

Why Business Intelligence Is Being Asked to Demonstrate a Return on Investment.

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ABSTRACT

Like it or not, Year 2000 projects are going to begin eating up resources that might have been dedicated to business intelligence projects. To successfully compete for your share of those resources, you, as a business intelligence sponsor, will need to demonstrate the measurable value of your application initiatives. This presentation will examine some elements of 'return on investment' calculations, and show how SAS applications have been successful in impacting bottom line results.

THE YEAR 2000 EXPENSE

As SAS users, you may wonder why a presentation about business intelligence applications is starting off examining the year 2000 issue. You already know that, generally speaking, this is not your problem. The reasons for that are many. Most notably, though, are the fact that 1) the major transaction systems suffering this problem were not often (if at all!) written in SAS and 2) even where date is a part of a mission critical SAS application, we have provided year 2000 compliance with the flexibility of our internally stored date functions. This looks like a problem for your IT counterparts, not you. I am here to suggest that, despite all of the good reasons stated above, year 2000 will impact you, and the impact will be visible and dramatic. It is related to cost and resources.

Let's take a look at the economics of this for a moment. For this, I will borrow heavily from recent research published by Gartner Group. In a recent conference presentation, they laid out a series of scenarios about how money will be spent to address year 2000 projects. Their research begins by examining IT budgets, and how they are distributed over key function areas. Those current budgets are distributed over 4 major categories: Nondiscretionary spending (Operations/Production, End-User Support, Facilities, etc), Application Maintenance, Application Enhancements and New Applications.

In their most likely scenario, they suggest that year 2000 conversion projects will be primarily funded out of current budgets, with some extra money added specifically to address the problem. Figure 1 shows that, over time, the portion of this budget distribution to be most greatly effected by diversion to year 2000 projects will be the New Applications area. In the best of times, this portion of the IS

budget is constrained by the other three, but, during this near term "crisis" the bulk of new spending to address conversion will come from this area.

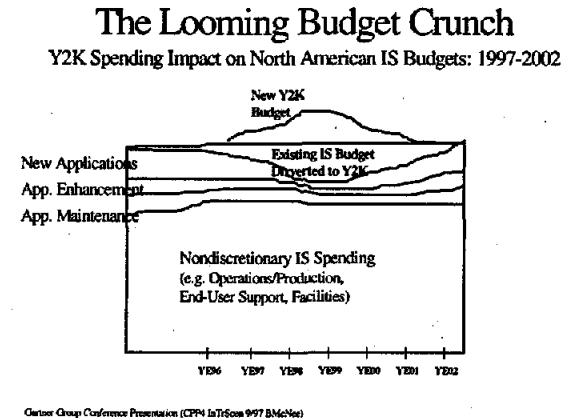


Figure 1

There will be some new application development work going on, but this squeeze will cause IT management to be much more careful about choosing the projects they can support. As a consequence, they will be looking for ways to prioritize the requests they receive. The battleground for IT support in this area will include a number of concepts. Two of those will be the concept of "strategic" applications, and the Return on Investment (ROI). Petitioners to IT will be asked to justify their requests along these lines. Strategic may be easier to identify, most probably related to the executive sponsor attached to the project. Return on Investment will be harder. Gartner believes that at least 30% of strategic "soft ROI" investment projects will be delayed from 1 to 2 years during this period. Anyone hear an approaching train?

So, even though you didn't have anything to do with those old systems that need to be fixed, your future access to IT resources is going to be impacted, and not positively. This is an ironic turn of events. Just when business units and IT had identified a common ground for cooperation, namely data warehousing, the ability to actually execute may be diminished. This does not mean that all is lost, but it does help refocus business unit professionals who will be looking for new applications over the next 5 years, to include a new dimension into their proposals; Return on Investment.

RETURN ON INVESTMENT FOR BUSINESS INTELLIGENCE

To begin, there is no single methodology or set of metrics which will universally measure the financial impact of business intelligence applications. For now, let's pick and choose among a number of metrics to help establish the benefit an investment in decision support environments will return.

One area which has received some formal attention is data warehousing. International Data Corporation (IDC), in a recently published study, outlined three types of activities within enterprises involving the processing of data for decision makers. By concentrating on the behaviors of the staff involved in these activities, they suggested some ways to measure the impact of a formal data warehouse. The three activities including data keeping, data gathering and data consuming.

Data Keepers

The IDC study described data keepers as those staff primarily responsible for the acquisition and maintenance of the major data systems. These professionals write and maintain the operational systems of the modern enterprise, tending to rather un-modern, legacy applications, with older third generation language tools. In the recent past, as business professionals have become more "data aware", this staff has often shouldered the additional burden of servicing informational requests. This has usually involved custom programming, to query data sources and produce reports. Some IT organizations have had to devote numbers of staff full time to this task. Inefficiencies in this area have been related to the iterative approach business professionals have taken to defining the "real" questions that they wanted answered. IT staffers in this role have often had to do many iterations of very similar reports.

IDC reported that, in enterprises where a data warehouse was put in place, measurable reductions could be documented in head count of staff devoted to this activity. In most organizations, this did not mean that the staffers were actually fired. Instead, they were freed up to be assigned to projects of a more strategic nature.

Data Gatherers

Moving "away" from the data, and more towards decision makers, is the class of professionals whose job involved asking and answering questions about the efficiency of the enterprise. In organizations, these people come under the title of

"analyst"; financial analyst, marketing analyst, quality assurance specialist, etc. As "gatherers" these professionals seek data which can be turned into useful information, with the proper examination and analysis. What IDC uncovered was that, fully 80% of the time gatherers were out "gathering" data, and only analyzing it in the remaining 20% of available time.

Data warehouses reduced the percentage of time "gatherers" spent gathering. This led to more time available for "analysis". It is not always directly measurable how much of an effect more "analysis" has on enterprises. One area where many of the companies participating in the study reported better "information" was in the financial reporting area. Giving their analysts more time to actually dig through data yielded the ability to react to performance deviations more quickly.

Data Consumers

These are the final consumers of information. Impact among this group is both the most dramatic, and the least reliable. By that, IDC meant that, enterprises provided with better information might make decisions which had significant visible impact on financial conditions, or might still miss opportunities. Data warehouses and the easy-to-use business tools to access them put decision makers in positions to make decisions which might not have been made at all, or, at best, made based on business experience or hunches.

NETWORK COMPUTING AND THE WEB

Another area in which business intelligence applications are expected to live is on the Web. For the most part this means on an enterprise Intranet, though some more ambitious enterprises are experimenting with providing access to customers via the World Wide Web. In both cases, the attraction is two fold. From an end-user standpoint, the Web, and browser based access "feels" friendlier. Think of all of the employees of your enterprise who would not go near a computer, but have suddenly become devoted Web surfers. Some of their interest can be traced to the content they can find on the Web. But, much of it is also the ease of use built in by Internet application designers. There is a whole class of users who are beginning to wonder, some even out loud, how come information access at work can't be as easy as at work.

The relevance of this to return on investment calculations is simple. More users means greater number of applications to amortize the cost of

development. In a constrained environment, like the one approaching, the application which can empower the greatest number of executives and analysts will show best probability of successful investment return.

The network computing trend has relevance to your year 2000 constrained IT staff as well. One of the tasks which they will be least interested in doing during this conversion project will be updating and distribution of new application code. The task of keeping application catalogs current on distributed workstations is odious at best. Network applications promise a "write once, run anywhere" strategy, with no distribution of code. Information customers would always have access to the most up to date version of the application, because they would be accessing it from a centrally managed store. This is an investment which has great appeal to IT managers.

CUSTOMER CENTRIC APPLICATIONS

To date, business intelligence applications have been put in place to help report on the activities of enterprises. SAS customers have enjoyed years of service from applications which have kept them up to date on everything from the size and composition of the organization, to the volume of supplies or inventory on hand, to the progress of sales or delivery of services. However, a new viewpoint for business intelligence applications is upon us. Susan Aldrich of the Patricia Seybold Group states it clearly in a recent report titled "Retaining Customers: What's it Worth?".

"In today's product-centered organization, the customer is the anonymous target of marketing campaigns. Information systems evaluate product market share, product costs, and product contribution to profits. But, revenue and profits come from customers, not products."

If there ever was a way to establish the direct impact of business intelligence applications, making them consistent with customer centric service is it. The closest that more traditional BI applications have come to this level of customer centricity have been to measure customer profitability. This has traditionally been information kept in the domain of finance, but now has general applicability to a broader enterprise commitment to concentrating on the true source of profitability.

HOW TO ADD UP THE SAS ADVANTAGE

Extend use of current software

Giving this presentation at a user group conference definitely qualifies as preaching to the choir. However, for purposes of qualifying the use of SAS Software for new projects, which will involve the approval of IT management, the point should not be taken for granted. It is not inconceivable that selected new projects can be completed using SAS Software tools you already have. It is more likely that you will need some additional modules. Those pieces might be to augment the software you already have, or to extend the use of SAS to other platforms.

Web enablement

Using SAS/IntrNet™ software, you are in a position to begin enabling a whole new class of user with browser access to SAS functionality. As mentioned before, the greater the number of users, the lower the marginal cost of providing data services, and the better the return on investment will be.

Customer centric applications

These applications come under the very broad business concept of *customer relationship management*. This concept is an enterprise wide commitment to maximizing all efforts to retain profitable customers. From a technology standpoint, this means integrating all of the information systems within an enterprise to gain as much knowledge as possible about the behaviors and preferences of customers. Key technology products from SAS Institute which are key to this customer centric concept include the SAS/Warehouse Administrator™, SAS/MDDb™ server and Enterprise Miner™, for data mining.

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