NEU BRAIN
Supercharge Your Business with Analytics

INTERACTIVE DASHBOARDS
SUCCESSFUL IMPLEMENTATION METHODOLOGY

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OPTIMIZE DECISION-MAKING WITH SKILLED DESIGN AND IMPLEMENTATION OF INTERACTIVE DASHBOARDS

TECHNOLOGY BRIEF

CHALLENGE

A picture is worth a thousand words. Well, what if that picture can provide a snapshot of your company's financial state, multi-process correlations, and business drivers? In business analytics, we can achieve exactly this through a well-designed visualization. Now that picture is worth a lot more.

In the current economy, decision-making occurs more frequently and at all levels of an organization. While information management technology has grown at a blistering pace, the ability to comprehend this data has not. Mountains of data are accumulating in various databases, scattering essential information throughout the enterprise. It is increasingly more difficult and time-consuming to extract and interpret data that can be used to make critical business decisions.

INTERACTIVE VISUALIZATION OF BUSINESS ANALYTICS

Business analytics is vital for enterprises to achieve their near-term and long-term strategic goals. The key to gaining a competitive advantage lies in the ability to turn data into decision-making information and to deliver this information in a timely manner to each decision-maker.

Poorly designed visual analysis models—and/ or a lack of internal skills to properly plan, manage and deliver the required capabilities— lead to failed implementations.

Interactive visualization is a way to help business analytics become more usable and insightful. By visualizing and interacting with information from multiple data sources, business analytics can help discover hidden patterns in data, answer pressing questions in regards to the business operations, and even anticipate what happens next.

Interactive visualization is an analytical capability often delivered/presented via interactive dashboards. Recent advancements in technology allow organizations to move away from static representations of data and to move toward parameter-driven interactive dashboarding and reporting, which enables deeper insight, and promotes user engagement and self-service.

Interactive dashboards are designed to be easily operated by business users and financial and data analysts with limited IT support. The visualizations are built in such a way that users can test hypotheses, look for patterns, and explore their data in an ad-hoc fashion. Interactive dashboards usually feature drag-and-drop analysis objects, data filters, selectors, prompts and drill paths to enable the interaction with graphs and data. A wide variety of graph and chart options as well as graphical object animation are widely used as a means of fostering analysis and identifying trends.

WHY DASHBOARD TECHNOLOGY ALONE MAY NOT BE ENOUGH

Data visualization tools, like dashboards, are becoming more popular and necessary to deal with exponential data growth, but both the cost of purchasing separate tools and the time it takes to implement each tool make data visualization solutions a great challenge.

Michelangelo once said, "Man paints with his brain, not his hand." This rings true for the creation of visual reports and dashboards. In our experience, improperly implemented visualization tools and dashboards produce subpar results and quickly become shelf wear. This is primarily due to the fact that the dashboards were too IT-centric, too static, too hard to use, or because they lacked a role-based view.

In other words, a lack of internal skills to properly plan, manage and deliver the required capabilities of a visual analysis model often lead to failed implementations.

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DASHBOARD IMPLEMENTATION METHODOLOGY THAT WORKS

Dashboard creation and optimization is a continuous process that requires periodic re-evaluations of data needs, refinements of visual representations, and improvements of business processes.

The keys to an effective dashboard initiative include proper definition of target audiences, well-designed metrics, simplicity and manageability of the design, proper data infrastructure to support dashboard data, integration of dashboards into daily operations, and, finally, sustained leadership through a dashboard champion.

DETERMINE INFORMATION NEEDS

Dashboards can provide an effective solution to the overwhelming amount of data that organizations accumulate by making data more intuitive and easier to observe and by allowing for extensive, real-time access (instead of digging through papers and emails to compile information). In order to have a significant return on the investment of a dashboard, it is important that the dashboard be exactly tailored or personalized to the information needs of an organization or a particular group within an organization. Therefore, it is important to invest sufficient time into research, analysis, and evaluation of the decision making processes and information needs of all dashboard users.

ESTABLISH PROPER METRICS

It is important that a dashboard has metrics that are meaningful, timely, and useful to its target audience. When interviewing business users or stakeholders, the goal is to uncover the metrics and KPIs that lead the user to a specific decision or action. Sometimes users will have a very detailed understanding of what data is important to them, and sometimes they will only have a high level set of goals. By following best practices, designers need to distill the information provided by the user into a specific set of KPIs and metrics for all organizational dashboards.

SELECT VISUALIZATION OPTIONS

By definition, a dashboard is a visual display of the most important information needed to achieve one or more objectives that fits entirely on a single computer screen where it can be monitored at a glance. The challenge of dashboards is squeezing a huge amount of useful, yet disparate, information into a small screen and presenting the information in such a way that the brain can absorb it quickly and effortlessly.

Data visualization is a technique of turning data into information via visually recognizing patterns and trends. In other words, data visualization is all about representing data

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graphically. Data visualization elements (data grids, charts, graphs, gauges, maps, etc.) are incorporated in the summary view and the multi-dimensional view of a dashboard application since they help accommodate a large amount of data on a limited screen space.

Use of data visualization elements and best practices not only help in optimizing the use of screen real estate, they also aid in quick comprehension of data. Dashboard users should be able to quickly identify the high and low values in the data and have an idea of the trend by which the data is changing.

AUTOMATE DASHBOARD PREPARATION PROCESSES

Oftentimes, creating dashboards in an organization is a one-time exercise that requires colossal efforts. To save time and resources, it is important to make the process of preparing dashboards effective and efficient through business process re-design and automation. Dashboard designers need to identify data, its attributes, its structures, and the business rules required for analysis. At times, this involves a comprehensive data strategy in support of dashboards by evaluating the need for ODS (Operational Data Store) and database normalization. Once the data preparation is rationalized and optimized, the next step is to automate dashboards by selecting and implementing the appropriate dashboard technology.

INCORPORATE DASHBOARDS INTO BUSINESS OPERATIONS

It is important for organizations to recognize that dashboarding is not just about technology; it is also about the organizations' capabilities (people, skills, processes). Organizations need to evaluate, plan and manage changes as a result of dashboards in all key organizational areas: culture, business processes, communications needs, roles and responsibilities, training needs, and other components. The objective is to help institutionalize the usage of dashboards in the context of normal business operations of the organization.

ABOUT NEUBRAIN

For nearly a decade, Neubrain has provided innovative business analytics solutions to all of our clients, maintaining an excellent referral and client satisfaction rating while delivering solutions at a fraction of the cost and deployment time of traditional vendors.

Neubrain is a full-service solutions provider and systems integrator, managing the entire system life-cycle from strategic planning and change management to design, development, and deployment. Neubrain's solutions help manage and budget resources in excess of $70 billion per year.

QUALIFICATIONS

- SBA 8(m)-certified Woman-Owned Small Business (WOSB/EDWOSB)
- Past Performance Rating: 96/100 (Open Rating, a D&B company)
- CAGE Code: 3GVN1
- NAIC Codes: 511210, 518210, 523920, 541511, 541519, 541618, 541712, 541990, 611420

GSA SCHEDULE (GS-35F-0536S):

- 132-33 - Perpetual Software Licenses
- 132-34 - Maintenance of Software
- 132-50 - Training
- 132-51 - Information Technology Professional Services