

A Conceptual Framework for Web-Based Interactive Dashboards in Business Management Using Agile-Oriented Web Design

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ABSTRACT

There are numerous enterprises that continue to rely on static reporting and disjointed data, which complicates the ability of managers to monitor performance, identify patterns, and make prompt decisions. These traditional methods often hinder analysis, increase manual effort, and limit adaptability to changing conditions. Interactive dashboards provide an efficient solution by integrating diverse data into a cohesive visual interface, offering real-time insights and improving decision-making efficacy. This article introduces a web-based interactive dashboard that emphasizes four primary features: drilldowns, time interval widgets, advanced data options, and the ability to disclose or conceal chart information. Drilldowns enable users to investigate granular information from summary views, time interval widgets facilitate flexible comparisons across different eras, advanced data options provide control over presented content, and toggling chart values maintains clarity and readability of charts. The dashboard utilizes PHP for server-side processing, CSS for responsive design, and JavaScript libraries such as Chart.js for interactive charts. By integrating these attributes with intuitive online design, the dashboard enables managers to examine data more efficiently, minimize manual reporting, and expedite informed, data-driven decisions.

Keywords: Interactive Dashboard, Data Visualization, Business Management Systems, Web-Based Application, Agile Software Development

INTRODUCTION

Companies today generate and handle massive amounts of data across numerous operational domains. Traditional corporate management systems often rely on static reporting and fragmented data sources, obstructing managers from obtaining a comprehensive view of performance. This fragmented approach may lead to prolonged decision-making, increased manual effort, and limited flexibility to changing organizational conditions. Managers frequently face challenges in trend analysis, tracking key performance indicators, and consolidating data from multiple departments, which can negatively affect operational efficiency and strategic planning. As business increasingly rely on data-driven decision-making, there is a pressing need for tools that can integrate, visualize, and clarify complex datasets efficiently.

In the realm of business administration, interactive dashboards have become increasingly significant as instruments for enhancing data visibility and decision-making. Through the consolidation of data into a centralized and visually intuitive platform, dashboards facilitate informed decision-making, trend analysis, and continuous monitoring. Interactive elements, including drilldowns, time interval widgets, sophisticated data options, and the ability to display or conceal chart values, offer users a higher degree of control over data exploration. By reducing manual processing and improving data clarity, these capabilities contribute to more responsive and efficient business operations.