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DESIGNING FRAMEWORK FOR IT START-UP SUSTAINABLE BUSINESS: INTERNAL AND EXTERNAL ENVIRONMENT APPROACH

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Abstract

Business today operates in high digitalized and dynamic condition that creates challenge for start-up business with low competitiveness and resources. This study looks at internal and external environment factors to understand how business can sustain in challenging environment. This study uses a mix method research design combining qualitative and quantitative approaches. Data were collected through in-depth interviews with several stakeholders to understand their preferences and expectations. The collected data was analyzed to identify key driver factors. The qualitative output was further analyzed using strategic management approach including resource-based theory and porter's five force analysis. These approaches were used to robust the output. This study found six key driver of IT start-up sustainable business. These key drivers are commercial value, trust and risk assurance, governance and communication clarity, incident resolution and SLA reliability, proactive service improvement, service responsiveness, and technical capability. Moreover, PT Cariva Mitra Inovasi as case study object is perceived positively in communication, collaboration, reporting, incident handling, SLA reliability, proactive monitoring, responsiveness and technical support. This study contributes to strategic marketing literature and stakeholders on improving their sustainable business framework.

Keywords: IT start-up business, sustainable business, external factor analysis, internal factor analysis, business competitiveness

INTRODUCTION

In current day, technology continues to change rapidly. Modern business strategy now is shapped by Innovation, automation, artificial intelligence, cloud computing, cybersecurity and data-driven decision-making. These conditions make technology essential for business survival and competitiveness (Blank and Eckhardt, 2023). Numerous companies need partners and strong networks to implement digital solutions. This shapes opportunities for IT solution. At the same time, new IT start-ups need to capture the growing demand for technology implementation. Even though, not all of start-ups can survive even after three years, while others fail to maintain their business (Victor, 2019). An IT start-up must bring relevant value and stable revenue to reduce dependency on external parties and avoid unnecessary spending. A business must grow and remain viable in the long term (Ovans, 2015; Qu et al., 2022). Internal and external factors are essential key factor influence start-up business stability (Gajewski & Kungl, 2024). These factors are covered to resources, capabilities, competition, customer needs and market conditions (Qu et al., 2022). To make it relevant, this study identifies PT Cariva Mitra Inovasi as a case of an IT solution implementor start-up. It follows relevant strategic frameworks to analyse the company's condition and design suitable recommendations.

According to Forbes, 90% start-ups fail remains a major concern. Start-ups must build trust to strengthen their brand and develop business networks. They also need build credibility and replicate future success (Adam, 2024). Therefore, start-ups must manage their business and market carefully to survive not only in the first year, but also over the next three, five and ten years (Weber et al., 2022). PT Cariva Mitra Inovasi faces this dynamic and uncertain condition. The company must identify possible opportunities while managing its limitations. It must also define its unique features and services. These are needed to build trust, improve competitiveness and support long-term business sustainability.

Current literature has limited consensus on how to measure IT start-up sustainability. Previous studies use many different frameworks to assess start-up performance and survival (Gajewski and Kungl, 2024; Bocken and Snihur, 2020; Godelnik and van der Meer, 2019; Joyce and Paquin, 2016). Joyce and Paquin (2016) perform the triple-layered business model canvas, which separates economic, social and environmental perspectives. Godelnik and van der Meer (2019) highlight the necessary to implement lean start-up practices to address sustainability beyond short-term market validation. Bocken and Snihur (2020) show that sustainable business model experimentation requires longer time periods, stakeholder engagement and systemic thinking. Gajewski and Kungl (2024) further warn that business modelling may still prioritise economic goals when environmental, social and financial goals are in tension. These previous studies show that different measurement method which must consider stakeholder value, governance, adaptability, social impact and environmental responsibility. Therefore, the literature remains fragmented. Different frameworks capture different dimensions of sustainability. However, there is a few literatures provide an integrated way to assess how start-ups create, test and grow sustainable business models over time.

This gap supports the need for a structured framework to evaluate both internal capabilities and external pressures affecting IT start-up sustainability. These approaches can help explain how an IT solution implementor start-up can sustain its business. According to pre-research evaluation, PT Cariva Mitra Inovasi has operated for more than four years. However, several challenges relate to resources, knowledge and market fit affect the company's ability to maintain growth in the future. PT Cariva Mitra Inovasi was established in 2020 during the COVID-19 pandemic. The founder saw a business opportunity in the IT industry. Since its establishment, the company has developed key performance indicators to support organisational growth. In the first year, the main KPI focused on acquiring new clients. This target was achieved. In the second year, the company increased its new client target. This target was also achieved. However, the company added a new KPI related to managed services. Managed service refers to post-sales support for customer systems and solutions. This KPI was not achieved in the second year. In the third year, the company aimed to differentiate itself from competitors. It focused on improving customer service quality. However, the managed service KPI was still not achieved. In the same year, the company added another KPI related to exposure from technology principals. These principals include product providers such as Google, Huawei, AWS and Alibaba Cloud. The company received two recognitions. Google provided exposure through participation in the TokenX and Trans Digital events. Alibaba Cloud also awarded the company with the Top Growth Award.

In the fourth year, the company added more components to its managed service offering. These included error prevention, reporting and SLA commitment. However, the company still did not achieve the managed service target. Another unachieved goal was product development. Since the second year, the company has aimed to create its own product. This goal was intended to reduce dependency on reselling principal products. It was also important because reseller margins have become smaller. A stronger product portfolio could support more sustainable financial performance. In the next three years, the company aims to reach an average deal size of USD 100,000 and managed service revenue of USD 30,000 per deal per year. The achievement is summarized as following Table 1.

Table 1. PT Cariva Mitra Inovasi KPI Achievement

Year	KPI	Metric	Target	Actual	Met (Y/N)
Year 1	Customer Logo (Acquisition)	# of Customer	20	30	Y
Year 2	Customer Logo (Acquisition)	# of Customer	30	30	Y
Year 2	Managed Service	# of Customer	15	10	N
Year 2	Creation new product	# of Invention	1	0	N
Year 3	Managed Service	# of Customer	40	15	N
Year 3	Creation new product	# of Invention	1	0	N
Year 3	Exposure from principal	# of Award	4	2	N
Year 4	Managed Service	# of Customer	60	36	N
Year 4	Creation new product	# of Invention	1	0	N
Year 5	Managed Service	# of Customer	80	60	N
Year 5	Creation new product	# of Invention	1	0	N
Year 6–9 (Future)	Deal Size Average	Revenue / Deal / One Time	100K USD		N
Year 6–9 (Future)	Managed Service Deal Size	Revenue / Deal / Year	30K USD		N

PT Cariva Mitra Inovasi faces complex condition due to loss of KPI achievement. The start-up now is running under complexity, while threats and reduce business position. In the result, this study has two research objectives as follows:

1. To identify the unique features expected by customers and potential customers in IT managed service providers, both before and after sales.
2. To formulate a business strategy that can increase the PT Cariva Mitra Inovasi business sustainability and competitiveness.

LITERATURE REVIEW

IT Start-up Business

Information technology refers to a group of fields within information and communication technology. It includes computer systems, software, programming languages, data processing and data storage. It is also closely related to computer science and computer engineering ("Information Technology," 2025). The scope of information technology is broad. It includes computers, supporting equipment, software, firmware, related services and other information resources. It also includes systems used to collect, store, process, manage, transmit and display data or information (National Institute of Standards and Technology, 2006).

The development of information technology continues to influence business activities. Several technologies have become important for firms, including artificial intelligence, agentic AI, cloud and edge computing, advanced connectivity, cybersecurity, quantum technology, robotics, mobility technology, bioengineering, space technology and energy-related technology. These technologies increase the need for computing power and digital capability. They also encourage firms to adopt more adaptive and responsible technology practices (Yee et al., 2025).

A start-up can be defined in different ways. The definition may depend on firm size, age, growth orientation, financing method, product readiness and organisational formality. Some definitions also relate start-ups to limited resources and high uncertainty. Weber et al. (2022) explain that start-ups are often linked to equity-based funding and the intention to grow rapidly. However, growth is not always measured in the same way. This shows that the concept of a start-up is still interpreted differently across studies and institutions.

The UK Government (2018) defines a start-up as a young, independent and privately operated company. It is usually established by one or more entrepreneurs to develop a product or service that is expected to have market demand. Start-ups often begin with high costs and limited revenue. Therefore, external funding is commonly needed to support their early development. This condition makes financial management important for start-up survival.

Start-up failure is a major issue in entrepreneurship. Forbes reports that many start-ups fail, which shows the difficulty of sustaining a new business (Adam, 2024). Several common causes of failure have been identified. These include poor product-market fit, insufficient funding, weak team composition, intense competition, pricing problems, poor product quality, an unsustainable business model, ineffective sales and marketing, limited attention to customer needs and poor launch timing (Arinkina, 2025). These factors are relevant for IT start-ups because they operate in a competitive and fast-changing market. Therefore, IT start-up sustainability should be examined through both internal capability and external market conditions.

Internal Environment Analysis Framework

Internal environment analysis frameworks were used SERVQUAL, The Importance-Performance Matrix Analysis (IPMA) and VRIN Framework. SERVQUAL is a framework used to assess service quality. It compares customer expectations with customer perceptions of the service received. Service quality is considered stronger when the gap between expectation and perception is smaller. The framework was introduced by Parasuraman, Zeithaml and Berry to measure service quality in the service sector. It was later refined into five main dimensions: reliability, assurance, tangibles, empathy and responsiveness (Parasuraman et al., 1993a). Reliability refers to the ability to provide the promised service accurately and consistently. Assurance refers to employee knowledge, courtesy and ability to build customer trust. Tangibles refer to physical facilities, equipment, personnel and communication materials. Empathy refers to individual attention given to customers. Responsiveness refers to the willingness to help customers and provide prompt service. These five dimensions are often known as RATER. In this study, SERVQUAL is used as part of the internal environment analysis. It helps identify how customers perceive the managed service quality of PT Cariva Mitra Inovasi. The framework is relevant because IT managed services depend on trust, reliability, technical support and responsiveness. These elements are important before sales and after sales. By using SERVQUAL, the study can examine which service dimensions have been delivered well and which dimensions require improvement.

Importance-Performance Matrix Analysis (IPMA) is used to evaluate service or product attributes based on two aspects. The first aspect is how important an attribute is to customers. The second aspect is how well the firm performs on that attribute. The framework was introduced by Martilla and James (1977). It is widely used in marketing and

service studies because it helps identify priority areas for improvement (Bacon, 2003; Feng et al., 2014; Martilla and James, 1977). IPMA usually presents attributes in four quadrants. The first quadrant is "Concentrate Here." It includes attributes with high importance but low performance. These attributes need immediate improvement. The second quadrant is "Keep Up the Good Work." It includes attributes with high importance and high performance. These attributes should be maintained. The third quadrant is "Low Priority." It includes attributes with low importance and low performance. The fourth quadrant is "Possible Overkill." It includes attributes with low importance but high performance. These attributes may receive more resources than needed (See Figure 1).

IPMA has been applied in several digital service contexts. Rachmawaty et al. (2021) used IPMA to analyse an integrated web-based information system in higher education. The study showed that IPMA can be applied to complex information systems when the attributes are adapted to the digital service context. Efficiency and process simplicity were found to be important user priorities. Responsiveness and system availability were also relevant, but their importance depended on the service context. This shows that IPMA should be adjusted to the type of digital service being evaluated.

IPMA has also been combined with e-SERVQUAL to assess digital service quality. Agustina and Suyatno (2024) used this approach to evaluate the BTN Mobile application. The study found that fulfilment, system availability and responsiveness were important areas for improvement. This supports the use of IPMA in digital service evaluation. IPMA has also been used to assess e-government benefits from the user perspective. Seng Wong et al. (2011) showed that the IPMA grid can help identify which service benefits are performing well and which benefits require strategic attention.

The VRIN framework is rooted in the resource-based view of the firm. This view argues that competitive advantage can be built from internal resources and capabilities. It differs from approaches that focus mainly on external industry conditions. The resource-based view became influential in strategic management during the 1990s. Barney's work on firm resources and sustained competitive advantage is widely recognised as an important foundation of this perspective (Barney, 1991). The VRIN framework is used to assess whether a firm's resources can support sustainable competitive advantage. Four criteria are used in this assessment. First, resources must be valuable. This means that they help the firm improve efficiency or effectiveness. Second, resources must be rare. This means that they are not widely owned by competitors. Third, resources must be imperfectly imitable. This means that they are difficult for competitors to copy. Fourth, resources must be non-substitutable. This means that they cannot be easily replaced by other resources with similar functions (Barney, 1991).

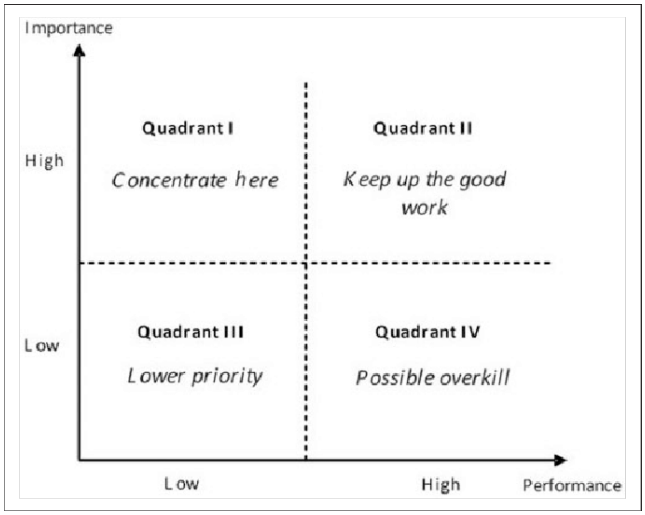

Figure 1. Importance-Performance Matrix Analysis (IPMA) Framework (Bahadori et al., 2018)

In the context of IT service firms, internal capabilities are important sources of competitiveness. Technical knowledge, service delivery routines, customer relationship capability, cloud expertise and problem-solving ability can support service quality. These capabilities may become more strategic when they are unique and difficult to replicate. Zhang and Ravishankar (2019) show that cloud service providers rely on vendor capabilities and organisational actions to support service development and delivery. These capabilities can contribute to competitive advantage when they are distinctive and hard for competitors to imitate.

In this study, the VRIN framework is used as part of the internal environment analysis. It helps assess whether the capabilities of PT Cariva Mitra Inovasi can support business sustainability. The framework is relevant because

the company operates in a competitive IT managed service market. Many providers may offer similar products from the same technology principals. Therefore, internal capabilities become important differentiators. These include technical expertise, customer support quality, responsiveness, managed service routines, partner relationships and service improvement capability.

The use of VRIN complements SERVQUAL and IPA in this study. SERVQUAL is used to understand service quality from the customer perspective. IPA is used to identify which service attributes should be prioritised. VRIN is used to assess whether the company's internal resources can become a source of competitive advantage. Together, these frameworks provide a more complete internal analysis. They connect customer perception, service improvement priorities and internal strategic capability.

External Environment Analysis Framework

External environment analysis framework were using the Five Forces Analysis, Segmenting Targeting Positioning (STP), marketing mix, and AIDA Framowork. Porter's Five Forces is used to analyse the external competitive environment of a firm. The framework explains how industry conditions influence firm competitiveness. It focuses on five forces (see figure 2): rivalry among existing competitors, threat of new entrants, threat of substitute products or services, bargaining power of buyers and bargaining power of suppliers. The strength of each force may differ across industries. Therefore, the framework helps identify which external pressures are most relevant to a firm's strategic position (Goyal, 2020).

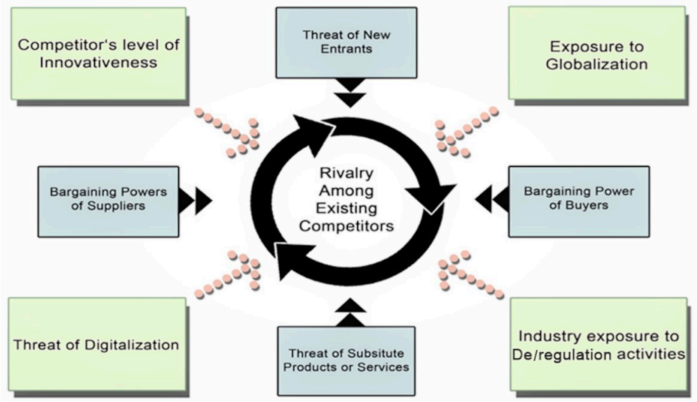

Figure 2. Proposed Augmented Porter's Five Forces Model (Isabelle et all., 2020)

Rivalry among existing competitors refers to the intensity of competition among firms in the same industry. It is influenced by the number of competitors, industry growth and the level of product or service differentiation. The threat of new entrants refers to the possibility that new firms will enter the market and increase competition. The threat of substitutes refers to alternative products or services that can meet similar customer needs. Bargaining power of buyers refers to the ability of customers to demand lower prices or higher service quality. Bargaining power of suppliers refers to the ability of suppliers to influence price, quality or availability of key inputs. In the IT industry, Porter's Five Forces remains useful as a basic tool for external analysis. However, the framework may need to be adapted to reflect digital industry conditions.

Isabelle et al. (2020) argue that digitalisation, innovativeness, globalisation and regulation should also be considered when analysing the IT industry. These additional forces are relevant because IT firms operate in markets that are shaped by fast technological change, cross-border competition and regulatory uncertainty. The Five Forces framework has also been applied in IT outsourcing and cloud-related studies. Fung (2014) used the framework to analyse competitive pressures in the IT outsourcing service industry. The study showed that customer bargaining power, supplier influence and rivalry among service providers can affect technology adoption decisions. This is relevant for IT managed service firms because customers often compare providers based on price, technical capability, reliability and after-sales support. In this study, Porter's Five Forces is used to analyse the external environment of PT Cariva Mitra Inovasi. The framework helps identify the competitive pressures faced by the company. These pressures include rivalry from similar IT solution providers, buyer sensitivity to price, dependence on technology principals and the threat of substitute service models. This analysis supports the formulation of strategies that can strengthen the company's position in the IT managed service market.

Segmenting, Targeting and Positioning, or STP, is used to develop a focused marketing strategy. The framework begins with segmentation. In this stage, the market is divided into groups of customers with different needs, behaviours or characteristics. The second stage is targeting. In this stage, one or more customer segments are selected

based on their attractiveness and the firm's ability to serve them. The third stage is positioning. In this stage, the firm defines how its offering should be perceived by the target market (Kotler et al., 2022). STP is important because firms cannot serve all customers in the same way. Resources are often limited. This condition is more relevant for start-up firms. A start-up must identify the customer groups that can be served effectively. It must also define a clear value proposition for those customers. The selected target market should match the firm's resources, capabilities and service strengths.

Positioning is used to create a distinct place in the mind of target customers. It explains why customers should choose one provider over another. Effective positioning is based on points of difference and points of parity. Points of difference refer to benefits that make the firm's offering unique. Points of parity refer to benefits that are expected in the industry and must be delivered to remain competitive. For IT managed service providers, positioning may be built around reliability, responsiveness, technical expertise, cost efficiency and trusted after-sales support.

Customer value is also central to STP. Customers usually compare offerings based on the value they expect to receive. This value may be functional, psychological or monetary. Functional value is related to service performance, reliability and ease of use. Psychological value is related to trust, confidence and perceived risk reduction. Monetary value is related to price, fees and cost savings. These forms of value help explain how customers evaluate IT service providers.

Previous studies show that segmentation and positioning can be applied in digital and B2B service contexts. Lee et al. (2004) used behavioural data to segment online game users across different countries. Curiskis et al. (2023) examined how B2B SaaS firms use customer lifetime value to identify and prioritise target customers. Williams et al. (2019) showed that B2B service firms use website signals to communicate service quality, reliability and performance. These studies support the relevance of STP for firms that serve digital and business customers.

In this study, STP is used to formulate the promotional strategy for PT Cariva Mitra Inovasi. The framework helps identify which customer segments should be prioritised. It also helps define how the company should position its managed service offering. This is important because the company operates in a market where many providers offer similar principal products. Clear positioning is needed to communicate its service differentiators and improve market awareness.

The 7P marketing mix is an extension of the traditional marketing mix. It was developed to better explain service marketing. The seven elements are product, price, place, promotion, people, process and physical evidence. The additional elements of people, process and physical evidence are important because services are often intangible and depend on human interaction (Ryńca and Ziaeian, 2021).

Product refers to the goods or services offered to customers. In an IT managed service context, the product includes cloud services, cybersecurity support, technical assistance and managed service solutions. Price refers to the cost paid by customers. It includes service fees, subscription costs and project-based charges. Place refers to how customers access the service. For IT firms, services may be delivered through online platforms, remote support, direct consultation or partner channels. Promotion refers to communication activities used to inform and persuade customers.

People refer to employees who deliver the service. In IT managed services, engineers, consultants, sales teams and support staff influence customer experience. Process refers to the procedures used to deliver the service. This includes onboarding, reporting, incident handling, escalation and SLA management. Physical evidence refers to tangible signals that help customers judge service quality. For IT firms, this may include websites, proposals, certifications, dashboards, reports, case studies and official partner recognition.

The 7P framework is relevant for service-based firms because service quality is shaped by more than the core product. Customer experience is also influenced by staff capability, service processes and evidence of credibility. Arista et al. (2025) show that digital marketing and the 7P marketing mix can support sales volume and competitive advantage in digitally enabled business environments. Although the study focuses on MSMEs, it shows that the 7P framework can be applied in businesses that use digital marketing and service-based strategies.

In this study, the 7P marketing mix is used to support the external marketing analysis of PT Cariva Mitra Inovasi. It helps examine how the company can communicate and deliver its managed service value. The framework is also used to identify which marketing elements need improvement. These may include pricing flexibility, promotion visibility, people capability, service process clarity and physical evidence of service quality.

The AIDA framework explains the stages that customers may pass through before taking action. The stages are attention, interest, desire and action. Attention refers to the ability of a message to make customers aware of an offering. Interest refers to the ability to make customers want to learn more. Desire refers to the formation of preference or intention. Action refers to the final response, such as contacting the firm, requesting a proposal or making a purchase (Vakratsas and Ambler, 1999).

AIDA is useful for structuring promotional communication. In the attention stage, the firm must make potential customers aware of its existence. This may be done through digital content, events, partner channels or referrals. In the interest stage, the firm must explain relevant customer problems and service benefits. In the desire stage, the firm must build confidence through evidence such as case studies, certifications, awards and customer testimonials. In the action stage, the firm must make it easy for customers to contact the company or request further discussion. For IT managed service firms, AIDA can help convert awareness into business opportunities. Many potential customers may not directly purchase after first seeing a provider. They may need trust, proof of capability and clear service value. Therefore, promotional messages should be developed step by step. Each stage should reduce uncertainty and strengthen customer confidence.

In this study, AIDA is used to support the promotional strategy of PT Cariva Mitra Inovasi. The framework helps organise communication activities from awareness building to customer action. It is relevant because the company faces limited market awareness among non-customers. By applying AIDA, the company can design promotion that attracts attention, builds interest, creates desire and encourages potential customers to engage with the company.

METHODS

This study used a mixed-method approach. The qualitative stage was used to identify the key drivers of IT start-up sustainability. The quantitative stage was used to structure and assess the identified drivers within the analytical framework (Sekaran and Bougie, 2018). This design was selected because the study required both in-depth interpretation and systematic evaluation. PT Cariva Mitra Inovasi was used as the case study object. The analysis focused on internal and external factors that influence the company's ability to sustain its business in the IT solution implementor industry. Data were collected through in-depth interviews with 10 participant consisting of existing customers and non-customers of PT Cariva Mitra Inovasi. The qualitative data were analysed through initial coding, focused coding and code consolidation. This process was used to identify the main service differentiators and market-related drivers that influence customer evaluation of IT managed service providers.

Interview Question

The interview questions were designed to systematically address the research objectives by capturing both customer expectations and actual service experiences in the context of managed services. First, the questions begin with pre-sales differentiators, focusing on general expectations toward managed service providers. These include aspects such as service interaction quality, provider capability and credibility, and commercial value. These questions are intentionally framed in a general context rather than referring to PT Cariva Mitra Inovasi, in order to capture unbiased customer expectations and avoid influence from existing perceptions or experiences.

Second, the interview continues with questions related to managed service components. These are divided into two groups. The first group consists of components that are currently part of PT Cariva Mitra Inovasi's service offering, including service scope and support structure, incident and root cause management, performance and capacity management, governance and SLA management, and scope boundary clarity. For these components, the questions are designed to capture both customer expectations and actual service experiences (for existing customers), enabling comparison between expected and delivered service.

The second group includes additional managed service components that are not yet a primary focus of PT Cariva Mitra Inovasi, such as IT service management processes, proactive support, security and compliance, and onboarding or transition management. For these components, the questions focus on customer expectations only, aiming to identify potential gaps and future service opportunities. Furthermore, an open-ended question is included at the end of the main discussion to capture any additional factors that may not have been covered in the predefined framework. This allows the identification of emerging themes and reduces potential bias from theory-driven questioning, consistent with the template analysis approach. The question lists are constructed as following Table 2.

Table 2. Question Lists

Customer	Non-Customer
1. How would you describe your overall experience with PT Cariva Mitra Inovasi's managed service in daily operations? (for example responsiveness, communication, and problem solving) 2. In your opinion, what aspects of PT Cariva Mitra Inovasi's managed service have worked well for your company? 3. Have you encountered any challenges in the managed service process? 4. In selecting and retaining a managed service provider, what factors are usually most important to your company? 5. Do you have any input for PT Cariva Mitra Inovasi to strengthen long-term cooperation?	**Presales differentiator** 1. From a managed service provider, what kind of service interaction and support experience do you expect? 2. From a managed service provider, what makes you confident that they can deliver the service successfully? 3. From a managed service provider, what are your expectations regarding pricing, flexibility, and value? What do you think about Commercial and Value in PT Cariva Mitra Inovasi **Managed Service Component** 1. What do you expect in terms of service scope and support structure? 2. What do you expect in terms of incident handling and issue resolution? 3. What do you expect in terms of system performance and optimization? 4. What do you expect in terms of SLA, reporting, and escalation? 5. How important is clarity of scope (in/out of scope, dependencies, asumption)? 6. How important are structured operational processes such as change management? 7. How important is proactive support and continuous improvement? 8. How important are security and compliance in service delivery? 9. How important is a smooth onboarding and transition process? **Reflection & Promotion** 1. From all the aspects we discussed, are there any other important factors or expectations you look for that we haven't covered? 2. How did you first hear about PT Cariva Mitra Inovasi? 3. Through which channels do you prefer to receive information about IT services? Do you feel you have enough information about PT Cariva Mitra Inovasi?

The identified drivers were then organised using quantitative and strategic analysis frameworks. SERVQUAL and Importance-Performance Analysis were used to assess service quality and improvement priorities. VRIN was used to evaluate whether internal resources and capabilities could support competitive advantage. Porter's Five Forces was used to analyse external competitive pressures. STP, the 7P marketing mix, the promotion mix and AIDA were used to formulate promotional recommendations. This combination allowed the qualitative findings to be translated into a structured framework for managerial decision-making. The final analysis produced

recommendations for improving managed service differentiation, customer value and market awareness. The study design framework can be summarized as following Figure 3.

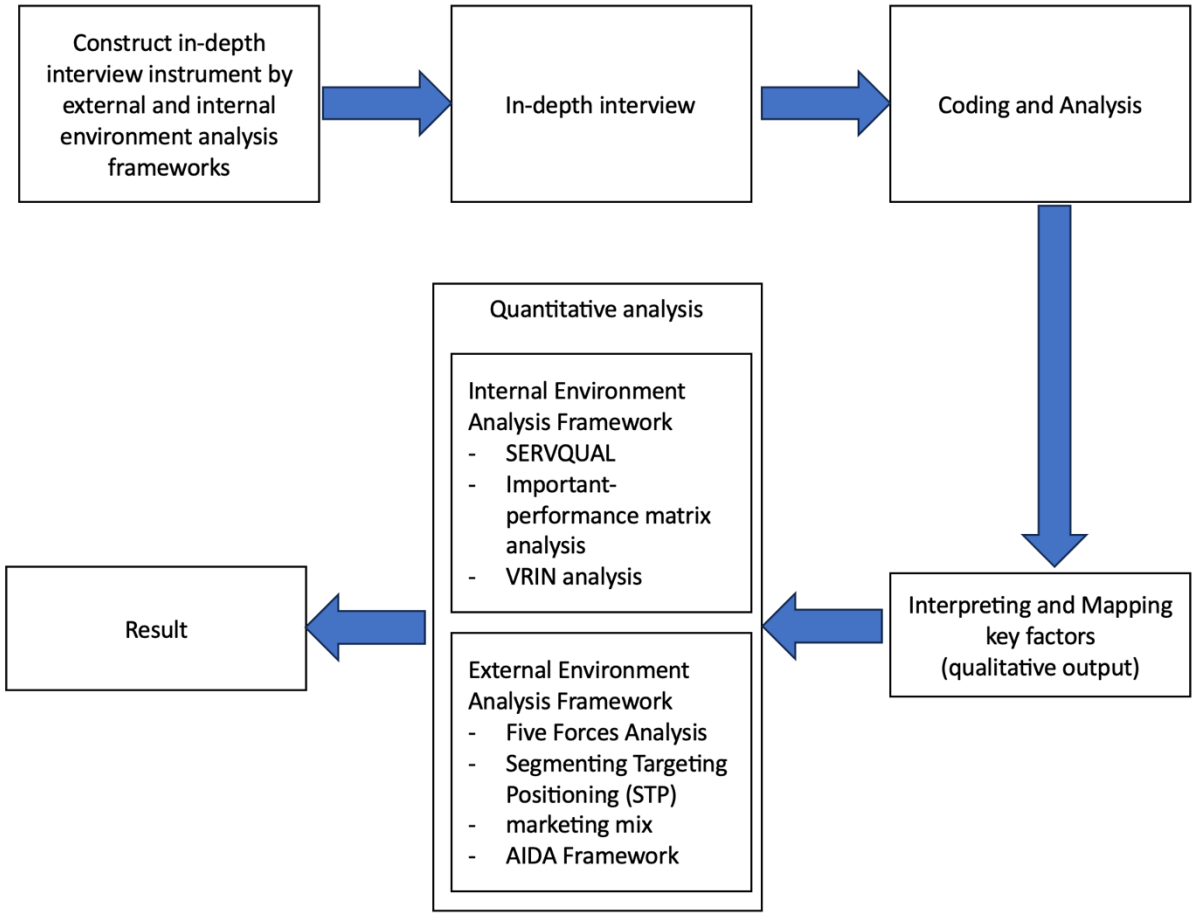

Figure 3. Research Designed Framework

RESULT AND DISCUSSION

Qualitative Approach Output

The analysis identified nine themes related to IT managed service provider selection and promotion strategy. These themes reflect the expectations of existing customers and non-customers of PT Cariva Mitra Inovasi. The findings show that customers do not evaluate IT managed service providers only from technical capability. They also consider commercial value, trust, risk assurance, communication, responsiveness, reliability and credibility.

Table 3. Qualitative Approach Output

Theme	Key Factors	Non Customer: Important	Customer: Important	Customer: Good Performance	Customer: Need Improvement	Overall Gap: Need Improvement
Commercial Value, Trust, and Risk Assurance	Certification	☑	☐	☐	☐	☑
	Flexible Billing	☑	☐	☐	☐	☑
	Flexible Operation	☑	☑	☐	☐	☑
	Pricing and TCO	☑	☑	☐	☐	☑
	Security and compliance assurance	☑	☐	☐	☐	☑
Governance, Communication Transparency,	Business oriented communication	☑	☐	☐	☐	☑

Theme	Key Factors	Non Customer: Important	Customer: Important	Customer: Good Performance	Customer: Need Improvement	Overall Gap: Need Improvement
and Scope Clarity	Good Communication	☑	☑	☑	☑	☑
	Human resource Intra team	☐	☑	☑	☑	☑
	Scope Clarity	☑	☐	☐	☐	☑
	Structured operational process and transition	☑	☑	☑	☑	☑
Incident Resolution and SLA Reliability	Escalation management	☑	☑	☑	☑	☑
	Incident handling	☑	☑	☑	☐	☐
	Preventive action	☑	☑	☑	☑	☑
	Service Quality	☑	☑	☐	☑	☑
	SLA Reliability	☑	☑	☑	☐	☐
Proactive and Continuous Improvement Orientation	Proactive action	☑	☑	☑	☑	☑
	Root cause analysis	☑	☐	☐	☐	☑
	Solution Innovation	☐	☐	☐	☑	☑
Service Responsiveness and Availability	Dedicated PIC	☑	☐	☑	☐	☐
	Fast Response	☑	☑	☑	☐	☐
	Service availability	☑	☑	☑	☐	☐
Technical Capability and Optimization Expertise	Cost Optimization	☑	☐	☐	☐	☑
	Hybrid Cloud & On Prem	☑	☐	☐	☐	☑
	Technical Capability	☑	☑	☑	☑	☑
Low Market Awareness of PT Cariva Mitra Inovasi	Brand Awareness	☐	☐	☐	☐	☑
Trust Based and Referral Based Promotion	Industry Referral	☑	☐	☐	☐	☑
	Portfolio	☑	☐	☐	☐	☑
Institutional Credibility and Official Channel Visibility	Official Channel visibility	☑	☐	☐	☐	☑
	Partnership status	☑	☐	☐	☐	☑

The first theme is commercial value, trust and risk assurance. This theme shows that customers consider more than the lowest price. Existing customers consider pricing, budget, service quality and business requirement alignment. Non-customers consider broader commercial factors. These include total cost of ownership, predictable cloud cost, flexible billing, bill of material validation, security, compliance, certification and official platform credibility. Therefore, clear value, flexible commercial terms and risk assurance are important differentiators.

Certification, security assurance, compliance assurance and pricing transparency can strengthen customer trust. The second theme is governance, communication transparency and scope clarity. Existing customers stated that PT Cariva Mitra Inovasi performs well in communication, collaboration, documentation, ticketing, follow-up tracking, monthly reporting and system performance updates. However, several improvements are still expected. These include better internal communication, more regular process updates, clearer service result visibility, more detailed reporting and more frequent coordination. Non-customers also emphasised business-oriented communication, technical translation, managed service term clarity, ticket quota clarity, support scope clarity, reporting, change management, onboarding and handover process. These findings show that customers expect transparency during the service relationship. They want to know what is included, how issues are tracked and how the service process is managed.

The third theme is incident resolution and SLA reliability. This theme is central to managed service expectations. Existing customers reported positive experiences in issue handling, troubleshooting, ticketing support, issue resolution, SLA commitment, escalation and preventive recommendations. These findings show that PT Cariva Mitra Inovasi has built a positive perception in incident resolution and SLA reliability. However, some weaknesses remain. Issue resolution may take longer when third parties or vendors are involved. Some customers also expect faster resolution and stronger preventive monitoring. Non-customers expect clear escalation matrices, WhatsApp escalation, principal escalation, SLA response time, SLA resolution time and support for critical issues. This means that incident handling must be fast, structured and visible. The fourth theme is proactive and continuous improvement orientation. Customers expect a managed service provider to be proactive. They do not expect the provider to only respond after problems occur. PT Cariva Mitra Inovasi received positive feedback in proactive monitoring, system improvement recommendations and preventive recommendations. However, proactive communication, proactive initiatives, solution innovation and service scope expansion still need improvement. Non-customers also viewed proactive support as important. Some were willing to pay more for proactive service. Root cause analysis was also considered valuable. These findings indicate that proactive service should be formalised and communicated as part of the company's differentiation.

The fifth theme is service responsiveness and availability. This is one of the clearest strengths of PT Cariva Mitra Inovasi. Existing customers described the company as responsive, helpful and fast in handling daily operational issues. WhatsApp support, 24/7 response and dedicated engineer support were also mentioned. Non-customers also considered responsiveness and availability important. They expect accessible support, fast response and a dedicated person in charge. This theme shows that responsiveness gives customers a sense of security, especially during critical business situations. The sixth theme is technical capability and optimisation expertise. Existing customers considered technical capability important. PT Cariva Mitra Inovasi was perceived positively in technical response and technical support. However, engineer knowledge still needs improvement. Non-customers expected broader technical capabilities. These include hybrid cloud capability, on-premises capability, multi-cloud capability, cloud cost optimisation, cloud delivery network, sizing optimisation, database configuration optimisation and performance optimisation. These findings show that customers expect the provider to act as a trusted advisor. Technical capability should not only solve problems. It should also improve system performance and reduce costs.

The seventh theme is low market awareness. All non-customer participants stated that they had never heard of PT Cariva Mitra Inovasi. This does not indicate negative perception. It indicates low awareness among potential customers. Existing customers already recognise the company's strengths in responsiveness, issue handling, communication and technical support. However, these strengths are not yet visible to the wider market. This shows that PT Cariva Mitra Inovasi has a market awareness gap. The eighth theme is trust-based and referral-based promotion. Non-customers prefer managed service providers with strong reputation, customer stories, testimonials, client portfolios and referrals from similar companies. This finding suggests that promotional messages should not only describe service scope. They should also provide evidence of experience and credibility. Potential customers are more likely to trust PT Cariva Mitra Inovasi when customer stories and industry referrals are available. The ninth theme is institutional credibility and official channel visibility. Non-customers prefer official partners of cloud principals. They believe official partners may provide better pricing, smoother communication and stronger escalation support. Formal selection through official tender or vendor registration was also considered important. This finding shows that institutional credibility can strengthen trust. Therefore, PT Cariva Mitra Inovasi should make its official partnerships, principal relationships, awards, certifications and tender registration channels more visible.

The findings also show that potential customers trust referrals and customer evidence. Referrals from similar companies are considered important. Customer portfolios, customer stories and testimonials are also useful for building trust. Institutional credibility also matters. Official partnership with cloud principals, awards, certifications and official vendor registration can increase customer confidence. Therefore, the recommended promotional strategy is to expand market awareness through evidence-based promotion. PT Cariva Mitra Inovasi should develop more

customer stories and strengthen its customer portfolio. It should also build a referral programme that targets potential customers in similar industries. The promotion should highlight the company's strengths in responsiveness, incident handling, technical support, preventive action, communication and reporting. The company should also make its official cloud partnerships, awards, certifications and tender participation more visible. These actions can help strengthen credibility and improve awareness among potential customers

Quantitative Research Output

The interview findings were further interpreted using the VRIN framework and Porter's Five Forces. The interview results remained the main basis of analysis. VRIN was used to assess the internal resources and capabilities of PT Cariva Mitra Inovasi. Porter's Five Forces was used to analyse the external competitive environment in the managed service industry. These frameworks were used to connect customer expectations with the company's internal strengths and external pressures.

The VRIN analysis shows that PT Cariva Mitra Inovasi has several internal resources that may support business sustainability. These resources include certified and experienced technical engineers, support team availability, service portfolio, principal partnerships, and customer relationships. These resources were assessed based on four criteria. The criteria are valuable, rare, inimitable, and non-substitutable.

The first resource is certified and experienced technical engineers. PT Cariva Mitra Inovasi has several professional certifications. These include Alibaba Cloud certification in cloud computing and security, AWS certification in DevOps, Google Cloud certification in development, security engineering, security operations and workspace administration, Huawei Cloud certification, Acronis certification in security and disaster recovery, and SAP ERP Cloud implementation certification. These certifications indicate that the company has technical capability across several cloud and technology platforms. This resource is valuable. It can support customer trust and service delivery. It may also be considered relatively rare because not all small IT service firms have certifications from several cloud brands. However, it is not fully inimitable. Competitors may develop similar capability if they invest in training, certification and technical talent. The second resource is support team capacity and availability. Customers reported that PT Cariva Mitra Inovasi is responsive and collaborative. This shows that the support team is valuable for daily service delivery. However, the team size is still limited. The company has fewer than 50 employees. This may create capacity risk if the number of projects and transactions increases. Therefore, this resource is valuable, but its scalability must be managed carefully.

The third resource is the service portfolio. PT Cariva Mitra Inovasi provides several services. These include cloud transformation, multi-cloud and hybrid cloud, big data, disaster recovery, modernisation, cybersecurity protection, digital workspace, smart business, business process review and cost optimisation analysis. The company also has its own products, such as Arsipku and MsSolvie. This portfolio is valuable because it allows the company to respond to different customer needs. It may also support differentiation because the services are relatively broad for a start-up firm. However, the portfolio must be supported by sufficient resources and clear service processes. The fourth resource is principal partnership. PT Cariva Mitra Inovasi works with several technology principals, including AWS, Google Cloud, Alibaba Cloud, Huawei Cloud, SAP and other platforms. These partnerships are valuable because they support access to technology platforms, certification, pricing and escalation channels. However, principal partnerships can also create dependency. The company depends on the policies, pricing and support structure of the principals. Therefore, this resource is valuable, but it must be managed strategically. The fifth resource is customer relationship and networking. Existing customers gave positive feedback on communication, responsiveness and technical support. This indicates that customer relationships are valuable. However, the company's visibility among potential customers is still limited. Non-customers had low awareness of PT Cariva Mitra Inovasi. This means that customer relationships should be converted into stronger market evidence. Customer stories, testimonials and referral programmes can help make this resource more visible.

The strongest internal resources are certified and experienced technical engineers, service portfolio and principal partnerships. These resources can support the company's ability to meet customer expectations. However, several internal gaps remain. The company still needs more flexible commercial models, stronger company-level certification, more structured operations and better resource planning. These improvements are important because growth may increase the pressure on the current team. The VRIN interpretation also supports the findings from Research Question 1. Customers and potential customers expect clear value, risk assurance, structured communication, reliable incident handling, proactive improvement, responsiveness and technical expertise. PT Cariva Mitra Inovasi already has several resources to support these expectations. However, these resources need to be formalised and communicated more clearly. Certification, service scope, escalation process, reporting, and customer success evidence should be made more visible to the market.

Table 4. VRIN Analysis Output

Resource	Valuable	Rare	InImitable	Non Substitutable
Certified and Experienced Technical Engineer	Yes	Potential	Medium	Medium
Support team capacity and availability	Yes	Partial	Low	Low
Service portfolio	Yes	Potential	High	Medium
Principal Partnership	Yes	Potential	Medium	Medium
Customer Relationship & Networking	Yes	Partial	Medium	Medium

Porter's Five Forces analysis shows that PT Cariva Mitra Inovasi operates in a competitive external environment. The threat of new entrants is considered moderate. The number of new IT service providers is not extremely high. However, new entrants may still become a threat if they can obtain certifications, recruit technical talent and build strong principal partnerships. The services offered by PT Cariva Mitra Inovasi are also not fully unique. This makes differentiation important.

The bargaining power of buyers is high. Customers have many alternative IT managed service providers. They can compare providers based on cloud expertise, technical capability, security, service scope and price. Switching costs may also be moderate to low in some cases. Cloud providers may offer incentives to move customers to their platforms. This condition gives customers more bargaining power. The bargaining power of suppliers is also high. PT Cariva Mitra Inovasi depends on cloud and technology principals. These include AWS, Google Cloud, Alibaba Cloud, Huawei Cloud, SAP and other platforms. These principals provide the technology platform, certification, partner pricing and escalation support. The company depends more on the principals than the principals depend on the company. This creates supplier pressure.

The threat of substitute products or services is moderate to low. Customers may build their own internal IT teams, purchase managed services directly from principals or use automation tools. However, these substitutes may not fully replace the role of a managed service partner. Internal teams require time, cost and capability development. Direct principal services may involve higher costs. Automation tools may still need technical interpretation and human support. Therefore, managed service providers still have a relevant role. Rivalry among existing competitors is high. Many providers offer similar products and services. Competitors may also work with the same cloud principals. This creates pressure on price, service quality and differentiation. In this situation, PT Cariva Mitra Inovasi must show clear service value. The company should not compete only on price. It should also compete through responsiveness, technical capability, customer trust, structured service delivery and credible partnerships.

In summary, the external environment creates strong competitive pressure. Buyer power, supplier power and rivalry among competitors are high. The threat of new entrants is moderate. The threat of substitutes is moderate to low. This condition shows that PT Cariva Mitra Inovasi must strengthen differentiation and market visibility to sustain its business. The combined analysis of the interview findings, VRIN and Porter's Five Forces provides a clearer strategic interpretation. Customers and potential customers seek managed service providers that can deliver clear value, predictable cost and risk assurance. They also expect security, compliance, certification, business-oriented communication, transparent scope and structured operations. After sales, they expect quick response, clear resolution, proper escalation, root cause analysis, preventive action and proactive service improvement. Technical expertise is also important, especially in hybrid cloud, performance optimisation and cost optimisation.

PT Cariva Mitra Inovasi has received positive feedback in several areas. These include communication, collaboration, reporting, incident resolution, SLA reliability, proactive monitoring, preventive recommendation, responsiveness, technical response and technical support. However, the company still needs to improve several areas. These include flexible commercial models, company-level certification, internal communication, business-oriented communication, process updates, service result visibility, detailed reporting and regular coordination. Improvements are also needed in vendor-related issue resolution, preventive monitoring, proactive communication, solution innovation, service scope expansion, multi-brand interoperability and engineer knowledge.

The VRIN analysis shows that PT Cariva Mitra Inovasi has internal resources that can support most of these improvements. Certified technical engineers, service portfolio and principal partnerships are the main internal strengths. These resources can be used to improve service credibility, technical delivery and customer confidence. However, the company still needs better operational structure and stronger capacity planning. This is important because the current team size may become a limitation when new projects increase. The Five Forces analysis shows that external pressure is high. Buyers have many provider options. Suppliers have strong influence because the company depends on technology principals. Rivalry is also high because many competitors offer similar services. However, the threat of substitutes is not very high. This means that PT Cariva Mitra Inovasi still has room to grow if its value proposition is clearly communicated and supported by strong service delivery.

CONCLUSION

This study aims to identify the factors driving the sustainability of IT startup businesses through an internal and external environmental approach. PT Cariva Mitra Inovasi was used as the case study subject. The results show that the sustainability of IT startup businesses is not determined solely by technical capabilities. Sustainability is also influenced by commercial value, trust, service governance, responsiveness, service reliability, internal capabilities, and external competitive pressures. Based on the results of the qualitative analysis, nine main themes were identified. These themes are commercial value, trust, and risk assurance; governance, communication transparency, and scope clarity; incident resolution and SLA reliability; proactive orientation and continuous improvement; responsiveness and service availability; technical capabilities and optimization expertise; low market awareness; trust-based promotion and referrals; and institutional credibility and visibility of official channels. These findings indicate that customers and prospective customers evaluate managed service providers based on both technical and non-technical aspects.

PT Cariva Mitra Inovasi received positive evaluations in several service areas. These areas include communication, collaboration, reporting, incident handling, SLA reliability, proactive monitoring, responsiveness, technical response, and technical support. However, there are still some areas that need improvement. These areas include commercial flexibility, enterprise-level certification, business communication, process updates, visibility of service outcomes, more detailed reporting, escalation with third parties, preventive monitoring, solution innovation, expansion of service scope, multi-brand interoperability, and enhancement of engineers' knowledge.

The results of the VRIN analysis indicate that PT Cariva Mitra Inovasi possesses several valuable internal resources. The key resources are certified engineers, the service portfolio, partnerships with principals, support capacity, and customer relationships. Certified engineers, the service portfolio, and principal partnerships are the company's main strengths. However, team capacity and operational structure still need to be strengthened. This is important because project growth can increase the workload and the risk of resource constraints. The results of the Porter's Five Forces analysis indicate that external pressures are quite strong. Buyer power is high because customers have many choices of service providers. Supplier power is also high because the company relies on technology principals. Competition among service providers is also high because many companies offer similar services. The threat of new entrants is moderate. The threat of substitutes is moderate to low. These conditions indicate that PT Cariva Mitra Inovasi needs to strengthen its service differentiation and market visibility.

The main contribution of this study is the development of a framework for analyzing the business sustainability of IT start-ups based on internal and external environments. This framework combines SERVQUAL, IPMA, VRIN, Porter's Five Forces, STP, the marketing mix, and AIDA. This approach helps link customer expectations, internal capabilities, external pressures, and promotional strategies. The framework can also be used by stakeholders to evaluate the business's position and develop strategies to enhance competitiveness. In practical terms, PT Cariva Mitra Inovasi needs to strengthen its differentiation in managed services. The company needs to offer more flexible business models, clarify the scope of services, improve reporting, expedite escalations with vendors, and enhance its engineers' capabilities. The company also needs to develop evidence-based promotional strategies. Customer stories, referral programs, certifications, awards from principals, and participation in official tenders can be used to build market trust.

This study has limitations. It uses only one case study subject, and the number of participants is also limited. Therefore, the findings cannot yet be generalized to all IT start-ups. Future research could involve more companies and respondents. Subsequent studies could also employ a broader quantitative approach to examine the relationships among the factors driving the sustainability of IT start-ups.

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The authors declare that there is no conflict of interest related to this study. Artificial intelligence was used only to support proofreading, grammar checking, and sentence construction. The authors remain fully responsible for the content, analysis, findings, and conclusions of this study.

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