

Shifting Trends

With wafer thin margins, corporates are introducing business intelligence to boost efficiencies reports Sanjay Mehta, CEO, MAIA Intelligence Pvt. Ltd

Logistics is an important component of economic development. Increasing competitiveness, however, has led to wafer thin margins which have affected the bottom line of various organizations. The increasing number of players in the industry is one of the major reasons that one can attribute to this situation. These organizations are leaving no stone unturned to cut costs and boost efficiencies. They have brought in huge automation into their operations ranging from ERP to TMS systems. While these new systems will help organizations to improve, they will not be able to monitor and control business activities. On the other hand, business intelligence is an excellent means of monitoring and

controlling an organization's value added activities. It is a paradigm shift in the way organizations respond to change in the market.

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 overall business strategy. At the same time, a number of factors have increased the complexity of logistics management. This has led many companies to outsource their logistics activities to Third Party Logistics (3PL) providers. Today, 3PLs play a critical role in the supply chains of their customers. They are increasingly viewed as strategic partners who can play a pivotal role in optimizing the supply chain and thereby providing sustained competitive advantage.

Analyzing Data

To effectively manage the supply chains of their customers, 3PLs need to constantly analyze data collected from various sources and convert it into actionable information. Business intelligence (BI) tools like data warehousing and OLAP (Online Analytical Processing) can significantly help 3PLs in achieving this objective. By providing a unified view of the entire supply chain, these tools can help improve the functioning of basic 3PL services like transportation management, warehousing, and inventory management. 3PLs can leverage BI tools to provide their clients with information specific to their supply chain, thereby increasing their market responsiveness. BI tools can also help 3PLs improve their own internal organizational

Key Performance Indicators for 3PL Providers

3PL process	Key performance indicators
Order receipt	Total order receipt time, order information accuracy, revenue per order
Vehicle load planning	Planning accuracy, capacity utilization, resource utilization, load balancing
Vehicle routing and scheduling	Route utilization, scheduling accuracy, rate of route addition / removal, vehicle availability
Dispatch operations	Vehicle loading time, on time vehicle dispatch, order dispatch accuracy
Goods in transit	Rate of update of location information, average transit time, cost of transportation per ton
Receiving operations	On time vehicle arrival, vehicle unloading time, order receipt accuracy, percentage of goods damage
Order delivery	Total order delivery time, on time deliveries, goods delivery error rate

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functions like human resources and financial management.

Aiding 3PLs

The 3PL industry is in a state of transition. Logistics providers are adding more and more services to their portfolios as customers demand more integrated solutions. 3PLs are viewed as strategic partners who can optimize the supply chain, reduce the cycle time, and provide unprecedented customer responsiveness. One method to effectively provide such services is information technology. The more sophisticated 3PLs have quickly embraced IT to enable better coordination of activities by providing tracing and tracking facilities to its customers. But this is hardly enough to ensure sustained competitive advantage. For total efficiency in the supply chain and also to

eliminate bottlenecks, the ability to analyze all activities in the logistics process is vital.

The fundamental purpose of business intelligence (BI) is to deliver fact-based information to improve the efficiency and effectiveness of business. To better understand their business, organizations need intuitive query and reporting tools for advanced and consumer-level users to obtain access to critical business information that supports strategic and tactical decision making. BI can be classified into the following categories:

Business Operations Reporting

The most common form of business intelligence is business operations reporting. This includes the actuals and how the actuals stack up against goals. This type of business intelligence often manifests itself in the standard weekly or monthly reports that need to be produced.

Dashboard

The primary purpose of a dashboard is to convey information at a glance. For this audience, there is little, if any, need to study data deeply. At the same time, presentation and ease of use are very important for a dashboard to be useful.

Multidimensional Analysis

Multidimensional analysis is the “slicing and dicing” of data. It offers good insight into numbers at a more granular level. This requires a solid data warehousing / data mart backend, as well as business-savvy analysts to extract the necessary information.

Finding Correlation Among Different Factors

This is in effect analyzing business intelligence deeply. The questions asked are, “How do different factors correlate to one another?” and “Are there significant time trends that can be leveraged/anticipated?” Data is seen as a wealth of information by most IT enabled organizations. Corporates, in fact, are adopting BI to receive accurate information regarding its various stakeholders. Thus BI can be applied in the day-to-day activities of an organization, for it to extract the most from the data generated by the organization’s various OLTP (Online Transaction Processing) systems.

Providing Tools

Business intelligence (BI) provides tools that enable the delivery of information to decision makers. The information delivered comes from relational data sources or enterprise applications (e.g., enterprise resource planning, customer relationship management and supply chain). Business intelligence includes:

Query Tools

Standard query tools allow the users to view information by answering a series of predefined questions. The business problem that query tools resolve is the need for users to combine, analyze and export information from several sources using a static format. The standard query tool is an excellent mechanism for segmenting the user population into groups: users who need ad hoc query

capabilities, prompted query capabilities and static query capabilities.

Reporting Tools

Reporting tools provide the capability for presenting information in a visually appealing format. The business problem that reporting tools address is the need for organizations to create permanent records representing the business at a specific point in time that can be easily disseminated to others. Due to the formal nature of the information that reporting tools represent, it is important to develop procedures for maintaining and updating the data that they present.

OLAP Tools

Online Analytical Processing (OLAP) tools are for users who require intensive data analysis capabilities. The business problem that OLAP tools solve is the need for users to “drill” seamlessly into information when additional details are required. OLAP tools provide users with ad hoc access to data on an as-needed basis. These tools insulate users from the details surrounding the retrieval of information from the data warehouse.

Data Visualization Tools

Data Visualization tools help in the visual interpretation of complex relationships in multidimensional data. Graphics tools are used to illustrate data relationships. Dashboards and scorecards have emerged as a means of helping organizations do just that by providing instruments for making decisions, delivering long-term plans, responding quickly to market changes, providing greater control over the execution of strategy and promoting accountability. Both are dynamic tools that make it possible for organizations to respond to short-term market changes, support tactical decisions and keep strategy on track.

Key Performance Indicators

Key Performance Indicators are im-

portant to any BI implementation, so the KPI defined for the various processes would enable the data to be analyzed and presented to the user. BI uses KPI to present in a dashboard. Further, 3PL players can use OLAP tools for generating MIS reports for evaluating the operations performed in the organization. Reporting tools would be of significant use for making daily operational decisions for managing a 3PL's daily operations. A 3PL can also use data mining tools to evaluate strategic factors both internal and external to the organization and identify patterns of business and operational behavior. A 3PL can then take decisions which are strategic or tactical in nature using data mining tools.

The direct benefits of the usage of a BI solution are reduction in the turnaround time for preparation of reports, direct and faster access to data needed to support decision making, analyzing the ebb and flow of businesses across services, regions, clients, pricing, currencies, and market factors in time etc. The indirect benefits are improved sales performance, data quality, productivity etc. This KPI is just a drop in the ocean and there can be various KPI which can be defined by an organization in conjunction with its BI consultants to capitalize on and make the best of BI technologies available in the market.

BI solutions are seen as more of a need than a luxury. 3PLs can implement BI solutions covering either key operations or the operations covering their entire organization. BI is here to stay as the rate of adoption is increasing because organizations are looking towards data as one of the key assets of the organization. Leveraging data means that it needs to be harvested in a beneficial manner. Harvesting data to gain an edge over the competition can be done with ease by using well-qualified BI solutions with unique BI

strategies for the organization.

The industry's 3PL providers who adopt BI solutions which exhibit only behavior would get solutions in BI analytics space. Such solutions would not only show present or market behaviour and other related activities, but also predict future behavior and suggestions. This is also the future of BI in transportation. Thus 3PL providers should embrace BI to stay competitive and be successful in the race for market leadership and customer satisfaction.

The 3PL industry is in a state of flux. The internet, supply chain management and globalization have made sweeping changes in the ex-

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isting business models of 3PLs. To compete in this market, a 3PL has to continuously improve its existing services, add new services based on technology and make its internal functions more effective. BI tools like data warehousing can significantly help a 3PL provider achieve these objectives.

Recognizing the need for an effective business intelligence solution is just the first step. The real challenge is to make it an integral part of the decision making process and to set clear objectives for business intelligence solutions with management support so that the company achieves complete success. 🍌

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