

Development of a Centralized Digital Platform to Improve Visibility of Local Service Providers in Puerto Rico

Ronald J. Vélez Rodríguez
 Advisor: Héctor J. Cruzado, PhD
 Master in Engineering Management
 Polytechnic University of Puerto Rico



Abstract

Independent local service providers in Puerto Rico rely on informal digital channels such as social media groups and personal referrals, which lack structure and effective search capabilities. This project developed a managerial planning and feasibility framework for a centralized digital platform intended to improve provider visibility and customer access to organized service information. A DMAIC-based methodology focused on analysis and planning rather than system implementation was applied. Secondary data sources and documented observations were used to establish baseline service-discovery conditions and identify gaps in information organization, search efficiency, and user confidence. Results showed that fragmented discovery practices limited effective service matching and provider exposure. The proposed framework supports the feasibility of a centralized managerial approach as a foundation for future platform development.

Introduction

Although digital media is the primary channel for accessing services in Puerto Rico, independent local service providers rely on fragmented informal channels that limit visibility, reduce search efficiency, and lower customer confidence. The objective for this project was to develop a managerial planning and feasibility framework for a centralized digital platform that improved visibility for independent local service providers and enhanced customer access to reliable and organized service information within the Puerto Rican context. Without a structured and centralized approach, both service providers and customers remain constrained by inefficient discovery practices that limit visibility, trust, and informed decision-making in local service markets.

Literature Review

- Centralized digital platforms improve visibility, coordination, and information accessibility [1], [2]
- Informal digital promotion channels lack standardization and reliability [3], [5]
- Structured information supports trust and transparency [1], [2], [3]
- Digital inclusion challenges in Puerto Rico reinforce the need for user-friendly platforms [4], [5]

Methodology

This project applied a DMAIC-based managerial methodology focused on analysis and planning. Secondary data sources and documented observations were used to evaluate existing service discovery conditions in Puerto Rico.



Figure 1. DMAIC-Based Methodology for Managerial Planning and Feasibility Analysis

Table 1. DMAIC Focus and Managerial Objectives

DMAIC Phase	Managerial Objectives
Define	• Identify service discovery challenges and stakeholders
Measure	• Establish baseline metrics for visibility, information organization, and search efficiency
Analyze	• Identify gaps and root causes related to fragmentation
Improve	• Develop conceptual platform planning outputs
Control	• Ensure alignment between framework components and project objectives

Given the limited availability of Puerto Rico-specific service discovery data, publicly available digital usage indicators were used as proxy measures to characterize baseline service discovery conditions.

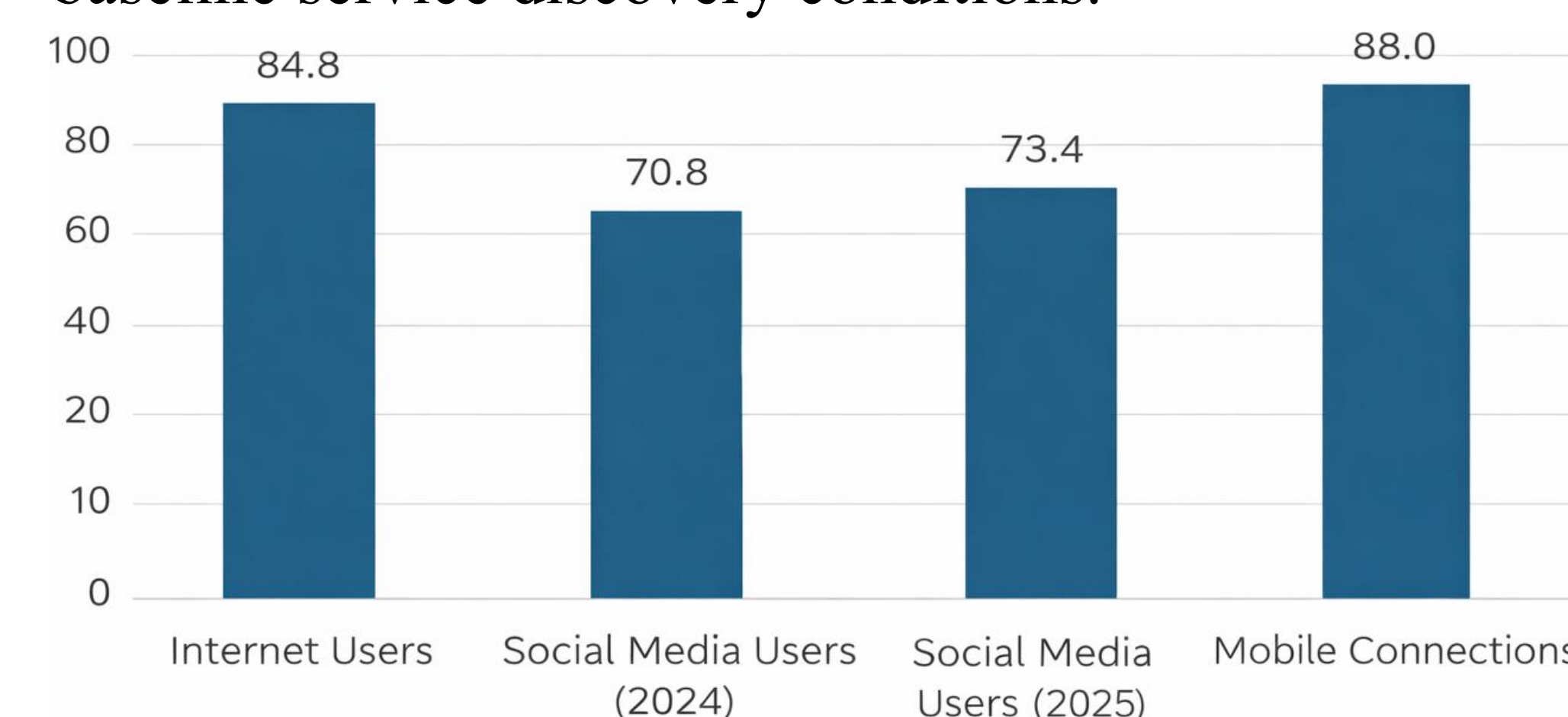


Figure 2. Baseline Digital Usage Indicators in Puerto Rico

Results

Since the primary outcome of this project was the development of a managerial planning and feasibility framework structured around the DMAIC methodology, each DMAIC phase was translated into specific planning components that addressed deficiencies identified in the existing service discovery environment.

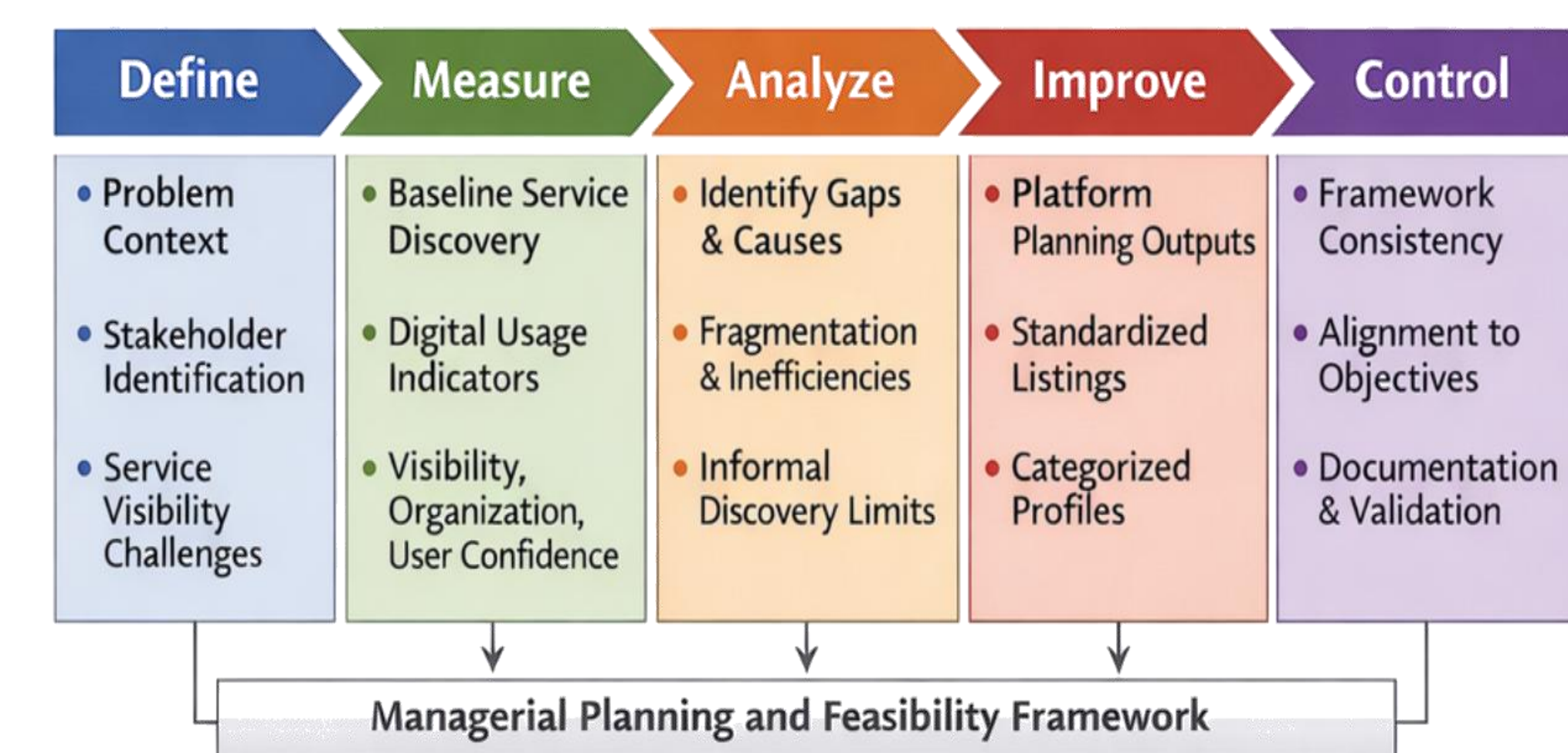


Figure 3. Managerial Planning and Feasibility Framework Aligned with DMAIC

The Define phase established the problem context, stakeholder groups, and visibility challenges affecting independent local service providers. The Measure phase documented baseline service discovery conditions using proxy indicators related to provider visibility, information organization, search efficiency, and user confidence.

The Analyze phase supported the identification of gaps and root causes associated with fragmented information structures and reliance on informal digital promotion channels. These findings informed the Improve phase, which produced conceptual planning outputs rather than a functional system. The Improve phase outputs included standardized service listing structures, categorized provider profiles, and centralized information organization principles. The Control phase emphasized consistency between framework components and alignment with the stated project objective.



Figure 4. Translation of Analyze Phase Findings into Improve Phase Planning Outputs

To contextualize the value of the proposed framework, a comparative analysis was conducted between the existing service discovery environment and the proposed centralized framework. The current environment was characterized by fragmented information sources, inconsistent provider visibility, and limited search functionality. In contrast, the proposed framework emphasized structured information, improved provider exposure, and more efficient service discovery. This comparison demonstrated clear alignment between identified gaps and proposed planning outputs.

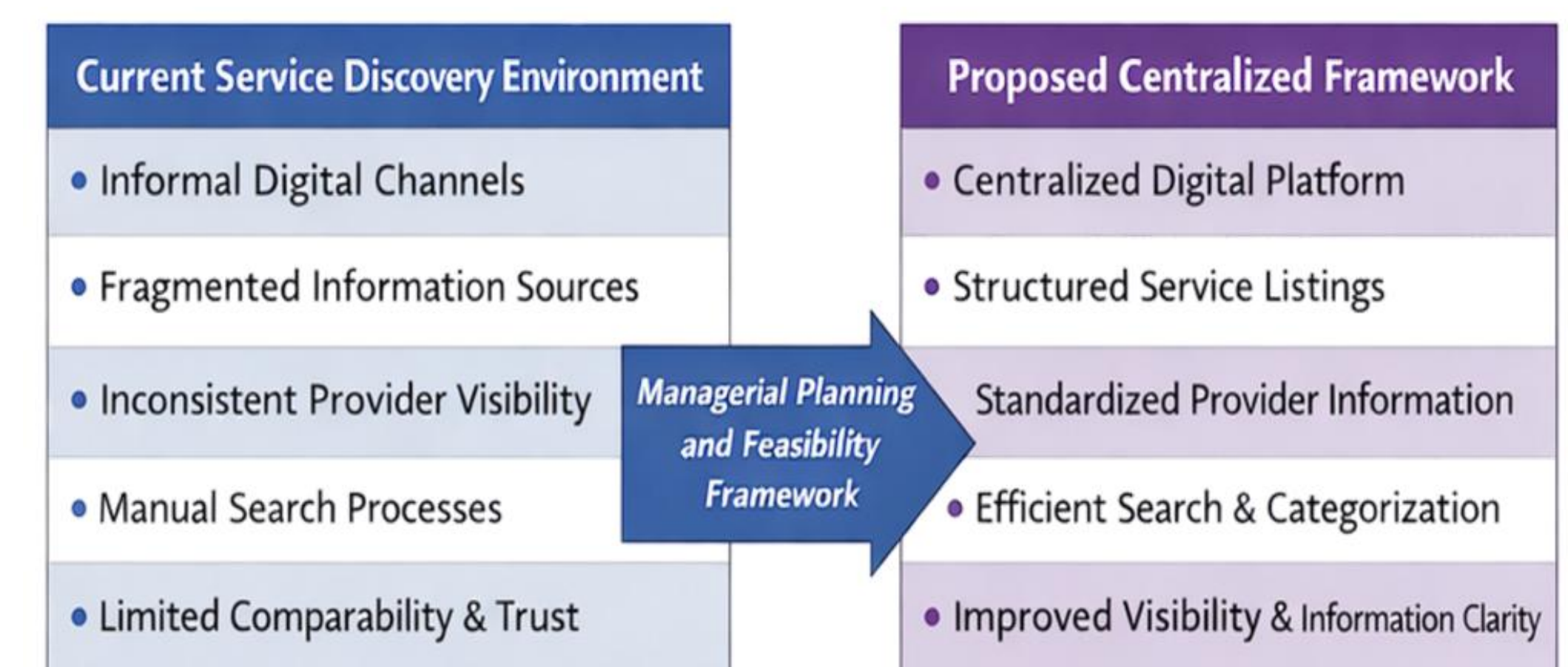


Figure 5. Managerial Planning and Feasibility Framework Aligned with DMAIC

Conclusions

- Informal service discovery limits visibility and user confidence
- Centralized information structures reduce fragmentation
- DMAIC provides a defensible managerial planning framework
- The framework supports future platform development efforts

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