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## **Master's Thesis (Appendix)**

**Optimizing Organizational IT Service Management Through the  
Implementation of ITIL Framework**

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## **Abstract**

The Purpose of this thesis is to point out the key elements of an organization that can be improved by applying the best standards from recognized guidelines. Nowadays most companies are IT-oriented. Whether it is finance, Sales, or HR management every department is integrated with IT devices and management. Companies face huge losses and less customer reliance and satisfaction when any IT incidents cause disruptions to any departments or clients' normal work. There may be several problems also solutions may be several for those. However, organizations have to select the best and most effective solutions among them. That's why there have been conducted real-world case studies based on organizational study and research. The objective is to apply ITIL (Information Technology Infrastructure Library) Framework practices based on those case studies criteria to draw out better outcomes and also keep aligned with IT Service Management (ISO20001) standards. This thesis will be a suitable guideline for small or medium new start-up companies.

**Keywords:** Value, Service, Cost, Process, Policy, Category, Relationship

## **Introduction**

The reputation of an organization is dynamic and subject to change depending on its activities, reactions to outside events, and continuous stakeholder interactions. Managing and maintaining a positive reputation requires a strategic, long-term commitment, sustained dedication to ethical business practices and stakeholder involvement. One of the key factors which most of the organizations rely on Quality of Products or Services and Customer Satisfaction. Organizations primarily generate value for their clients and themselves through services. Since almost all services are now IT-enabled, businesses stand to gain a great deal by developing, growing, and enhancing their IT service management capabilities.

Technology is advancing faster today than ever before. Technological advancements like block chain, machine learning, cloud computing, infrastructure as a service (IaaS), and machine learning have created new avenues for value creation and made IT a vital source of competitive advantage and business driving force. Thus, **IT service management** is positioned as a crucial strategic capability.

Many firms are taking advantage of these opportunities by starting large-scale transformative programs to make sure they stay successful and relevant.

Businesses without a solid IT service infrastructure may face a number of difficulties that lower their general productivity, efficiency, and competitiveness. That's why it is necessary to implement a comprehensive set of practices for IT service management which can address these challenges by providing a structured and proven framework For Example ITIL (**Information Technology Infrastructure Library**),**the most widely adopted guidance on IT service management (ITSM) in the world according to google survey**. It helps organizations align their IT services with business needs, improve efficiency, and develop overall service quality.

## **Objectives and Methodology**

### **Objectives**

The primary objective of this thesis is to analyze the current organizations' IT service management and pinpoint any areas that could gain more possible benefits from the deployment of new standard ITIL practices.

### **Methodology**

In the practical part, we will first identify an organization's IT service management fields that need to be integrated with ITIL Principles. Then, we will use multi-criteria decision analysis to determine the effective quality and cost. Then, we will implement shell scripting operations to automate a business process and service. Finally, we will create an Interaction model using the UML use-case scenario to show proper Team-End user relationship

## Case Study: Release Management & Continuity Improvement

ABC Company relies heavily on its IT infrastructure to support its online operations. Company has experienced many disruptions from software releases in the past, resulting in decreased sales and customer dissatisfaction. To address these issues, company decided to implement a formal Release and Continuity Management Program (RCIM).

**Challenges:** Company faced many challenges in managing software releases, including: **Lack of Structured Release Process:** ABC did not have a well-defined process for planning, planning, and executing software releases. This often resulted in unplanned developments and disruptions to business operations.

**Manual Change Control:** ABC's change control process was manual and labor-intensive, making it difficult to track changes and ensure they were properly implemented.

**Improper Testing:** ABC did not have a rigorous testing process, resulting in software being released with errors and defects.

**Poor Communication:** ABC did not have a clear communication plan for software releases, which often led to confusion and frustration among users.

**RCIM Implementation:** To address these challenges, ABC has implemented a comprehensive RCIM program that includes the following steps: **Release Process Development:** ABC has developed a structured release process that included roles and responsibilities for each individual.

Stakeholders and schedule for each phase of the release.

**Implementation of Configuration Management Tools:** ABC has implemented configuration management tools to track and manage changes to software configurations.

**Introducing CI/CD pipelines:** ABC introduced CI/CD pipelines to automate the process of building, testing, and deploying software.

**Creating an Infrastructure as Code (IaC) approach:** ABC has developed an IaC approach to infrastructure deployment and management to improve infrastructure consistency and reliability.

**Establishment of a Monitoring and Alert System:** ABC has established a monitoring and alert system to identify and respond to potential problems.

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## **List of abbreviations**

ITIL-Information Technology Infrastructure Library

ITSM-Information technology service management

ISO-International Organization for StandardizationSVS-Service Value Chain

LM-Line Manager

RCMP-Release and Continuity Management Program

SLA-Service Level Agreement

SD-Service Desk

KB-Knowledge Base

VPN-Virtual Private Network

GP-Group Policy