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Improving IT Service Management (ITSM) Capability in Small Application Development Firms Using FitSM: A Case Study Integrated with Socio-Technical Systems Theory

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Abstract

This paper looks at how the FitSM framework, together with Socio-Technical Systems (STS) theory, can help improve IT Service Management (ITSM) in a small software development firm. Limited resources often cause small businesses to manage services inefficiently, which leads to inconsistent delivery and dissatisfaction among clients. The study focuses on a single software company in Jakarta, where ITSM processes like incident management, change management, and configuration management were assessed. The research involved interviews with key staff, an evaluation of current practices, and a gap analysis to identify areas needing improvement. The results show that most processes are at an early stage, with some progress in Configuration Management. By using FitSM's structured approach and addressing teamwork and communication issues through STS theory, the company can improve service reliability and efficiency. The study concludes that combining FitSM with socio-technical principles provides a practical solution for small companies to enhance their ITSM practices and overall service quality.

Keywords: IT Service Management, FitSM, Socio-Technical Systems, Capability Level, Process Improvement

1. INTRODUCTION

Small firms in general have resource constraints. The firms prioritize resource allocation to maintain their core capabilities to ensure ongoing business. That means other organizational activities are not well resourced. As a result, they struggle to implement and sustain effective service management processes, which impacts their ability to consistently deliver quality IT services. In the competitive landscape, where customer satisfaction and service reliability are paramount, this lack of focus on ITSM maturity can lead to inefficiencies, service disruptions, and ultimately lost business opportunities. [1], [2], [3].

The FitSM standard, a lightweight and resource-efficient ITSM framework, was specifically designed to address the needs of small organizations. It simplifies service management by focusing on core processes, making it suitable for small firms that lack the capacity to implement more complex frameworks like ITIL. Despite its advantages, many small firms have not fully adopted FitSM, leaving gaps in IT service quality and maturity. This is particularly urgent in software development firms, where client expectations for reliable, high-quality services are ever-increasing, and the ability to manage IT services efficiently directly impacts project success and customer retention [4].

FitSM offers a simple, modular way to manage essential service processes. This approach reduces the effort needed to get started while maintaining clear accountability and effective service delivery. ITIL is known for its thoroughness but often requires specialized skills and significant investment, making it less suitable for smaller companies. Similarly, COBIT focuses on governance and is more appropriate for larger organizations that need detailed alignment between IT and business strategies. FitSM, in contrast, provides simplicity and flexibility. Its core design principles address the unique needs of smaller organizations, emphasizing essential service management practices without overburdening the organization. Moreover, FitSM aligns with compliance standards, offering an added advantage for small firms aiming to maintain regulatory adherence without extensive resource allocation [4], [7], [8].

The importance of adopting FitSM is underscored in the context of this study, a small software development firm in Jakarta that struggles with minimal documentation, inconsistent incident handling, and inadequate service level agreements. The integration of FitSM with Socio-Technical Systems (STS) theory further enhances its applicability by addressing not only technical gaps but also the socio-organizational challenges faced by the firm. This combined approach ensures a balanced improvement in IT service management, considering both human and technological factors.

This case study exposes the fact that a small software development company is struggling with minimal to non-existent documentation, inadequately addressing issues and little or no traceable processes of service management. These problems are hard to fix without an organized plan for improving their IT service management. The study suggests that applying FitSM could be a simple and effective way to tackle these issues, paying attention to both the people and the technology involved. This approach could lead to better service, smoother operations, and a flexible solution that works within the company's limited resources.

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The significance of the research lies in its focus on ITSM capabilities configuration tailored to small application development firms, guided by FitSM, human expectation theory, and socio-technical systems principles. Through a qualitative analysis of similar cases and an in-depth exploration of FitSM process flows, the study contributes valuable insights into how small firms can balance human and computational capacities to achieve sustainable service management practices.

2. METHODS

2.1. FitSM Framework

FitSM is a lightweight IT Service Management (ITSM) standard specifically designed for small to medium-sized organizations, providing a streamlined approach to managing IT services (Figure 1, 2). Unlike more comprehensive frameworks such as ITIL, FitSM focuses on core service management processes, making it particularly suitable for organizations with limited resources. Originally developed as part of the European Community's Framework Programme Seven, FitSM was aimed at enhancing IT service management in service-oriented infrastructures, particularly in research environments. Its modular structure allows for flexibility in implementation, addressing the diverse needs of various entities while maintaining transparency, accountability, and visibility in service delivery. [4], [5], [6], [7]

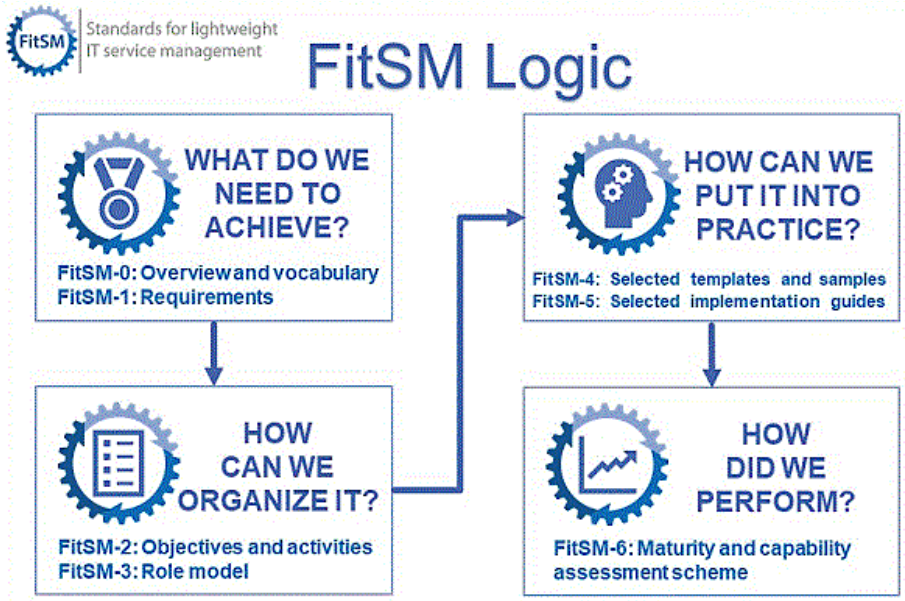

Figure 1. FitSM Logic. [4], [27]

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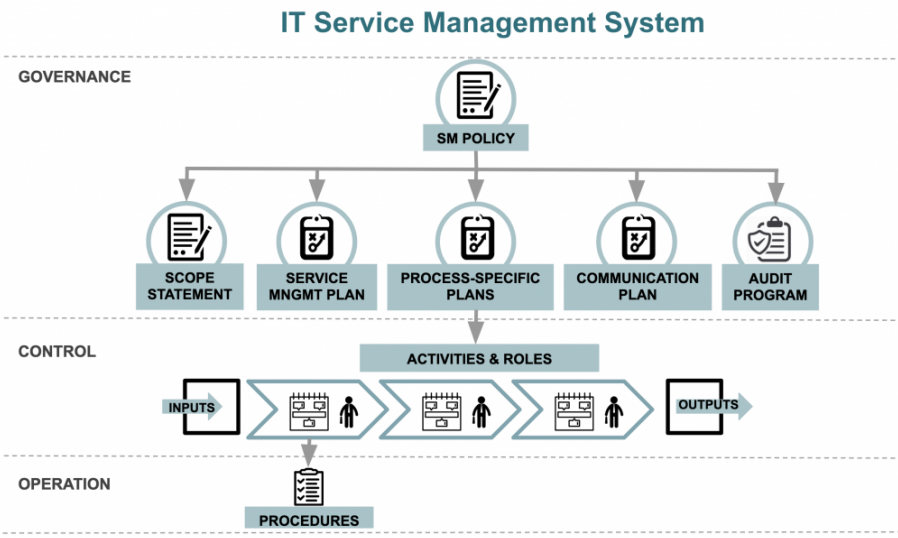

Figure 2. Lightweight IT service management with FitSM. [4][28]

The framework simplifies ITSM by breaking down complex processes into manageable components, focusing on essential areas such as incident and service request management, service level agreements, and change management. FitSM also emphasizes compliance, ensuring that each service area meets its functional requirements while adhering to agreed-upon service levels. This approach enables organizations to achieve a structured and controlled service management environment without the overhead of more complex frameworks. [8], [9], [10]

FitSM considers IT Service Management (ITSM) for support in two directions, capability and maturity. Capability is measured in terms of specific practices being done well, for example incident management or change management. Maturity, in contrast, is the ability to look at something from a larger perspective — how all aspects work together across an entire system. This study, on the other hand is related to capability and therefore only selected processes are being evaluated rather than an overall system performance. [4]

For this research we chose capability instead of maturity due to the fact that we are measuring how effectively certain processes (e.g incident management, change management) are being used. This study aims to identify areas for immediate improvement in individual tasks, assessing capability gives a more direct understanding of what needs attention. Maturity, on the other hand, looks at the entire system, which might be too broad for the current scope. By focusing on capability, we can provide more targeted insights to enhance the company's specific IT service management practices.

The capability levels in FitSM are as follows [4]:

1) Level 0: Unaware / Non-existent – No understanding of what needs to be done and without any key outputs.
2) Level 1: Ad-hoc / Initial – Tasks are performed without any control, some degree of awareness of what is required and ownership in place but no clear responsibility with all key outputs half done.
3) Level 2: Repeatable / Partial – Tasks are done in a repeatable way, though documentation may not always match what's actually being done, and key outputs are produced, but not consistently.
4) Level 3: Defined / Complete – Tasks are clearly defined, performed consistently, and key outputs meet expectations.
5) Level 4: Managed / Aligned – Tasks are formally defined, managed & controlled leading to measurable results; outputs of one process always feed other processes.

There's a noticeable lack of academic research on how FitSM can improve ITSM maturity, especially in small application development companies, despite its potential. The framework's simple, focused approach makes it a good fit for smaller businesses, but its use in real-world settings hasn't been studied much. This paper aims to fill that gap by showing a case study where FitSM is combined with socio-technical systems theory to enhance ITSM maturity in a small firm. The goal is to demonstrate the practical advantages of FitSM and inspire more research on its use in different types of organizations.

2.2. Socio-Technical Systems Theory in ITSM

Socio-Technical Systems (STS) theory helps us understand how people and technology work together in organizations, emphasizing that both need attention to make real improvements. In IT Service Management (ITSM), STS can be combined with frameworks like FitSM to improve how services are delivered by focusing on both the human and technical sides. The theory provides tools to guide ongoing improvements, bridging the gap between ideas and real processes. By comparing STS criteria with ITSM practices, like handling incidents and managing changes, companies can create a tailored approach that works for them. This is especially useful for small software firms that often manage services informally due to limited resources. Integrating STS with FitSM can help these firms shift to more organized ITSM practices, balancing the roles of people and technology. Through workshops and interviews, the approach can be adjusted to meet the specific needs of smaller companies while remaining flexible enough to apply to other organizations that depend heavily on technology. [11], [12], [13], [14]

2.3. Integration of FitSM and Socio-Technical Systems Theory

Combining FitSM with Socio-Technical Systems (STS) theory creates a practical framework that helps small software development companies improve their ITSM maturity by balancing both the technical and human aspects. This approach ensures that FitSM's straightforward service management processes are supported by STS's focus on how people and technology interact. As a result, small firms can build more effective ITSM practices while also considering the social factors that impact how services are delivered. [15]

The result of this integration is a dual-focus framework where FitSM's lightweight structure is used to manage core ITSM processes like incident management, service request handling, and change management, while STS theory introduces a socio-technical lens that improves how teams collaborate, communicate, and adapt to technological systems. This combined approach allows small firms to streamline their IT operations without overwhelming their limited resources. It helps address challenges such as inconsistent service processes, insufficient documentation, and inadequate communication by structuring both the technical workflows and human responsibilities. [8], [9]

2.4. Research Steps

This research focuses on measuring IT Service Management (ITSM) capability and formulating improvement strategies by integrating FitSM with Socio-Technical Systems (STS) theory, specifically for small application development firms with limited existing ITSM practices. The methodology includes the following steps:

Step 1 - Preparation for Capability Level Assessment

1) Since the firm lacks formal ITSM practices and relevant records are limited, the first step involves conducting interviews and discussions with key personnel, such as IT staff and management, to understand the informal processes currently in place for handling incidents, service requests, and changes.
2) In this study, interviews were conducted with a total of five key personnel, comprising three members of the IT staff and two members of the management team. These interviews provided valuable insights into the company's current IT service management practices and highlighted specific challenges.
3) A FitSM-aligned ITSM capability assessment tool is then adapted to evaluate the maturity of these informal processes, using qualitative data as the basis for the assessment.

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Step 2 - Process Capability Level Measurement

1) The adapted FitSM capability assessment tool is applied to assess the current state of ITSM, even though formal processes may not yet be established.
2) Socio-technical elements, such as teamwork, communication, and the clarity of roles within the firm, are evaluated alongside the technical infrastructure to provide a holistic view of the organization's ITSM maturity.

Step 3 - Gap Analysis

A gap analysis is conducted to compare the current informal practices with the desired state based on FitSM guidelines. This step identifies key areas where the firm's current service management efforts are insufficient or inconsistent, particularly in how human and technical factors interact.

Step 4 - Strategy Formulation for Capability Improvement

1) Based on the gap analysis, targeted strategies are developed to improve ITSM capability. These strategies focus on introducing formal processes for core ITSM functions, tailored to the firm's resource limitations and operational context.
2) The integration of STS theory ensures that the strategies not only address technical improvements but also enhance human factors such as collaboration, communication, and role clarity within the service management environment.

In selecting the case study method, we aimed to gain a deep understanding of how FitSM can be applied in small businesses. This approach allows for detailed insights into real-world challenges and solutions, which might not be captured through surveys or experiments. While surveys can gather broad data, they often miss the context-specific nuances that case studies provide. Given the unique constraints of small businesses, such as limited resources and the need for flexible IT service management solutions, a case study offers a practical way to explore these dynamics in depth.

3. RESULTS AND DISCUSSION

3.1. Company Overview

This small software development company, based in Jakarta with a team of seven, focuses on delivering custom software solutions to local small and medium-sized businesses. The team has had some challenges with managing client requests, fixing technical problems, and keeping services running smoothly. In one case, a client's system crashed because of a software issue during an important business task.

Since there wasn't a clear process for handling such situations, it took longer to fix the problem, which left the client unhappy. In another case, a planned software update was delayed because there wasn't a proper plan in place for managing it, which caused more disruptions. With limited resources and no formal system to manage these services, the company depends on the team's individual knowledge and informal methods to keep things working.

3.2. Selected Processes for Capability Assessment

In the context of improving IT Service Management (ITSM) capability within small application development firms, this study focuses on assessing the capability of several critical service management processes. These processes were chosen based on their direct impact on the firm's operational efficiency, service reliability, and customer satisfaction. Furthermore, insights gained from interviews with key personnel, including IT staff and management, highlighted specific pain points, such as the lack of formal incident management procedures and inconsistent handling of service requests, reinforcing the importance of the selected processes. Given the firm's resource constraints and often informal practices, the chosen processes are: Incident and Service Request Management, Change Management, Configuration Management, Service Level Management, and Continual Service Improvement, thse selected processes are pivotal in identifying gaps in both technical and human aspects of service management. By evaluating these processes, the study provides a foundation for targeted improvements aligned with the principles of FitSM and Socio-Technical Systems (STS) theory.

1) Incident and Service Request Management (ISRM)
This process is important to the company's everyday work because it affects how they respond to client problems and requests. Many small businesses handle incidents without a clear system, which often leads to delays, mistakes, and unhappy customers. Creating a proper system for managing incidents is necessary to make services more reliable and to make sure customer needs are met quickly. By reviewing how they currently deal with incidents, the company can find areas that need improvement, like tracking issues, setting priorities, and response times, and then put in place a better, more organized way of handling these problems to meet customer expectations.

2) Change Management (CHM)
Small businesses often try to make changes in IT systems or software without proper planning, approvals etc., resulting into potential service outages, delayed projects, and other risks. It is necessary to have a mechanism for changing and that these changes are covered so as not to affect the daily work. The company can also improve its process to manage changes in a more structured form, ensure updates are planned and tested and better communicated.

3) Configuration Management (CONFM)
    a) Configuration management ensures that all key service assets (e.g., hardware, software, and documentation) are tracked and managed consistently. Small firms often overlook this process, leading to confusion about what assets are being used and their current status.
    b) This process is essential for maintaining accurate information about the components that support services, enabling better decision-making during troubleshooting or upgrades.
    c) Maturity assessment here will help the firm establish a structured system for tracking configurations, allowing for better control over assets and reducing the likelihood of configuration errors.

4) Service Level Management (SLM)
    a) In small application development firms, there is often no formal agreement between the firm and its clients regarding service levels, which can lead to unmet expectations or poor customer satisfaction.
    b) Service Level Management ensures that the firm defines, monitors, and reviews service targets with clients, aligning service delivery with client expectations.
    c) This process is critical for improving transparency and accountability, helping the firm to establish clear service targets and metrics for performance evaluation.

5) Continual Service Improvement (CSI)
    a) Small firms rarely have formal processes for evaluating and improving their services over time. Without a continual improvement mechanism, service quality can stagnate, and emerging issues may go unaddressed.
    b) Continual Service Improvement focuses on reviewing service performance and identifying areas for enhancements, which is crucial for maintaining competitive advantage in a resource-limited environment.
    c) Assessing this process will help the firm build a culture of ongoing improvement, enabling it to adapt to evolving client needs and market trends.

The selected processes cover both operational tasks, like managing incidents, changes, and configurations, and strategic activities, such as service level management and continuous service improvement. These processes are the key for the company to deliver secure, efficient services and best utilize its constrained resources. By concentrating on these aspects, the organization could have in place a robust IT management system to ensure business-as-usual and prepare for growth while considering both technology as well as human sides.

3.3. Capability Assessment Instrument

Here is a Capability Assessment Instrument for evaluating the selected processes (Incident and Service Request Management, Change Management, Configuration Management, Service Level Management, and Continual Service Improvement) in the context of improving IT Service Management (ITSM) capability within small application development firms. The instrument integrates FitSM principles and Socio-Technical Systems (STS) theory to ensure both technical and human aspects are assessed.

1) Incident and Service Request Management (ISRM)
   Level 1 (Ad-hoc):
   a) Technical: Are incidents and service requests handled informally, with no structured process for logging and resolving them?
   b) Socio-Technical: Are staff roles for handling incidents unclear, leading to delays in resolution due to poor communication?
   c) Evidence: Incidents are managed on a case-by-case basis, and team members are uncertain about who is responsible for each step.

   Level 2 (Repeatable):
   a) Technical: Are incidents logged consistently but with no formal prioritization or tracking system?
   b) Socio-Technical: Do staff have a basic understanding of their roles in incident resolution, but collaboration is still inconsistent?
   c) Evidence: Incidents are logged, but some requests may fall through the cracks due to inconsistent prioritization and follow-up.

   Level 3 (Defined):
   a) Technical: Is there a formal process for logging, prioritizing, and tracking incidents and service requests, with defined escalation paths?
   b) Socio-Technical: Are clear roles and communication protocols established, ensuring effective collaboration in incident resolution?
   c) Evidence: Incidents are resolved in line with predefined SLAs, and team collaboration is smooth, with well-defined responsibilities.

2) Change Management (CHM)
   Level 1 (Ad-hoc):
   a) Technical: Are changes made to IT systems reactively, without formal planning or documentation?
   b) Socio-Technical: Are changes communicated poorly among team members, often leading to confusion or service disruptions?
   c) Evidence: Changes are implemented without approval or tracking, and team members are often unaware of the impacts.

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Level 2 (Repeatable):

a) Technical: Is there a basic process for submitting and approving changes, but it's not followed consistently?
b) Socio-Technical: Are there some informal communication channels for change management, but miscommunication still occurs?
c) Evidence: Changes are tracked inconsistently, with some documentation but a lack of standard procedures.

Level 3 (Defined):

a) Technical: Are changes formally logged, approved, tested, and implemented with minimal disruption to services?
b) Socio-Technical: Is there clear communication and collaboration among technical staff and management regarding the potential impacts of changes?
c) Evidence: Changes are managed effectively with full documentation, risk assessment, and team collaboration, minimizing service risks.

3) Configuration Management (CONFM)

Level 1 (Ad-hoc):

a) Technical: Are configuration items (CIs) not formally documented, leading to confusion about which assets are in use?
b) Socio-Technical: Do team members lack a clear understanding of the status and relationships of key assets, resulting in inefficiencies during troubleshooting?
c) Evidence: There is no centralized repository or system for tracking CIs, causing delays when resolving issues.

Level 2 (Repeatable):

a) Technical: Is there a basic inventory of CIs, but it's not regularly updated or maintained?
b) Socio-Technical: Are there some informal procedures for communicating asset information, but gaps still exist?
c) Evidence: Configuration items are tracked, but updates are inconsistent, and team members are not always aware of changes.

Level 3 (Defined):

a) Technical: Is a Configuration Management Database (CMDB) being used, and is it updated regularly to track all assets and their connections?
b) Socio-Technical: Are roles and responsibilities clearly assigned to ensure effective teamwork in maintaining and updating configuration data?

c) Evidence: The CMDB is continuously updated, and every team members have access to the current configuration of infrastructure details that allow for a faster troubleshooting effort.

4) Service Level Management (SLM)
Level 1 (Ad-hoc):
a) Technical: Are service level agreements (SLAs) with clients undefined or non-existent, leading to unmet expectations?
b) Socio-Technical: Is there little to no communication with clients regarding service expectations and performance metrics?
c) Evidence: Clients' service expectations are not formally documented, leading to inconsistent service delivery.

Level 2 (Repeatable):
a) Technical: Are informal agreements in place with some clients, but SLAs are not consistently applied or monitored?
b) Socio-Technical: Is there occasional client communication about service levels, but no regular reviews?
c) Evidence: Some clients have informal agreements but monitoring of service performance against these expectations is inconsistent.

Level 3 (Defined):
a) Technical: Are formal SLAs in place, and are service levels regularly monitored and reviewed to ensure alignment with client expectations?
b) Socio-Technical: Is there clear, regular communication with clients about service levels, and are reviews conducted to address performance gaps?
c) Evidence: SLAs are clearly defined and monitored, and regular reviews with clients ensure ongoing alignment with expectations.

5) Continual Service Improvement (CSI)
Level 1 (Ad-hoc):
a) Technical: Are service improvements made informally, with no structured review process for evaluating service performance?
b) Socio-Technical: Is there a lack of structured collaboration among team members to identify areas for service improvement?
c) Evidence: Service improvements are made reactively, with no formal process for identifying or addressing recurring issues.

Level 2 (Repeatable):
a) Technical: Are some improvement initiatives identified, but follow-through is inconsistent and there is no formal tracking process?

b) Socio-Technical: Are team members aware of the need for improvements, but collaboration and follow-up are informal and inconsistent?
c) Evidence: Some service improvement ideas are discussed, but they are not consistently tracked or implemented.

Level 3 (Defined):
a) Technical: Is there a clear process for identifying, assessing, and implementing service improvements, with regular checks on performance?
b) Socio-Technical: Do team members collaborate well to find and apply improvements, and are these actions tracked and reviewed regularly?
c) Evidence: The company demonstrates a systematic method to keep everything going by regular testing and working collectively; as such there are apparent advancements in service quality.

For each process, the organization will be scored based on three levels of capability:
a) Ad-hoc: Processes are informal and unstructured.
b) Repeatable: Basic processes are established but inconsistently applied.
c) Defined: Processes are formalized, consistently followed, and well-documented.

This instrument provides a structured approach to evaluating both the technical aspects (e.g., documentation, processes, tools) and the human/social aspects (e.g., communication, collaboration, roles) of ITSM processes. The integration of Socio-Technical Systems (STS) theory ensures that the human interactions and organizational dynamics are considered alongside technical improvements, fostering a holistic approach to service management.

3.4. Capability Level Results

The Capability level results presents the findings from the capability assessment of selected IT Service Management (ITSM) processes, which were evaluated using the tailored assessment instrument. The processes assessed: Incident and Service Request Management (ISRM), Change Management (CHM), Configuration Management (CONFM), Service Level Management (SLM), and Continual Service Improvement (CSI), were chosen for their direct impact on the firm's operational efficiency and service delivery. The assessment focused not only on the technical aspects of each process but also integrated Socio-Technical Systems (STS) theory to ensure that both human and technical interactions were evaluated.

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The assessment relied on qualitative interviews conducted with five key personnel: three IT staff members and two members of the management team. These interviews were designed to explore how each process is currently managed, focusing on both technical execution and the human factors involved. The capability of each process was classified based on responses indicating whether processes were informal (Level 1: Ad-hoc), established but inconsistent (Level 2: Repeatable), or fully structured and standardized (Level 3: Defined). Capability levels by process as follow.

1) Incident and Service Request Management (ISRM) – Level 1 (Ad-hoc)
   The interviews revealed that incidents and service requests are handled informally, with no consistent logging, prioritization, or escalation mechanisms in place. Team members indicated that while they attempt to manage incidents as they arise, there is no clear process or documentation. Communication gaps between IT staff and management further contribute to delays in resolution, resulting in inconsistent service delivery. This process was classified as Level 1 (Ad-hoc) due to the absence of formal practices.
2) Change Management (CHM) – Level 1 (Ad-hoc)
   There is no real change management process in the organization, but instead changes are put into place when needed, with zero approval or documentation. The management team recognizes that changes are often carried out without adequate planning or communication, which leads to service disruptions. Therefore, the process is at Level 1 (Ad-hoc), i.e., there are no formalized procedures for managing changes.
3) Configuration Management (CONFM) – Level 2 (Repeatable)
   The firm's configuration management process is somewhat more structured, with a basic inventory of assets in place, though this inventory is not regularly updated or maintained. IT staff noted that they rely on informal methods to track configuration items, leading to occasional confusion during troubleshooting. The interviews indicated that while there is some level of process, it is inconsistent and not standardized, placing this process at Level 2 (Repeatable).
4) Service Level Management (SLM) – Level 1 (Ad-hoc)
   Their management team shared with us in interviews that they do not have any formal service level agreements (SLAs) with their clients. Seemingly expectations are occasionally formalized verbally, but there is no way to actually monitor or evaluate the levels of service. Therefore, the service delivery has been inconsistent and there is no provision in place to ask customers if they are happy or not regularly. Because of the absence of formal agreements and monitoring, this process is rated at Level 1 (Ad-hoc).
5) Continual Service Improvement (CSI) – Level 1 (Ad-hoc)
   The company handles continual service improvement informally, without a clear system for identifying or implementing changes. Team members mentioned that improvements are sometimes talked about, but there is no

formal way to track or review these efforts. As a result, this process is rated at Level 1 (Ad-hoc).

The overall capability assessment indicated that the firm's ITSM processes are largely at the Ad-hoc (Level 1) stage, with Configuration Management (CONFM) showing some signs of progress at Level 2 (Repeatable). The absence of formal processes, combined with communication and collaboration challenges, has resulted in inconsistent service delivery and operational inefficiencies. By addressing these gaps, the firm can elevate its capability levels, moving toward more structured, efficient, and consistent IT service management practices.

3.5. Strategy Formulation for Capability Improvement

The capability assessment shows that the company's current IT Service Management (ITSM) processes are mostly at an Ad-hoc (Level 1) stage, with some progress towards a more consistent approach (Level 2) in Configuration Management. To close these gaps and develop more structured, reliable ITSM practices, a set of specific improvement strategies has been created. These strategies focus on both the technical side of service management and key socio-technical factors, like team collaboration, clear roles, and communication, which were identified as weaknesses in the interviews.

1) Incident and Service Request Management (ISRM)
    a) Strategy: Set up a formal system for logging and tracking incidents and service requests. This involves using a ticketing tool to make sure every incident and request is recorded, prioritized, and followed through until it's resolved.
    b) Justification: The assessment revealed that the firm's incident management process is informal, with no consistent method for logging or prioritizing incidents, leading to delays and missed deadlines. Implementing a structured system will not only improve operational efficiency but also enhance accountability, as each incident will be tracked through a formal process, allowing team members to understand their roles and responsibilities more clearly. This strategy also supports improved communication and collaboration within the team, as all members will have access to real-time incident data. [16], [17].

2) Change Management (CHM)
    a) Strategy: Establish a clear process for managing changes, including a formal approval system for any updates or modifications to the IT environment. This system should include assessing risks and involve

both technical staff and management to ensure that all changes are properly reviewed and approved before they are made.

b) Justification: The ad-hoc nature of change management within the firm poses a risk to system stability and service delivery. By introducing a formalized change management process, the firm can reduce the risk of unplanned disruptions and ensure that changes are tested and evaluated for potential impacts before implementation. This strategy also addresses the socio-technical gap identified in the assessment, where poor communication around changes led to confusion and instability. Establishing a formal approval process will ensure that all team members are aligned on changes and their implications. [18], [19], [20].

3) Configuration Management (CONFM)
   a) Strategy: Create and manage a database (CMDB / Configuration Management Database) to track all configuration items (CIs) and their connections. This database should be updated regularly, and routine checks should be done to ensure the information stays accurate.
   b) Justification: While the firm has a basic inventory of CIs, the process is inconsistently applied, leading to confusion during troubleshooting and system updates. A well-maintained CMDB will provide a single source of truth for all configuration data, improving operational efficiency and enabling faster resolution of issues. Furthermore, this strategy supports better decision-making by providing an accurate and up-to-date view of the firm's IT assets. It also improves collaboration among team members, as all stakeholders will have access to the same configuration data, reducing miscommunication. [21], [22].

4) Service Level Management (SLM)
   a) Strategy: Create formal Service Level Agreements (SLAs) with clients that clearly outline service expectations, response times, and performance measures. Regular reviews should be held with clients to ensure these agreements are being followed and standards are met.
   b) Justification: The absence of formal SLAs has led to inconsistent service delivery and unmet client expectations. By establishing formal agreements, the firm can improve transparency and accountability, ensuring that all stakeholders are aligned on service targets. This strategy also fosters stronger client relationships by demonstrating the firm's commitment to meeting agreed-upon service levels. Additionally, regular service reviews will provide an opportunity to address any performance issues and adjust SLAs as needed, promoting a continuous improvement mindset within the organization. [23], [24].

5) Continual Service Improvement (CSI)
    a) Strategy: Introduce a formal Continual Service Improvement (CSI) process that includes regular service performance reviews, the identification of improvement opportunities, and the implementation of service enhancements. A dedicated team or individual should be assigned responsibility for tracking and managing improvement initiatives.
    b) Justification: The firm's current approach to service improvement is informal and lacks structure, limiting its ability to adapt to evolving client needs and industry trends. By introducing a formal CSI process, the firm can systematically identify areas for improvement, track progress, and implement changes in a controlled manner. This strategy will also help to foster a culture of continuous improvement, where team members are encouraged to contribute ideas for enhancing service quality. In line with Socio-Technical Systems (STS) theory, this strategy emphasizes the importance of collaboration and communication within the team, ensuring that all stakeholders are involved in the improvement process. [25], [26].

3.6. Adapting FitSM and STS Theory for Regional Expansion

As the small software development company plans to extend its services beyond Jakarta, the application of the FitSM framework and Socio-Technical Systems (STS) theory must be re-evaluated to address the complexities of a broader client base.

1) Enhanced Service Management Processes
   Expanding services geographically introduces diverse client requirements and operational challenges. FitSM's lightweight and modular structure facilitates scalability, allowing the company to adapt its IT Service Management (ITSM) processes to meet varying regional demands. This adaptability ensures consistent service quality across different locations.
2) Socio-Technical Integration
   STS theory emphasizes the interplay between social and technical components within an organization. With expansion, the company must consider cultural differences, communication barriers, and regional regulations. Integrating STS principles will help in designing systems that accommodate these social factors, ensuring seamless collaboration between teams and clients across regions.
3) Standardization vs. Localization
   Balancing standardized processes with localized adaptations is crucial. While FitSM provides a standardized approach to ITSM, regional variations may necessitate tailored processes. Applying STS theory can guide the integration of local social dynamics with technical systems, achieving an optimal balance between consistency and regional specificity.

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4. CONCLUSION

This study assessed the capability levels of key IT Service Management (ITSM) processes within a small application development firm and formulated targeted improvement strategies based on the FitSM framework and Socio-Technical Systems (STS) theory. The selected processes: Incident and Service Request Management (ISRM), Change Management (CHM), Configuration Management (CONFM), Service Level Management (SLM), and Continual Service Improvement (CSI), were identified as critical to the firm's operational efficiency and service reliability. The assessment, conducted through interviews with IT staff and management, revealed that most processes are currently operating at an Ad-hoc (Level 1) capability level, with Configuration Management reaching a Repeatable (Level 2) level. The assessment highlighted some important challenges with the company's current ITSM practices. First, they don't have a solid process for handling incidents or managing changes, which has caused inefficiencies and unreliable service, not to mention some risks to system stability. Second, they're not using formal SLAs with their clients, so expectations aren't always met, and it's tough to be transparent about how services are performing. On top of that, they take a pretty casual approach to service improvement, which limits their ability to keep improving quality and stay ahead of clients' needs. Overall, it's clear they need more structured ITSM processes, better documentation, and stronger communication within the team. The improvement strategies formulated in this study address both the technical and human aspects of ITSM capability. By implementing formalized processes for incident and service request management, change management, and configuration management, the firm can improve operational efficiency and reduce service disruptions. The introduction of SLAs and regular service reviews will foster greater transparency and accountability, leading to improved client satisfaction. Furthermore, establishing a formal Continual Service Improvement (CSI) process will enable the firm to continuously evaluate and enhance its service delivery, ensuring long-term competitiveness.

One limitation of this study is the reliance on qualitative interviews as the sole method for assessing capability levels. While interviews provided valuable insights into the current state of ITSM practices, the absence of quantitative data, such as performance metrics or service logs, limits the ability to fully measure the impact of existing processes. Additionally, this study focused exclusively on the internal processes of a single small firm, which may limit the generalizability of the findings to other organizations or industries. The small size of the firm, with only seven personnel, may also mean that the identified challenges and strategies are specific to this context and may not fully apply to larger organizations with more complex IT environments. Another limitation is that this study does not account for the potential financial or resource constraints that may affect the implementation of the recommended strategies. Given the firm's limited resources, implementing

formal ITSM processes may require additional investments in tools, training, and staff capacity, which were not explicitly considered in this research.

Future research could include quantitative data, such as performance metrics, combine with the interviews. This would offer a complete picture of how ITSM processes influence both operational efficiency and client satisfaction over time. It might also be helpful to run similar assessments in a variety of small businesses from different industries. Doing so could help validate the findings from this study and make the suggested strategies more applicable to other organizations. Further research could also explore the financial and resource implications of implementing formal ITSM processes in small firms. A cost-benefit analysis could help organizations better understand the potential return on investment of adopting frameworks such as FitSM, particularly in resource-constrained environments. Additionally, future studies could investigate the role of automation and ITSM tools in streamlining service management processes for small firms, identifying technologies that offer the most significant benefits in terms of efficiency and scalability.

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