyalty, particularly through the role of customer satisfaction.

Against this background, this study seeks to analyze the influence of Electronic Customer Relationship Management (E-CRM) on customer loyalty in the telecommunication industry, with a specific focus on B2B customers of PT PLN Icon Plus. By examining both the direct and indirect effects of E-CRM through customer satisfaction, this research contributes to the understanding of how digital relationship strategies can strengthen customer loyalty in a highly competitive market..

## **II. LITERATURE REVIEW**

### **A. Electronic Customer Relationship Management (E-CRM)**

Electronic Customer Relationship Management (E-CRM) represents the integration of internet-based technologies into traditional CRM systems to enhance company–customer interactions. By enabling personalized services, efficient communication, and consistent customer experiences through digital platforms, E-CRM strengthens relational bonds between firms and customers (Rahimi & Kozak, 2023; Payne & Frow, 2023). It encompasses technology, people, processes, and customer knowledge, all of which are essential for effective relationship management (Guerola-Navarro et al., 2021).

E-CRM facilitates long-term customer commitments by fostering trust and engagement (Yang, 2022). Its widespread adoption in competitive industries highlights its role in increasing retention, with evidence showing that effective E-CRM implementation can raise customer retention by up to 25% (Vicedo, 2020). Prior studies in banking and retail contexts also confirm that customer orientation, advocacy, and knowledge management through E-CRM positively influence customer loyalty (Alam, Karim, & Habiba, 2021; Almotairi, 2020). However, research also indicates that E-CRM does not always guarantee loyalty without active customer involvement. For instance, Wang et al. (2022) found that in the hospitality sector, E-CRM had limited impact unless supported by emotional connection, underscoring the importance of aligning digital strategies with customer expectations.

Beyond loyalty, CRM and its electronic extensions also play a critical role in shaping customer satisfaction. Satisfaction arises when perceived performance meets or exceeds expectations, while dissatisfaction emerges when performance falls short (Kotler & Keller, 2009). Empirical studies reveal a positive link between CRM and satisfaction: Setyaleksana et al. (2017) showed that CRM significantly improved satisfaction at PT Telkomsel, while Dewi and Semuel (2015) emphasized that well-implemented CRM makes customers feel valued and comfortable. Similarly, CRM practices integrating people, processes, and technology not only foster satisfaction but also build loyalty through long-term commitment (Safira, Saleh, & Remmang, 2020; Putri & Utomo, 2017). This is further supported by evidence from the banking sector, where CRM dimensions such as employee competence, communication, and service quality significantly influenced customer loyalty (Maftuhah, Yulisetiari, & Halim, 2014; Iriandini, Yulianto, & Mawardi, 2015).

Taken together, these findings suggest that E-CRM, as an extension of CRM, not only enhances customer satisfaction but also drives loyalty by leveraging technology-enabled engagement and consistent service quality. Accordingly, this study proposes the following hypotheses:

**Hypothesis 1: E-CRM has a positive effect on customer satisfaction.**

**Hypothesis 2: E-CRM has a positive effect on customer loyalty.**

### **B. Customer Satisfaction**

Customer satisfaction is achieved when customer expectations meet or exceed the perceived performance of a product or service. According to Oliver (2022), satisfaction serves as a critical indicator of company performance, as satisfied customers are more likely to repurchase and recommend the brand. The disconfirmation theory emphasizes that satisfaction arises when there is alignment between customer expectations and actual experiences.

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Several studies confirm the positive influence of satisfaction on customer loyalty. Rachmawati (2014) explained that when customers' needs and expectations are fulfilled, they tend to become repeat buyers and develop loyalty. Similarly, Panjaitan et al. (2018) and Molle, Mandey, and Kojo (2019) found that higher satisfaction levels significantly strengthen loyalty across different industries. In addition, prior research highlights the mediating role of satisfaction in the CRM/E-CRM–loyalty relationship. Nguyen et al. (2022) emphasized that satisfaction fosters long-term relationships by generating positive experiences and a sense of being valued. Chen and Wang (2022) also noted that satisfied customers demonstrate stronger commitment to a brand due to trust and perceived value.

However, satisfaction does not always guarantee loyalty. Zhang and Kim (2023) observed that despite being satisfied, customers may still switch brands due to external factors such as competitive pricing and attractive promotional offers. This indicates that while satisfaction is an important driver of loyalty, it should be supported by other strategic factors to ensure sustained commitment.

**Hypothesis 3: Customer satisfaction has a positive effect on customer loyalty.**

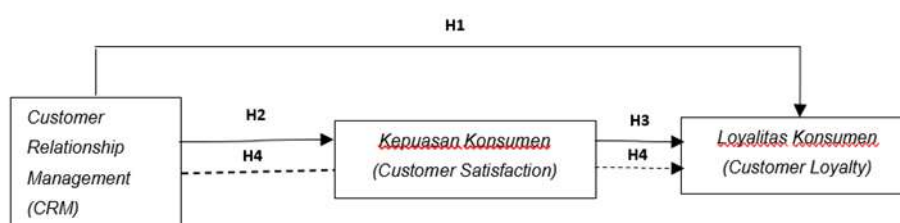
## C. Customer Loyalty

Customer loyalty refers to the commitment of customers to continue purchasing products or services from a company despite the presence of alternatives. It is not merely reflected in repeated purchases but also in a strong preference for a brand over competitors (Chen & Wang, 2022). Loyalty is often driven by consistent service quality, positive emotional engagement, and long-term relational trust (Yang, 2022). Prior studies have highlighted loyalty as a critical predictor of business success, especially in highly competitive service industries (Bahri-Ammari & Bilgihan, 2019; Paparoidamis et al., 2019). Nevertheless, loyalty requires significant investment in resources, time, and strategic initiatives to sustain (Izogo, 2017; Nyadzayo & Khajehzadeh, 2016; Tseng et al., 2017). Aramburu and Pescador (2019) further argued that high market uncertainty makes loyalty one of the most difficult outcomes for firms to achieve, while Chiang et al. (2018) noted that companies often rely heavily on human resource management and digital strategies to secure it.

In the context of E-CRM, loyalty is shaped not only by transactional efficiency but also by the emotional and experiential dimensions of customer relationships. Customers who perceive continuous value, satisfaction, and trust in their interactions with a company's digital platforms are more likely to remain committed over time. This underscores the importance of satisfaction as a mediating factor in the relationship between CRM/E-CRM and loyalty. Empirical studies support this view: effective CRM practices have been shown to enhance satisfaction by making customers feel valued and prioritized, which subsequently increases their likelihood of remaining loyal (Ersi & Semuel, 2014; Padmavathy, Balaji, & Sivakumar, 2012). Customer satisfaction therefore serves as a bridge linking CRM with loyalty, reinforcing long-term relational bonds.

However, evidence also suggests that the mediating role of satisfaction may vary across industries and contexts. For example, Sofwan (2024) found that CRM had a negative and insignificant effect on satisfaction and loyalty in the sea freight sector, highlighting the possibility that environmental and industry-specific factors can weaken this relationship. Despite these variations, the dominant body of literature positions satisfaction as an essential pathway through which CRM/E-CRM contributes to loyalty outcomes. Based on this evidence, this study proposes the following hypothesis:

**Hypothesis 4: Customer satisfaction mediates the relationship between E-CRM and customer loyalty.**



**Figure 1. Framework**

## III. METHODOLOGY

This study employs a quantitative research design to examine the causal relationship between Customer Relationship Management (CRM), Customer Satisfaction, and Customer Loyalty. Data were collected through structured questionnaires distributed to B2B customers of PT PLN Icon Plus across Indonesia, with additional secondary data obtained from company archives, reports, and relevant literature. Respondents were selected using purposive sampling with specific criteria, namely

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corporate customers who had subscribed for at least three years, represented by IT division managers and staff members as end-users. The study population consisted of 28,186 corporate customers, from which a sample of 160 respondents was determined based on Hair et al.'s (2014) indicator-based formula. Proportional distribution ensured representation from ten regional offices across Indonesia. A five-point Likert scale was applied to measure three latent variables: CRM, Customer Satisfaction, and Customer Loyalty, with indicators adapted from established prior studies to suit the technology and communication industry context.

To ensure measurement quality, validity and reliability tests were conducted using SEM-PLS. Convergent validity was confirmed with factor loadings above 0.6 and AVE values exceeding 0.5, while discriminant validity was established through cross-loadings and Fornell-Larcker criteria. Reliability was tested using Cronbach's Alpha and Composite Reliability (CR), both with thresholds above 0.7. Data analysis was performed using Partial Least Squares Structural Equation Modeling (PLS-SEM), suitable for complex causal models and small-to-medium sample sizes. The analysis included descriptive statistics, evaluation of the measurement and structural models, and hypothesis testing.

## IV. RESULT AND DISCUSSION

### A. VALIDITY TEST RESULT

The validity test in this study consisted of convergent validity and discriminant validity assessments. The parameters used for convergent validity are factor loadings greater than 0.7 and Average Variance Extracted (AVE) values above 0.5.

**Table 1. Validity Test Result**

| Variable                               | Indicator | Outer Loadings | AVE   | Desc         |
|----------------------------------------|-----------|----------------|-------|--------------|
| <i>Customer Relationship Marketing</i> | CRM1      | 0.821          | 0.650 | <i>Valid</i> |
|                                        | CRM2      | 0.830          |       | <i>Valid</i> |
|                                        | CRM3      | 0.794          |       | <i>Valid</i> |
|                                        | CRM4      | 0.797          |       | <i>Valid</i> |
|                                        | CRM5      | 0.800          |       | <i>Valid</i> |
|                                        | CRM6      | 0.796          |       | <i>Valid</i> |
| <i>Customer Satisfaction</i>           | KEP1      | 0.863          | 0.746 | <i>Valid</i> |
|                                        | KEP2      | 0.861          |       | <i>Valid</i> |
|                                        | KEP3      | 0.867          |       | <i>Valid</i> |
| <i>Customer Loyalty</i>                | LOY1      | 0.817          | 0.669 | <i>Valid</i> |
|                                        | LOY2      | 0.803          |       | <i>Valid</i> |
|                                        | LOY3      | 0.795          |       | <i>Valid</i> |
|                                        | LOY4      | 0.846          |       | <i>Valid</i> |
|                                        | LOY5      | 0.798          |       | <i>Valid</i> |
|                                        | LOY6      | 0.859          |       | <i>Valid</i> |
|                                        | LOY7      | 0.804          |       | <i>Valid</i> |

Based on the measurement analysis in Table 4.9, all indicators measuring the variables of Customer Relationship Marketing (X), Customer Satisfaction (Z), and Customer Loyalty (Y) show factor loadings > 0.7 and AVE > 0.5. Therefore, these indicators are considered valid.

The discriminant validity test evaluates whether a latent variable can better predict its own indicators than those of other variables, indicated when the correlation of each indicator with its respective variable is higher than with other variables (Hair et al., 2019). Discriminant validity was assessed using the Fornell-Larcker Criterion, Cross Loadings, and Heterotrait-Monotrait Ratio (HTMT).

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**Table 2. Cross Loading Value**

|             | <b>CRM</b>   | <b>KEP</b>   | <b>LOY</b>   |
|-------------|--------------|--------------|--------------|
| <b>CRM1</b> | <b>0.821</b> | 0.644        | 0.557        |
| <b>CRM2</b> | <b>0.830</b> | 0.581        | 0.494        |
| <b>CRM3</b> | <b>0.794</b> | 0.497        | 0.446        |
| <b>CRM4</b> | <b>0.797</b> | 0.525        | 0.445        |
| <b>CRM5</b> | <b>0.800</b> | 0.609        | 0.508        |
| <b>CRM6</b> | <b>0.796</b> | 0.580        | 0.513        |
| <b>KEP1</b> | 0.630        | <b>0.863</b> | 0.622        |
| <b>KEP2</b> | 0.622        | <b>0.861</b> | 0.556        |
| <b>KEP3</b> | 0.599        | <b>0.867</b> | 0.623        |
| <b>LOY1</b> | 0.448        | 0.555        | <b>0.817</b> |
| <b>LOY2</b> | 0.511        | 0.569        | <b>0.803</b> |
| <b>LOY3</b> | 0.465        | 0.553        | <b>0.795</b> |
| <b>LOY4</b> | 0.466        | 0.533        | <b>0.846</b> |
| <b>LOY5</b> | 0.578        | 0.573        | <b>0.798</b> |
| <b>LOY6</b> | 0.545        | 0.648        | <b>0.859</b> |
| <b>LOY7</b> | 0.498        | 0.538        | <b>0.804</b> |

As shown in the table, all cross-loading values for the indicators of the latent variables are greater than those of other variables, with each indicator exceeding the threshold of 0.7. This demonstrates good discriminant validity in accordance with Hair (2019). Thus, all indicators used in this study are declared valid based on discriminant validity testing.

**Table 3. Fornell-Larcker Criterion**

|            | <b>CRM</b>   | <b>KEP</b>   | <b>LOY</b>   |
|------------|--------------|--------------|--------------|
| <b>CRM</b> | <b>0.806</b> |              |              |
| <b>KEP</b> | 0.714        | <b>0.864</b> |              |
| <b>LOY</b> | 0.616        | 0.696        | <b>0.818</b> |

The results presented in the table indicate that each indicator shows the highest correlation with its respective latent variable compared to other variables, confirming that each indicator is capable of accurately predicting its construct.

**Table 4. Heterotrait-Monotrait Ratio (HTMT) Value**

|            | <b>CRM</b>   | <b>KEP</b> | <b>LOY</b> |
|------------|--------------|------------|------------|
| <b>CRM</b> |              |            |            |
| <b>KEP</b> | <b>0.825</b> |            |            |
| <b>LOY</b> | 0.674        | 0.794      |            |

According to Henseler et al. (2015), HTMT values above 0.90 indicate a lack of discriminant validity. Table 4.12 shows that the highest HTMT value occurs in the relationship between CRM and Customer Satisfaction (0.825). Since all HTMT values are below the 0.90 threshold, discriminant validity is confirmed.

## B. RELIABILITY TEST RESULT

The reliability test was conducted to evaluate the consistency of the questionnaire items as indicators of the constructs. A variable is considered reliable if Cronbach's Alpha and Composite Reliability (CR) values exceed 0.7 (Hair et al., 2014).

**Table 5. Reliability Test Result**

|     | <b>Cronbach's alpha</b> | <b>Composite reliability</b> | <b>Cut Value</b> | <b>Desc</b> |
|-----|-------------------------|------------------------------|------------------|-------------|
| CRM | 0.893                   | 0.918                        | 0.7              | Reliable    |
| KEP | 0.830                   | 0.898                        | 0.7              | Reliable    |
| LOY | 0.917                   | 0.934                        | 0.7              | Reliable    |

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Based on the measurement analysis in Table 4.13, all indicators for Customer Relationship Marketing (X), Customer Satisfaction (Z), and Customer Loyalty (Y) achieved Composite Reliability > 0.7 and Cronbach's Alpha > 0.7. Therefore, the indicators are valid, and the variables are deemed reliable.

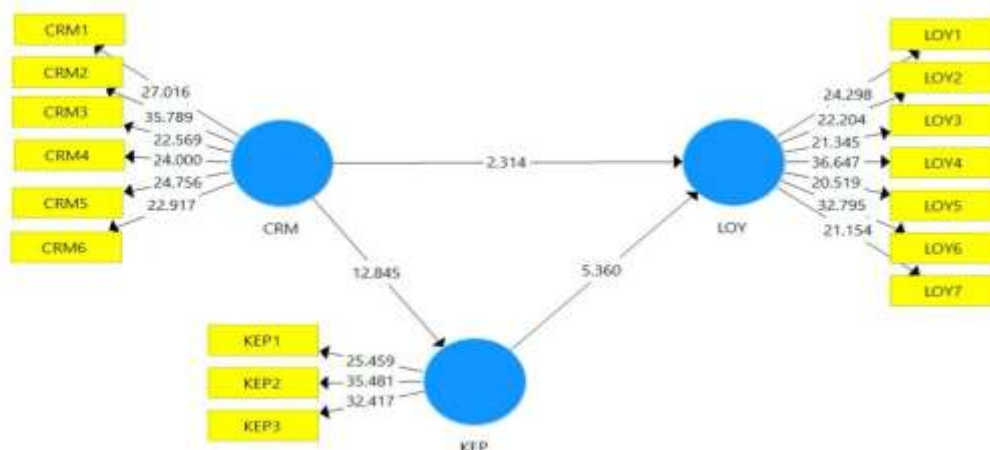
## C. MODEL FIT TEST

The model fit test for PLS was assessed using the Standardized Root Mean Square Residual (SRMR). A PLS model meets the Goodness-of-Fit criterion when SRMR < 0.10 and is considered a perfect fit when SRMR < 0.08.

**Table 6. Model Fit Test Result**

|            | Saturated Model | Estimated Model |
|------------|-----------------|-----------------|
| SRMR       | 0.059           | 0.059           |
| d_ ULS     | 0.468           | 0.468           |
| d_ G       | 0.265           | 0.265           |
| Chi-Square | 239.941         | 239.941         |
| NFI        | 0.861           | 0.861           |

As shown in Table 4.18, the SRMR value of the saturated model is 0.059, while the estimated model also yields an SRMR value of 0.059. Thus, the model demonstrates a perfect fit and is appropriate for hypothesis testing



**Figure 2. Inner Model**

## D. Hypothesis Testing

Hypothesis testing was conducted using the bootstrapping approach with SmartPLS 3 software. This procedure generated path coefficient estimates and t-statistics, which were employed to examine the significance of relationships among variables within the structural model. Bootstrapping was chosen as it enhances the stability of the analyzed data, thereby improving the accuracy of hypothesis testing results (Hair et al., 2010). In this study, the bootstrapping technique was applied to a sample of 160 respondents. This evaluation process aimed to validate the proposed hypotheses. The results of the hypothesis testing through bootstrapping are presented in Figure:

**Table 7. Hypothesis test**

| Hypothesis | Relationship                                                                | Original sample (O) | T statistics ( O/STDEV ) | P values | Desc     |
|------------|-----------------------------------------------------------------------------|---------------------|--------------------------|----------|----------|
| H1         | Customer Relationship Marketing-> Customer Satisfaction                     | 0.714               | 12.845                   | 0.000    | Accepted |
| H2         | Customer Relationship Marketing -> Customer Loyalty                         | 0.242               | 2.314                    | 0.022    | Accepted |
| H3         | Customer Satisfaction -> Customer Loyalty                                   | 0.523               | 5.360                    | 0.000    | Accepted |
| H4         | Customer Relationship Marketing-> Customer Satisfaction -> Customer Loyalty | 0.374               | 4.276                    | 0.000    | Accepted |

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## **The Influence of Customer Relationship Management (CRM) on Customer Satisfaction**

The findings indicate that CRM has a significant positive effect on customer satisfaction, with a path coefficient of 0.714 and a t-statistic of 12.845 ( $p < 0.001$ ). This suggests that better CRM practices lead to higher levels of satisfaction among B2B customers of PT PLN Icon Plus. Effective CRM—encompassing personalized service, responsive communication, and consistency—creates positive customer experiences and enhances perceptions of being valued, ultimately fostering satisfaction.

This result aligns with Shahin et al. (2014), who emphasized that CRM effectiveness relies on processes, people, technology, and knowledge. PT PLN Icon Plus has operationalized these elements through its CRM system, which includes real-time service dashboards, structured feedback mechanisms, and periodic Customer Satisfaction Index (CSI) surveys. These initiatives confirm that CRM is not only a theoretical concept but also a practical strategy that improves customer experience. Consistent with Setyaleksana et al. (2017) and Dewi & Samuel (2015), the findings reinforce that well-implemented CRM significantly enhances satisfaction in the telecommunications sector.

## **The Influence of Customer Relationship Management (CRM) on Customer Loyalty**

The results further demonstrate a significant positive effect of CRM on customer loyalty ( $\beta = 0.242$ ;  $t = 2.314$ ;  $p = 0.022$ ). This indicates that enhanced CRM practices contribute to stronger loyalty among Icon+ customers. Loyalty in this context is shaped not only by efficient processes but also by emotional and relational engagement, achieved through proactive communication channels such as WhatsApp and social media. Respondents confirmed this by expressing their preference for Icon+ and willingness to recommend the service to others.

These findings are consistent with Buttle (2009), who argued that CRM nurtures emotional closeness between firms and customers. Prior studies (Maftuhah et al., 2014; Iriandini et al., 2015; Molle et al., 2019) also support the notion that CRM fosters loyalty by enhancing communication quality, trust, and relational depth. Thus, in the case of Icon+, CRM not only improves satisfaction but also sustains long-term loyalty in a highly competitive B2B market.

## **The Influence of Customer Satisfaction on Customer Loyalty.**

Customer satisfaction was found to significantly influence loyalty ( $\beta = 0.523$ ;  $t = 5.360$ ;  $p < 0.001$ ). This confirms that satisfaction is a key antecedent of loyalty in the B2B telecommunications sector. Customers who reported satisfaction with Icon+ services were more likely to repurchase, recommend, and maintain long-term relationships with the provider. This supports Oliver's (2022) loyalty model, which positions satisfaction as a precursor to affective and conative loyalty.

The findings are in line with Panjaitan et al. (2018) and Molle et al. (2019), who demonstrated that satisfaction enhances loyalty through positive experiences and perceived value. In the context of PT PLN Icon Plus, satisfaction arises from reliable network services, efficient technical support, and effective after-sales service, all of which strengthen customer trust and commitment.

## **The Mediating Role of Customer Satisfaction between CRM and Loyalty.**

The analysis also confirms that customer satisfaction mediates the relationship between CRM and loyalty ( $\beta = 0.374$ ;  $t = 4.276$ ;  $p < 0.001$ ). This finding suggests that CRM influences loyalty indirectly by first generating satisfaction. While CRM initiatives such as personalized service and efficient communication enhance satisfaction, loyalty only emerges when customers consistently perceive value from these interactions.

This aligns with Oliver's (2022) loyalty framework, which highlights that sustainable loyalty requires repeated positive experiences. Empirical support comes from Padmavathy et al. (2012), who demonstrated the mediating role of satisfaction, and Sofwan (2024), who found that CRM alone does not directly create loyalty without satisfaction. For PT PLN Icon Plus, this implies that CRM strategies should prioritize creating consistent and meaningful customer experiences that lead to satisfaction, which in turn fosters loyalty.

## **CONCLUSIONS**

This study concludes that Customer Relationship Management (CRM) has a significant and positive impact on customer satisfaction among PT PLN Icon Plus clients. Effective implementation of CRM—through responsive service, transparent communication, and integrated technology—enhances customer perceptions of value and leads to greater satisfaction. Furthermore, the findings demonstrate that CRM also exerts a positive and significant influence on customer loyalty. Customers who experience consistent relational engagement and service excellence are more likely to remain committed to the company.

The results further reveal that customer satisfaction plays a crucial role in strengthening loyalty. Higher satisfaction levels significantly increase the likelihood of customers maintaining long-term relationships with the company. Moreover, satisfaction

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was found to mediate the relationship between CRM and loyalty, indicating that CRM efforts are more effective in fostering loyalty when they first succeed in creating meaningful customer satisfaction.

These findings highlight the strategic importance of optimizing CRM not merely as an administrative system but as a customer-centric approach that emphasizes experience and relationship-building. PT PLN Icon Plus is encouraged to enhance its CRM initiatives by focusing on personalized interactions, proactive service delivery, and customer education programs. In addition, efforts to foster deeper emotional loyalty are essential to ensure long-term customer retention. Future research is recommended to further examine the role of emotional and experiential factors in shaping loyalty within B2B service contexts, particularly in highly competitive telecommunications industries.

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