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Eight strategies for delivering business intelligence on the web

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Takeaway:

These strategies will help companies ensure they are distributing the kind of high-quality, actionable BI necessary to make real-time business decisions.

Businesses have mastered using the Web as a communication tool, and with good reason. The Internet has proven to speed connectivity between disparate organizations and enable a mobile workforce. Yet leading organizations are realizing that using the Web channel to communicate business intelligence (BI) in near real-time fashion supersedes its previous use as an information dissemination and collaboration tool.

Not so long ago, paper reporting was distributed on a monthly, or less-frequent, basis. As business users became more and more technology-savvy, reporting became more "downloadable" on demand. A step in the right direction in terms of flexibility, yet this had each user slicing and dicing data as he saw fit to find hidden treasure in the information. Most individual employees have neither a full view of corporate objectives, nor the expert knowledge or the time to dig for critical information in raw or even summary data.

When it comes to delivering BI, the goals should be accessibility and clarity -- not flexibility. End users should not have to wonder how to find the information that they are looking for, and what the information they are looking at means. This focus is further heightened when new and less sophisticated delivery platforms are considered; for example, mobile devices are not equipped to handle large amounts of data manipulation, but are perfect to receive frequent updates of succinct business intelligence.

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To succeed in today's competitive, fast-paced business environment, it is imperative that the right content is aggregated and delivered to the right people at the critical moment when a decision must be executed. The following eight strategies will help companies ensure they are distributing the kind of high-quality, actionable BI necessary to make real-time business decisions.

1. Pick the best delivery vehicle for your audience and your data

Core metrics that users need to develop a quick and clear understanding of the organization's state of health should not exceed five to eight numbers. Typically, such information is not intended to be printed and taken to a meeting, and is therefore well suited for placement on a dashboard, mobile device or in a pagelet on a portal page.

Detailed reports, on the other hand, are better looked at on paper and should be provided in document format, such as PDF or Excel. Rendered documents provide much more control over the appearance of a printed report versus HTML Web pages.

2. Integrate the presentation layer

A BI solution is often built as an add-on component to the transactional system that generates much of the data. Users who work with the transactional system want access to reports from where they need it -- from within the application -- and are much less likely to navigate to a different web site that would invariably come with a different user experience. Since the value of the reports depends directly upon a user's ability to locate, analyze and use the information skillfully and appropriately, we recommend that the reports become part of the application's user interface. Furthermore, providing direct links to important reports from key locations on the interface will give you tighter control over where the reports appear and to whom.

3. Integrate the security layer

In order to effectively integrate the presentation layers of your report delivery application and your transactional application, it is necessary to integrate security layers as well. One way to accomplish this is a true integration with shared user accounts. However, this approach can be complicated if either side uses proprietary security. A simulated integration where the application authenticates with the reporting server through a service account is comparably simple and straight-forward to implement. In this scenario, the application proxies all requests to the report server and streams the results back to the client. This has the added benefit that a user does not need to access the report server directly so that it can be hidden behind a firewall. A reference implementation of a Java proxy for SQL Server Reporting Services is described in [1].

4. Customize the presentation for target devices and user roles

There is great appeal to the idea of making critical business information available to decision makers anywhere in the world, using current data and not depending on any additional infrastructure other than a cell phone or PDA. Yet, as previously noted, clarity and accessibility become even more important for mobile device access. Full-scale BI reports are too ungainly to be delivered to the small screens of handheld devices, and cell phones don't come with sophisticated input devices. Therefore, BI reports for wireless devices should be limited to a set of key performance indicators or a dashboard. In addition, navigation must be cut down to what is absolutely necessary.

5. Target reports to users

If access to reports is integrated into a transactional application, parameters can be passed to the report server that reflect the user's role selection, current navigational context, and other values that a report can use to create a targeted and customized view of the data. For instance, if the application maintains some sort of organizational tree and users can navigate from the corporate level to regional and branch office levels, the reports can show data for the currently selected node in the organization. The user does not have to navigate down to the node again in a separate report application.

6. Use a combined push/pull model

In order to maximize the use of a BI solution, it can be helpful to push information to the users instead of depending on their ability to pull the information when needed. If your presentation layer is already integrated with a transactional application that the users rely on on a daily basis, this information push can be done on Web pages with ticklers, "advertisements" and links to reports. Alternatively, report updates can be pushed via email.

7. Keep information timely

The closer to real-time your enterprise BI data is, the more costly the implementation, especially in large scale enterprises. Keep in mind that information is only useful if it pertains to decisions that need to be made. Therefore, firms should be judicious about what their information requirements truly are and plan accordingly.

8. Enterprise Application Integration (EAI)

Though we recommend delivering key performance indicators (KPIs) within the proper context and application (i.e., not forcing the user to a separate application), calculating and delivering KPIs often requires information integrated from other applications.

This form of EAI can be accomplished in many ways, from the database level on up to Web Services, or with simple feeds from the system of record. Be aware of the EAI requirements, especially when you consider outsourcing any portion of your critical operation (data). Oft overlooked in these budgets, you will need two-way communication with the outsourced data.

While the Web is a very effective distribution channel for business intelligence, Web features should only be used with a specific goal in mind or they will subtract value from a solution. Even a disciplined approach will only be successful if the potential pitfalls identified above are being managed properly. BI is most effective through the merger of EAI initiatives with relevant positioning of business intelligence. The power of EAI and BI together allows a concise focus on creating business value: disseminating easily understood information to each employee's unique information requirements, without requiring slicing and dicing on their own -- and in near real-time (NRT) fashion.

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References

[1] Christian Donner, Ilija Papas: A Java Proxy for MS SQL Server Reporting Services

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