2nd INNOVEX 2026 - International Conference
Vol.2, June, 2026
ISBN:

WEB-BASED EVENT PLANNING SYSTEM WITH BUDGET TRACKING FOR NOREEN PHOTOGRAPHY, BRIDAL FASHION AND EVENT ORGANIZING

J L. A. S. Anches , C. G. I. Bacsarsa, X. P. Doble, R. S. M. Gamon, I. L. B. Mayordomo, J. R. Z. Morcillos

College of Information Technology Education, PHINMA COC (Cagayan de Oro City)

Corresponding email: asi.anches.coc@phinmaed.com

ABSTRACT

The Web-Based Event Planning System with Budget Tracking addresses critical coordination, scheduling, and bookkeeping bottlenecks faced by manual event management infrastructures. This study aimed to build and validate a centralized platform that digitalizes event booking, package customization, task delegation, and financial monitoring. Following a developmental research design and a Modified Waterfall SDLC model, the software was engineered using a Next.js frontend, PHP APIs, and a MySQL database. Empirical evaluation via the ISO/IEC 25010 Software Quality Model and production log analysis revealed exceptional performance, yielding a composite technical score of 4.26 and an outstanding efficiency rating of 4.60. Operational metrics showed a 75% reduction in booking processing times (dropping to 15 minutes), a 60% reduction in procedural budget-tracking steps, and an 87.5% drop in recording error frequencies. In conclusion, the system successfully replaces paper-dependent workflows with a highly secure, reliable, and user-friendly multi-tier digital architecture that preserves data integrity. It is strongly recommended that small-to medium-sized event firms fully deploy this platform under centralized administrative oversight, while incorporating structured end-user onboarding workshops and scheduling periodic database maintenance to ensure long-term scalability and operational effectiveness.

***Keywords**: event planning system, budget tracking, web-based application, ISO 25010, event management.*

1. INTRODUCTION

Event planning systems increase efficiency and client satisfaction. High demand for seamless events leads organizations to centralize tasks and improve the customer experience with digital tools.These systems prevent scheduling conflicts, automate management, and provide real-time updates. Digital tools reduce errors and streamline coordination of complex events.

In the Philippines, web-based event management is increasingly used in education, business, and weddings. These digital systems improve communication and logistics. instance, the CPUR U-Day Events Management System with Mobile Application (2019) and the Event Management System with SMS Notification for Mindanao People's Care Foundation Inc. (2022) enhanced coordination and messaging

These examples highlight the rising value of technology in Philippine event planning.

Noreen Photography, Bridal Fashion, and Event Organizing in Cagayan de Oro City faces coordination. Managing multiple rental clients and up to five events daily with contracts, schedules, budgets, and communication handled on paper and calendars leads to inefficiencies, errors, and collaboration. Noreen expanded to three branches, but manual processes caused poor service tracking and transparency, leading to operational conflicts . The business was merged into a single branch in Cagayan de Oro for quality and control

To address these challenges, the proposed system introduces a web-based platform that simplifies and centralizes event management. It provides tools for client booking, package customization, budget tracking, real-time event monitoring, timeline management, and organizer coordination. All suppliers are external partners and not registered users. The Admin coordinates directly with suppliers via phone or messaging

outside the platform and logs supplier details, assignments, and updates in the system for tracking purposes. Supplier communication always occurs outside the system to retain flexibility and control. The digital solution focuses on budget tracking, status monitoring, and event timelines. It tracks client payments, budgets, changes, and organizes tasks, and allows for cancellation or rescheduling. Real-time notifications, checklists, and a calendar streamline operations and increase professionalism. The system reflects owner input, addressing real needs, and is designed for small- to medium-sized event firms that require flexibility and control.

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2. METHOD

The study employed a developmental research design following the Modified Waterfall Model of the Software Development Life Cycle (SDLC). The methodology comprised five phases with structured activities and outputs . The System Development Life Cycle (SDLC) methodology guided the project through requirements analysis, system design, development, testing, implementation, and evaluation/
The explicit activities and documented outputs generated across each phase of the framework are structured in Table 1.

Table 1. *System Development Life Cycle (SDLC) Phases and Administrative Outputs*

SDLC Phase	Key Activities and Documented Outputs
Requirements Analysis	Stakeholder interviews, surveys, manual process review, functional and non-functional requirements specification
System Design	Conceptual design (IPO model), database design (MySQL), interface design (Next.js)
Development	Frontend development (Next.js), backend development (PHP), database implementation (MySQL), 3-tier architecture integration
Testing	Component testing, ISO 25010 software quality benchmarking, System Usability Scale (SUS) execution, and User Acceptance Testing.
Implementation	Unit testing, integration testing, User Acceptance Testing (UAT), ISO 25010 evaluation, System Usability Scale (SUS)
Evaluation	Server deployment, data migration from manual records Event Planning System with Budget Tracking for Noreen Photography, Bridal Fashion and Event Organizing

The structural flow of data collection, administrative processing, and automated reporting within the engineered architecture is executed via the Input-Process-Output (IPO) model mapped out in Figure 1.

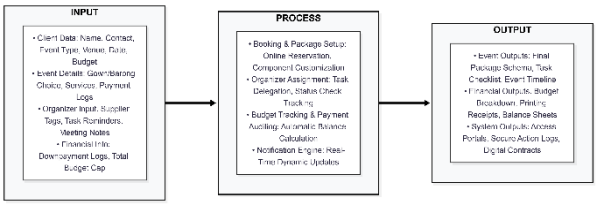


Figure 1. *Input-Process-Output Framework of the Event Planning System Event Planning System with Budget Tracking for Noreen Photography, Bridal Fashion and Event Organizing*

3. RESULT AND DISCUSSION

The developed Web-Based Event Planning System successfully digitized event booking, package customization, budget tracking, and task coordination. Evaluation results based on ISO/IEC 25010 indicated high mean ratings across all quality attributes, reflecting strong user acceptance and system reliability. Usability received the highest rating, demonstrating that users found the system intuitive and easy to

The quantified quality values compiled from the user evaluation are arranged in Table 2.

Table 2. *ISO 25010 Evaluation Summary (Mean Ratings)*

Quality Attribute	Mean Rating	Interpretation
Functionality	4.36	Very Satisfactory
Usability	4.42	Very Satisfactory
Reliability	4.36	Very Satisfactory
Efficiency	4.6	Very Satisfactory
Maintainability	4.35	Very Satisfactory
Portability	4.33	Very Satisfactory

Objective technical execution statistics gathered from the production log analysis are presented in Table 3.

Table 3. *Performance Evaluation Results*

Metric	Measurement Result	Quantified Operational Improvement
Event booking processing time	15 minutes	75% faster than manual workflows
Budget tracking steps	2 automated steps	60% fewer than manual workflows
Error frequency in records	1 error per 100 records	87.5% reduction in recording errors
User satisfaction rating	4.7 out of 5.0	Very Satisfactory administrative index

The physical execution of these tasks is sustained by a secure multi-tier layered architecture The Presentation Layer is structured using a *Next.js Web Application* with role-based portal routing tailored for Administrators, Clients, Organizers, and Suppliers. The Security Layer handles Authentication and Authorization utilizing system *middleware*, Role-Based Access Control (RBAC), and transactional One-Time Passwords (OTP) Event Planning System with Budget Tracking for Noreen Photography, Bridal Fashion and Event Organizing.pdf]. The Application Layer drives core business rules via a *PHP REST APIs* network, while data hosting is integrated within a *MySQL Database* (Data Layer) Event Planning System with Budget Tracking for Noreen Photography, Bridal Fashion and Event Organizing.pdf]. Administrative interactivity is routed through an Analytics Dashboard that provides the manager with structural indicators including a cumulative history of 83 events, an asset volume tracking metric of 9.0M Pesos, a client registration count of 15 active users, 11 completed events, along with real-time status check parameters tracking active API and database connectivity.

4. DISCUSSION

The empirical outcomes reveal that transitioning from a manual, paper-dependent recording environment to an integrated web-based architecture addresses the critical coordination issues of the. The outstanding 4.60 mean score in performance efficiency mathematically validates that automating data calculations bypasses traditional operational delays. This is further proved by the 75% reduction in booking processing speed, which dropped to just 15 minutes.

The reduction in error frequency (1 error per 100 records) shows that replacing physical calendars and books with a centralized relational database removes transcription. This high level of data accuracy supports the high reliability evaluation score of 4.36. Additionally, reducing the procedural complexity of budget calculation by 60% allows organizers to focus on task execution rather than manual arithmetic verification.

From a technical perspective, separating user interfaces into role-based portals ensures that clients can customize packages freely while administrators maintain complete financial oversight. The 4.42 usability rating confirms that the user experience remains accessible and straightforward across all user roles, from clients managing payments to staff updating timelines. Ultimately, the system provides small-scale and medium-scale event planning firms with the digital infrastructure necessary to manage high-volume daily operations securely without requiring continuous multi-branch overhead.

4. CONCLUSION

The Web-Based Event Planning System with Budget Tracking effectively addressed the operational challenges faced by Noreen Photography, Bridal Fashion, and Event Organizing. By replacing manual workflows with a centralized digital platform, the system improved booking efficiency, budget accuracy, task coordination, and communication among stakeholders. Evaluation results based on ISO/IEC 25010 confirmed that the system is functional, reliable, efficient, and user-friendly. The system demonstrated its capability to enhance business operations and provide a sustainable digital solution suitable for small- to medium-sized event organizing businesses. Future enhancements may include the integration of automated reminders for payments and event milestones, a mobile application version to improve accessibility, and expanded analytics for financial forecasting and operational insights. Supplier integration may also be considered in future versions while maintaining centralized administrative control. Continuous system evaluation and user training are recommended to ensure long-term effectiveness and scalability.

Acknowledgements
The researchers express their sincere gratitude to the faculty of Cagayan de Oro College, the advisory panel, and the

management, staff, and clients of Noreen Photography, Bridal Fashion, and Event Organizing for their cooperation and support throughout the development and evaluation of this system

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