Journal of Information Systems and Informatics

Vol. 7, No. 2, June 2025 e-ISSN: **2656-4882** p-ISSN: **2656-5935**

DOI: 10.51519/journalisi.v7i2.1118 Published By DRPM-UBD

A Novel UX-Centered ITSM Framework for Technology Startups: Beyond Traditional Service Management

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Abstract

This research explores the integration of User Experience (UX) principles into IT Service Management (ITSM) frameworks within resource-constrained B2B SaaS technology startups. Through a comprehensive qualitative case study methodology involving semi-structured interviews with seven stakeholders, participatory observation across 12 sessions, and systematic document analysis at a Jakarta-based startup serving SMEs, we uncovered a critical paradox: companies selling superior UX solutions to clients often neglect these principles in internal IT management. The primary contribution is a novel adaptive UX-Centered ITSM conceptual model featuring three interconnected layers: Core Principles, Implementation Domains, and Operational Elements, designed for incremental implementation based on startup capacity. Unlike rigid existing ITSM frameworks, this model introduces a prioritized approach with "Must Have," "Should Have," and "Can Be Added" categorizations specifically tailored for startup contexts. The research identified five contextual factors influencing implementation: organizational culture, leadership structure, resource limitations, team dynamics, and SME client characteristics. Findings reveal that UX-centered ITSM not only addresses internal operational challenges but creates strategic alignment between internal practices and external value propositions, forming the foundation for market credibility and business sustainability. This framework provides startup managers and IT practitioners with an actionable roadmap for transforming ad-hoc internal systems into user-centered services that support operational excellence while enhancing competitive positioning in digital transformation markets.

Keywords: IT Service Management, User Experience, Case Study, Conceptual Model, Service Design

1. INTRODUCTION

Organizations increasingly recognize the critical importance of user experience in IT service delivery, yet significant gaps persist between user expectations and actual service performance. This disconnect becomes even more pronounced in the startup ecosystem, where companies often champion user-centric design for their products yet fail to apply these same principles internally.

IT service management has long been dominated by approaches that focus on process and standards compliance, while aspects of user experience are often overlooked [1], [2]. This phenomenon creates a significant gap between service provision and the real needs of users, especially in technology startups providing B2B SaaS services to SMEs in Jakarta [3]. Various studies show that many ITSM initiatives fail to achieve their goals due to a lack of consideration for the end-user experience [4], [5]. It becomes paradoxical when such startups sell solutions that promise superior user experience to their clients, yet fail to apply similar principles in internal IT management [6], [7].

Technology startups with limited resources face a strategic dilemma in ITSM adoption [8], [9]. On the one hand, conventional ITSM frameworks such as ITIL are too bureaucratic and unwieldy to implement [10], [11]. On the other hand, an unstructured ad-hoc approach risks creating inconsistent and difficult-to-scale services [12], [13]. Both conditions result in the same consequences: decreased productivity, user resistance, and the emergence of "shadow IT", the use of technology outside the control of the IT department that not only creates security risks, but also hinders operational efficiency and business process cohesion [14], [15].

Building on these challenges, we propose a different approach: integrating UX principles directly into ITSM practices rather than treating them as separate domains [16]. This goes beyond simply making interfaces more user-friendly, it means rethinking how people actually experience IT services throughout their entire interaction journey, from requesting help to seeing their problems resolved [17]. Our study focuses on a small B2B SaaS company in Jakarta with 18 employees that serves local SMEs. We wanted to understand whether this UX-integrated approach could actually work in practice, especially for startups that face real resource constraints while trying to deliver the same quality of internal operations that they promise their paying customers [18].

The research addresses three primary objectives: (1) to identify gaps in current ITSM practices from a user experience perspective within resource-constrained startup environments, (2) to develop an adaptive UX-Centered ITSM conceptual model suitable for technology startups, and (3) to evaluate contextual factors influencing the implementation of such integrated approaches in emerging market contexts. The contribution of this research is not limited to the development of a more adaptive ITSM model for technology startups, but also extends the ITSM literature with an exploration of its implementation in a less well-documented context, technology startups in emerging markets [19]. Preliminary observations at a startup company suggest that the integration of UX principles in ITSM has the potential to reduce recurring incidents, increase internal user satisfaction, and

create organizational coherence that supports the sustainable growth of technology startups as drivers of SME digital transformation in Indonesia [9], [20].

2. METHODS

2.1. ITSM Adaptation in the Technology Startup Context

Conventional ITSM (IT Service Management) frameworks such as ITIL were born and developed in large organizational environments with formal structures, adequate budgets, and abundant specialist manpower. This situation is much different from the reality of today's tech startups. While recognizing the importance of structured IT service management, startups are often caught in an implementation dilemma: adopt a formal framework that is too unwieldy or stick with a manual approach that risks falling apart as the company grows [1]. Even ITIL 4, which offers a more flexible approach than its predecessors, remains a burden for startups with minimal IT teams due to the complexity of documentation, the need for specialist roles, and formal processes that are too detailed for a startup's fast-paced daily life [3], [21].

Alternative frameworks such as ISO/IEC 20000 and COBIT also face similar problems. ISO/IEC 20000's certification-oriented approach demands strict process implementation that goes against the experimental rhythm of startup work. Meanwhile, COBIT with its focus on governance and compliance overemphasizes the control aspect which can hamper the speed of adaptation, a key competitive advantage of startups. If rigidly applied, these frameworks can even be counterproductive, creating bureaucracy without commensurate value [22]. The reality of the field shows that tech startups, especially in the B2B SaaS sector, have unique characteristics that require a different ITSM approach, especially with fast release cycles, high innovation needs, and limited human resources [23].

To address this gap, more flexible ITSM approaches have started emerging. "Lean ITSM" eliminates processes that add no value, while "Agile Service Management" blends agile methodologies into ITSM practices. These approaches preserve what makes good IT service management: value focus, service orientation, and ongoing improvement, while cutting down on paperwork and bureaucracy [22]. This shift goes beyond simply "lightening" existing frameworks; it demands a complete rethinking of how startups should approach "service management." Unlike large organizations that view ITSM as mandatory processes to follow, startups need to see it as a flexible set of principles they can adapt to their specific needs and growth stage, emphasizing outcomes over process compliance [24], [25].

The difference in ITSM needs between large enterprises and startups is not only in scale and complexity, but also operational priorities. Large enterprises lean

towards standardization and regulatory compliance, while startups prioritize speed, flexibility, and adaptability. In the context of B2B SaaS startups catering to SMEs, the complexity increases as they have to manage a multi-tenant infrastructure with enough customization capabilities for a variety of SME clients, while remaining standardized to be manageable by a limited team [26]. Unlike enterprise companies that can have separate teams for internal and external infrastructure, startups often rely on the same team for both aspects, creating significant workload and complexity for their small teams [4].

Some startups are beginning to develop hybrid ITSM models by integrating best practices from various frameworks. They might adopt incident management from ITIL, a risk-based approach from ISO/IEC 20000, and a DevOps implementation for change management. This "cherry-picking" approach allows startups to benefit from various frameworks without having to implement them in their entirety [27]. The challenges of ITSM implementation in startups are also cultural, as startup culture that emphasizes speed, experimentation, and tolerance for failure is often at odds with traditional ITSM that emphasizes structure and predictability. Reconciling these two aspects requires a deep transformation of the meaning of "good IT services" in the context of fast-changing organizations [28], [29].

Recent trends show a shift toward service value and user experience approaches as better fits for tech startups. This perspective borrows from product development philosophy, treating internal IT services as "products" and internal users as actual "customers." IT teams essentially function as product teams, prioritizing user experience, feedback-driven development cycles, and delivering value through quick iterations. This framework naturally aligns with startup culture and elevates ITSM from merely supporting operations to driving strategic growth. While formal ITSM implementation remains difficult for startups, tech startups often pioneer innovative tools and approaches to IT service management, proving they're not just consuming ITSM practices but actively reshaping its evolution [2], [4].

2.2. Integration of User Experience (UX) Principles in IT Service Management

The fields of ITSM and UX have grown alongside each other but remained distinctly separate. While ITSM zeroes in on process efficiency and measuring service performance, UX concentrates on the emotional and cognitive elements of how users interact with systems. This divide creates a conceptual gap that often makes ITSM practices feel stiff, overly bureaucratic, and disconnected from real-world user experiences. Yet when we look at ITSM's core purpose, providing IT services that support business needs, user experience should naturally be woven into its fabric [30]. User Experience in IT services needs broader understanding

beyond just "user-friendly interfaces." UX encompasses every user interaction with IT services, including usability, accessibility, performance, visual appeal, and emotional response. As Hassenzahl and Tractinsky [31] put it, UX is "the consequence of the user's internal state, the characteristics of the designed system, and the context where interaction happens." For IT services, this means user experience isn't just shaped by interactions with IT tools, but also by the service request process, conversations with IT staff, response times, and satisfaction with how problems get resolved.

We're witnessing a shift from service-dominant logic toward more experience-focused approaches in IT service management. The service-dominant paradigm that Vargo and Lusch [32] developed sees value as something created through interactions and applying intangible resources like knowledge and skills. For ITSM, a good IT service can't just meet Service Level Agreements (SLAs), it must create positive experiences that boost user productivity and satisfaction through joint value creation between service providers and their users. Recent studies confirm that satisfaction with IT services goes well beyond technical aspects. Cater-Steel and Tan [33] explored how ITSM approaches work in broader contexts like Green IT initiatives. Their research shows that success depends not just on technical implementation but on how users perceive and receive the service, highlighting why integrating UX principles into ITSM frameworks matters, not just at the interface level but throughout processes and human interactions.

Practically speaking, the integration of UX into ITSM can start from user journey mapping in every interaction with IT services. Lemon and Verhoef [34] have developed a comprehensive framework for understanding customer experience along the customer journey, which can be adapted for the context of internal IT services. This technique allows IT teams to see the service from the user's perspective, identify critical touch points, and understand emotional aspects that may be overlooked in traditional ITSM approaches. Herein lies the irony: ITSM designed to “improve services” often forgets the user as the center of the service ecosystem. User experience measurement methodologies in the context of ITSM bring a new dimension to IT service performance evaluation. Where traditional ITSM KPIs focus on metrics such as Mean Time to Resolution or the number of incidents closed, UX-based approaches add more user-oriented measurements. The UX evaluation methods discussed by de Winter and Dodou [35] can be adapted to measure IT service effectiveness from a user experience perspective, providing a more holistic understanding of how IT services are perceived by users, going beyond conventional metrics.

The agile approach in ITSM shows clear alignment with UX principles, too. Verlaine [36] breaks down how an agile ITSM framework boosts responsiveness to quickly changing user needs. When IT teams design services with users' natural

workflows and preferences in mind, they see higher adoption rates and fewer support tickets. This isn't just adding UX as a nice-to-have "complement", it's a strategy delivering tangible business value. The systematic, comprehensive UX evaluation method that Vermeeren and colleagues [37] outlined can be adapted beyond just assessing technology to evaluate IT service processes as well. This approach helps organizations spot improvement opportunities in service delivery that traditional ITSM metrics might completely miss.

Some organizations have started using "Design Thinking" as a bridge connecting ITSM and UX. Cronholm and Göbel [29] explain how this approach puts user empathy and quick prototyping front and center when developing solutions. This method helps close the gap between technical specs and what users actually need, letting IT teams build services that aren't just functional but genuinely intuitive to use. Looking at startups and SMEs specifically, research by Kabanda and colleagues [38] reveals how cybersecurity practices are often shaped by non-technical factors like company culture and user experience. These findings matter for ITSM too, since it's also a socio-technical practice whose success hinges not just on implementing technology correctly but on how people interact with the service. For resource-strapped startups, an ITSM approach that weaves in UX principles can squeeze maximum value from IT investments by making sure the services they develop actually get used and appreciated by their intended users.

The gap between what companies promise customers and how they operate internally is shrinking fast, especially for tech firms selling user experience solutions. Sandström and colleagues [39] dug into the foundations of disruptive innovation theory and what it means for management. Their work shows that an innovation's success doesn't just ride on the technology itself, it hinges on how users experience and embrace that technology. For startups selling IT solutions, matching the experience they promise customers with what they create within their own walls can set them apart from competitors. One major hurdle in bringing UX into ITSM is building a conceptual bridge between two traditionally different worlds: one focused on processes and compliance, the other on experiences and creativity. Shin and colleagues [40] stress the need for systematically weaving UX throughout every development stage, rather than tacking it on as an afterthought. This same thinking applies to ITSM, where UX should be baked into every phase of the service lifecycle, from initial strategy through to day-to-day operations.

Recent perspectives from Gada and Chudasama [41] emphasize the role of UX in product design effectiveness and integration with data analysis approaches. In the context of ITSM, this means that IT services not only need to be designed with functional needs in mind, but also how data about user interactions can be leveraged to continuously improve the experience. Through a combination of structured ITSM principles and a human-centered UX approach, organizations can

develop IT service systems that are not only efficient from an operational perspective but also truly meet the needs and expectations of their users. This combination is becoming increasingly important in the digital age where user expectations of technology services continue to rise, even for internal systems that were once seen as mere utilities.

2.3. Research Steps

The overall research methodology and sequential steps conducted in this study are illustrated in Figure 1.

1) Case Selection Process

We used purposive sampling to select a technology startup for our case study. Four specific criteria had to be met: the company needed to operate as a B2B SaaS provider serving the SME segment, maintain a lean IT team structure with no more than 5 personnel, have at least 2 years of operational experience to ensure business maturity, and demonstrate concrete initiatives in improving user experience for internal IT services. Through this selection process, we chose an 18-employee startup in Jakarta that provides financial automation services to SMEs.

2) Ethical Considerations and Access Arrangements

Given that our research focused solely on organizational processes rather than sensitive personal information, formal institutional ethical approval was not required. Nonetheless, we adhered to rigorous ethical standards throughout the study. Prior to data collection, we secured informed consent from all participants, clearly communicating the purpose of the research, their rights, and the confidentiality measures in place. To ensure privacy, all individual and organizational identifiers were anonymized using pseudonyms in research outputs. This commitment to ethical research practices enabled us to gain full, unhindered access to the company's operational environment during the study period.

3) Data Collection Through Multiple Methods

Data collection took place over 8 weeks using a triangulation approach with three different methods. The first method involved semi-structured interviews with 7 key people in the company: the CEO, CTO, one Product Manager, two developers, and two non-technical staff who regularly use internal IT services. Each interview lasted between 45-75 minutes depending on the participant's role and availability, focusing on their daily experiences with IT services, perceptions of the current ITSM system, and future needs and expectations.

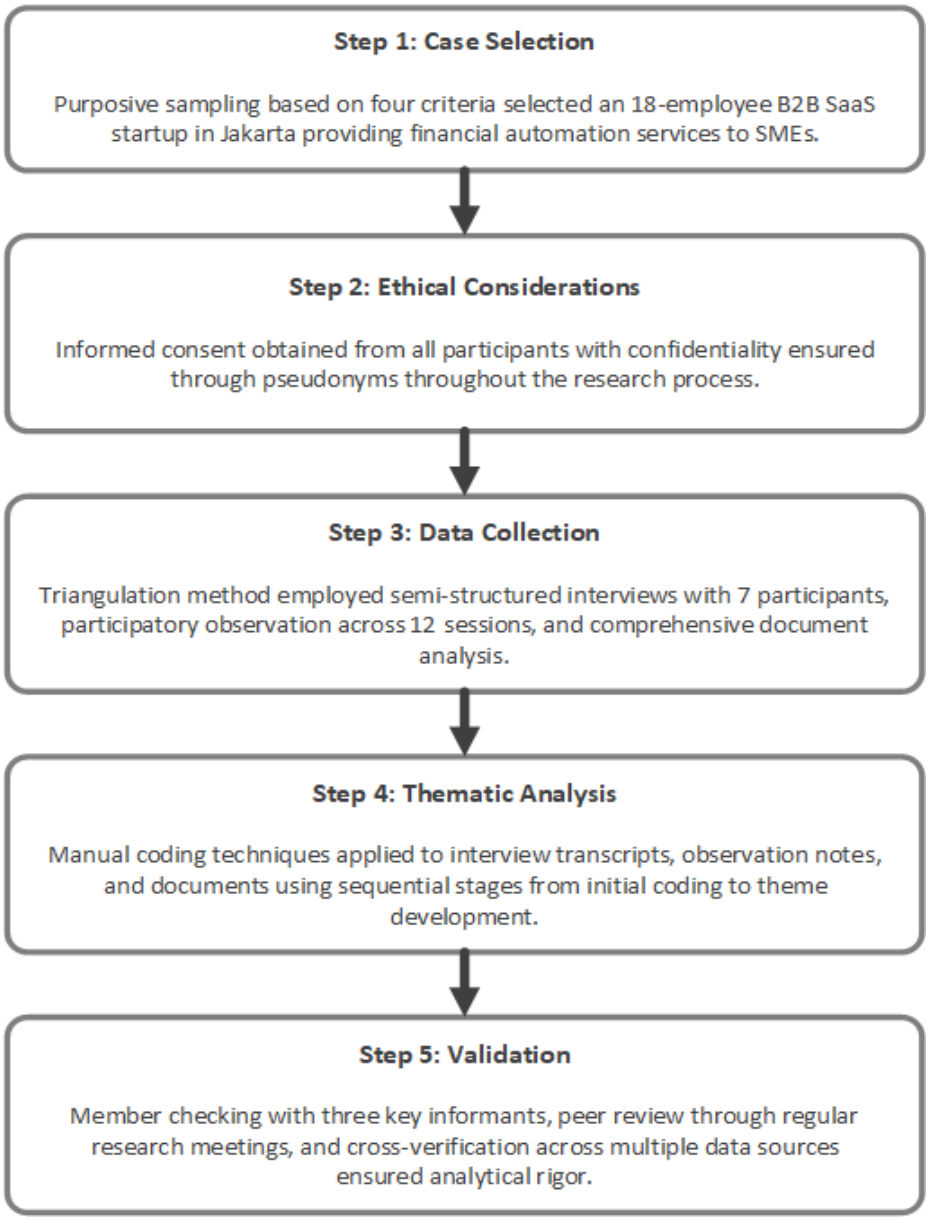

Figure 1. Research steps

The second method was participatory observation of day-to-day IT service management activities, including incident handling processes, service requests, and team interactions. We conducted 12 observation sessions to get a comprehensive picture of ITSM practices and user experiences in the daily operational context. The third method was document analysis covering various organizational artifacts

such as formal and informal process documentation, support ticket archives, inter-departmental communications, and external marketing materials. This documentation review served two purposes: understanding existing IT service workflows and identifying gaps between organizational capabilities marketed to clients versus actual internal operational practices.

4) Thematic Analysis Implementation

We analyzed collected data using thematic analysis through a manual coding process. Interview transcripts, observation notes, and document extracts were meticulously reviewed line by line to identify significant textual elements. Preliminary codes were assigned to these segments, which were then clustered into conceptual categories reflecting patterns in ITSM practices and user experiences. Through iterative refinement, these categories were synthesized into cohesive thematic frameworks that captured the organizational, technological, and experiential aspects of internal IT service delivery.

5) Validation and Quality Assurance

To enhance the credibility and reliability of our findings, we implemented several validation measures. The lead researcher manually coded all data using color-coded annotations and margin notes on printed transcripts, ensuring a grounded understanding of the material. Regular debriefing sessions with research team members facilitated critical discussions of emerging themes and resolved any interpretative disagreements. Additionally, we conducted member validation sessions with three key participants—the CTO, Product Manager, and a Customer Success representative. These individuals reviewed preliminary findings, provided feedback, and clarified instances where interpretations diverged from their firsthand experiences. This iterative dialogue continued until a strong alignment was achieved between researcher interpretations and participants' perspectives, strengthening the trustworthiness of the analysis [42].

2.4. ThematicAnalysis Process and Results

Thematic analysis was chosen due to its ability to identify meaningful patterns from diverse qualitative data and enable in-depth understanding of the phenomenon under study [42].

1) Stages of Thematic Analysis

Thematic analysis was conducted through a series of systematic but iterative stages, where the researcher moved back and forth between stages as needed. The following are the stages conducted in this study (Table 1):

Table 1. Stages of Thematic Analysis Process.

Stage	Activity	Process Conducted	Output
1. Data Familiarization	Repeatedly reading all collected data	Reading interview transcripts 2-3 times; Reviewing observation notes; Examining collected documents	Initial notes and ideas for coding
2. Initial Coding	Identifying and labeling meaningful units in the data	Coding relevant sentences or paragraphs; Using inductive approach (codes emerge from data); Using different color highlights for different data types	47 initial codes identifying important concepts
3. Potential Theme Identification	Grouping related codes into initial themes	Arranging related codes; Identifying common patterns; Creating simple concept maps to visualize relationships	12 potential themes summarizing related codes
4. Theme Review	Reviewing initial themes to ensure internal coherence and external distinction	Checking if themes are supported by sufficient data; Merging overlapping themes; Breaking down overly broad themes	8 more solid and well-defined themes
5. Theme Refinement	Clearly defining and naming themes	Identifying the essence of each theme; Giving names that reflect content; Identifying theme hierarchy (main themes and sub-themes)	6 main themes with clear definitions
6. Report Writing	Integrating thematic findings into analytical narrative	Selecting representative quotes; Connecting themes to research questions; Developing conceptual model based on relationships between themes	Structure of Results and Discussion chapter

2) Thematic Analysis Results

The analysis process produced six main themes that formed the basis for the structure of Chapter 'Results and Discussion'. Each of these themes developed

p-ISSN: **2656-5935** http://journal-isi.org/index.php/isi e-ISSN: **2656-4882**

from the grouping of initial codes that were related. Below are the six main themes along with descriptions and examples of the codes that formed them (Table 2):

Table 2. Main Themes of Thematic Analysis Results.

Main Theme	Description	Example Codes That Form It	Manifestation in 'Results & Discussion'
1. User Experience Characteristics in ITSM Context	Dimensions and attributes of user experience relevant in IT service management context in startup environment	User expectations; Friction points; User emotions; Mental model; Service accessibility; Clarity of process	Section 1: User Experience Dimensions in ITSM Context
2. Gaps in Existing ITSM Practices	Gaps and limitations in current IT service management practices from user experience perspective	Ad-hoc processes; Lack of visibility; Service inconsistency; Dependency on individuals; Minimal documentation; Unnecessary complexity	Section 2: Gap Analysis in Existing ITSM Practices from User Experience Perspective
3. Shadow IT Phenomenon	Practice of using unofficial IT solutions as response to limitations of formal systems	Workarounds; Alternative solutions; Personal tools; Procedure bypassing; Departmental initiatives; Shadow system risks	Section 3: Manifestations and impacts of "Shadow IT" in Startup Ecosystem
4. UX-ITSM Integration Model	Conceptual framework for combining UX principles with ITSM practices in startup context	Integration principles; Implementation domains; Prioritization; Adaptation mechanisms; Operational framework; Success metrics	Section 4: Conceptual Model of UX-ITSM Integration in Startup Context

Main Theme	Description	Example Codes That Form It	Manifestation in 'Results & Discussion'
5. Contextual Factors	Organizational and environmental conditions affecting implementation of UX-centered ITSM approach	Organizational culture; Leadership style; Resource constraints; Team dynamics; Client expectations; Competitive pressure	Section 5: Contextual Factors Affecting UX-Centered ITSM Implementation
6. Internal-External Value Alignment	Relationship between internal user experience and value proposition offered to external clients	Credibility; Value coherence; Internal-external disconnection; Dogfooding; Customer perception; Strategic alignment	Section 6: Implications of Alignment Between Internal User Experience and External Value Proposition

To illustrate more clearly how our initial coding evolved into themes and sub-themes, we've provided a detailed breakdown of one main theme below (Table 3):

Table 3. Theme Development "Shadow IT Phenomenon".

Initial Code	Grouping into Sub-themes	Representative Quote
Workaround	**Shadow IT Forms** Alternative tools; Personal solutions; Shadow systems	"I created a separate WhatsApp group for my team because coordination is faster than through the official Slack." - Marketing Lead
Procedure bypassing	**Shadow IT Forms** Alternative tools; Personal solutions; Shadow systems	"It's easier to share files via WhatsApp than having to set permissions in the official system." - CS Staff
Frustration with official processes	**Driving Factors** IT response gap; Personal preferences; Functionality limitations	"If we wait for the official system from IT, the project deadline would have passed. That's why we use our own tools." - Sales Manager
Habits from previous jobs	**Driving Factors** IT response gap; Personal preferences; Functionality limitations	"I'm used to using Airtable from before, so I'm more productive using it than having to learn a new system." - Marketing Staff

Initial Code	Grouping into Sub-themes	Representative Quote
Security risks	**Negative Impacts** Security risks; Data inconsistency; Effort duplication	Observation finding: 3 incidents of sharing sensitive documents via personal email
Data silos	**Negative Impacts** Security risks; Data inconsistency; Effort duplication	"Other teams can't access our data because it's in different tools." - Sales Staff
Work speed	**Positive Impacts** Productivity increase; Flexibility; Innovation	"Our team can deliver campaigns faster, but we have to re-input data into the official system." - Marketing Staff

3) Conceptual Model Development

One important aspect of the thematic analysis is how the identified themes were used to develop the UX-Centered ITSM conceptual model discussed in the RESULTS & DISCUSSION chapter. This model did not emerge directly from the data, but rather through a process of synthesizing and abstracting from the patterns found in the data (Table 4).

Table 4. Conceptual Model Development Process.

Stage	Process	Output
1. Key Component Identification	Identifying important elements emerging from various themes	List of potential components for the model
2. Relationship Structuring	Analyzing how components relate to each other	Initial relationship diagram
3. Data Validation	Checking whether the model structure is consistent with existing data	Model revisions and adjustments
4. Practical Framework Development	Transforming the conceptual model into an implementable framework	UX-Centered ITSM Model with three layers: Core Principles, Implementation Domains, and Operational Elements

4) Interrelationships between Themes

In addition to identifying individual themes, the analysis also reveals complex interrelationships between themes. An understanding of these interrelationships is important to provide a holistic picture of the phenomenon under study (Table 5).

Table 5. Interrelationships between Major Themes.

Interconnection	Description	Manifestation in Chapter 'Results & Discussion'
ITSM Gaps → Shadow IT	Limitations in ITSM practices drive the emergence of shadow IT solutions	Discussed in the transition from section 2 to 3
Contextual Factors → Model Implementation	Organizational context influences how the UX-ITSM model can be implemented	Discussed in the connection between sections 4 and 5
Internal Experience → Value Proposition	Internal user experience has implications for the credibility of external value propositions	Becomes the focus of discussion in section 6
Shadow IT → UX-ITSM Model Input	Shadow IT practices provide insights for developing a more responsive model	Discussed in the transition from section 3 to 4

The structure of the RESULTS & DISCUSSION chapter is designed to follow the logical flow of these themes, starting from understanding the dimensions of user experience (Section 1), analyzing gaps in existing practices (Section 2), exploring the phenomenon of shadow IT as a response (Section 3), developing an integrative model (Section 4), analyzing contextual factors that influence implementation (Section 5), and ending with a discussion of the strategic implications of internal-external experience alignment (Section 6).

2.5. Data Collection and Analysis

In addition to qualitative data from interviews and observations, quantitative data was collected through systematic document analysis during the 8-week study period. The analysis included:

1. Ticketing System Analysis: All 47 IT incidents recorded in the company's Trello-based ticketing system during the study period were analyzed to identify patterns. Each ticket was reviewed to determine whether it followed the formal process, received proactive updates, and represented a recurring issue. A ticket was classified as "receiving proactive updates" if the IT team provided status information without being prompted by the user.
2. Support Documentation Audit: All support tickets were cross-referenced with existing documentation to determine what percentage could have been

resolved through self-service. Tickets were categorized as "basic questions with available documentation" if the answer existed in the company's Notion knowledge base.

3. Process Metrics Collection: Process metrics such as resolution times were collected from the ticketing system and compared against the company's stated targets. Employee turnover data for the previous 12 months was obtained from HR records and analyzed by department to identify patterns related to user experience issues.

All quantitative data was validated through triangulation with interview findings and observational data to ensure accuracy. The quantitative measures served to complement and support the primarily qualitative focus of the research.

3. RESULTS AND DISCUSSION

3.1. Profile and Operational Context of B2B SaaS Technology Startup

Startup X was established in late 2020 by three people with tech and finance backgrounds, with the company launching its beta product in early 2021. The story goes that one of the founders kept struggling with managing their family business, especially all the financial admin stuff. That's when they thought, "Seems like lots of SMEs probably deal with these same headaches." So they created Startup X. They offer this SaaS platform that helps automate financial processes, turning what used to be manual transaction recording and financial reporting into something much more streamlined. "*We don't just make software, we also want SMEs to be able to use financial practices that are only available in big companies*," explained Startup X's CEO in an interview. This vision led them to develop easy-to-use features for their target users, most of whom are not tech or finance professionals.

Since its beta launch in early 2021, Startup X has served around 70 active SMEs from various sectors with the highest concentration in retail (35%), professional services (25%), small-scale manufacturing (20%), and F&B (15%). They focus their services on SMEs with an annual turnover of IDR 500 million to IDR 5 billion that have 5-25 employees. The company's business model relies on recurring revenue through monthly subscriptions with several service packages tailored to the needs of various SME segments. Startup X has a fairly lean organizational structure with a total of 18 employees, with the distribution as shown in Table 6.

Table 6. Organizational Structure of Startup X.

Department	Number of Personnel	Main Roles
Product & Technology	8	1 CTO, 1 Product Manager, 4 developers, 1 UX designer, 1 QA engineer
Sales & Marketing	5	Customer acquisition and retention

Department	Number of Personnel	Main Roles
Customer Success	3	Customer onboarding and support
Operations & Finance	2	Internal administration and finance

"*In the early days, we all did everything. The CEO also helped answer support tickets, and the CTO was still coding. Now that we have more clients, we need a clearer process*," said the CEO in the casual manner typical of Jakarta startups. This statement reflects the general condition of startups that are transitioning from the survival phase to sustainable growth. Startup X's IT infrastructure is entirely cloud-based with a microservices architecture running on AWS. Their main technology stack includes Node.js and PostgreSQL for the backend, react for the web frontend, and React Native for mobile apps. For internal needs, the company uses various tools that are common among startups, as shown in Table 7 below:

Table 7. Internal Tools and Applications of Startup X.

Category	Tools	Function
Productivity	Google Workspace	Email, documents, spreadsheets, presentations
Communication	Slack	Team communication and system notifications
Knowledge Management	Notion	Documentation and SOPs
Development	GitHub, Jira	Version control and project management
Customer Management	Zendesk, HubSpot	Support ticket and CRM
IT Support Internal	Trello	Simple ticketing for internal IT issues

In the context of managing internal IT services, the primary responsibility falls on the shoulders of the CTO with help from developers who take turns being "on-call support" every week. This model, while resource-efficient, creates some significant challenges for the company's operations. "*Being a CTO in a startup is a dilemma. On one hand, you have to push the product to grow quickly, on the other hand, you have to make sure that the internal system runs smoothly. Every day it's like playing ẓonglir between development and maintenance*," complained the CTO when asked about his main challenge. This expression illustrates the classic dilemma faced by many tech startups in the growth phase.

The challenge is further complicated by the internal team's high expectations of IT services. As a tech company selling a seamless digital experience to its clients, there is a mismatch when internal IT services do not meet the same standards as what is promised to customers (Table 8). "*It's funny actually. We sell a product that says 'best*

p-ISSN: **2656-5935** http://journal-isi.org/index.php/isi e-ISSN: **2656-4882**

user experience', but internally we still use spreadsheets and chat to talk about IT issues," said one developer in a half-joking tone, illustrating the gap between external values and internal practices.

Table 8. Startup X Internal IT Service Management Challenges.

Challenge	Impact	Manifestation
Developer focus division	Delayed product feature completion	"Project deadlines often slip because developers have to assist with support"
Minimal documentation	Inconsistent issue handling	"If the same issue goes to different people, the solutions can vary"
Dependency on specific individuals	Single point of failure	"If Budi is out, we already have problems that have to wait until he returns"
Expectation gap	Dissonance with product values	"We sell UX-focused products to clients, but in our own office we still use whatever tools are available"
Resource limitations	Trade-off between development and maintenance	"Every meeting inevitably debates whether to focus on adding features or improving internal systems"

Despite the challenges, Startup X has started to implement some basic ITSM elements such as a simple ticketing system using Trello, an on-call rotation schedule, and minimal documentation in Notion. But these elements are far from a comprehensive ITSM approach that integrates UX principles.

"*So here's the thing, when we create new features for our products, we always... always start from problems that users experience. We definitely do research first, then create prototypes, test them all over the place, and only then move to full development. But what's funny is... when building internal systems, it's the complete opposite. We tend to just jump straight to executing solutions that we, you know... think make sense to implement, without really asking the team what they actually need.*" That's what the Product Manager admitted, highlighting how different their approaches are between product development and internal systems.

Startup X's operational context, characterized by its growth phase, limited resources, and expectation gaps, provides an important backdrop for understanding how ITSM practices evolve in organizations and how UX principles can be integrated into them.

3.2. Existing ITSM Practices and User Experience Gaps

ITSM practices at Startup X reflect the company's state of transition-a combination of the fast-paced approach typical of startups with growth-driven formalization efforts. While not yet adopting a formal ITSM framework, the company has

developed some basic practices that demonstrate an awareness of the importance of structured IT services (Table 9).

1) Existing ITSM Practices

Table 9. Existing ITSM Practices at Startup X.

ITSM Area	Current Practice	Tools	Strengths	Weaknesses
Incident Management	Basic ticketing system with "Reported - In Progress - Resolved" flow	Trello, Slack	Simple & quick to implement	Inconsistent recording, no priority categorization
Change Management	No formal process, changes done ad-hoc	-	Flexibility & implementation speed	Lack of risk assessment, minimal communication to users
Knowledge Management	Basic process & solution documentation	Notion	Information accessibility	Documentation incomplete & poorly structured
Availability Management	Manual & reactive monitoring	Chat notifications	Minimal overhead	65% of downtime detected from user reports, not monitoring

"*Our system is still very simple. Tickets come in via Slack, we record them on Trello, and then we work on them. The problem is that when its busy, sometimes people skip the process*," explains a developer who is often on-call. Observations during the research confirmed this inconsistency, of the 47 IT incidents during our study period, 32 followed the formal Trello-based process while 15 were handled informally through direct communication.

2) User Experience Gaps

Analysis of the interview, observation, and documentation data revealed five key gaps that have a significant impact on user experience (Table 10): The numbers in Table 10 come from our analysis of the company's ticketing system and all those supporting documents during our 8-week study. We didn't just take samples, we actually examined every single IT incident, all 47 cases documented during that time. Then, to get a better picture, we also interviewed several key people in the company. This helped us understand our findings more completely and figure out what's really causing these patterns we kept seeing.

Observations during the research revealed that the root of the problem is not only in the limitations of tools or processes, but in the fundamental approach that has not prioritized user experience. Three main factors contribute:

1. No mapping of the user journey in interaction with IT services.
2. Information asymmetry between technical teams and users. "Sometimes the IT team talks in terms that we don't understand, so we can only nod when we are still confused," said one user from the non-technical team.
3. Metrics that only focus on technical aspects, not user experience. "All we measure is how many tickets we resolve, not how satisfied the internal team is with our service," admitted the CTO during an interview.

Table 10. User Experience Gaps in Internal IT Services.

Gap	Manifestation	Impact	User Quote
Unclear escalation paths & priorities	No clear guidelines on reporting methods & priority criteria	Incident handling inconsistent & not based on urgency	"I'm confused, sometimes urgent reports aren't responded to, but trivial ones get addressed immediately." -CS Staff
Minimal status communication	Of 32 recorded tickets, only 12 received proactive updates	Users must repeatedly follow up	"If I don't keep asking, I'll never be told about the status update." - Finance Staff
Recurring patch solutions	28% of incidents are recurring issues	Users experience frustration & productivity decrease	"This printer issue has been 'fixed' 3 times, but keeps giving the same error." -Marketing Staff
Product UX vs. internal system contrast	Internal system development doesn't go through UX phases	Internal systems difficult to use & not intuitive	"We build apps with great UX for customers, but our internal systems are clunky and focus only on function." - Product Manager
Weak self-service	40% of tickets are basic questions with answers already in documentation	Excessive burden on IT team	"I avoid opening Notion and just ask directly. Searching is difficult, and many documents are outdated." -New Staff

These user experience gaps and process inconsistencies created conditions that drove employees to seek alternative solutions, leading to the emergence of what we discovered to be widespread 'shadow IT' practices.

3.3. Manifestation and Impact of "Shadow IT" in the Startup Ecosystem

Research at Startup X revealed a fairly common phenomenon of "shadow IT"-the use of applications, services, or technology solutions that are not officially approved by the IT department. During the observations, various forms of shadow IT were seen being used by most employees in various departments (Table 11).

Table 11. Manifestations of Shadow IT at Startup X.

Category	Examples	User Department	Reason for Use
Non-formal Communication	WhatsApp Group, Telegram	All departments	"Faster response than Slack"
Storage & Sharing	Personal Google Drive, WeTransfer	Sales, Marketing	"Easy to share with clients"
Tracking & Planning	Personal Trello, Private Excel	Marketing, CS	"Can customize according to needs"
Alternative Software	Free design/edit applications	Marketing	"No need to queue for official licenses"
Automation Tools	Free IFTTT, Zapier	Sales	"Create own workflows without waiting for IT"

"*I created a separate WA group for my team because it's easier to coordinate. In Slack sometimes messages get drowned in many channels*," explained one marketing lead. Similar confessions emerged from various departments, indicating that shadow IT is a response to the limitations of existing official systems. From the interviews and observations, several key drivers for the emergence of shadow IT were identified (Table 12):

Table 12. Drivers of Shadow IT at Startup X.

Factor	Description	Representative Quote
Speed & Flexibility	Formal processes too slow	"If we wait for systems from IT, deadlines would have passed"
Personal Preferences	Habits from previous experience	"I'm more comfortable using Excel from before"
Functional Limitations	Required features not available	"Official templates are too simple for my needs"
Lack of Awareness	Unaware that official solutions exist	"Oh, there's already a system for this? I never knew"
Poor User Experience	Official systems difficult to use	"So cumbersome, it takes 5 clicks to do something simple"

The shadow IT phenomenon has various impacts on company operations (Table 13). During the monthly project review meeting, it was discovered that the

marketing and sales teams were using data from their own tracking system, which was different from the company's official system. "We have to waste time reconciling data from the sales team's Excel to the finance system every month," complained the head of finance.

Table 13. Impact of Shadow IT at Startup X.

Aspect	Positive Impact	Negative Impact
Productivity	Teams work faster for certain tasks	Time wasted reconciling data
Security	-	Important data scattered across various platforms
Data	-	Inconsistent figures between official reports and shadow systems
Cost	Free solutions reduce short-term expenses	License redundancy, hidden costs
Collaboration	Effective collaboration within small teams	Barriers to information sharing between departments

A real-world example of this practice occurs when the sales team opts for separate spreadsheets to track leads because they find the official CRM too complicated. Sure, this helps them work faster, but consequently, data integration with the financial system becomes a mess. "The lead data in the sales team's Excel often doesn't match what's in our system. When we're creating revenue forecast reports, we end up confused about which numbers to use," complained a finance staff member. Security is also a concern. There were several incidents where customer information was shared through unsecured channels because it was easier to use. "It's faster to send files via WA than setting permissions in the system," said one staff member, showing how the poor UX of the official system encourages risky practices. Interestingly, some shadow IT solutions actually inspire improvements to the official system. For example, the report template created by the marketing team turned out to be more informative than the official format. "Actually, the reporting format created by the marketing team has better visualization. We can adapt it to the official system," commented the CTO.

These findings reinforce the importance of an ITSM approach that pays more attention to user needs. Instead of simply banning shadow IT, Startup X needs to understand that this phenomenon indicates an unmet need. By understanding the motivations behind shadow IT, companies can identify gaps in authorized services and develop solutions that better suit actual needs. "*You know, Shadow IT is actually kind of... how should I put it... a signal that our official system is missing something. Instead of rushing to ban it, we should really try to figure out why they prefer using their own tools*," said the CTO while discussing yesterday's research findings. His point was that shadow

IT isn't just a problem, but could actually be valuable learning material for developing an ITSM approach that cares more about user experience.

3.4. Conceptual Model of UX-ITSM Integration in the Startup Context

Based on the findings obtained from the case study at Startup X, this research proposes a conceptual model that bridges User Experience (UX) principles with IT Service Management (ITSM) practices in the context of technology startups with limited resources. This UX-ITSM model is not intended as a rigid framework, but rather as an adaptive guide that allows startups to integrate UX elements into ITSM practices gradually according to organizational priorities and capacity.

The UX-ITSM conceptual model consists of three main interconnected layers: (1) Core Principles, (2) Implementation Domains, and (3) Operational Elements. For ease of application in a startup context, each element in the model is assigned a priority notation: Must Have (H), Should Have (S), and Can Be Added (D). This categorization helps startups with limited resources to determine which elements need to be implemented first (Table 14).

We developed the core principles in this UX-ITSM model by combining several important theoretical frameworks from both UX and ITSM domains. The user journey-focused approach draws from Lemon and Verhoef's [34] Customer Journey Mapping concept. Meanwhile, the Co-Creation of Value concept has its roots in the Service-Dominant Logic introduced by Vargo and Lusch [32]. For the Transparency & Visibility principle, we adopted it from the Service Design Principles outlined by Cronholm and Salomonson [29]. As for the Incremental Improvement aspect, we derived its concept from the ITIL v4 framework [27], [28].

The Context Awareness principle is based on Holtzblatt & Beyer's [43] Contextual Design methodology that emphasizes the importance of understanding the context of use in solution design. Finally, the Consistency with Simplicity principle incorporates elements from the Principles of Good Design developed by Dieter Rams and Nielsen's Usability Heuristics [44], [45] which has become a standard in user interface evaluation.

Table 14. Core Principles of the UX-ITSM Model for Startups.

Principle	Description	Priority	Theoretical Foundation	Implementation Example at Startup X
Journey-Centric Approach	Identifying and optimizing user journeys in	H	Customer Journey Mapping (Lemon & Verhoef [34])	Mapping user touchpoints when reporting IT incidents

Principle	Description	Priority	Theoretical Foundation	Implementation Example at Startup X
	interactions with IT services			
Co-Creation of Value	Involving users in IT service design	H	Service-Dominant Logic (Vargo & Lusch [32])	Ticketing system design workshop with representatives from various departments
Transparency & Visibility	Providing visibility into IT service status and processes	H	Service Design Principles (Cronholm & Salomonson [29])	Dashboard of request status accessible to all users
Incremental Improvement	Iterative approach to service improvement	S	Continuous Service Improvement (ITIL v4 [27-28])	Weekly feedback and improvement cycle
Context Awareness	IT services sensitive to usage context	S	Contextual Design (Holtzblatt & Beyer [43])	Request handling that prioritizes business context
Consistency with Simplicity	Consistent yet uncomplicated interfaces and processes	D	Principles of Good Design (Dieter Rams); Nielsen's Usability Heuristics [44-45]	Standardization of simple service request forms

These core principles are then translated into four implementation domains that reflect areas of ITSM that intersect directly with user experience. Within each domain, there are specific practices that startups can implement (Table 15).

Table 15. UX-ITSM Implementation Domains and Practices.

Domain	Key Practices	Priority	Relevance for Startup X
Service Design & Delivery	Journey mapping for IT services	H	Shadow IT findings indicate need for more user-centric design
	Design thinking workshop	S	
	Prototyping services before full deployment	D	
Service Interaction	Clear single point of contact	H	Unclear escalation paths require interaction improvement
	Multi-channel request system	S	

Domain	Key Practices	Priority	Relevance for Startup X
	Self-service portal with optimal UX	D	
Knowledge Management	Use-case based documentation	H	Difficulty finding information drives shadow IT
	Visual and interactive format	S	
	User-generated content	D	
Service Improvement	Feedback loop with users	H	Lack of user experience metrics needs to be addressed
	User satisfaction metrics	S	
	Shadowing and observation	D	

At the operational level, the model offers a set of tools and metrics that tech startups can adopt to implement UX-ITSM in the context of limited resources (Table 16).

Table 16. Operational Elements of UX-ITSM for Startups.

Category	Elements	Recommended Tools	Priority
Assessment Tools	UX Audit Checklist	Google Forms	H
	Journey Mapping Template	Miro/Figma	S
	Service Blueprint	Miro	D
Implementation	Request Form Templates	Notion	H
	Documentation Structure	Notion/Confluence	S
	Service Catalog	Airtable	D
Measurement	User Effort Score (UES)	Google Forms	H
	Customer Satisfaction (CSAT)	Typeform	S
	UX Metrics Dashboard	Google Data Studio	D

The recommended tools prioritize free or low-cost solutions familiar to startup environments. Miro and Figma provide collaborative design capabilities, while Airtable offers database functionality without complex setup requirements.

The integration of these three foundational components is visualized in Figure 2, which presents the complete UX-ITSM conceptual model as a three-layer architecture. Table 14's core principles form the foundational Layer 1, establishing the theoretical underpinnings and priority-based approach with Must Have, Should Have, and Can Be Added categorizations. Table 15's implementation domains constitute Layer 2, translating these principles into four practical areas of service design, interaction, knowledge management, and improvement. Finally, Table 16's operational elements comprise Layer 3, providing concrete tools and measurement approaches that startups can immediately adopt.

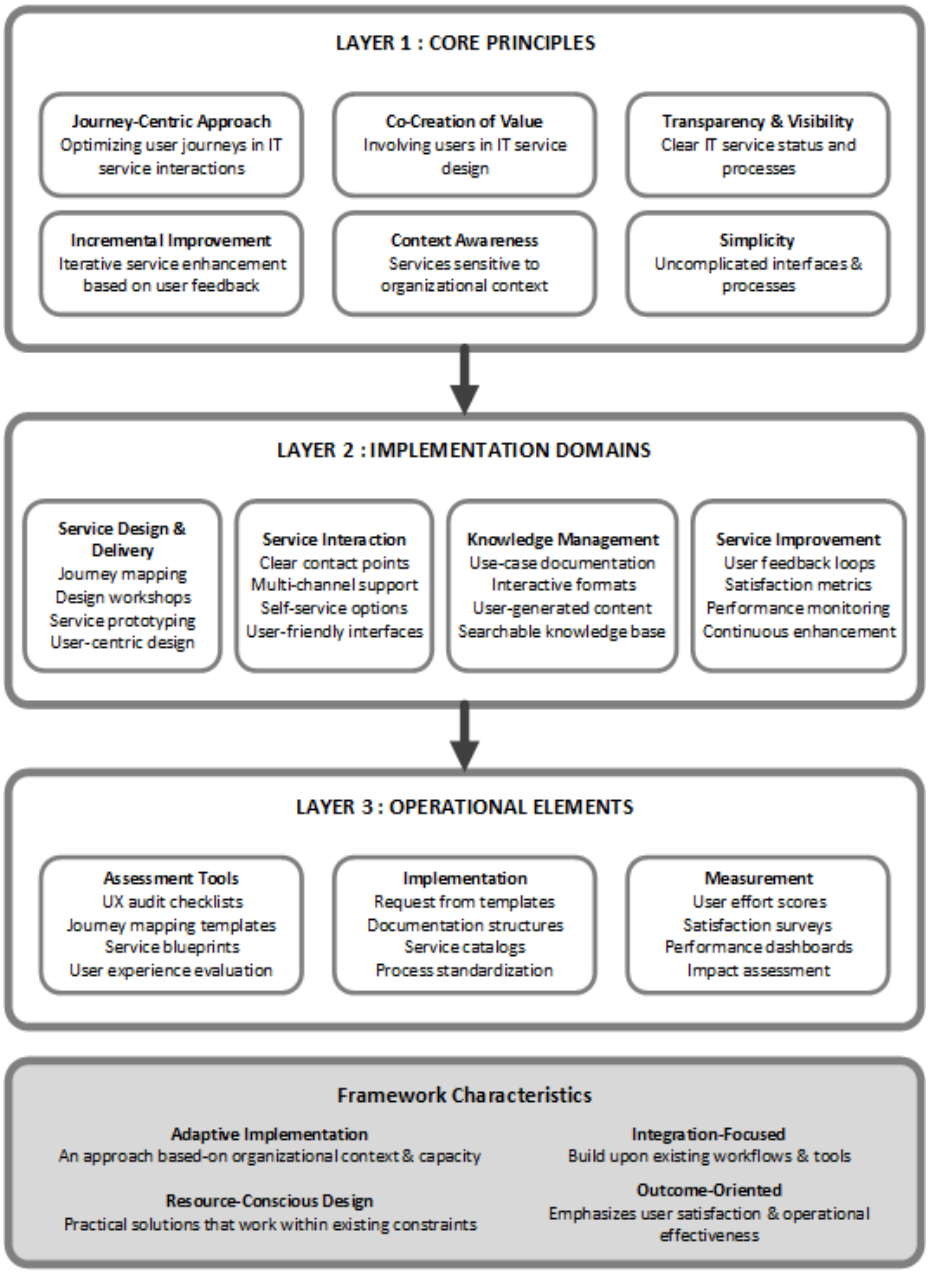

Figure 2. UX-ITSM Conceptual Model for Startup Context

3.5. Contextual Factors Affecting the Implementation of UX-Centered ITSM

The successful implementation of the UX-Centered ITSM approach at Startup X cannot be separated from various contextual factors that act as both drivers and barriers. The research identified five key factors that significantly influenced how the model could be applied in the context of a tech startup with limited resources.

1) Organizational Culture

Cultural aspects are fundamental factors that influence how UX-Centered ITSM initiatives are accepted in organizations. Observations at Startup X show certain cultural characteristics that can be drivers or barriers to implementation (Table 17).

Table 17. Cultural Elements and Their Impact on UX-ITSM Implementation.

Cultural Element	Manifestation at Startup X	Impact on UX-ITSM
Pragmatism & Efficiency	"Just make it work first, improve along the way"	(+) Encourages adoption of simple solutions (−) Reluctant to follow processes seen as complex
Informal Communication	Meetings at cafes, WhatsApp chats, minimal documentation	(+) Quick feedback gathering (−) Difficult to standardize processes
Output Orientation	"Results matter, process is secondary"	(+) Appreciation for immediately visible results (−) Reluctance to follow lengthy design processes
Experimentation Culture	Readily tries new tools/methods	(+) Open to trying new UX approaches (−) May abandon new initiatives before maturity

"*In our startup world, everything wants to be instant. If the process looks complicated, people will be reluctant to follow it. Better to keep it simple*," said the Product Manager during a casual chat in the pantry. This comment demonstrates the challenge of creating ITSM processes that are structured enough without feeling bureaucratic to a team that is used to being fast-paced.

The experimental culture that thrives at Startup X serves as a crucial supporting factor. "We're actually super open to new ideas, just as long as they don't pile more work on our plates," the CTO remarked casually, showing their openness to innovation provided the benefits are clearly visible.

2) Leadership Structure and Decision Making

Decision-making patterns and leadership characteristics at Startup X proved to have a significant influence on UX-ITSM adoption. Observations during the study revealed several relevant patterns (Table 18).

Table 18. Leadership patterns and their implications.

Pattern	Description	Implications for UX-ITSM
Centralized Decision Making	CEO/founder has final say on important decisions	Founder support needed for meaningful initiatives
Delegated Execution	Teams given freedom in implementation methods	ITSM practices must be supported by technical leads
Fire-Based Prioritization	"Address urgent issues first, important ones later"	UX-ITSM must demonstrate short-term benefits
Limited Communication	Not all decision rationales shared with everyone	Need champion to communicate UX-ITSM importance

Observations show that while the CEO verbally supports improving internal systems, priority is still given to product development that directly impacts revenue. "Verbally, everyone agrees that the internal system needs to be improved, but when discussing resources, the features that are requested by paying clients come first," explained one developer in a resigned tone, showing how the priority structure affects the implementation of internal initiatives. An interesting finding is that within Startup X's structure, individuals with informal influence (not job titles) are often more effective at driving change. "Budi is like an influencer in our office. He says A, the next day we all follow A. Even though he's just an ordinary PM, his words are heard," said one of the staff. This shows the importance of involving opinion leaders in change efforts.

3) Limited Resources

Like most startups, Startup X faces significant resource limitations, both in terms of finance, time, and availability of people. These limitations greatly affected how UX-ITSM could be implemented (Table 19).

Table 19. Resource Limitations and Adaptation Strategies.

Constraint	Manifestation	UX-ITSM Adaptation Strategy
Small Team	"Everyone is already at full capacity, constantly exhausted"	Focus only on elements with highest impact
Limited Time	"Deadlines piling up, no time for processes"	Integrate UX-ITSM into existing workflows

Minimal Expertise	"We don't have anyone who understands service design"	Simplify UX methods into practical versions
Tight Budget	"Enterprise tools are expensive; we use whatever's free"	Leverage free tools already familiar to the team

"*Honestly, we can't possibly implement full ITIL with such a small team. It's just a dream*," the CTO said with a laugh, expressing the reality that traditional ITSM approaches are too heavy for startups. This finding emphasizes the importance of a phased approach that is realistic to the team's conditions. Interestingly, limitations actually encourage creativity in implementation. "Because we didn't have the budget to buy specialized tools, we got creative using Zapier to automate notifications from Trello to Slack. It became more efficient," said one developer, showing how limitations sometimes lead to creative solutions that are more suitable.

4) Team Dynamics and Roles

Team dynamics and role distribution at Startup X have a big influence on how UX-ITSM initiatives are received and implemented. Observations revealed some interaction patterns that need to be considered (Table 20).

Table 20. Team Dynamics and Roles in UX-ITSM Adoption.

Team Dynamic Aspect	Description	Implications for UX-ITSM
Overlapping Roles	"Everyone wears multiple hats"	ITSM must be flexible to accommodate multiple roles
Cross-Functional Teams	Developers, designers, product working together	Can transfer UX knowledge from product to internal systems
Experience Gap	Mix of senior experienced staff & junior fresh graduates	Need different approaches for varying experience levels
Turnover	Several positions changed hands in the past year	Challenge of maintaining knowledge when people leave

"*In our team, there is no rigid job description. Developers also support, PMs also sell. So it's difficult to create a strict process*," the CTO explained casually, describing the challenges of standardization in the context of flexible roles.

This mixed team structure also gives them chances to share knowledge with each other. The Product Manager put it this way, "Our product team is really good at user testing, making prototypes, and all that stuff. When you think about it, why aren't we using this same thinking for our internal systems?" He sees a golden opportunity to take the UX approaches that have already proven successful in product development and apply them to internal systems too.

5) Specific Challenges Related to IT Support for SME Clients

The unique characteristics of Startup X's mostly SME clients create additional factors that affect how internal IT services are managed (Table 21).

Table 21. Specific Challenges related to SME Clients.

Challenge	Manifestation	Implications for UX-ITSM
Varying Digital Literacy	"Some clients still use Excel; others already use BI tools"	Internal systems must handle data variations
Need for Intensive Guidance	"SMEs need step-by-step guidance, can't work independently"	CS workload fluctuates, affecting internal support priorities
Price Sensitivity	"SMEs always ask for discounts, tight budgets"	Pressure to maintain operational efficiency
Personal Touch Preference	"SME clients prefer personal attention, not systems"	Expectations for quick & personal responses

"*Our SME customers are just... you know, some really get technology, but most are still clueless. What can you do, the CS team just has to adjust to all these different clients. So yeah... our system should be made flexible too*," said the CS head when explaining why they need an internal system that isn't rigid.

The characteristics of SMEs also create a fluctuating pattern of support requests, with the expectation of a quick response. "SME clients want to be served quickly and personally. 'Eh mas, please dong' via WA at any time. So our team also gets carried away with the 'fast-paced' culture that sometimes clashes with processes that are too rigid," added the CTO, pointing out how client expectations influence internal service culture.

6) Implications for Implementation Strategy

This analysis of contextual factors provides an important basis for developing a realistic UX-ITSM implementation strategy for Startup X. Some key implications include:

a) Start Small with Quick Wins: With limited resources, implementation needs to start with simple initiatives that yield quick and visible results, creating momentum for subsequent changes.
b) Leverage a Culture of Experimentation: Leverage a culture of experimentation by introducing UX-ITSM elements as "trials" or "experiments" rather than formal changes, reducing resistance and increasing buy-in.
c) Find and Engage Internal Influencers: Identify and engage influential people within the organization to be UX-ITSM champions, leveraging the strong informal influence structures within the startup culture.

d) Simplify UX Methods: Create a simplified version of the UX method that teams can apply without specialized skills, overcoming knowledge and time constraints.
e) Align with Business Goals: Link UX-ITSM initiatives to key business priorities, especially efficiency improvements and client support, to gain management buy-in.

"*If you want to implement something successfully, the key is to start small but see the benefits. Make one process really better, show the results, then expand to others*," the CTO said simply when talking about implementation strategies, reflecting a practical approach that suited Startup X's conditions. By considering these five contextual factors, the implementation of UX-ITSM at Startup X cannot use a standardized template, but needs a customized approach that fits the startup's operational reality, culture, and limitations. A deep understanding of these factors is key to transforming conceptual models into practical implementations that are truly useful for the organization.

3.6. Implications of Alignment between Internal User Experience and External Value Proposition

While the contextual factors above influence how UX-ITSM can be implemented, our research revealed an even more fundamental issue that affects the very foundation of Startup X's business strategy: the misalignment between internal and external user experiences. One of the most interesting findings of this research is the striking misalignment between the user experience that Startup X promises to external clients and the experience that employees have interacting with internal systems. This mismatch is not just a technical or operational issue, but has the potential to affect fundamental aspects of the company's identity, credibility and business sustainability.

1) Gaps between Promised Values and Internal Practices

Observations and interviews during the research revealed a significant gap between the experience that Startup X sells to SME clients and the internal experience. This gap manifests in several dimensions mapped through comparative analysis (Table 22).

Table 22. External vs Internal Experience Gap.

Dimension	Value Promised to Clients	Internal Reality	Implications
Ease of Use	"Intuitive platform, no lengthy training needed"	Complex internal systems with minimal guidance	Difficulty demo/supporting features that internal staff struggle to use

p-ISSN: **2656-5935** http://journal-isi.org/index.php/isi e-ISSN: **2656-4882**

Dimension	Value Promised to Clients	Internal Reality	Implications
Visibility & Transparency	"Real-time dashboards for business monitoring"	Limited visibility of ticket status & project progress	CS team often unable to provide accurate status updates
Process Automation	"Automation of administrative tasks that consume time"	Many manual repetitive internal processes	Service delays due to manual process bottlenecks
Data Integration	"Data integrated in one place, no silos"	Data scattered across various tools, often unsynchronized	Inconsistent information provided to clients
Responsiveness	"Responsive support whenever you need it"	Slow & unstructured internal ticket support system	Difficulty providing fast responses to external clients

This misalignment created a paradoxical situation: Startup X sells a platform with a modern UX as an automation solution for SMEs, but internally the company is still struggling with manual processes and unintuitive systems. “It's crazy, we sell software that is said to make workflows more efficient, but we still use Excel for internal approval processes that are sent back and forth,” said one of the sales team members in a frustrated tone. Interestingly, this gap is most evident in the teams that are in direct contact with clients. “It feels like living in two different worlds. In front of clients, we talk about digitalization and efficiency, but back at the office, we face work processes that are far from digital. How the hell!” complained a Customer Success Manager, describing the dissonance experienced on a daily basis.

2) Impact of Misalignment on Service Credibility and Capability

This misalignment doesn't just impact day-to-day operations, it potentially undermines Startup X's overall service credibility and capabilities too. During our research period, we analyzed various service incidents and client feedback, revealing correlations between this internal-external disconnect and several business performance aspects (see Table 23).

Table 23. Impact of Misalignment on Business Aspects.

Business Aspect	Identified Impact	Example Manifestation
Credibility	Erosion of trust due to inconsistency between promises and delivery	Client questioning, "If your system is so good, why do you have difficulty checking my request status?"

Business Aspect	Identified Impact	Example Manifestation
Service Speed	Internal bottlenecks slow down response to client needs	Support ticket resolution time 30% longer than target due to manual processes
Service Consistency	High variation in service quality depending on who handles it	Identical requests receive different handling because of lack of process standardization
Information Accuracy	Errors in information delivered due to non-integrated data	Clients receiving different updates from different teams for the same issue
Employee Experience	Staff frustration affecting motivation and performance	Turnover rate 25% higher in customer-facing teams

*Turnover rates were calculated by comparing employee resignation data across departments for the 12-month period preceding the study. The 25% higher rate represents the difference in turnover percentage between customer-facing teams and other departments.
**Resolution time data was collected from the ticketing system and compared against the company's internal Service Level Agreement targets over the 8-week observation period.

"*A client once said to me, 'You sell software that is said to make all processes integrated, but how come your support team and sales team often give different information?' I was really embarrassed, what to answer*," said a CS staff, describing how internal misalignment can be reflected to the client's perception.

From a service capability perspective, this misalignment creates a situation where internal capabilities don't evolve as quickly as the promises offered to the market. "We often sell features that are not really mature because of pressure from the market. But if our own team can't/won't use the tools we sell, how can we be sure it's really the right solution?" a sharp reflection from the Product Manager during the discussion of research findings.

3) Potential Strategic Value of Internal-External Alignment

On the other hand, the research also identified significant potential strategic value if Startup X is able to create alignment between internal user experience and external value proposition. An analysis of other tech startups with higher levels of alignment shows some of the competitive advantages that can be achieved (Table 24).

p-ISSN: **2656-5935** http://journal-isi.org/index.php/isi e-ISSN: **2656-4882**

Table 24. Potential Strategic Value from Internal-External Alignment.

Strategic Aspect	Value Potential	Realization Mechanism
Market Credibility	Strengthening value proposition with internal proof	"We use what we sell" as authentic marketing narrative
Product-Market Fit	Product validation through internal use before market release	Internal dogfooding as early feedback loop mechanism
Service Capability	Service quality improvement through first-hand experience	Support team skilled from daily product usage
Innovation	Accelerated feedback cycle and innovation	Direct identification of pain points from internal use drives improvements
Operational Efficiency	Reduction of system duplication and workflow integration	Single platform for internal and external needs reduces overhead

One mini-experiment we conducted during our research demonstrated this potential perfectly. The product team began using the knowledge base feature, originally designed for clients, to document their internal processes. The results were quite remarkable: first, documentation became more structured and searchable; second, the team discovered bugs and UX issues that testing had missed; and third, the support team became notably better at explaining features to clients because they'd grown familiar with using those features themselves.

"*When we started using our knowledge base module for our own internal documentation, we gained so many insights. Things we completely missed during the initial design phase suddenly became obvious when we used it daily. And the most noticeable change was how our support team became way more confident teaching clients because they'd already mastered it themselves*," the CTO explained, describing how using your own product creates an invaluable feedback loop.

4) Linkage to UX-Centered ITSM Approach

Our findings on the implications of this alignment directly connect to the UX-Centered ITSM model discussed in the previous section. The alignment between internal and external experiences goes beyond just brand consistency or service quality, it serves as a mechanism ensuring that the UX principles Startup X values in its products are equally reflected in its internal systems. This UX-focused ITSM model gives sort of a roadmap for creating alignment through several ways:

a) Co-Creation Practices: So basically, we involve teams who meet customers every day to help design internal systems. Like the CS team for example, they really know what customer complaints come up all the time, so their input is super valuable when making an internal

ticketing system. That way, the system we build actually connects with what clients need.

b) End-to-End Experience Principles: Now, this one focuses on seeing the user experience from start to finish, both for employees and customers. It's like making a map, you know? So we can compare and go, "Oh, it turns out customers often get confused at this part, and our team also struggles with the same thing." From there we can find where the problems are.

c) Connected Knowledge Warehouse: This means creating one place to store all important info. So no more information scattered everywhere. The internal team uses the same warehouse that clients see, so the information is guaranteed to be exactly the same.

d) Connected Measurement Methods: In this part, we look for ways to measure how well internal and external experiences align. For example, if our team says a process is complicated, we check if customers feel the same way. That way we know what needs fixing so everyone's happy.

As expressed by the CEO in the final reflection of the study: "We have always confused internal productivity and client experience as two different things. But if you think about it, that's really the core of our solution-bridging that gap. Maybe it's time we became the first client of our own product."

5) Implications for Business Strategy

At the strategy level, the findings on internal-external alignment provide important implications for the future direction of Startup X's development. The analysis shows that this alignment is not just a "nice to have" but a potential competitive advantage in an increasingly fierce competition. First, in the context of the price-sensitive SME market, the ability to demonstrate the concrete value of the product becomes very important. Startup X that uses its own products is in a more credible position to explain the tangible benefits than competitors who only sell "promises" without evidence of internal implementation. Second, the philosophy of "use it ourselves before selling to others" creates a feedback loop that accelerates our product's fit with market needs. We directly feel which aspects work smoothly and which cause headaches. Startups that successfully align their internal and external experiences typically develop products more rapidly, as they identify issues and can fix them immediately before problems grow larger. Third, this alignment facilitates more effective knowledge transfer between product development and client support. Teams that use the same products as clients naturally develop a deeper understanding of use cases and potential problems.

p-ISSN: **2656-5935** http://journal-isi.org/index.php/isi e-ISSN: **2656-4882**

"*If we seriously want to be a player that matters in the SME SaaS market, we've got to start practicing what we've been preaching to our clients all this time. It's not just about looking credible to clients, but also because this makes our own organization better overall*," the CEO's statement emphasizes the long-term implications of this alignment. This research highlights that for tech startups offering user experience solutions to external clients, aligning with internal experience goes beyond mere consistency. Rather, this alignment forms the foundation for credibility, capability, and business sustainability. Startup X, despite its current gaps, actually has a significant opportunity to create competitive advantage by aligning its internal experience with its external value proposition.

4. CONCLUSION

This research makes important contributions to both IT Service Management (ITSM) and User Experience (UX) literature by demonstrating how these traditionally separate areas can be combined effectively in resource-constrained startups. Our study shows that even small technology companies can align the polished external user experiences they offer with more structured, user-friendly internal IT services. This challenges the common belief that robust ITSM practices are only practical for large enterprises and highlights how UX-centered practices are both feasible and valuable for startups aiming for sustainable growth. However, several limitations should be recognized. This research is based on a single case study, which limits the ability to generalize findings to other startup contexts. Additionally, the proposed UX-Centered ITSM model is conceptual and has not yet been tested for long-term outcomes or scalability. Finally, the insights from this study may not apply directly to larger organizations or startups in industries with very different operational or regulatory environments.

The main contribution of this study is the development of a practical UX-Centered ITSM framework specifically designed for startups. By addressing the gap between the sophisticated customer experiences startups promote externally and the ad-hoc internal IT services they rely on, our three-layer model offers a flexible path for gradual improvement. Unlike traditional ITSM standards, which are often too rigid for small companies, our approach allows startups to tailor adoption to their own pace and capabilities. For practitioners, we recommend starting with user journey mapping to identify pain points in IT processes, setting up basic feedback loops with internal users, and using existing tools like Slack or Trello instead of investing in complex new systems. Creating simple dashboards to show the status of IT requests can improve transparency, while involving customer-facing teams in designing IT processes ensures better alignment between internal workflows and external expectations. Key takeaways from this research include recognizing that shadow IT often signals unmet needs, aligning internal IT practices with external customer experiences can create a competitive edge, and that focusing on basic

UX principles like clarity and timely feedback can have a greater impact than adopting advanced tools. Phased, iterative implementation is more effective than trying to overhaul systems all at once, and involving users in designing processes reduces resistance and increases buy-in.

Future research should examine how this model performs in startups at different growth stages, compare results across industries, and explore links between internal UX improvements and external customer satisfaction. Longitudinal studies tracking startups over time could provide deeper insights into how internal IT practices adapt as organizations scale and how these changes affect performance. Broadly, our findings suggest that the internal IT practices of startups are crucial not just for their own success, but also for the success of digital transformation efforts in emerging economies like Indonesia.

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