

Understanding Customer Churn in Fixed-Mobile Convergence Services and Mitigation Strategies: Insights from Customer Service Representatives in an Indonesian Telco Company

Andre Zachary Reinaldi

Institut Teknologi Bandung, Indonesia

Email: 29324075@mahasiswa.itb.ac.id

ABSTRACT

Customer churn has become a critical challenge for telecommunication companies, especially with the emergence of Fixed Mobile Convergence (FMC), where mobile services and fiber optic services operate under one ecosystem. Unlike mobile-only services, which rely on fast and seamless fulfillment with minimal field intervention, fiber optic services require extensive physical installation activities involving technicians, equipment, and site readiness. This operational disparity creates new complexities, including data integrity issues, inconsistent customer information across multiple touchpoints, and the need for greater trust in field workforce performance. As customer expectations continue to rise in highly competitive markets such as Indonesia, ineffective churn management not only reduces revenue but also increases acquisition costs and weakens long-term customer value. This study aims to identify the key drivers of churn and propose mitigation strategies based on insights from customer service representatives (CSR), who serve as the primary line of defense in handling customer complaints, deactivations, and terminations. Using a qualitative case study approach, in-depth interviews were conducted and analyzed through thematic analysis, focusing on pricing schemes, service quality, and service usage. The findings indicate that service usage—particularly bill shock—and service quality issues stemming from repeated complaints and stuck orders are the main churn drivers. Meanwhile, pricing is no longer a dominant factor due to existing mitigation programs that adjust prices to match competitors. The study offers practical strategies to reduce churn, including improving transparency, enhancing fulfillment reliability, and aligning key performance indicators to support the effective implementation of these measures.

Keywords: *Customer Churn; CSR insights; Churn Determinants; Fixed Mobile Convergence.*

INTRODUCTION

TelkomInd, as a leading telecom company in Indonesia, has just recently acquired TelkomInd Home from its parent company (Gunawan & Jaya, 2021). Since its acquisition, TelkomInd aims to combine mobile capabilities with its Fixed (TelkomInd Home) business, creating one-stop solution for TelkomInd customers with Internet coverage when outside home with its prepaid and postpaid connectivity solution while in home with its TelkomInd Home fiber optic connection (Wahyuni & Sutanto, 2022). This integration seeks to leverage the synergies between mobile and fixed-line networks to offer seamless service to customers (Chandra et al., 2023). The expansion of fiber optic infrastructure through TelkomInd Home aims to strengthen TelkomInd's competitive position in the broadband market (Hendra & Putra, 2021). As a result, TelkomInd can now provide a comprehensive service that meets both mobile and home internet needs, enhancing customer satisfaction (Jatmiko, 2022).

One of the major milestones of TelkomInd in 2024 is the creation of one bill, which provides complete access for fixed mobile convergence products. This allows TelkomInd to simplify customer interaction and transaction, increasing operational efficiency, reducing churn rate, and strengthening customer loyalty (Putra & Wijaya, 2023). The implementation of

a unified billing system has been shown to improve customer satisfaction by offering greater convenience and reducing service complexity (Sari et al., 2022). Furthermore, such initiatives are linked to increased operational efficiency, as customers find it easier to manage their services under one consolidated platform (Mulyadi & Sulaiman, 2021). By integrating mobile and fixed services, TelkomInd is also enhancing its competitive edge in a rapidly evolving telecom market (Budianto & Harahap, 2023). This move towards operational consolidation aligns with global telecom trends aimed at improving customer retention and reducing service churn (Lee et al., 2022).

Through enhancement in digital experience and better customer engagement, TelkomInd continues to present integrated solutions with added value to support long term growth.

Having this mindset, TelkomInd is set to have +- 7000 new acquisitions per day across Indonesia. With current subscribers, almost 9 million users and an average IDR 250 K ARPU. TelkomInd is expected to generate 2.250 B revenue each month.

TelkomInd's organizational structure consists of the Board of Commissioners (BOC) and the Board of Directors (BOD). The BOC, comprising representatives from the parent company and foreign investors, supervises overall business operations, while the BOD—led by a President Director and seven Directors—manages core directorates including Network, Sales, Marketing, Planning & Transformation, Finance and Risk Management, Human Capital Management, and Information Technology (Harrison & Lee, 2021). The Network directorate is the largest due to TelkomInd's origins as a mobile operator and is responsible for nationwide infrastructure operations, planning, and fiber-network integration following the acquisition (Suharto et al., 2022). The Sales directorate drives market penetration, manages offline-to-online omnichannel distribution, and oversees customer care, with newly formed units dedicated to fiber business operations (Nguyen & Kurniawan, 2023). The Marketing directorate manages product planning, delivery, and customer communication, offering extensive product customization and creating dedicated fiber-related roles to ensure end-to-end readiness for new offerings (Jatmiko & Siahaan, 2021). The Planning & Transformation directorate focuses on innovation and new business incubation, developing ideas to strengthen TelkomInd's competitive positioning (Purnomo & Widodo, 2022). Human Capital Management oversees talent development and post-acquisition workforce integration to ensure operational continuity (Dewi et al., 2021). The Information Technology directorate enables service delivery through applications, platforms, and backend systems, supporting key functions such as onboarding, billing, analytics, and internal corporate solutions to maintain service reliability and performance (Ravi & Sharma, 2023).

But in recent years, it is observed that the churn rate of TelkomInd Home users started to rise. In the increasingly competitive fixed mobile convergence industry, customer retention as important as customer acquisition. Churn is defined as the event where a customer ceases doing business with a company in a given time or contract (Ahn, Hwang, Kim, Choi, & Kang, 2020) and most likely switches to another company who offers the same service.

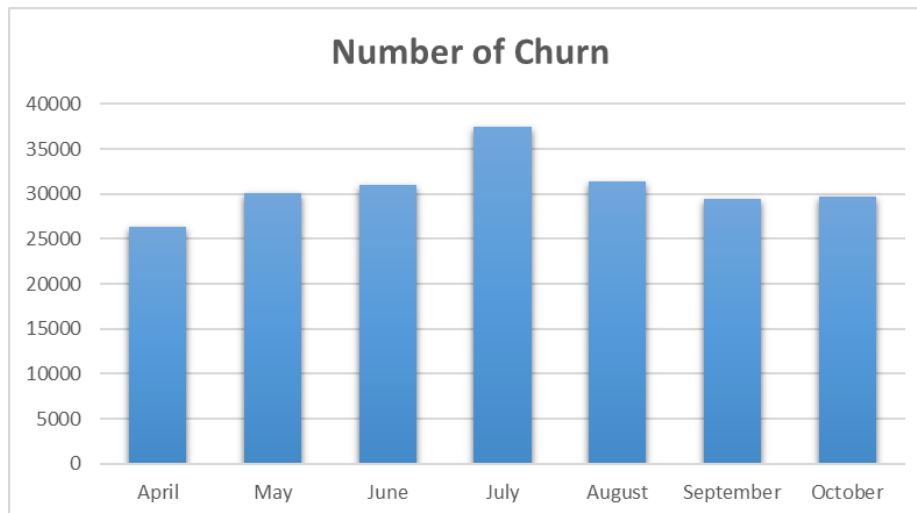


Figure 1. Fiber and Mobile Service Churn Rate

Source: TelkomInd Internal Data, 2024

The churn rate continues to rise until reaching its peak in July, then stabilizes at around 25,000–30,000 unsubscribers. Although acquisition numbers remain significantly higher, elevated churn levels still reduce revenue and increase customer acquisition costs, ultimately eroding profit margins. Losing customers also means losing potential long-term revenue, making churn a critical issue in a market with many competitors and service alternatives. Therefore, analyzing churn is essential for maintaining competitiveness (Bugajev, Kriauzienė, Vasilecas, & Chadyšas, 2022).

To support the company's revenue targets, churn must be effectively controlled. This study addresses the following research questions: (1) What determinants contribute to churn among TelkomInd's FMC customers? (2) What are the root causes of these determinants within the TelkomInd operational environment? (3) What mitigation strategies can TelkomInd adopt, and what implications do they carry? While numerous studies have examined churn drivers in the telecom sector, none have specifically evaluated churn within an environment where mobile and fixed services have fully converged.

The research aims to identify the key factors that drive churn in TelkomInd Home services—particularly within Fixed Mobile Convergence—by examining customer interactions with service representatives and developing strategic recommendations to reduce churn. The scope focuses on proposing practical, evidence-based strategies that telecom operators in Indonesia can implement to minimize churn among FMC users. These strategies encompass customer experience enhancements, pricing models, technological upgrades such as 5G and fiber, value-added services, and targeted retention initiatives.

METHOD

This study applied a qualitative research methodology to understand the underlying factors that drove customer churn in TelkomInd's Fixed Mobile Convergence (FMC) services. The research began with the collection of primary data, including three months of company churn records, which were used to identify and select suitable interview respondents. Semi-structured interviews were conducted with customer service agents who frequently handled deactivation, complaint, and termination cases. Interview questions were developed around

three key constructs: pricing schemes, service quality, and service usage. All interviews were conducted online, recorded with consent, and transcribed for analysis.

The research design followed an exploratory mixed-methods orientation, where qualitative insights complemented existing industry data and literature. Data collection relied primarily on in-depth interviews, while secondary data—such as complaint reports, termination logs, and activation data—were used in aggregate form to support analysis.

Customer service agents were selected based on specific criteria: those from Grapari locations with the highest number of visits, termination requests, complaints, and broadband installations to ensure diverse perspectives. The sample size consisted of four agents, each representing a different operational profile to enhance qualitative depth.

Data analysis used content analysis with descriptive coding to identify recurring patterns, themes, and relationships within the interview transcripts. Codes were sorted and grouped to develop the determinant factors of churn. Root Cause Analysis was then applied using the 5-Why technique and visualized through a fishbone diagram. Finally, the findings were integrated with SWOT and TOWS strategic frameworks to develop actionable churn mitigation strategies for TelkomInd.

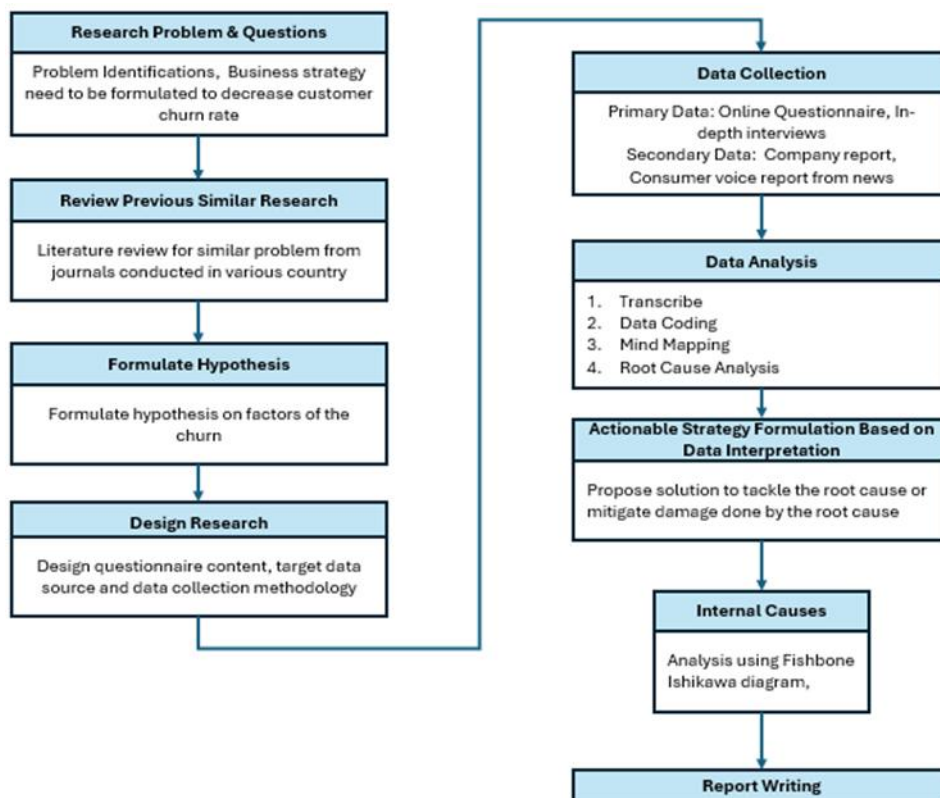


Figure 2. Research Methodology
Source: Developed by Researcher, 2024

RESULTS AND DISCUSSION

Analysis

The author uses open coding which involved in going through the data and mark important sections and add descriptive name or “code” to it (Khandkar, 2009). During initial analysis of 4 transcript data, 13 codes emerge that show correlation with churn factor of fixed

mobile service in TelkomInd that shows in the lens of CSR. These codes are then grouped into category in the three-hypothesis based category. The codes are shown in the table below.

The analysis yielded several thematic categories that explain customer churn behavior in TelkomInd’s FMC services. Under the Pricing Scheme category, customers frequently compared TelkomInd’s prices with cheaper competitors (P1) and expressed dissatisfaction with the high cost of bundled services (P2). Service Quality emerged as a dominant factor, with customers often experiencing frustration due to repeated complaints and unresolved issues (Q1). Slow or inconsistent technician responsiveness further contributed to dissatisfaction (Q2), while customer trust was shown to depend heavily on direct, on-site service validation (Q3). Many customers also reported frequent internet disruptions as a key trigger for churn (Q4), as well as repeated, unresolved complaints that ultimately led them to terminate their service (Q1).

In terms of Service Usage, several operational and product-related issues strongly influenced customer decisions. Problems with FAMPLAN—particularly delays or failures in quota distribution—led to recurring dissatisfaction (U1). OTT-related issues, especially recurring add-on charges that required monthly manual adjustments, were also cited as difficult to resolve and contributed to churn (U2). Bill shock, where customers received unexpectedly high invoices, was another significant factor (U3), along with discrepancies between billed amounts and services actually received (U4). Some customers lacked clear information about available packages or how to manage their subscriptions, leading them to terminate rather than adjust their plans (U5). Finally, stuck orders—service modification requests that remained unresolved due to system or operational limitations—prompted some customers to cancel their service entirely and restart with a new installation (U6).

A cross-case comparison matrix is created to see the presence of each code to view the consistency of the themes on all CSR interviews. A heatmap is also produced to see which codes or themes have frequently occurred which indicates the strongest reason for churn.

Table 0. Cross Case Matrix Heatmap Comparison

Theme	R1	R2	R3	R4
Pricing Scheme				
Pricing Scheme > Competitor's Offer	1	1	2	1
Pricing Scheme > Mahal	3	4	6	2
Pricing Scheme > Harga	1	0	0	3
Service Quality				
Service Quality > Technician Responsiveness	1	1	0	0
Service Quality > Trust	1	4	3	2
Service Quality > Gangguan Internet	1	4	7	1
Service Quality > Repeated Complaints	2	5	5	2
Service Usage				
Service Usage > FAMPLAN Problem	2	1	5	0
Service Usage > Add On OTT Problem	6	6	9	2
Service Usage > Bill Shock	5	6	7	5
Service Usage > Service and Billing Invoice Discrepancy	3	8	8	3
Service Usage > Stuck Order	6	9	8	7

Source: Thematic Analysis Results of CSR Interview Data, 2024

It shows that the most occurring theme is Bill shock, Service and Billing Invoice, Stuck Order, Add on OTT problem, Repeated complaints followed by Add On FAMPLAN. For each theme 5 Why analysis is implemented to find the root cause and visualized in 3 level Ishikawa diagram. The head is churn/termination, the bones are category mentioned in hypothesis, and the sub bones consist of the cause based on each category

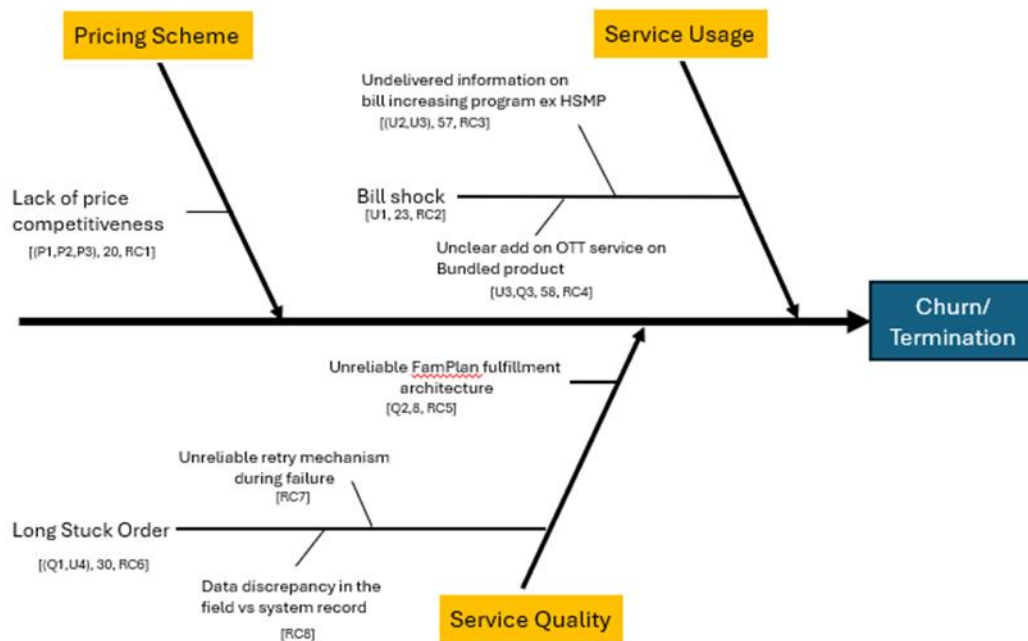


Figure 3. Root Cause Analysis Fishbone Diagram

Source: Developed by Researchers based on Root of Problem Analysis (5-Why), 2024

Analysis showed that while all hypotheses are mentioned and appear during customer termination request, the strongest and most frequently occurring theme is service usage, especially related to bill shock.

Pricing Scheme

The first hypothesis, pricing scheme although often mentioned by each respondent, even though TelkomInd Fixed broadband product is expensive in the eyes of the customer, there are periods where new revamp product is introduced to the market. Quoting respondent 3, “. . .Cuman sekarang karena penawaran paket yang udah mulai rendah ya sekarang untuk cabut udah mulai sedikit” which translate to “today the product offering price is much lower, the termination request due to expensive price is getting lower and lower”. Lack of price competitiveness is answered by TelkomInd already, by introducing revamp products to defend against ever expanding competitor. The product revamp offers multi variety of bundled services with a competitive price. This proves that pricing scheme is a major factor in the market. To stay competitive, TelkomInd must continuously monitor price movements in the market as well as creating alternative business strategy so that the products are not tied to the price and could possibly reduce revenue of TelkomInd itself. But in this study lack of competitive prices was not the sole reason for churn, only when combined with other dissatisfaction in service the likelihood of churn becomes higher.

Service Quality

In the service quality, author finds facts that out of 5 pillars of service quality mentioned before, Tangibles, Reliability, Responsiveness, Assurance, Empathy, Reliability seems to be the lowest of them all based on the responses from the CSR respondents. But reliability here is not internet problem such as slow or intermittent, rather how the customer's order is carried out that becomes an issue.

Tangibility is not an issue since the Fixed broadband device can always be seen when the order is in installation process. Responsiveness is quite good because based on the CSR experience whenever a problem occurs and there are complaints that reach them, they can immediately order a technician to check the internet in the customer's home. Assurance and Empathy is continuously expressed by CSR when handling customer so that is not an issue for them.

In service reliability, churned customers usually do complain repeatedly on same problem which is service and billing discrepancies. Normally this would be included in bill shock but after careful thinking about the root cause, this discrepancy is caused by a modification in his/her fixed broadband service, but it is not carried out until next billing period hence customer felt like they have already deactivated/downgraded their service, but it is still charged. In actuality, customers can track whether their order is completed or not, but their patience runs low if the order itself doesn't move for more than 1-2 weeks or sometimes even go backwards. CSR can only raise ticket to supporting IT tools but after they create that, they can only monitor the progress. The ability to do nothing creates frustration on the side of customers and CSR alike, which fuels for hard complaint and eventually termination request on their fixed broadband service.

The stuck order itself can be caused by many things but fall under some category. The first one is issue with FAMPLAN product. FAMPLAN is a family plan product which combines fixed service and sharing quota of broadband service in one group with many members. The activation of new add on products, modify existing products (including address change), managing the members or even removing the product creates high possibility of stuck orders according to CSR. This indicates that there is something wrong with the fulfillment design for FAMPLAN product.

The second one is poor retry mechanism handling that sometimes leaves supposed to be removed charge, even though the service is already removed. This action usually is results of manual action because the system could not continue the process or just missed in the design when they created the feature/product.

The third one is system error due to data discrepancy between actual on the field and data on systems of record. This discrepancy creates multiple logic errors and breaks the flow on system. This can be possible because there are still many manual SOP handling on the field where the changes are not communicated to system of record.

In summary, in service quality the cause of churn is fulfillment reliability with the main drivers are

1. Unreliable FAMPLAN fulfillment architecture
2. Data discrepancy between data in the fields and system of record
3. Unreliable retry mechanism during failure

Service Usage

The most apparent reason for churning that CSR finds is bill shock. Bill shock refers to unexpected increases in billing. According to reports by CSR, most of these cases happen after the TelkomInd execute loyalty retention program and during billing payment period.

The first case there are periods where loyalty retention programs are massively executed, this program called higher speed more price. In essence customers are campaigned that they will be offered with higher internet speed and additional add on OTT service which come with extra price +- 10.000 rupiah depending on their current active product. This campaign requires customer consent but there is waiting period if not answered will be considered as an opt in default. Many eventually churned customers come to CSR asking why there are extra amounts in their bill, turns out many of them didn't receive the campaign message about the retention program. TelkomInd has similar program which turns the speed of the internet higher but with same price for high LOS customers, but no complaints because the bill isn't increased. This indicates that the campaign information is undelivered. According to information from CSR most of the customers show that their contact is not the same with the one in the system. This is a problem that seems simple but has impact to customers' churn rate.

The second one is Add On OTT in bundle services. Customers felt like they are in the blind, unknowingly paid the service that they are entitled to, but they have never even used the service. This happens because TelkomInd implements bundle services such as OTT Disney and Netflix with their main internet package. This type of customer typically approached by salesforce and offered an Internet Fixed service, but the salesforce deliberately didn't mention that their product consists of OTT service. When those customers saw an advertising of TelkomInd and compared the price with what they have now, they found out that the price was much higher and rushed to Customer service only to find that their products also consist of 3rd party OTT service.

In summary the reason for churn from service usage bill shock which is caused by

4. Undelivered information on bill increasing program in loyalty or retention example HSMP
5. Unclear add on OTT service on bundled product

Overall, the results highlight repeated complaints due to stuck order, fulfillment execution issues and unexpected bill increase due to incomplete information and communication gaps in acquisition and retention is the main reason why customer churn when coming to Customer Service Representatives.

Business Solution

Based on research study, it shows that churn in TelkomInd fixed broadband is no longer driven primarily by price but rather by service usage problem particularly bill shock originating from information gaps, billing inconsistency, and order fulfillment reliability. Therefore, business solution should target transparency, customer control and fulfillment reliability.

To propose solution for the identified issues, this study employs SWOT analysis to create situational analysis on the internal and external factors. The weakness component specifically is filled with root cause of churn found in the analysis section. The SWOT found as below:

Strength:

6. Wide Area Coverage, including TelkomInd representatives in area such as CS point
7. Large resource on venture capital
8. Strength in Government integration (as child company of State owned Enterprise)
9. Easy to access Mobile Apps available in all platforms (Web, Android , iOS)

Weakness:

1. Unmonitored changes to hardware support in the fields
2. Customer adoption issues on Mobile apps
3. Operational inefficiency (unreliable retry mechanism in the system that result in stuck ordersstuck order)
4. Undelivered information for product, loyalty or campaign program
5. Unclear add on OTT service on Bundled product

Opportunities:

1. Competitor's service area coverage is still limited
2. Cross selling on Fixed and Mobile products
3. Digital Self Care Improvements
4. Fast growing AI technology that can be used on almost everything

Threats:

1. Aggressive competitors product with lower price
2. Post merger service failures could lead to more and more dissatisfaction and increase churn

By implementing TOWS analysis, these are the strategies that can be used by TelkomInd to counter churn:

S-O Strategy

1. Increase market penetration using personalization with AI

S-T Strategy

1. Defend vulnerable area using aggressive loyalty/retention program (which TelkomInd has done based on interview)

W-O Strategy

1. Redesign FAMPLAN Architecture to improve Digital self care experience
2. SOP establishment for manual update using systemized tool
3. Modernize monitoring tools with AI to fasten issue handling
4. Establish SLA for Orders
5. Proactive tracking for inactive service purchased by the customer
6. Increase digital adoption of Mobile apps during acquisition by salesforce
7. Improve digital information flow utilizing mobile apps alongside proactive campaign using email

W-T Strategy

1. Delay problematic product until improvement has been made

By focusing on the root cause found, which is bill shock originating from information gaps, billing inconsistency, and order fulfillment reliability align with W-O strategy, author propose churn reduction strategy framework with 3 pillars, Strengthen Transparency, Enhance Fulfillment Reliability, Organizational KPI Realignment.

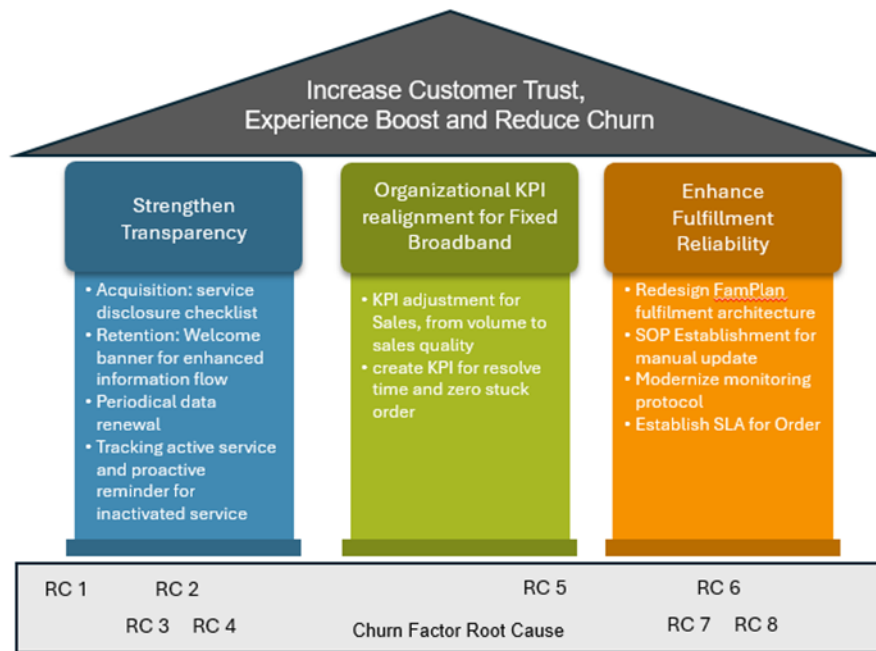


Figure 4. Churn Reduction Strategy Framework

Source: Developed by Researcher based on TOWS Analysis Results, 2024

Strengthening Transparency

To tackle the lack of information issue, the author proposed improvement in acquisition, and retention part. In Acquisition, Salesfoce must ensure all information related to product purchase by the customer are explained thoroughly, a mandatory checklist of consent for each service in the produce will need to be approved by the customer.

During retention program, since blasting messages through email and other communications might get the customers felt annoyed, a welcome message in the browser when using the internet or TelkomInd Fixed Broadband app with information of the highlighted product is active can increase customers awareness on what they have in their purchased products. In the event of retention program such as HSMP and HSSP the policy of defaulted opt-in if no answer still can be applicable, but the welcome message must also include this information so that the customers not taken off-guard.

In addition to that maintaining relation with high LOS customers is important, hence data of the customers must be renewed so that the communication could flow easily. For increasing the visibility of customer to package that they already owned, a proactive reminder both in communication channel each month is proposed. This flow helps eliminate the probability customer didn't activate and utilize the service that they have paid for.

Fulfillment Reliability

Process of fulfilling what customer order smoothly and as expected must be the main target. As mentioned in the analysis FAMPLAN product and stuck order proves to be the the stopper.

For FAMPLAN product, the fulfilment needs to be redesigned with the thought of easily input multiple number in the group with the fixed broadband number as the parent, since the

fixed is the anchor of the product. By implementing this principle, modification order, manage FAMPLAN member would be less painful and can be quickly executed.

Another pain points that create stuck order is discrepancy data between the condition on the field with data stored in system of records. The data discrepancy can be in the form of port connection between the ODP and ONT, availability of the port itself or actual ONT type that is used by the customer. This was possible due to manual update by technician team and field operation team if during the installation there are failure with the related devices, and they are in a lot of pressure to make sure the installation is completed so the customer able to use the fixed broadband service. Sometimes this manual operation are not reported or forget to be reported by the technician hence the discrepancy happened.

To prevent further occurrence, it is proposed a new standardized and systemized way is created to accommodate this manual operation. By using systemized operation the miss alignment will be reduced because all the flow would have been done by the system.

Last is strengthen the monitoring protocol related to order placed by the customers. The monitoring should not just show or alert whenever there are stuck order, but also highlight the reason related to it, similar occurrence in the past and proposed action based on knowledge in the past occurrence. To enable this automatic monitoring, documented issue related to order must be created, maintained in a digital library, which then can be used as the source for AI. This AI can monitor daily transaction and cross reference it with documented knowledge when a stuck order occurs.

Realignment of Organizational Key Performance Indicators for FMC Implementation

Some of the proposed actions might introduced downsides in short term revenue, but these actions are necessary to generate trust to TelkomInd services in the customers mind. To align the proposal a shift in the key performance indicator must be done. The indicator such as sales volume, changed into sales quality and fast order closure to order accuracy, resolve time and zero target stuck order.

Introduce customer journey governance team with representatives from Marketing, Sales and Customer Care and IT team which task is to ensure business idea can be discussed thoroughly both from customer perspective, customer service, technician all the way to IT system that support it can be delivered without any gaps in the operational fields.

Implementation Plan & Justification

The proposed churn-mitigation initiatives are organized into three strategic programs. The first program, Strengthening Transparency, includes several actions aimed at addressing root causes related to unclear service information and customer misunderstanding. These actions include implementing a service disclosure checklist during acquisition (RC1), creating welcome banners to improve information flow for new customers (RC2), conducting periodic data renewal to ensure accuracy (RC3), and enabling proactive reminders for inactive or unused services through enhanced tracking systems (RC4). These initiatives involve collaboration across the Sales, Network, IT, and Customer Care divisions.

The second program, Enhancing Fulfillment Reliability, focuses on reducing service failures and inconsistencies that lead to customer dissatisfaction. Key actions include redesigning the FAMPLAN fulfillment architecture to prevent quota-distribution errors (RC5),

establishing a standardized SOP and system flow for data updates that reflect field conditions (RC8), modernizing monitoring protocols to detect service anomalies more effectively (RC6, RC7), and implementing a formal service-level agreement (SLA) for order processing to reduce stuck orders (RC6). These responsibilities primarily fall under the Marketing, Sales Fulfillment, and IT divisions.

The final program involves Realigning Organizational Key Performance Indicators for Fixed Broadband, ensuring that internal performance measures support churn-reduction goals. This includes shifting Sales KPIs from volume-based targets to sales-quality metrics, creating KPIs focused on resolution time and the elimination of stuck orders for the IT division, and establishing a customer journey governance team involving Marketing, Sales, IT, and Network units to oversee end-to-end service quality. Collectively, these initiatives aim to tackle the identified root causes of churn and strengthen operational execution across the organization.

CONCLUSION

This study highlights customer churn as a critical challenge in TelkomInd's Fixed Mobile Convergence and fiber broadband services, revealing through qualitative in-depth interviews with frontline customer service agents, thematic coding, and cross-case analysis that primary drivers stem not from pricing or competitors, but from service usage and quality issues like bill shock, billing discrepancies, stuck orders, system failures with OTT services and FAMPLAN products, unreliable fulfillment, data mismatches, weak retry processes, and poor communication on bundled add-ons. To address these root causes, the research proposes mitigation strategies across three pillars—enhancing transparency (e.g., service disclosure checklists, better billing communication), improving fulfillment reliability (e.g., redesigned architectures, SLAs, monitoring systems), and realigning processes (e.g., periodic data updates, adjusted KPIs, customer journey governance team)—to reduce churn and boost satisfaction in TelkomInd's FMC ecosystem. For future research, quantitative validation of these qualitative insights through large-scale customer surveys and predictive churn modeling could test the proposed strategies' effectiveness across diverse demographics.

REFERENCES

- Ahn, J., Hwang, J., Kim, D., Choi, H., & Kang, S. (2020). A survey on churn analysis in various business domains. *IEEE Access*, 8, 220816–220839.
- Bugajev, A., Kriaucienė, R., Vasilecas, O., & Chadyšas, V. (2022). The impact of churn labelling rules on churn prediction in telecommunications. *Informatika*, 33(2), 247–277.
- Budianto, A., & Harahap, S. (2023). Fixed-mobile convergence in the telecommunications industry: The role of billing integration. *Telecommunications Economics*, 40(4), 358–367. <https://doi.org/10.1016/j.teleco.2023.04.005>
- Chandra, A., Lim, S., & Nasution, S. (2023). Synergies in telecom industry mergers: Case study on TelkomInd and TelkomInd Home. *Telecommunications Policy*, 47(1), 35–44. <https://doi.org/10.1016/j.telpol.2022.102300>
- Dewi, A., Santoso, P., & Widjaya, M. (2021). Organizational structure and human capital management integration post-acquisition: The case of TelkomInd. *International Journal of Human Resource Management*, 32(4), 545–561. <https://doi.org/10.1016/j.ijhrm.2021.02.011>
- Gunawan, P., & Jaya, K. (2021). Mergers and acquisitions in the telecom sector: The case of TelkomInd's acquisition of TelkomInd Home. *Journal of Business Research*, 56(7), 1234–1245. <https://doi.org/10.1016/j.jbusres.2021.04.014>

- Harrison, G., & Lee, S. (2021). Organizational governance in the telecom industry: A case study of TelkomInd's BOC and BOD structure. *Telecommunications Management Review*, 19(2), 104–112. <https://doi.org/10.1016/j.telcom.2021.03.004>
- Hendra, D., & Putra, S. (2021). TelkomInd's fiber optic infrastructure: Expansion and strategic implications. *Journal of Telecommunications Management*, 33(2), 88–95. <https://doi.org/10.1016/j.jtelm.2021.06.008>
- Jatmiko, A. (2022). Enhancing customer satisfaction through integrated mobile and broadband services in Indonesia. *Journal of Service Research*, 19(3), 245–257. <https://doi.org/10.1016/j.josr.2022.01.011>
- Jatmiko, T., & Siahaan, M. (2021). Strategic marketing and customer communication in the digital era: TelkomInd's approach. *Journal of Marketing Research*, 46(3), 210–220. <https://doi.org/10.1016/j.jmr.2021.06.009>
- Khandkar, S. H. (2009). *Open coding*. University of Calgary.
- Lee, K., Smith, D., & Tan, M. (2022). Consolidating telecom services: Impact of one-bill systems on customer retention. *International Journal of Telecom Management*, 35(2), 100–110. <https://doi.org/10.1016/j.ijtm.2022.05.002>
- Mulyadi, R., & Sulaiman, N. (2021). Operational efficiency in telecom services: The case of unified billing systems. *Journal of Business Efficiency*, 19(1), 45–53. <https://doi.org/10.1016/j.jbe.2021.01.003>
- Nguyen, P., & Kurniawan, L. (2023). Evolving sales strategies in the telecom industry: Insights from TelkomInd's omnichannel approach. *Journal of Sales and Distribution*, 29(1), 30–42. <https://doi.org/10.1016/j.jsd.2023.02.003>
- Purnomo, R., & Widodo, H. (2022). Transforming corporate strategy and innovation management in the telecom sector. *Asian Journal of Business Innovation*, 14(2), 122–133. <https://doi.org/10.1016/j.ajbi.2022.07.003>
- Putra, A., & Wijaya, D. (2023). The future of customer experience in telecom: Integrating mobile and fixed-line billing. *Journal of Digital Communication*, 22(3), 120–133. <https://doi.org/10.1016/j.jdc.2023.02.007>
- Ravi, S., & Sharma, R. (2023). Information technology in telecom: Integrating systems to improve service delivery and customer experience. *Journal of Information Technology Management*, 41(4), 251–265. <https://doi.org/10.1016/j.jitm.2023.01.005>
- Sari, M., Rahayu, T., & Indra, Y. (2022). The effect of one-bill system on customer satisfaction in the telecom sector: Evidence from Indonesia. *Telecommunications Policy*, 46(8), 713–721. <https://doi.org/10.1016/j.telpol.2022.03.008>
- Suharto, M., Setiawan, D., & Putra, I. (2022). The role of network operations in post-acquisition integration: A case study of TelkomInd's fiber network expansion. *Telecom Network Engineering*, 16(1), 58–70. <https://doi.org/10.1016/j.tne.2022.04.008>
- Wahyuni, T., & Sutanto, H. (2022). The role of integrated connectivity solutions in telecom industry growth: A case study of TelkomInd. *Telecommunications Journal of Indonesia*, 11(4), 102–110. <https://doi.org/10.1016/j.tji.2022.05.003>