



# SMART SOLUTIONS For EFFECTIVE MANAGEMENT

The spurt in logistics management organisations is affecting the bottom line of companies. In order to have a competitive edge over others, many logistics service providers are adopting business intelligence (BI) to improve their performance and meet the needs of their growing client base.

**LOGISTICS** is an important activity for economic development. However, cut-throat competition as a result of the increase in the number of organisations offering logistics services has led to thin margins, thus affecting the bottom line growth of organisations.

Companies today are leaving no stone unturned to cut costs and boost efficiencies. They have incorporated automation in their operations, ranging from enterprise resource planning (ERP) to transportation management system (TMS). However, despite giving these organisations time for improvement, these systems offer less scope for perfect monitoring and control activities. This is where business intelligence (BI) comes to the rescue of these organisations by proving to be an ideal programme for exercising perfect monitoring and control. Adopting this program has transformed the way organisations sense and respond to changes in the market.

Logistics, which is a subset of a supply chain, relies heavily on transportation for achieving complete execution. In a supply chain, transportation is an important link connecting various entities. Moreover, transportation plays a significant role in managing inventory levels. Although manufacturers adopt the Total Cost of Ownership model for managing their logistics costs, transportation still plays a major role in determining the number of facilities and their corresponding inventory levels for the associated stock keeping units (SKUs). Most organisations prefer to outsource transportation due to its asset intensiveness and distinct nature of operations.

Manufacturers are dependent on third party logistics (3PL) for their transportation needs. Most 3PL have matured from being basic transportation service providers to providers of other value-added services like pickups, storage and packing.

3PL can be categorised depending on the type of services they offer. The 3PL providers are actually transportation service providers (TSPs), but have matured to provide other value-added services often covering the entire logistics need of an organisation.

Over the last few decades, the role of logistics management has undergone a paradigm shift. It is now widely recognised as an extremely important aspect of the overall business strategy. Also, various factors have increased the complexity of

logistics management, thus leading many companies to outsource their logistics activities to 3PL providers.

Today, 3PL plays a critical role in the supply chain. They are increasingly viewed as strategic partners that can play a pivotal role in optimising the supply chain, thereby providing a sustained competitive advantage. In order to effectively manage supply chains, 3PL need to constantly analyse data collected from various sources and convert it into actionable information. Here, BI tools like data warehousing and online analytical

**RECOGNISING THE NEED FOR AN EFFECTIVE BI SOLUTION IS JUST THE FIRST STEP. THE REAL CHALLENGE IS TO MAKE IT AN INTEGRAL PART OF THE DECISION-MAKING PROCESS.**

processing (OLAP) can significantly help 3PL achieve this objective. By providing a unified view of the entire supply chain, these tools can improve the functioning of basic 3PL services like transportation management, warehousing and inventory management. 3PL can also leverage BI tools to provide their clients with information specific to their supply chain, thereby increasing their market responsiveness. BI tools can thus, help 3PL improve their internal organisational functions including human resources and financial management.

## **BUSINESS INTELLIGENCE: A MUST FOR 3PL BUSINESSES**

Today, 3PL providers are viewed as strategic partners that can optimise the supply chain, reduce the cycle time and provide unprecedented customer responsiveness. These services can be effectively provided by using information technology (IT).

More advanced 3PL providers have already embraced IT to enable better coordination of activities by providing tracing and tracking facility to clients. But this is not sufficient to ensure a sustained competitive advantage. 3PL providers have to analyse all activities in the logistics process to completely decimate inefficiency from the supply chain, eliminate bottlenecks and continuously work towards process improvement.

The fundamental purpose of BI is to deliver fact-based information to improve the efficiency of a business. The BI tools need to be built to meet business requirements, and users must be able to use them. In today's competitive global economy, having the right information at the right time is crucial to an organisation's ability to make strategic, tactical and operational decisions.

To better understand their business, organisations need intuitive query and reporting tools to access critical business information, which will help both advanced and consumer-level users. BI is fast gaining recognition across most industries and among organisations that want to leverage its capabilities to gain a competitive advantage.

BI can be grouped into the following categories:

**Business operations reporting:** This is the most common form of BI and

<b>KEY PERFORMANCE INDICATORS FOR 3PL</b>	
<b>3PL Process</b>	<b>Key Performance Indicators</b>
Order receipt	Total order receipt time, order information accuracy, revenue per order
Vehicle load planning	Planning accuracy, capacity utilisation, resource utilisation, load balancing
Vehicle routing & scheduling	Route utilisation, 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 tonne
Receiving operations	On-time vehicle arrival, vehicle unloading time, order receipt accuracy, percentage of damaged goods
Order delivery	Total order delivery time, on-time deliveries, goods delivery error rate

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. Here, there is little, if any, need for drilling down on the data.

**Multidimensional analysis:** This refers to the 'slicing and dicing' of data. It offers an insight into numbers at a more granular level. To acquire the necessary data, a solid data warehousing/data mart back-end and business-savvy analysts are required.

**Finding correlation among different factors:** This entails diving deep into BI. Most IT-enabled organisations consider data as a wealth of information. Organisations are moving towards adopting BI to obtain accurate information on its various stakeholders. Thus, BI can be adopted and applied in the daily activities of organisations to make the most of the data generated by various Online Transaction Processing (OLTP) systems within an organisation.

## OVERVIEW OF BI TOOLS

BI provides tools that deliver information to decision makers. The information comes from relational data sources or enterprise applications (eg, ERP, customer relationship management, supply chain). BI includes the following tools:

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

**Reporting tools:** Reporting tools help present information in a clear format. These tools address the need for organisations to create permanent records representing the business at any point in time. The records then can be easily disseminated to others. Because of the formal nature of the information that reporting tools represent, it is important to develop procedures to maintain and update the data presented by them.

**OLAP tools:** OLAP tools help users who require intensive data analysis capabilities to 'drill' seamlessly into information. These provide users with ad

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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 visualisation tools:** These tools visually interpret complex relationships in multidimensional data. Graphics tools are used to illustrate data relationships. Dashboards and scorecards help organisations work on data by providing an instrument for making decisions, delivering on long-term plans, responding quickly to market changes, providing greater control over the execution of strategy and promoting accountability. Both are dynamic tools that enable organisations respond to short-term market changes and support tactical decisions.

## KEY PERFORMANCE INDICATORS

Key performance indicators (KPIs) are important for the implementation of BI, as KPIs defined for the various processes would enable the data to be analysed and presented to the user. BI uses KPIs to present the data in a dashboard.

Further, 3PL can use OLAP tools to generate Management Information System (MIS) reports for evaluating operations performed in an organisation. Reporting tools significantly help 3PL in making decisions for managing daily operations.

3PL can also use Data Mining tools to evaluate internal and external strategic factors, and identify business and operations behaviour patterns. Data Mining tools thus, help 3PL take strategic as well as tactical decisions.

## BENEFITS OF USING BI

The direct benefits of using BI include:

- Reduction in turnaround time for preparation of reports
- Direct and faster access to data needed to support decision making

- Analysis of the ebb and flow of businesses across services, regions, clients, pricing, currencies, market factors in time, etc.

The indirect benefits include improvement in:

- Sales performance
- Data quality
- Productivity.

Various KPIs can be defined by an organisation in conjunction with its BI consultants to capitalise on BI technologies available in the market. Adopting BI in an organisation is now considered more a need than a luxury. 3PL can implement BI solutions covering either key operations or the operations covering their entire organisation. Irrespective of the acceptance level and the kind of implementation, the benefits realised should be in totality.

BI is here to stay, as the rate of adoption is increasing with organisations looking at data as one of the key assets. Data needs to be harvested in a beneficial manner to gain an edge over competitors. It must be harvested by using a proper BI solution that has a unique BI strategy. 3PL, which adopt BI solutions, would be able to analyse present behaviour or market and other related activities as well as predict future behaviour and suggest actions.

Thus, 3PL should embrace BI in its nascent stages to stay competitive. It should encourage the organisation to use high-end BI solutions to remain successful in the race for market leadership and customer satisfaction.

## BI SOLUTIONS FOR EFFECTIVE FUNCTIONING

The 3PL industry is in a state of flux. Internet, supply chain management and globalisation have made sweeping changes in the existing business models of 3PL. To compete in this market, a 3PL has to continuously improve the existing services, add new technology-based services and make its internal organisational functions more effective with the help of various BI tools.

Recognising the need for an effective BI solution is just the first step. The real challenge is to make it an integral part of the decision-making process. It is critical to set clear business objectives for the BI solution, with total support from the top management. ■

*Courtesy: Dhiren Gala, Manager – Operations MAIA Intelligence*