

NAVIGATING SERVICE INNOVATION: INVESTIGATING THE STAGES OF INNOVATION PROCESS IN TELECOMMUNICATION INDUSTRY

Difla Dhea Fiva¹, Anjar Priyono²

Department of Management, Faculty of Business and Economics,
Universitas Islam Indonesia^{1,2}

20311008@students.uui.ac.id¹, anjar.priyono@uui.ac.id²

ABSTRACT

This research explored the stages of service innovation within the telecommunications industry, specifically examining PT Telkom Indonesia Datel Temanggung. Using a qualitative approach that included observation and interviews with five employees, the research identified a six-stage process for service innovation: opportunity identification, idea management, concept development, pilot test, launch, and learning. The results highlighted significant challenges faced during the innovation process and emphasized the importance of customer involvement. Additionally, service innovation at PT Telkom had crucial managerial implications, requiring careful evaluation to ensure profitability and customer satisfaction. Managers must navigate the innovation timeline to balance stakeholder impact and avoid employee burnout. Phased rollouts and targeted marketing were recommended strategies to keep customers informed and engaged throughout the innovation process.

Keywords: Service Innovation; Management Operation; Income; Financial Attitude.

INTRODUCTION

All sectors of the economy and all regions of the world are engaged in service innovation. This relates to service companies, yet product-based businesses are equally capable of developing advances in the service sector. Service innovation is a change in how customers are serviced, resulting in more income for the company and increased customer value (Shields, 2022). A firm may be able to boost its income by introducing a new service innovation. This could result from existing customers spending more money, an improved positive image of the company, referrals, and other factors.

Integrating innovative techniques into a company's range of services offers an important and long-lasting opportunity for achieving a competitive edge (Durst et al., 2015). Reinartz and Ulaga in Durst et al. (2015) proposed that strategically, exploring service-oriented projects can be crucial for organizations to overcome the difficulties of sustaining growth in competitive marketplaces.

Moreover, these service models are advantageous in efficiently addressing challenges arising from the competition of products and services. Through the implementation of ongoing service innovation, organizations establish themselves to effectively respond to changes in the market, distinguish their products or services, and maintain a competitive advantage in the long run.

Active participation of customers in the process of service innovation is indispensable, given that customers represent the primary beneficiaries of the service. Engaging customers in the strategic planning of a company's service innovation, especially with a heightened level of involvement, plays a pivotal role in enhancing the company's comprehension of customer needs. As highlighted by Firdaus et al. (2021), this heightened engagement empowers the company to create truly innovative service offerings aligned with the evolving demands and expectations of the customer base.

The significance of this customer-centric approach is further underscored when customers perceive that the value

derived from the service surpasses their initial expectations (Firdaus et al., 2021). This positive experience of exceeding anticipated value leads to customer satisfaction. Customer satisfaction is a dynamic and essential element in creating and sustaining a satisfied customer base. Consequently, companies that actively involve customers in the service innovation process and consistently deliver value beyond expectations are better positioned to foster enduring customer satisfaction, loyalty, and positive brand perceptions.

PT Telkom, usually referred to as Telkom Indonesia, is a leading telecommunications company in Indonesia, offering a wide range of services, including landline, mobile, web, and data solutions. PT Telkom is now investigating the implementation of a digital operations model that aligns with its strategic vision. This strategic project aims to fully incorporate diverse digital technologies and capabilities into its operating structure.

The proposed digital operations model represents a significant achievement for PT Telkom, placing the company at the forefront of technological progress in the telecoms sector. PT Telkom seeks to optimize operational efficiency, improve customer experiences, and increase service delivery across its wide range of offerings by adopting digital transformation. Anticipated benefits of implementing advanced technologies include streamlining procedures, optimizing resource use, and promoting a more agile and responsive organizational structure.

PT Telkom's choice of adopting a digital operations model demonstrates its dedication to ongoing innovation. This proactive strategy is intended to address the changing needs of the telecoms sector and actively influence the industry's future. PT Telkom aims to

utilize digital technology to develop and provide services that surpass customer expectations.

The primary goal of this digital transformation is to deliver concrete benefits to PT Telkom's customer base. The organization aspires to improve the quality, accessibility, and customization of its services by utilizing innovative digital technologies. Furthermore, this strategic transition towards a model that prioritizes digital platforms is in line with PT Telkom's primary objective of promoting consistent and long-lasting increases in income. The expected advantages encompass enhanced market competitiveness, a broadened range of services, and the capacity to leverage emerging opportunities in the digital ecosystem.

PT Telkom's implementation of a digital operations model is a proactive response to the ever-changing telecommunications industry. This move demonstrates their dedication to innovation, customer focus, and long-term financial sustainability. As the company begins this revolutionary journey, it positions itself as a pioneer in the quest for excellence within the constantly changing digital telecoms industry.

Further research is required to comprehensively examine PT Telkom's application of service innovation, considering the company's pioneering role in this area. This research presents an analysis of the initiatives undertaken by PT Telkom to improve service innovation, along with the challenges faced in implementing these initiatives. Another crucial factor in the service innovation process is the involvement of customers, as their degree of satisfaction is a key indicator of the success of the innovation.

RESEARCH METHOD

Approach

This research applies a qualitative approach. According to Denzin and

Lincoln in Anggito & Setiawan (2018), qualitative research is a study that makes use of natural settings to analyze phenomena that occur and is carried out by involving a variety of methods that are already in existence. According to Erickson in Anggito & Setiawan (2018), qualitative research aimed to identify and explain in a narrative fashion the activities carried out and the influence that the acts carried out have on the lives of the individuals involved.

Qualitative methods were used to examine how PT Telkom carries out service innovation in this inquiry. Besides that, descriptive analysis was used in this research to offer a detailed overview of the subjects investigated. Descriptive analysis is used to present and summarize data descriptively. The goal is to comprehensively and precisely representing the presented facts (Sprinthall, 2011).

Unit of Analysis

One key factor to consider is the unit of analysis, which refers to the individuals or objects pertinent to the research. The research identified competent parties as those directly interested in the studied phenomenon, such as program participants, organizational personnel, or members of

associated communities (Yin, 2014). The unit of analysis in this research was the employee of PT Telkom, which was located in Datel Temanggung. The employees frequently work in the field and deeply understand the company's operations. The number of employees interviewed was 5, with different positions.

FINDINGS AND DISCUSSION

PT Telkom Indonesia enhanced the quality of its customer service by always employing the most efficient methods and minimizing resource expenditures. The industry faced various challenges but actively used continuous innovation to tackle these problems. The fundamental measure of success was the level of customer satisfaction. All employees of PT Telkom Indonesia had the chance to improve the company's services to meet its customers' demands more effectively. Innovation transcended the confines of firm leadership. The service changes that were introduced often draw inspiration from the requirements of the local branch.

PT Telkom underwent a series of steps, starting from the initial phase to carry out the service innovation process. The figure below illustrates the process that a company undergoes to innovate.

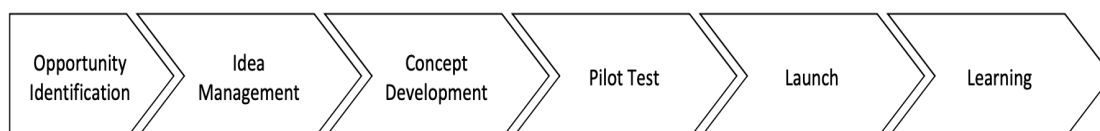


Figure 1. Service Innovation Stages in Telkom

Source: Telkom Temanggung, 2023

Opportunity Identification

One of the most important stages in service innovation was called opportunity identification. This step entailed discovering areas where innovation might solve unmet requirements, create value, and improve customer experiences. Innovative ideas

can emerge from several sources. This might be attributed to internal factors, such as optimizing operational procedures and implementing innovative technological advances. In addition to that, other factors drove organizations to innovate, such as problems presented by customers, which required the creation of solutions.

Innovation arises from a company's aspiration to enhance internal systems or processes to boost production and improve service quality. Implementing innovative technology or creating in-house digital apps or platforms was an instance of corporate innovation aimed at enhancing

performance, communication, or collaboration across different departments. Furthermore, numerous prospects or concepts for advancement were issues or grievances voiced by customers. Several respondents had similar sentiments, as evidenced by the table below.

Table 1. Interviewees Answers Regarding Opportunity Identification

No.	Respondents	Answers
1.	J1	Problems arising from customers, such as the extensive geographical coverage that sales teams cannot reach, necessitate the company to employ innovative strategies for implementing digital marketing. Furthermore, the issue of delays in satisfying customer requests for product installation has prompted enterprises to develop internal applications for their personnel. These applications enable employees to coordinate their responsibilities and enhance service efficiency.
2.	I2	Any harm caused to the production equipment would directly impact the customer's installation. As a result, the company has been compelled to innovate to ensure uninterrupted internet connections for customers. The maintenance division mostly achieves this by implementing proactive measures, such as regular inspections of production equipment.
3.	H5	The classification of innovation depends upon the problems encountered during fieldwork. Upon identifying the problem, the company assesses its innovation to ensure that customers also experience a sense of comfort with our service. Innovation arises when we encounter challenges in a particular domain.

Source: Employees of Telkom Temanggung, 2023

Idea Management

Once a concept was identified, the subsequent stage in the service innovation process for the company determined how to implement and control such ideas effectively. Innovation management encompassed structured operations to handle ideas created during the innovation process effectively. The management of ideas in the innovation process referred to a systematic and organized approach to gathering, overseeing, assessing, and executing ideas related to innovation.

Innovation encompassed the creation, advancement, and execution of novel concepts that can enhance an organization's offerings, services, or procedures.

Idea management sought to maximize the capacity for originality and novelty within a company by promoting cooperation, evaluation, and advancement of the most favorable concepts. It entailed utilizing various tools and methodologies, such as digital platforms, brainstorming sessions, and feedback mechanisms, to foster the active engagement of team members or stakeholders. The concept of

idea management in the innovation process focused on facilitating and overseeing the flow of ideas that result in beneficial transformation and

advancement inside the company. Several respondents had similar sentiments, as evidenced by the table below.

Table 2. Interviewees Answers Regarding Idea Management

No.	Respondents	Answers
1.	J1	The company can determine the problem using the 5W+1H writing approach, which will lead to identify the problem and its corresponding solution. To facilitate the process, PT Telkom typically conducts small-scale workshops to encourage employees to engage in brainstorming sessions. The outcome of such initiatives is primarily service innovation.
2.	A3	Innovation can be derived from either team leaders or directly from field technicians. Regular morning briefings are typically conducted to assess innovation. Here, all innovative ideas will be considered and evaluated, and the most crucial invention will be selected based on its ability to overcome nearly all obstacles.

Source: Employees of Telkom Temanggung, 2023

Concept Development

Concept development was an essential stage in the company's service innovation process. Specifically, chosen ideas were developed during this stage into more precise and detailed concepts. Participation from customers was essential at the initial stage of concept development because most ideas for innovations were derived from the input that customers supplied. At this point, the company identified and gained an understanding of the customer demands, challenges, and preferences that the

proposed new service intended to either address or fulfill.

The continuation of brainstorming was also included in this step. Following identifying the most urgent problem that needed to be fixed, an appointment was made for the person in charge of the most qualified individual to carry out this innovation process. Each specific issue was taken into consideration while selecting the person who would be in charge of the situation. The respondents' statement is in the table below.

Table 3. Interviewees Answers Regarding Concept Developments

No.	Respondents	Answers
1.	J1	Following the mini-workshop, the company will designate a person in charge (PIC) to address and resolve each problem. The problem can be identified by utilizing the 5W+1H technique, after which the company can devise a solution to address the issue. The timeline for each innovation project is chosen based on the urgency associated with each current problem.
2.	I2	Customer involvement in this innovation process is through the

		feedback they provide. The company will usually make direct visits to customers to ask how the company is performing, what complaints they have, and what they want for the company so that the level of customer satisfaction continues to increase. Sometimes, a visit like this does not have to be made, but customers have complained about what they have experienced.
--	--	--

Source: Employees of Telkom Temanggung, 2023

During the concept of development stage, the company encountered many barriers or challenges

in its efforts to create precise and targeted innovations. Some of the respondents indicated this, as depicted in the table below.

Table 4. Interviewees Answers Regarding Challenges in Concept Development

No.	Respondents	Answers
1.	J1	The primary obstacle to developing innovation is the need for more time. Employees will face challenges balancing their time between regular daily tasks while working on this innovation.
2.	H4	One main challenge in developing innovation is the financial burden associated with supporting innovation. The allocated budget is occasionally restricted, necessitating precise and careful budget adjustments.

Source: Employees of Telkom Temanggung, 2023

Pilot Test

Once the concept had been effectively formulated, the subsequent step was to conduct small-scale trials as part of the service innovation process. During this phase, an innovation prototype underwent testing before its official launch. This stage was crucial as it allows for collecting feedback from all parties concerned. In addition, the developers will make necessary modifications at this stage before implementing the results of this

invention in the broader operational context.

Pilot testing often involved only a selected group of the intended user base. The primary objective of this stage was to acquire validation of the concept being developed and identified potential issues before launch. Subsequently, the feedback obtained from the pilot test was utilized as a part of an endeavor to enhance the innovation before its formal debut. The respondent's statement is in the table below.

Table 5. Interviewees Answers Regarding Pilot Test

No.	Respondents	Answers
1.	J1	PT Telkom conducted an "AB Testing" test during the testing phase. The approach involves comparing two samples, A and B, under different situations and analyzing the impact of the influence of the upcoming innovation prototype. If there are any subsequent barriers or issues, the input obtained from this

		testing can be utilized to enhance and refine the process. Not all service innovations need to include direct contact with customers. This particular invention is designed exclusively for internal usage, aiming at enhancing employee service to customers. The parties participating in this testing can consist of prospective customers or internal companies only.
--	--	---

Source: Employees of Telkom Temanggung, 2023

Launch

During the launch stage, most actions were mainly focused on marketing. At this point, the innovation had completed the testing phase and prepared for implementation. The outcomes of innovation were prepared to be distributed to a broader audience. The company was prioritizing the

introduction of innovations to customers. Customer assessments in this stage were of the utmost significance and consistently monitored by the company. The company continues to conduct satisfaction surveys to assess the quality of its customer service. According to the respondent, it is indicated in the following table.

Table 6. Interviewees Answers Regarding Launch

No.	Respondents	Answers
1.	J1	Following the implementation of the innovation, the company surveyed customers to obtain their feedback. PT Telkom has a program called Voice of Customer, allowing customers to express their comments about our services. At this stage, criticisms will resurface and further innovation will be required, as this company operates in a cycle of innovation.

Source: Employees of Telkom Temanggung, 2023

Learning

Following the completion of the launch process, the company proceeded to the final phase of innovation, known as the learning process. At this point, the company gathered feedback from customers who had directly experienced the outcomes of the recently introduced innovation. The company gathered and evaluated customer feedback to

comprehend the response to this innovation in the market. By embracing customer feedback and analyzing market performance, the innovation can be enhanced and optimized to satisfy customer demands and match their expectations more effectively. This could involve adjusting the product, service, or business model. The respondents' statements can be seen in the table below.

Table 7. Interviewees Answers Regarding Learning

No.	Respondents	Answers
1.	J1	We will conduct a review after each last stage of the company's innovation. This review focuses on the performance of the launched innovations and their impact. The basic concept is that the company strategically plans, executes, evaluates, and takes action, which will consistently drive our business processes.

2.	A3	The company assesses employee performance by measuring customer satisfaction. Following the implementation of the innovation, customers will be requested to provide feedback on their level of satisfaction with the employees' performance and their satisfaction with the innovation itself.
3.	H4	Upon completing the innovation launch process, the company will evaluate the profitability of the innovation. This encompasses the process of reproduction, whereby if the innovation proves to be financially viable, it will be continued. Conversely, if it will naturally be discontinued if it fails to generate profit.

Source: Employees of Telkom Temanggung, 2023

Throughout learning, the company encountered various challenges. Some competitors provide identical services to what this company offers its customers. The company needs to prioritize to the quality of its services to stay ahead of its rivals. Another challenge in this

innovation process was the need for more customer awareness regarding the technological advancements associated with the innovation provided by this company. The company should educate customers with little understanding of available advances to maximize their utilization of the given services.

Table 8. Interviewees Answers Regarding Challenges in Learning

No.	Respondents	Answers
1.	I2	When innovation is launched, we can discover that competitors offer precisely the same services we provide to customers. This company is very dependent on customers; therefore, we have to ensure that the quality of the service we provide is very satisfying to customers so that customers do not switch to our competitors.
2.	H5	A challenge that develops while introducing innovation is the presence of customers who need to be adequately informed or are resistant to being informed about service updates implemented by this company. Occasionally, specific customers get excessively comfortable with the company's services before any advancements or improvements. This occurs due to the presence of specific customers who need help comprehending technological advancements. Nevertheless, the obstacles encountered in this area are proportionally insignificant due to the small percentage involved.

Source: Employees of Telkom Temanggung, 2023

Discussion

The discussion focused on analyzing and elaborating on the data acquired from the findings and interview results connected to existing theory and

prior research.

Service Innovation Stages

Based on data findings, PT Telkom's innovation process included several

activities: opportunity identification, idea management, concept development, pilot test, launch, and learning. This was in line with research conducted by Helmer et al. (2021). It stated that the process of innovation process includes opportunity identification, creativity and idea management, concept development, service development, testing and validating pilot service, and the last one is launch. Other research presented by Eveleens (2010) also stated that the process of innovation includes idea generation, selection, development and testing, implementation and launch, post-launch, and the last one is learning.

PT Telkom initiated the innovation process by first identifying potential opportunities. Opportunities for innovation arise from internal factors that necessitate optimizing its operations, or they could come from external sources, such as customer problems. Helmer et al. (2021) mentioned that the organization will gather customer insights or do market research throughout the opportunity identification phase. The objective was to comprehend customers' or users' requirements and challenges. According to another study conducted by Eveleens (2010), behaviors included in generating ideas include extracting ideas from internal and external company sources.

PT Telkom engaged in idea management activities as part of the second process of this innovation. A session was conducted to gather ideas for innovations that have emerged from the subsequent phase to coordinate and discuss selecting the most appropriate concept for implementation. In their study, Helmer et al. (2021) explained that the ideation phase encompasses the generation of ideas and the full scope of the decision-making process. According to Helmer et al. (2021), this stage aimed to choose the most suitable idea for the identified problem.

During the third step, PT Telkom

engaged in concept development, wherein the selected concept from the previous stage was transformed into a prototype. Customers played a crucial role currently as they were the primary source of emerging ideas and the organization gained valuable insights regarding customer complaints and needs during this period. At this stage, the individual accountable for the execution of the innovation project was also designated. According to a study conducted by Eveleens (2010), this stage of the project involved identifying the most qualified individuals to carry out the project and also involving users early on.

Following the development of the concept, PT Telkom proceeded to the fourth stage of innovation, the pilot test. Preliminary testing was conducted at this phase, involving a limited number of potential users. The feedback provided by users was utilized to make enhancements before the official introduction of the innovation. This remark aligned with the study conducted by Helmer et al. (2021), which asserted that the testing and validation procedure would entail direct testing of customers to obtain first-hand feedback from initial users.

After the testing and validation stage, PT Telkom launched its product to the broader public as the next step in its innovation process. At this stage, the company prioritized introducing its products or services to the market and marketing activities. In addition, a customer satisfaction survey was carried out to gather feedback that will be used to drive further innovation. According to Helmer et al. (2021), during the launch stage, the efforts were mainly directed toward making a product or service available for sale and ensuring that the solutions provided were consistently validated.

The learning process was the final stage implemented by PT Telkom to facilitate innovation following the launch process. During this phase, the company assessed the advancements they had

introduced. The organization evaluated customers' satisfaction and the innovation's effectiveness in addressing existing issues. Subsequently, the organization can identify any shortcomings in its service method, leading to a restart of the innovation process, thereby establishing a cycle of innovation. According to Eveleens (2010), the organization will conduct value analysis and evaluation throughout the learning stage.

Service Innovation Challenges

PT Telkom encountered several challenges in implementing service innovation development. During the concept development stage, one of the issues was the difficulty employees faced in managing their work time between routine activities and the innovation project. Another obstacle faced at this point was the constrained budget for innovation. According to Auer (2023), finance is necessary at every stage of the innovation process. Acquiring capital can provide challenges. Organizations must provide a strong business case for their innovation initiative to secure funding, demonstrating a return on investment (ROI). The inherent unpredictability of innovation poses a significant challenge and results in substantial variations between projected business scenarios and actual outcomes.

PT Telkom encountered additional challenges along the course of learning. The presence of direct competitors offering identical services was a challenge for organizations in enhancing their innovation efforts. As stated by the OECD (2023), multiple competitors can result in a downward spiral in pricing, creating challenges for enterprises to distinguish themselves and sustain profitability.

Another challenge encountered was customer resistance to changes or innovations implemented by the

organization. This was due to the presence of customers who possess a lower capacity to comprehend technological progress. According to Kotter & Schlesinger (2008), the key to implementing change is for organizations to prioritize communication and employee involvement. This will help them overcome resistance and cultivate an innovative culture.

Customer Engagement

Customers played a crucial part in the service innovation process at PT Telkom. Customer interaction was present in nearly every phase of the innovation process. The principle of co-creation was central to customer engagement, involving active customer participation in defining the direction and consequences of innovation activities. Organizations may optimize their decision-making and improve the effectiveness of their innovations by promoting open communication and cooperation, which allows them to get valuable insights, preferences, and customer feedback. The Vargo and Lusch (2004) framework, called service-dominant logic (S-D logic), emphasized the importance of customer engagement in driving innovation. It focuses on the collaborative interactions between service providers and customers to co-create value.

CONCLUSION

PT Telkom engaged in a sequence of actions to drive service innovation. The initial step was to identify opportunities, followed by idea management. Subsequently, concept development took place, followed by a pilot test. The next phase was the launch, and the last stage involved the learning process. Customer participation was a consistent aspect of nearly every process, as they contributed ideas and offered feedback to enhance the company's offerings. Several challenges were encountered during this innovation process, including time constraints,

financial limitations, the rise of competition from rivals, and resistance to change from certain individuals.

REFERENCES

- Anggito, A., & Setiawan, S.Pd., J. (2018). Metodologi penelitian kualitatif. CV Jejak (JejakPublisher).
https://books.google.co.id/books?hl=en&lr=&id=59V8DwAAQBAJ&oi=fnd&pg=PP1&dq=pengertian+penelitian+kualitatif+menurut+para+ahli&ots=5I9CoDdxHm&sig=mPOHOcvHsteSCDXyyX2wLzMXksc&redir_esc=y#v=onepage&q=pengertian%20penelitian%20kualitatif%20menurut%20para%20ahli
- Auer, I. (2023, May 23). 4 Key Challenges of Innovation Management. Scale Company. Retrieved March 19, 2024, from <https://www.scale-company.com/post/4-key-challenges-of-innovation-management>
- Durst, S., Mention, A.-L., & Poutanen, P. (2015). Service innovation and its impact. What do we know about? 21(Investigaciones Europeas de Dirección y Economía de la Empresa), 7. 10.1016/j.iedee.2014.07.003
- Eveleens, C. (2010). Innovation management; a literature review of innovation process models and their implications.
https://www.researchgate.net/publication/265422944_Innovation_management_a_literature_review_of_innovation_process_models_and_their_implications
- Firdaus, A., Sobarna, A., & Azel, F. E. (2021). Inovasi Layanan dan Kepuasan Pelanggan Pada E-Commerce. Peran dari Customer Value Creation, 12(Industrial Research Workshop and National Seminar), 10. <https://jurnal.polban.ac.id/ojs-3.1.2/proceeding/article/view/2832/2211>
- Helmer, J., Huynh, T., Lobacz, K., Kor, B., & Wakkee, I. (2021). Innovating digitally for services. A review of innovation process literature focused on digital innovation and service innovation. 10.1016/j.procs.2021.09.050.
- Kotter, J. P., & Schlesinger, L. A. (2008). Choosing strategies for change. Harvard Business Review, 86(7-8), 130-139.
- OECD. (2023). Competition and Innovation: A Theoretical Perspective, OECD Competition Policy Roundtable Background Note. www.oecd.org/daf/competition/competition-and-innovation-atheoretical-perspective-2023.pdf.
- Shields, K. (2022). Leading Innovation 2nd Edition (2nd ed.). Pressbooks. <https://ecampusontario.pressbooks.pub/leadinginnovation2/>
- Sprinthall, R. C. (2011). Basic statistical analysis 9th Edition. London: Pearson. 672 pages.
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. Journal of Marketing, 68(1), 1-17.
- Yin. R. K. (2014). Case study research design and methods (5th ed.). Thousand Oaks, CA: Sage. 282