BUSINESS INTELLIGENCE: TECHNOLOGY- HUMAN INTERFACE

Reetesh K Singh*
C. S. Sharma**

ABSTACT

The role of business is changing very fast with the emergence and increasing use of technology. Information Technology (IT) has encroached in one way or other all and sundry, certainly for the good to the society if used in right perspective. Marketing is also changing its nature may be called a new incarnation. Though putting customer at the centre is not the new notion in marketing but gathering and managing the information about customers and their usage to the satisfaction of both organization and customer is certainly a new chapter added in the history with mega use of IT. Business Intelligence (BI) is the technique to organize the data not only to make it available as and when it is desired but the address the problem from its very core. BI not only helps analyzing the results rather to drilldown the reasons of the happenings or not happening. BI converts data into knowledge platform which offers both analytical and reporting functionality, and percolated across layers of the organization. In India BI has been adopted by handful of organizations but there is enough scope for the industry to adopt and use this for the improvement of efficiency and effectiveness on various fronts.

Introduction

Over the last few decades the role of logistics management has undergone a paradigm shift. It is widely recognized as an extremely important aspect of the overall business strategy. At the same time, a number of factors have increased the complexity of logistics management. Logistics management has, if anything, grown much more complex ever since. Product lifecycles have shortened, customer behavior has become very fickle and business environment as a whole is extremely volatile. Manufacturers can no longer push their products down the supply chain; it is the consumer who pulls the products she desires and the products should be there right in front of her, as and when she wants them. Price and quality are no longer sufficient to thrive in this market. Speed to market, and flexibility of the supply chain are also of paramount importance. To achieve this

* Reetesh K Singh is Senior Lecturer in the Department of Commerce, Shri Ram College of Commerce, University of Delhi, Delhi 110 007.
** Dr. C S Sharma is Reader in Commerce at Shri Ram College of Commerce, University of Delhi, Delhi 07.

flexibility, information has to freely flow throughout the supply chain – information not just about where the products are but also how the supply chain as a whole has been functioning. The performance of the supply chain needs to be constantly analyzed and improved to ensure its survival.

Bertrand Russell once observed, "Wisdom has given way to knowledge, knowledge has given way to information, and information has given way to words." Aacharya Chankya said-

Sukhasya mulam dharmah,
Dharmasya mulam arthah
Arthasya mulam rajyam
Rajyasya mulam vinyam
Vinyasya mulam vridhoyp seva
Vridh sevaayay vigyanam
Vigyanen aatmanam sampadyet
Sampadit aatmaan jitatma bhawati
Jitaatma sarwarthe sanjyet

(The root of pleasure lies in action. The root of action lies in wealth. Wealth is there with the kingdom/state. The head of the state should be polite. Humility can be gained from services rendered to scholars, enlightened people. Scholars pave the way for wisdom and which helps in acquiring knowledge. It is the wisdom which helps in gaining self control and a self controlled man conquers the world).

The wisdom and knowledge referred by the visionaries have become the buzz word for the present market; we call it as Business Intelligence (BI) these days. Organizations find it as a way to improve every phase of their operation. BI is a way of putting the right information in right format into right hands at the right moment. A good BI gathers information from the entire organization, analyzes it prepares reports and then transmits that information to the people who need it. In that way, person gets the specific information to his her needs.

In other words BI is an umbrella term for a set of tools and applications that allow corporate decision-makers to gather, organize, distribute and act on critical business information. BI applications include activities of online analytical processing (OLAP), decision support systems (DSS), data warehousing, and data mining.

Evolution of BI

Around five to six years ago, due to increasing automation, companies accumulated huge amounts of data. It was felt that in order to derive benefits from the data it had to be consolidated and formatted according to specific needs. This realization gave rise to applications that enabled organizations to convert data into usable formats. Tracing the roots of the BI market, it is seen that with each major IT development new BI applications have come online and existing products have been reworked to offer new functionality. With the passage of time, taking strategic decisions no longer remained the prerogative of the top management, and business units across hierarchies became responsible for their own bottom-lines. This marked the emergence of first generation data warehousing tools and BI tools, which offered both analytical and reporting functionality, and percolated across layers of the organization. The second and third generation BI tools known as relational online analytical processing (ROLAP) provided high-class analytical capabilities, enterprise-wide access and further applications catering to the specific needs of a business unit. Current BI tools represent the fourth generation, which offers companies a centralized enterprise business insight into the performance of the entire organization.

People want concise information they can act on. If they get bits and pieces of data,

leaving them to fill in the blanks and make sense of it all the purpose remains unfulfilled or half achieved. The idea of BI isn't to create more information but to create better information. That's what makes BI such a major change. It gives people only the information they need. Used right, BI can reduce the amount of information being transmitted and greatly improve its quality.

In BI the users set the parameters. They get the basic information they need, and then, if they need more, simply "drill down" through the data and get increasing degrees of detail. Here's an example. Let's say the Profit & Loss statement shows that profits are slipping. At the touch of a button, the CEO can start digging deeper to investigate the downturn. Are sales down? If so, where? Are profit margins shrinking? Then, on what product lines? Are we getting too many returns? Has the cost of materials been creeping up? Is the problem enterprise-wide or is it limited to a single geographic area? How will it affect earnings per share? What impact is it likely to have on share price? Will it endanger a planned merger? Within minutes the CEO has a precise picture of what's going wrong and can prepare a report to senior management that includes all of the details needed to develop a plan of action.

The BI market in India is still at a nascent stage. Industry analysts expect the market to register high growth rates during 2004-05. The demand is likely to be fuelled by large and medium-sized enterprises and MNCs. One positive trend is that many organizations are going in for data warehousing, data mining, OLAP on transactional data and data mart suites to address the needs of specific business units or departments. According to Frost & Sullivan, the total BI application market in India is currently estimated at $10.7 million. By 2005, this is expected to touch $30.4 million. Today the BI market has reached a significant level of maturity, with organizations realizing the value of taking timely decisions.

Imperative need

In most industries today, good information systems are an absolute must for a place in the rat-race. Though the use of enterprise applications like ERP, SCM and CRM has helped companies procure timely information, to derive business value out of them requires tremendous amount of research on the part of the management. The need to deploy advanced tools to give corporates an edge over others in their field is likely to spruce up the BI market.

Since the basic function of BI tools is to convert vital data of the organization into a knowledge platform based on which future decisions will be taken, it is important for the company to configure the data in a usable format after the strategic manager procures data from various sources, the BI tools will enable him to make quick decisions as per the requirement of the organization. Further, the increased level of automation across business processes has created a need for continuously tracking these processes; BI applications, which integrate and monitor various business processes, have thus made life easier for the management.

The Web and related technological developments, like wireless computers, promise to make BI more pervasive and more valuable. BI doesn't simply deliver information; it delivers insights and it delivers these insights on an individual basis where and when it is required.

Information is obtained to make better decisions and do a better job. Within the next few years, we'll see BI greatly expanding its physical reach. Practically anyone, anywhere, will have access to BI. A sales representative

taking an elevator up to a customer's office will be able to quickly check to see how profitable the client is and what purchases are generating the bulk of that profit. The representative can also check on returns and, if returns are high, track down the problem and be prepared to suggest a solution.

Key drivers

The customer-centric model of business is seen as the key driver for the BI market. Many companies are trading in products keeping in mind the needs of the customer. Further, in order to find out the acceptance level for their products, companies need to do a detailed analysis of customer patterns. "Market participants that align products and solutions to match customer needs are likely to place themselves in an advantageous position through BI tools as against the competition. This in turn is likely to reflect in their market share," says Gourish Hosangady, CEO and managing director, SAS India. It has therefore become more imperative for vendors to prioritize customer lists, catering to the most important customers while giving prompt service to others when required. The thrust on tracking customer needs in a real-time environment and bringing enhanced versions of products and services to the market at a rapid pace is likely to drive the BI solutions market.

BI tools are also proving to be useful in dealing with suppliers. For instance, if a vendor can analyze supplier performance and price changes, he is in a better position to negotiate. The same applies to customers; a detailed analysis of the customer's spending pattern can help the company identify the ideal package deal for that particular customer.

BI Vs Sales Efforts

Sales and marketing managers can identify the information they need and BI will provide it, according to the appropriate schedule. For example, many sales managers already have systems that enable them to track how many leads actually turn into sales and to identify sales patterns. What they typically lack is the financial input that they can get from a BI system - such as information about how profitable their sales are. Some customers buy a lot, return a lot, and are forever calling the help desk with complaints. Others buy less, return less and generate a greater overall profit. When you combine the sales data with the financial data and analyze it, you get a clearer sense of where to focus your efforts. In case of marketing, most marketing campaigns are hit or miss. The marketers don't have the information they need to focus on the products and customers generating the most profits. Once they get this kind of information, they can usually focus their marketing campaign efforts, improving their effectiveness. They can also spot impending problems, such as products whose margins are falling, and adapt their tactics to solve or sidestep the problem. In addition, they can track sales of specific products against marketing dollars budgeted against them and see where they're getting the best bang for their buck - and where they're getting no bang at all. This kind of information provides a solid factual basis for creative thinking.

BI Vs Customer Relation Management (CRM)

Customer relationships are based on good intentions. Businesses spend a lot of time and money getting to know their market and their customer, so that when they can deliver the right product at the right price at the right time, a marriage of wishes will take place. A successful union means customer loyalty, and the opportunity to provide services and more products.

CRM has evolved into a customer-centric philosophy that must permeate an entire organization. There are three key elements to a successful CRM initiative: People, Process, & Technology. The people throughout a company-from the CEO to each and every customer service rep-need to buy into and support CRM. A company's business processes must be reengineered to reinforce its CRM initiative, often from the view of, how can this process better serve the customer? Organizations must select the right technology to drive these improved processes, provide the best data to the employees, and be easy enough to operate that users won't cringe. If one of these three foundations is not sound, the entire CRM structure will crumble. It's a strategy used to learn more about customers' needs and behaviors in order to develop stronger relationships with them. After all, good customer relationships are at the heart of business success. There are many technological components to CRM, but thinking about CRM in primarily technological terms is a mistake. The more useful way to think about CRM is as a process that will help bring together lots of pieces of information about customers, sales, marketing effectiveness, responsiveness and market trends. If customer relationships are the heart of business success, then CRM is the company's life blood. As such, CRM is best suited to help businesses use people, processes, and technology gain insight into the behavior and value of customers. This insight allows for improved customer service, increased call center efficiency, added cross-sell and upsell opportunities, improved close rates, streamlined sales and marketing processes, improved customer profiling and targeting, reduced costs, and increased share of customer and overall profitability. This sounds like a panacea, but CRM is not without its challenges. For CRM to be truly effective, an organization must convince its staff that change is good and that CRM will benefit them. Then it must analyze its business processes to decide which need to be reengineered and how best to go about it. Next is to decide what kind of customer information is relevant and how it will be used. Finally, a team of carefully selected executives must choose the right technology to automate what it is that needs to be automated. This process, depending upon the size of the company and the breadth of data, can take anywhere from a few weeks to a year or more. Though some organizations are using Web-based CRM technologies for only hundreds of rupees per month per user, large companies may spend millions to purchase, install, and customize the technology required to support its CRM initiative.

The better organization's Business Intelligence, the better CRM. The goal of CRM is to put relevant customer information in people's hand when they need it. BI can do that and more. A typical CRM system tells you what customers are buying. BI can expand that information to tell you how profitable customers are and how promptly they're paying their bills. Knowing how much profit customers generate helps sales reps determine how much time to devote to them.

BI Vs Supply Chain Management

Manufacturing used to be a much simpler process than the convoluted mélange of hardware and software choices that confront manufacturers today. Once upon a time craftsmen built things for local customers, with quality and price being the primary concerns of the buyer. As more products became available, convenience was added to the mix. If a local craftsman had good quality and a reasonable price, that person usually got the job over someone far away who might have a better price.

Increased mobility changed the situation somewhat, but the differentials had to be high to warrant traveling any significant distance for a commodity product. Given a unique product, available in limited locations, a buyer might justify a long trip or high shipping costs.

The traveling peddler attempted to circumvent this logic by bringing the products to the consumer, but often had to battle the image of a fly-by-night competitor. Buyers wanted to be able to call on the maker in case of trouble.

Being aware of unusual products wasn't easy in the days before advertising. A person might see a product carried by a foreigner and inquire as to its origins but not have the resources to contact the maker and order a similar product. Due to the time necessary to move information, an order could take years to be fulfilled. The "supply chain" began with obtaining an address for the manufacturer, sending a letter of order and waiting for a response.

Nowadays, speed of information flow has made manufacturing a global, not a regional or local business. Coupled with advertising, the ability to move information at the speed of light has opened up all corners of the globe to makers of all products.

In modern manufacturing operations, information starts at the top and the bottom simultaneously. Data originates at the machines, the process and the workers. It is collected by sensors, controls and operators. It indicates what is being made, how and where, when it will be done, and why it won't be on time. Programs such as manufacturing execution systems and shop floor control take the data and create the information, passing it up the chain to the planners and product developers. Here the data are integrated with other bytes from advanced scheduling and planning systems to produce a report and forecast.

Whether it's manufacturing or the supply chain, BI gets you the specific information you need to make decisions. You set your own parameters. In manufacturing, key data might include quality problems, returns, and the time it takes to manufacture particular products, the reliability of suppliers in delivering parts on time, and so on. With BI, you can link the manufacturing and financial data to see the impact of quality and other problems on profitability. Similarly, BI can help you manage the supply chain better. You can learn what you're buying, how many days it takes from order to delivery, what percentage of parts are defective, how well your suppliers' prices match up against those of their competitors, and so on. Again, by combining supply chain and financial data, you can see more clearly where you're making money and where you're losing it.

Early Adopters

The banking, finance and telecom sectors are seen as early adopters of BI solutions. After the entry of foreign banks, the banking space has become extremely competitive. BI tools help individual banks to know the entire history of the customer, which in turn enables the bank to offer services suited to him.

UB Group

Vijay Mallya's UB Group was searching for ways and means to cut costs that put a strain on the company's reserves. The company decided to deploy BI tools from Microsoft, which quickly spotted areas where expenses were skyrocketing. The company realized that a significant amount of money was being spent on executive travel and accommodation, more often in certain prime cities in the country. Based on inputs from the BI tools, the company found that it was more cost-effective to build guest-houses in these prime cities.

HDFC Bank

By deploying BI solutions from Reveleus of i-flex, HDFC Bank has significantly reduced costs by optimizing its channels and reducing the reaction time to emerging market opportunities. Due to integration of the various channels, the BI tools can analyze data and help the bank cross-sell its services. Today the bank can close its account books much faster, and has improved the usage of its ATM network with a better understanding of how its 2.6 million customers use its channels.

Orange

When the Orange brand was introduced in Mumbai in February 2000, the company noted that competition was steadily gaining ground. After implementing SAS/Warehouse Administrator, which now manages the entire warehousing process, it is now easier for Orange to do 'what if' analysis of new initiatives, track key indices like usage churn, predict key customer traits, and monitor usage behavior, tariff plans, product performance and product development.

Stumbling blocks

Though the Indian BI market is headed upwards, in order to fully leverage the benefits of BI tools Indian industry still needs to undergo a significant transformation. The typical Indian scenario consists of companies at various levels of automation—companies with full-fledged ERP in place, and others that are just considering the idea of integrating their businesses. Many companies have legacy systems which do not have the amount of data required for BI implementations. BI thrives on data, and higher analytical tools can only be run if information repositories hold a substantial amount of customer and transaction information. Enterprises all over the world now have an increased responsibility to provide accurate financial numbers in their results. "However, users in many organizations that have adopted BI complain that they don't "trust" their information, in other words they don't know whether it was calculated according to established norms

While BI tools lift a company to a whole new level of decision-making, they require a marked change in the organization's culture. A successful BI deployment requires a change in the way different processes are conducted. For instance, in analyzing customer satisfaction levels and after-sales movements, the point of interaction with customers and suppliers has to be revisited and incorporated into the database for future analysis.

Conclusion

Though the basic functionality of BI tools has existed for quite a long time now, BI as a concept is just picking up in the market. Over a period of time, as BI vendors showcase more success stories, the market is bound to respond in a positive way. And as more and more companies seek to find intelligence in their data and take crucial decisions based on it, BI should start looking like an increasingly wise choice.

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