Noetix Dashboard™

Dashboard Development and Deployment

A Methodology for Success

Introduction

The successful implementation of a dashboard is complex and requires a step-by-step process—a methodology that considers all aspects of the project life cycle. This document outlines the process necessary to effectively plan, design, build and deploy a dashboard. The tasks (and their order) will be similar, regardless of the technology that is chosen or the vendor providing that technology.

NOETIX®

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About Noetix

More than 1,200 customers worldwide use Noetix to quickly and cost-effectively access the enterprise application data they need to make important business decisions every day. Noetix provides software that automatically generates metadata from enterprise applications, enabling immediate access to data. Unlike most business intelligence tools that require weeks of extensive manual mapping to be set up and maintained, Noetix uses patented technology to automatically discover and produce metadata based on customers' specific implementations of Oracle Applications or Siebel Business Applications. Noetix provides this BI content with easy search and navigation capability, empowering users to quickly generate the ad hoc, operational reports needed to make critical and timely business decisions. Noetix's proven technology is being used by industry-leading customers worldwide, including: CompUSA, Motorola, Starbucks, Toshiba, Visa and Xerox International Partners. The company is headquartered in Redmond, Washington, with international operations based in London.

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Dashboard Development and Deployment

A Methodology for Success

A dashboard is a vital tool for monitoring the daily health of your organization. From a single interface, decision makers have access to key performance indicators (KPIs)—actionable information that can be used to actively guide business performance. A dashboard is like an executive intranet, a site where everything of interest to you is displayed in logical groupings. At a high level, it may seem relatively easy to build one. Companies that have a good handle on what performance indicators are of strategic importance to the organization, may feel collecting and summarizing supporting data and putting it in one place shouldn't be that difficult. However, such oversimplification can lead to a failed project before it ever gets off the ground.

> Management dashboards and other tools to pull together operational performance and marketplace conditions have been a high priority in recent years.
>
> *IDC, July 2004*

The successful implementation of a dashboard is complex and requires a step-by-step process—a methodology that considers all aspects of the project life cycle. This document outlines the process necessary to effectively plan, design, build and deploy a dashboard. The tasks (and their order) will be similar, regardless of the technology that is chosen or the vendor providing that technology.

All of these steps must be completed to ensure a successful dashboard implementation and deployment. When comparing proposals from multiple vendors (or the cost of a "do-it-yourself" project), it's important to ensure that all of these steps are included. Correctly designed and implemented, a dashboard has the potential to bring immediate ROI to your organization.

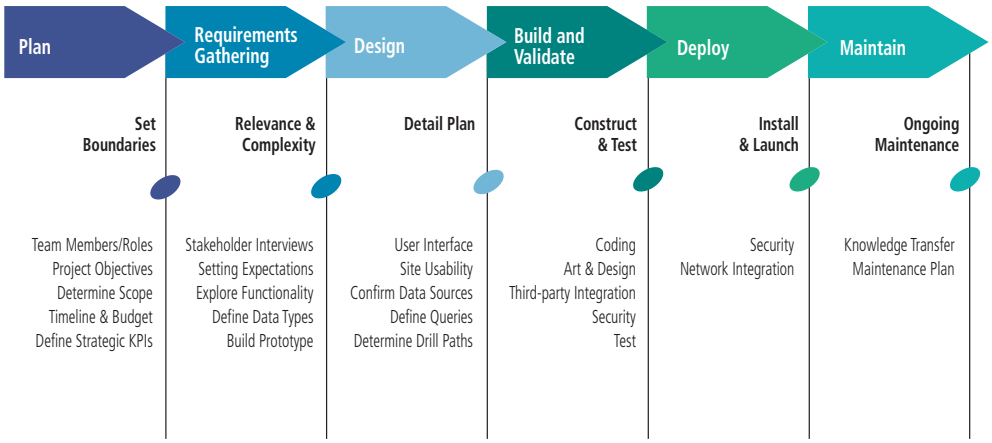

Figure 1: Noetix Dashboard Development and Deployment Methodology

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Dashboard Implementation Methodology

The need for faster access to business information

Plan

The planning phase is where it all begins. Make sure to allocate enough time in your project schedule to ensure this critical step is not rushed. First, the project team members must be identified and their roles clearly defined. Who will be the executive sponsor? What are the overall project objectives? It's not uncommon for the primary users—executives or line of business managers—to play a limited role in the dashboard development. Therefore, the team members must have access to and gain insight into the needs and wants of this group.

In the planning phase, team members determine the scope of the project. What KPIs are important to the primary users? What data is needed to support the KPIs and where is that data located? A dashboard is most useful if the metrics will be measured against predefined conditions and thresholds. What are these conditions and thresholds?

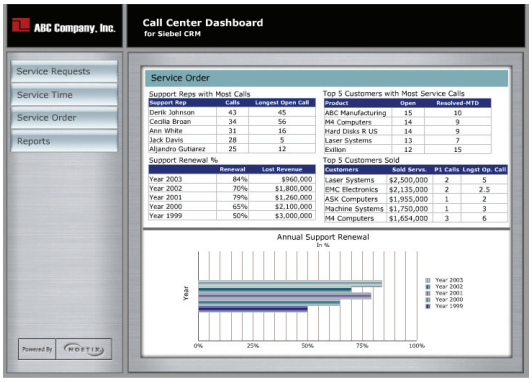
> Some executive dashboards are little more than eye candy. If managers can't act on the visual information, the software ultimately is of little value.
>
> *GNC.com, July 2004*

What is the timeline? If you're working within a tight timeline, populating the dashboard is of utmost concern. Take care not to underestimate the complexity of the databases in which the data resides. The tremendous flexibility enterprise applications provide for customizations results in data tables that are very complex. Accessing the data from a myriad of tables is not a simple task, requiring technical resources with detailed knowledge of the underlying table structure and SQL skill. It can take days to gather the data relevant for a single KPI, so plan accordingly.

What is the project budget? Budget plays a major role in defining the scope of the project. The work required to create custom queries to provide the desired metrics might be out of budget. Set realistic goals for your dashboard project by striking a balance between the primary users needs and what you can afford to deliver. Determine up front what KPIs are critical and keep to the plan.

Requirements Gathering and Prototype

Once the scope of the dashboard project has been defined and the plan is in place, the process of requirements gathering begins. Interview the key stakeholders to determine their needs and expectations for the dashboard. To keep the project within scope, these needs and expectations should map to the KPIs already identified.



Call Center Dashboard for Siebel CRM

Discuss the options available for dashboard presentation and functionality. A dashboard provides the user with a number of different ways to graphically display the data. This is the time to cover personal preferences—top level navigation, use of bar charts, gauges, etc. For each dashboard, the desired data elements must be identi-

fied. Relationships between them must be defined so that drill down and drill-to capabilities can be provided appropriately.

Some tools and technologies lend themselves well to prototyping and iterative development. Taking advantage of those capabilities can increase the likelihood that the final dashboard meets the users' expectations.

Design

Once the requirements for the content and appearance of the dashboard have been agreed upon, major aspects of the design must be completed.

- Refine the user interface and control flow
- Confirm the data sources for each data element
- Determine how to "persist" data when historical trending information is desired, but not available from the transaction database
- Define the queries needed to retrieve each data element
- Determine drill paths

HR Dashboard for Oracle Applications

Build and Validate

The "real" development begins at this stage of the project. Several tasks occur here, typically in parallel, closely coordinated with each other.

For CIOs, one of the top IS management priorities in 2003 was providing guidance for senior business executives.

Garnter Symposium, ITXPO November 2003

Front End Implementation

Create the dashboard user interface. Final user interface decisions must be made. Personal preferences have been discussed, but now is the time to evaluate what graph and chart types best represent the data to be displayed. In addition, make decisions regarding grouping data to provide the greatest visibility for cross-analysis. What visual alerts, such as color changes when values exceed expected thresholds, will be defined? Have a game plan in place for when these thresholds are surpassed. What kinds of "summary-detail" options will be provided? What interactive drilling to other graphs or charts will be available?

Query Implementation

Create the queries to retrieve the necessary information from the appropriate databases. This step can be particularly complex and time consuming, especially if there are multiple data sources for the various data elements in the dashboard. Even more so, if those data sources include customized enterprise applications for ERP, CRM, or SCM—applications that generally have complex database schemas. Writing advanced SQL statements is a challenging task for even the skilled programmer. Creating queries can easily take more time than you may have allocated to this task.

Configure Scheduling, Refresh, and Security

To ensure the content of the dashboard is up-to-date, the queries created must be configured to run regularly to deliver information to the dashboard. In addition, security rules must be implemented in order for the dashboard to display the appropriate information for different users. To minimize the need for redundant administration, those security rules should take advantage of security frameworks that are already being managed.

CIOs need to link IT metrics to business goals and performance.

CIO July 2003

Dashboard Validation

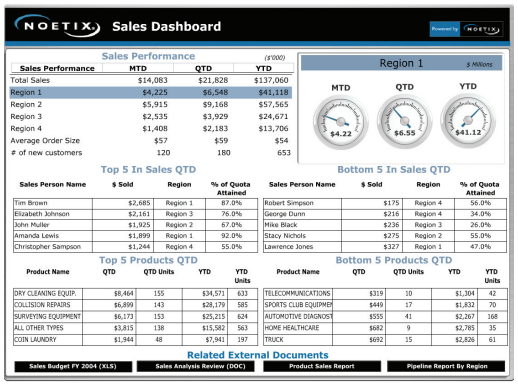
As with any software project, when the effort reaches "code complete," it must be tested to ensure that it meets the requirements and specifications outlined in the project plan. Some of this validation can be done independently by the technical team. Other aspects, especially ensuring that the data is correct, must be done by the primary users of the dashboard or their representatives.

Deploy

Once the dashboard has been built and tested, it is deployed into production. Security requirements must be implemented in the production environment. Integration within a corporate network environment must be completed (including considerations for portal frameworks, extranets for partner and customer access, etc.)

Maintain

With the dashboard in production or "live," steps need to be taken to provide for ongoing maintenance. Over time, requirements and expectations for the dashboard will change. The dashboard solution should be flexible and open to allow for such inevitable enhancement requests. If the dashboard was implemented by a vendor or solution provider, knowledge transfer to the customer for ongoing maintenance is essential. To minimize reliance on external resources, tools to promote self-sufficiency are beneficial.



Sales Dashboard for Oracle Applications

Build vs. Buy

Building and deploying an executive dashboard takes time, regardless of the vendor or technology that is chosen. Creating the graphical front end is relatively quick and easy, but that's merely the shell of the dashboard. As the iceberg theory illustrates, what you actually see on your desktop pales in comparison to the hidden effort—80% of the complexity that lies beneath the surface. Populating the dashboard with relevant KPIs takes the majority of the development effort. This is no small task and is largely dependent upon the size and structure of systems where the data resides. Don't be misled by promises of an overnight dashboard solution. All of the tasks listed above require planning, organization, coordination, scheduling, and solid project management. When comparing proposals or considering a "Build vs. Buy" decision for deploying a dashboard, it is important to ensure that the entire scope of the project is considered.

The Noetix Dashboard Advantage

If you are considering a dashboard for your organization, the steps outlined in the dashboard methodology will provide a guide for you to compare development effort whether you choose to initiate an internal project or look to external resources.

With more than ten years of experience simplifying data access, Noetix leverages its Dashboard technology to bridge the gap between users and data. Noetix dramatically reduces the time, effort and costs associated with designing, building and deploying a dashboard. Specifically, in relation to the dashboard methodology previously discussed, Noetix provides the highest impact in the steps highlighted in the figure below—where most of the effort and cost is incurred.

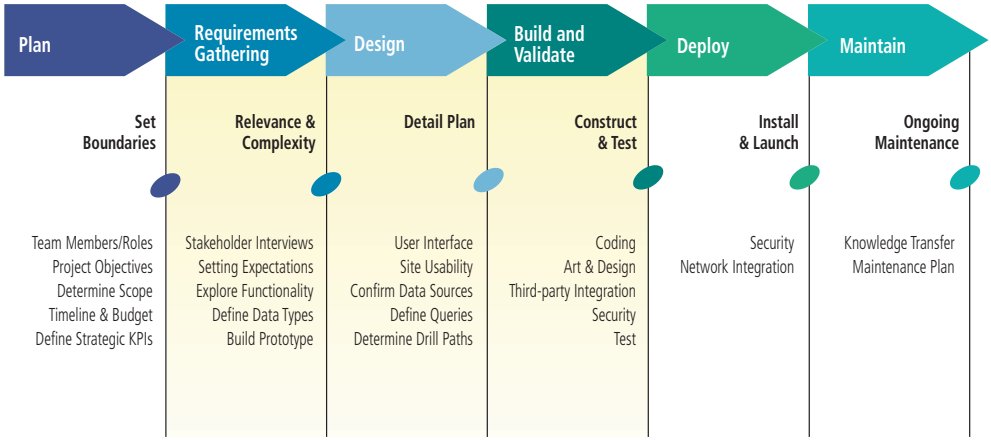


Figure 2: Noetix High Impact Areas

Requirements Gathering and Prototype

While Noetix does not eliminate this effort, we provide a rapid prototyping approach which assists with requirements definition. Rather than start with a blank slate, Noetix provides pre-built dashboards based on functional areas such as financials, supply chain, project management and HR/pay that have been populated with KPIs common across most organizations. In addition, Noetix provides templates specifically designed for key verticals such as government and higher education.

The queries needed to support these KPIs are already defined and generated, based on a customer's configuration of the Oracle E-Business suite. For financials, this means that a customer's chart of accounts and organization set ups are reflected in the prototype dashboard.

The generation of this prototype can be completed in days and, therefore, provides a significant head start. Although changes to these KPIs and queries are expected, organizations benefit from reduced development effort and faster time to answers.

Design

Noetix automatically generates content from Oracle Applications and Siebel CRM. This provides a significant advantage for dashboards requiring access to data from these applications. If all the information needed to build your dashboard isn't contained within one of these enterprise applications, Noetix provides a framework to easily integrate information from any data source into your dashboard.

Leveraging Noetix QueryServer technology, virtual views and queries can be built to access any ODBC compliant data source. These queries can then be used to support key performance metrics in the dashboard. Once created, Noetix QueryServer can be used to manage both Oracle and non-Oracle based queries.

> We haven't seen any other product that has the ability to auto generate reports based on our unique Siebel configuration so quickly and cost-effectively.
>
> *Cathy Witt, CIO CompUSA*
> *April 2004*

Build and Validate

Noetix provides the most significant impact in the Build and Validate phase. NoetixViews generates metadata based on specific customer configurations of Oracle Applications and Siebel CRM. This includes business set ups as well as security models. This generation occurs in less than one day.

Noetix QueryServer generates report templates and queries based on this metadata. Within two to three days, depending on the number of applications that are implemented, NQS will generate over 600 Answers based on key functional areas such as finance, sales, service, supply chain, etc. These Answers can then be used as queries to support KPIs.

Noetix QueryServer also provides caching, scheduling and refresh capabilities. This ensures optimum performance and allows dashboards to be updated as frequently as required. Scheduling and refreshing is completely controllable, ensuring that the content is updated and accurate as per user requirements.

Deploy

Security considerations are a major concern during this phase. Noetix fully leverages existing security models defined for Oracle Applications and Siebel CRM. Unless otherwise required, users will have access to data from the dashboards based on these already defined security models.

In addition, if there is a requirement to incorporate the dashboards into an existing portal framework, Noetix supports most open portal technologies such as Oracle Portal, Microsoft SharePoint, Plumtree, etc., and can be integrated with little effort in less than one day.

Professional Services

Noetix offers a range of professional services that can assist during all phases of a dashboard project: from overall project management to assisting with user requirements, definition of key performance indicators, the design of the dashboard itself, to building deploying and training. Our service offerings are designed to provide rapid implementations and to maximize skills transfer. Noetix has implemented successful dashboard projects in less than six weeks.

The Noetix implementation saved consulting hours. It didn't negatively impact production schedules, nor did it incur expensive licensing costs. Additionally, the implementation provided Telex with an immediate return on investment.

Scott Renneke, Consultant
DMReview July 2001

Dashboard Development Timeline

NoetixViews Installation	< 1 day
Noetix QueryServer Installation	< 1 day
Noetix Answers & Generated Queries	< 1 day
Dashboard Design, Build & Deploy	4-12 weeks*

* Timeline dependent on specific requirements and overall project objectives.

Summary

The Noetix solution accelerates the design, build and deployment of dashboards by automating many of the key tasks that would otherwise have to be executed manually. The bulk of this automation occurs within the first few days of implementation and can dramatically reduce the project time and effort from months to days or a few short weeks.

In addition to resulting in effective, intelligent dashboards, customers receive the added benefit of an operational and ad hoc reporting solution that can be used across the organization for day-to-day data access requirements, or to drill down from the dashboard.

The Noetix approach is unique, as it focuses on the generation of relevant content, based on customers' unique configurations of these applications. Other solutions focus primarily on the look and feel of the presentation layer, leaving the most difficult tasks of populating and managing dashboards to the IT organization. While the desired outcome is a simplified and powerful view of enterprise performance, the path can be a complex and arduous journey.

We encourage you to consider Noetix when evaluating alternative strategies and technologies.

For more information on Noetix Dashboard for Oracle Applications or Siebel CRM or for a custom demo, call (Toll-free) 866-4NOETIX.

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