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**SynDICA: Document Tracking and Logistics System for   
Bureau of Jail Management and Penology Regional Office III**

In Partial Fulfillment of the Requirements for IT 303 – System Analysis and Design

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# Chapter I INTRODUCTION

In this chapter, the foundational elements of the project are delineated. The project context encompasses the historical background, past inquiries, and conceptualization of the study. The purpose and description section articulates the underlying rationale and motivation driving the study forward. The general and specific objectives of the project serve as a structured statement of the identified problem, guiding the research's focus. Finally, the chapter outlines the scope and limitations, establishing the boundaries and constraints of the study.

## Project Context

Amid the statutory evolutions of the 21st Century, penological offices persist to serve as a fundamental entity for correctional facilities and legal investigations. Integral to the criminal justice system, they play a pivotal role in the management of personalities, equipment, operations, and artifacts related to socio-civic activities, ensuring the effective implementation of laws and regulations governing incarceration. These offices serve as the linchpin in coordinating various aspects of correctional affairs, housing persons deprived of liberty (PDL), facility security, and compliance with progressing legal standards (St. John, 2020). Penologists work to evaluate prison operations, policies, and rehabilitation programs to help PDL develop skills, overcome challenges, and improve their behavior (Rubin, 2021). Recognizing the dynamic nature of the correctional environment, a comprehensive understanding of penological offices and their multifaceted responsibilities is tantamount to addressing contemporary challenges enhancing the efficiency of legal and civic processes.

Within the realm of correctional administration, the management and documentation of penological processes are brought to significance by penological documents. These documents, collected by Bureau of Justice offices, constitute a comprehensive record of PDL activities, facility operations, proceedings, and incarceration and institutional records (Bureau of Justice Statistics, 2021), forming the backbone of information crucial for decision-making within penological offices. In particular, certain jargonized documents and operations are necessary to ascertain the organized flow of data and records bound to the correctional setting, as defined by Bureau of Jail Management and Penology (2021): disbursements refer to the settlement of government obligations and/or accounts; liquidation reports are documents prepared by an accountable officer for discharging cash advances; prisoners subsistence allowance (PSA) pertain to the amount provided by the government to cover the daily expenses of PDL. These specialized documents provide the structured framework for administering government obligations to correctional entities.

Among penological documents, vouchers are used as the basis for monetary flow around the institution, serving as documented proof of financial transactions and providing a transparent record of disbursements, allowances, and other financial activities within the institution. Disbursing officers receive and disburse funds on behalf of personnel who are eligible for allowances or reimbursements (National Headquarters Philippine National Police, 2020), facilitating a structured and accountable flow of money throughout the correctional facilities. In particular, disbursement vouchers (DVs) are the forms used to request and authorize a payment or cash equivalents (Sheth, 2023), specifically by government agencies for financial transactions. Written as a record that contains fund cluster, supervisor certification, accounting entry validation, and receipt validation, it is a critical document to warrant financial transparency and accountability in correctional institutions through formal requests and authorizations.

Digitization of correctional records have been a pioneering initiative internationally toward centralization, efficient access, and security of data related to penological affairs. Mail scanning has been implemented across the different prison systems of America as an easier method of communication (Wang, 2022). Japan plans to modernize its legal system by introducing electronic arrest warrants and interrogation records, transitioning to electronic systems (Kyodo, 2023). Auspicious projects are also set by first world countries, such as Finland (Järveläinen & Rantanen, 2021) and Sweden (Kaun & Stiernstedt, 2020), trailblazing the roadmap for smart prisons to produce assistance in achieving a more efficient re-entry process, improving efficiency and reliability. Third world countries, including Uzbekistan, also have initiatives for streamlining administrative processes and vocational training to expedite paperwork (Ostanaboyeva, 2023). Across the countries of Asia, there is a trending demand for jail systems that incorporate tracking documents and providing analytics (Kent, 2023), suggesting a support for pioneering penological logistics system.

In the Philippines, setting prison records and correctional data into electronic environment has been a recent legislative project by government House members and executive bodies (Flores, 2023). However, despite technological improvements across penological offices, substantiated by global initiatives, efforts are saturated on the management of PDL data and records more than the correctional documents, which poses a greater challenge on penological personnel and officers (Damicog, 2022). The efficiency of correctional processes is notably impeded by the inherent complexities of document transfer across various offices, exacerbated by the past pandemic season. Thus, a document tracking and logistics system help achieve the advancement needed for efficient correctional processes in monitoring documents seamlessly to achieve security, accessibility, and productivity (IOT Philippines, 2020) and promote transparency and customs clearance process (Santiago, 2021).

The Bureau of Jail Management and Penology (BJMP) stands as a crucial pillar within the Criminal Justice System of the country, dedicated to addressing and managing the evolving challenges within the realm of jail administration and penology. Termed as the Jail Bureau, this institution came into existence in accordance with the provisions stipulated in Section 60 to 65 of Chapter V, RA No. 6975. Its initial composition comprised uniformed officers and members of the Jail Management and Penology service, as established under Presidential Decree No. 765. As the BJMP endeavors to fulfill its core mission of conducting activities for the development of PDL and promoting the general welfare and development of its personnel aligned to establishing linkages through responsive planning and implementation (GOVPH, 2020), the need for dynamic approaches in jail management becomes increasingly apparent.

Within the administrative framework of the BJMP Regional Office III, DV Issuers, known as DV Makers, initiate the creation of the vouchers, ensuring that all required attachments and supporting documents are attached to the DV request, adhering to the checklist of requirements. On the other hand, DV Authorizers review DV requests submitted by DV Issuers to ensure completeness, accuracy, and compliance with established standards. However, procedural intricacies of document flow pose a substantial hindrance. The transfer of papers, pivotal for transactions ranging from subsistence allowances to fixed expenditures, encounters a continuous bottleneck characterized by fragmented and unmonitored tracking via manual systems (Patag, 2022), particularly in DV progression. With roles intact, the inefficiencies not only disrupt correctional system operations but also impact time and resource allocation caused by fragmented tracking in in verifying the completeness and accuracy of document attachments.

The project, “SynDICA”, encapsulates its essence as an acronym, denoting the “Synchronization of Documents and Information for Correctional Affairs”. By rectifying existing document management lapses, SynDICA aims to expedite transfers, reduce delays, and enhance penological accountability. Consequently, this study not only addresses immediate challenges at BJMP Regional Office III but aligns with the broader BJMP mission of promoting welfare and development in the correctional domain. In the realm of information technology, SynDICA showcases the practical application of technological solutions for optimal operational efficiency in correctional management. Corroborated by previous investigations emphasizing the necessity for prison institutions to establish efficient logistical operations to perform elementary functions, enhance officer retention and accountability, and fulfill statutory responsibilities effectively (Dalley, 2022; Janusz & Kościelecki, 2023), the project underscores the urgency of addressing these operational challenges within the BJMP Regional Office III.

This study then attempts to address the research gap by introducing SynDICA through the implementation of this technological solution to provide a systematic approach to document management, enhancing the efficiency of correctional processes and mitigating the challenges associated with fragmented and unmonitored tracking of critical documents. By aligning with contemporary standards and advanced technology, SynDICA aspires to contribute to the overarching mission of the BJMP, promoting transparency, accountability, and the seamless execution of correctional affairs within the dynamic landscape of BJMP Regional Office III.

## Purpose and Description

Addressing a pronounced gap in the existing administrative framework of the BJMP Regional Office III in document transfers, the project holds paramount significance within the domain of correctional management. By providing a web-based logistics system that reorganizes the flow of transactions on physical papers, SynDICA presents a client-driven solution through digitization, accessing relevant records to enhance the effectiveness, accountability, and transparency of the penological workflow (Lalu, 2023). Accordingly, it contributes to the ongoing shift digitization within the correctional field, exhibiting the practical integration of Information Technology for enhanced operational efficiency.

Moreover, the relevance of the study extends across various stakeholders within the correctional landscape, each envisioned for tangible advantages.

1. BJMP Regional Office III

The study will directly address the operational challenges faced by BJMP Regional Office III, leading to efficient document processes, reduced delays, and an overall more efficient workflow. With SynDICA's implementation, the regional office will benefit from efficient correctional operations, enhanced transparency, and improved resource allocation.

1. Correctional Personnel

The implementation of SynDICA will optimize their daily workflows, reducing the burden of manual tracking, and enabling them to focus on core responsibilities. The heightened level of accountability introduced ensures a transparent and traceable document trail, reducing errors and fostering a culture of responsibility among personnel aligned with their mandates.

1. Persons Deprived of Liberty

The study will benefit PDL through improved efficiency in correctional processes, leading to faster processing of allowances, smoother communication within the correctional facility, and a reduction in delays related to essential services. This enhancement will contribute to a more organized and responsive correctional environment that can positively affect the welfare of PDL.

1. Government Regulatory Agencies

The study will aid regulatory bodies overseeing correctional facilities by ensuring compliance with legal and procedural requirements. The system will offer a tangible model for modernization in correctional practices and insights on the practical integration of Information Technology in governmental agencies, particularly within correctional settings.

1. Future Researchers

The study will contribute to the academic understanding of correctional administration and technology integration, providing a practical case study for researchers and enriching the existing body of knowledge in the field.

In essence, SynDICA addresses correctional inefficiencies by providing a client-centric solution that streamlines physical document transfers and implements digital workflows toward the immediate impact on correctional affairs and its broader contributions to academic research and policy considerations.

## General Objectives

The core general objective of this study is to design and develop SynDICA, a specialized Document Tracking and Logistics System, tailored to address operational challenges within the BJMP Regional Office III to contribute to a more efficient, transparent, and accountable correctional system within the penological office.

By developing a solution for the identified gaps and client-targeted problems, the study primarily provides the client with a new method to reorganize its correctional processes. SynDICA is envisioned as a transformative tool that re-organizes document flow, mitigates delays, and fosters an environment of enhanced efficiency and transparency within the correctional framework of BJMP Regional Office III.

## Specific Objectives

Specifically, the study aims to achieve the following objectives:

1. To identifying bottlenecks, inefficiencies, and areas for improvement upon analysis of the existing document management processes within BJMP Regional Office III;
2. To devise detailed flowchart based on the SynDICA system that outlines the processes involved in document tracking and logistics;
3. To design and develop a Document Tracking and Logistics System that will integrate the following significant functionalities and features:
   1. Landing Page section for Registered and Non-registered Users;
   2. Sign-Up and Log-In section for Registered and Non-registered Users;
   3. System and Workflow Configuration section for Administrator;
   4. User Account Management section for Administrator;
   5. Role-Based Access Control Management section for Administrator;
   6. System Backups and Recovery section for Administrator;
   7. Tracking Page section for DV Issuers and DV Authorizers;
   8. DV Request Creation section for DV Issuers;
   9. DV Review and Approval section for DV Authorizers;
4. To implement specific roles, views, and permissions within the SynDICA system tailored to the relevant positions within the office; and
5. To determine the acceptability of the system using the ISO/IEC 25010:2011 software quality evaluation criteria as perceived by the respondents on the following:
   1. Functional Sustainability;
   2. Performance Efficiency;
   3. Compatibility;
   4. Usability;
   5. Security;
   6. Reliability;
   7. Maintainability; and
   8. Portability

## Scope and Limitations

Delineating the parameters of the research, the project foremost caters to the exigencies and requirements of the Bureau of Jail Management and Penology (BJMP) Regional Office III. The study emphasizes the development of SynDICA, a document tracking web-based system, aimed to provide a solution for the client’s existing challenges in document tracking and workflow optimization within the confines of their institutions only. Administrators will be able to manage users and their permissions for control management in the interface of the system, applicable to the hierarchical roles of the institution (i.e., DV Issuer and DV Authorizer). They are also able to manage the system and workflow configuration, aimed for customizing organizational needs and changing requirements to ensure each user has access to the functionalities relevant to their specific role for a more and controlled environment.

Furthermore, the developed software highlights the features of logistics programs, incorporating a suite of functionalities that include ensures data-driven efficiency and strategic insights for a seamless document management experience. Providing a visually intuitive logistics timeline display ensures a transparent overview of document movement. Additionally, compliance checkpoints exist for relevant vouchers to review the checklist of requirements in line with document submissions and approvals. Subsequently, SynDICA adheres to ISO standards in the penological field to guarantee the secure handling of critical documents.

Integration with existing BJMP systems and regulations marks another delimitation for the project. Recognizing the essence of data security, the research extends measures to safeguard the confidentiality and integrity of sensitive information, conforming to the Data Privacy Act of 2012, along with deemed permissible data from the office of the client. These considerations are tailored to the unique needs of BJMP Regional Office III, aiming to provide a comprehensive solution adhering the standards of usability and adaptability.