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Self-service BI: Analytics for the Business Community

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Self-Service BI

There should be no doubt that Business Intelligence (BI) is more important today than ever. One false move in this economy and your company could be out of business. To survive in today's competitive environment, BI implementers must recognize that <u>every</u> employee is some form of decision maker at various points during their day. To ensure optimal decisions, they must have the right information at the right time. Supporting this new information worker is perhaps the most difficult requirement for IT to accommodate.

For many organizations, this rapidly changing business milieu requires business users to be able to change their information dashboards to reflect streams of new information coming into their environments. They themselves must be able to access and create appropriate analytics and reports based on the situation they find themselves in. This is a very different world from the early years of BI where the business had to depend completely on IT and the data warehouse to create and make available all their analytic capabilities. It requires that analytics be put into a business context and that business analytics be related to business goals and plans (using performance management, for example).

This new order for BI means that it is now being used for operational decision making, not just strategic analytics. The BI technology has undergone a tremendous overhaul to accommodate this new "operational BI" while maintaining proper support for strategic BI. Let's look at just a few of the pressures that are changing BI:

- *Data Currency, Volumes and Sources* – The first major pressure from the changing BI environments comes in the form of the currency of the data needed. To make good operational decisions, the data must be much fresher or more current than that normally found in traditional data warehouses. Detailed *intraday* snapshots of data are now trickle fed into data warehouses or operational data stores, allowing operational personnel the ability to analyze events occurring <u>during</u> the day of the event. As you can imagine, this means that the volume of data being stored increases substantially. But in addition to speeding up the loads for a data warehouse, many business users require sources *outside* of the data warehouse to be combined with these traditional historical data snapshots to get the most recent and up-to-date information on a given situation.

- *Performance* – While performance in traditional BI environments has always been important, it is now a critical success factor for the

operational form of BI. The mere name, operational BI, should conjure up visions of users requiring sub-second response times – enough to make the stoutest BI implementers' hearts quiver! Now add to this the fact that the environment must still support the more traditional BI users (tactical and strategic) with appropriate response times. This one facet of the evolving data warehouse environment – handling a mixed workload environment – has stumped many database vendors. A mixed workload environment means BI technologies must have the ability to prioritize queries, not only according to their importance to the enterprise but also their response requirements. The analytics must also be derived from multiple sources of information – current operational data, historical data from data warehouse, perhaps even data from outside the organization.

- *Number of users* – Before the advent of operational BI, most decision support environments appealed to a relatively small number of users – perhaps less than 10% of the entire workforce. With a focus on operational decisions, the new form of BI attracts a great deal more users, maybe even <u>all</u> of the business users. And these new users often have very different interface requirements and are usually more technologically naïve than the traditional BI users of yore. BI implementers must rethink how BI is delivered to these new information workers, what the interface looks like, how support should work, and where and when the users will use this capability. And – most importantly – how to deliver an environment that let's these users create their own analytics, presentation dashboards, even mash-ups, according to the changing business conditions.

- *Support for increasingly complex and dynamic queries* – The final pressure on today's BI environment comes from the increasingly innovative analytics performed by business users. We have seen the evolution of BI utilization in most organizations go from the creation of simple reports, to time series comparisons, to complex models of fraud detection and risk mitigation, to intricate predictive models of customer and market behaviors. Supporting these complex needs in an easy to use and, more importantly, easy to consume fashion is the great challenge for BI vendors today.

So BI implementers – you have a lot on plate! Now let's add one more significant trend that may lighten your load. This trend is in your business users. Many are frustrated with the time lag between the request for a new analytic, query, or report and IT's ability to deliver it. They can't wait 3 months, 1 month, even 1 week for analytic results to help them make informed decisions. And they want to be able to decide what analytics

they need, maintain their own dashboards and, in many cases, be able to create the reports or analytics themselves rather than going to IT for help. They need an environment in which they can serve themselves. But what changes need to occur in our BI environments to support this business user self-service?

Support for BI Self-service

This notion of self-service BI goes well beyond the concept of "easy to use"; it encompasses one that promotes a BI environment where information is "easy to consume" as well as easy to use. IT can help its users as well as itself by creating such an environment and removing the heavy burden of having to create all the BI end products as well as the BI infrastructure. Companies like Salient have studied how we humans think and create analytics and have incorporated the necessary flexible support for that circuitous pattern into their technology. This notion of self-service BI has a number of characteristics that differentiate it from IT-dependent BI:

1. *Having access to the right information at the right time* – This means the business user has access to the entire "buffet table" of available analytics and sets of data offered by IT. The self-service user is then able to choose what is needed from them based on the current situation in which they find themselves. It also means adopting an easy to use and easy to consume information technology. Most operational personnel do not have deep technical expertise yet still want the ability to do their own thing with the information. To overcome this, the BI interface must be familiar to the user from the start as well as be able to support the way the workers think. Many BI tools are rigid in their linear presentation of data (drill up and down only). However, most business users think in a non-linear fashion; that is, they tend to hop and skip through data until they find the report, analytic or set of data they need. Self-service BI for these users must support this non-linear pathway to insight.

2. *Ability to experiment and create analytics* – Many BI companies are developing technologies that support experimental areas of BI where self-reliant business users can investigate new analytics, create new reports or run ad hoc queries without IT help or intervention. These are called BI "sandboxes" and they offer the freedom sought by many users of BI. These areas should maintain the ease of use, give the users access to all sorts of data (not just data from a warehouse), and support the users' ability to understand and use the information correctly. Since many of these

users may not be technological wizards, the technology should work in a familiar fashion and support the user's comprehension of the data, e.g., have data lineage and business metadata available.

3. *Being able to interface analytics with Microsoft® Office products* – No matter how useful a BI technology is, the BI user still requires it to interface with Office products. Even the experimental area must connect with these products to promote sharing and exchange between these personnel. It is this continuous exchange that improves the overall environment and promotes better BI end products.

4. *Ability to promote experimental analytics to an enterprise status* – Once an experimental analytic, report or query has been satisfactorily vetted (that is, it proves to be something useful for more than one person or is useful for more than a single run), it should be easy to promote it to a production application where it is accessible by all with a need. It is critical that these newly minted BI capabilities be available in time to make a difference for the organization. This means that IT should be able to monitor the "sandboxes" for potential "promotable" new BI products.

5. *Ability to improve outcomes* – Motivated business users want to add feedback and best practices as well as improve the information they are supplied. Current decision support environments must change to provide sufficient flexibility to allow innovative business users to use their expertise to provide such feedback and organizational alignment to their BI environments. This collaboration capability is becoming a significant demand from our business audiences.

Summary

BI technology is changing – it is handling vastly more volumes of data from multiple sources with agility as well as more current data through significant technological changes. It is reaching further into the enterprise by supporting the decisions of not only business analysts but also front line and operational personnel. Yet performance, scalability, and costs continue to be the watchwords. In addition, BI must support non-technical business users as they begin to create their own analytics, reports and queries as well as the enterprise versions of these BI products. Self-service BI is now a major requirement for business users and BI technologies must adapt to support this new necessity.

About Intelligent Solutions, Inc.

Intelligent Solutions, Inc. (ISI) is a professional services firm, founded in 1992 by Dr. Claudia Imhoff, dedicated to assessing, planning, and guiding business intelligence (BI) efforts. ISI offers both consulting and education services, built around our conceptual architecture – Corporate Information Factory – an industry icon, used by hundreds of organizations to plan, architect, and deliver their BI capabilities.

ISI's continued success at leveraging these architectures and maximizing their value for its clients has earned ISI the reputation of being leaders and experts in this field.

Intelligent Solutions' mission is simple: help our clients help themselves. ISI's offerings are designed to help our clients plan, design, and execute their BI and CRM initiatives, using their own resources wherever possible. ISI's services are based on the three primary keys to success: architecture, strategy, and education.

By adding the right expertise at key points and by providing appropriate education, ISI offers organizations in a host of industries the opportunity to realize the benefits of BI and CRM. For clients who wish to team with third party providers, we deliver crucial architecture and strategy direction, and assist in selecting the right vendors.

About Salient Management Company

Salient Management Company offers business and government a new solution for efficient management. Drawing on diverse data from multiple sources, our technology measures how business activity creates value, quality, financial efficiency, productivity, while its user interface eliminates barriers to the use of this knowledge for continuous process improvement.

Salient's technology platform is a super scalable in-memory OLAP system for activity based value scoring. Its user interface is a graphical toolbox for interactive, stream-of-thought data mining, visualization and root cause analysis. Overall, the technology enables non-technical knowledge workers to evaluate process behaviors rapidly, eliminate waste and optimize outcomes continuously.

Founded in 1986, Salient Management Company today serves more than 35,000 users in 53 countries. For more information, visit www.salient.com.

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