

SofTrack – The building block of Vortex’s BI solution

"How you gather, manage, and use information will determine whether you win or lose"
Bill Gates

Data is an asset...is it so?

Data is an asset to any organization. However, its value is realized only if it is in a ready to use form. Hence, gathering, managing and utilizing data has been a major activity for all the organizations over the years. This task got further complicated with the advent of several domain applications like that of a CRM, SCM, ERP etc. Although data is one asset that is truly unique to an organization, giving a meaningful shape to these disparate sources of data lying at different operational systems, databases and applications, is a Herculean task.

How do you turn this raw data into actionable knowledge that provides business value?
This is where business intelligence steps in.

Business intelligence (BI) means different things to different people. Some call it business performance and some call it as Information delivery systems, etc. But when one looks it purely from a technology stand point, BI translates to a set of software tools that access, manage and analyze relevant data and draw intelligence or insights that help them to make better business decisions. When implemented, a BI system should help decision makers extend information access and analysis capabilities to a broader user base, as well as capture and share individual expertise to benefit the enterprise.

Enterprise BI Solution: Typical architecture and Flow

There are several layers in a BI solution, and it is possible to implement BI in a phased manner, that allows for controlled expenditure. The phases and prerequisites will depend on what one expects to achieve from a BI solution, that is, whether it is to be used for purely for ad-hoc reporting or something more complex functions like data-mining or as and TMIS (Top management Information System). Let’s look at the basic value chain in a BI solution.

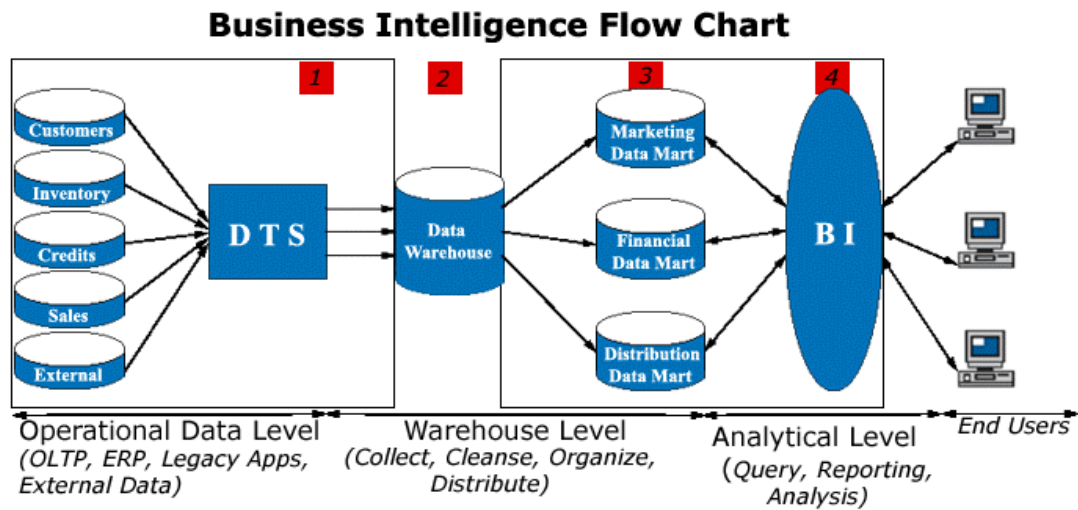


Fig 1

Data sources

The data sources are the basis of all the business intelligence solution extracted from IT systems. They can be anything from ERP backends, CRM systems, HR databases, billing systems, operational databases or any other database that forms a critical part of your business processes. Typically, organizations have these data in some form of relational database. Specific data needs to be extracted from these databases and loaded into a data warehouse to support the kind of heavy analysis and querying that a BI system allows.

Data Transformation services

This layer also referred as ETL (Extraction, Transformation and Loading), is probably the most critical phase in the BI chain. At this point, data sources are accessed and available, but the required data needs to be extracted from them, cleaned up and formatted before loading into the data warehouse. This is probably also where most of the variables in implementation lie. The ETL engine therefore is often referred to as the ‘intelligence’ behind the scenes in business intelligence and is essential for any kind of true BI implementation.

The Data warehouse

A data warehouse as the name suggests is a huge storehouse of information. It does not have a normalized structure, as is the case with a RDBMS. Infact, it is the exact opposite of a RDBMS in that it holds de-normalized data. The quality of the data in the warehouse depends on the configuration and capabilities of the ETL engine.

Data marts

A data warehouse is not always the ideal place to fetch data for complex queries and analysis. Data is further filtered into application specific 'data marts. The term data warehouse and data marts are often used interchangeably, but there is a distinct difference. Data marts contain some information from the data warehouse. However, put together, they do not make up the data warehouse. By extracting data specific to the type of analysis required, data marts improve the speed of queries and data mining.

Analytical applications

These applications are pieces of software that take up the cleaned-up, filtered data from a data mart or warehouse and generate information. The applications may be data miners making predictions, statistical analysis applications or plain old ad-hoc reporting applications.

BI solution: High cost of deployment

Implementation issues

Business intelligence is pretty high up the food chain as far as IT systems go. First, comes the data collection from various data sources. Then you need a data warehouse to aggregate it. Even before you start, you need to extensively analyze your business processes and decide what you wish to achieve from the BI solution. All these activities might even require the services of a professional consulting firm to perform a detailed requirements analysis.

Network connectivity

Common business systems such as ERP, CRM and SCM may have distributed data sources that will need aggregation. In such a case, the initial ETL process will be heavy on the network while all relevant data is sourced and aggregated into the data warehouse. Beyond this, additional updates to the data warehouse from each data source will also take their toll on network speed. If heavily stressed already, the network connectivity may be in need of upgrade as well.

Storage infrastructure

Data warehouses can run into terabytes of information. Naturally, one needs to have massively scalable storage systems to cope with huge load of data.

CPU scaling

While all elements of a BI solution will not require heavy CPU processing horsepower, but some specific elements can use whatever you can throw at them. Data mining and OLAP applications are known to be CPU heavy. These applications might necessitate server upgrades or new additions to the existing server arsenal.

All the above factors point to the complexity of deploying a large IT system. While the level of complexity can be debated, it can be safely assumed that BI solutions come with their own cost and at face value, it might appear to be out of reach for a small and medium business enterprise.

Why BI for SMEs

Today small and medium enterprises (SMEs) are facing stiff competition in the wake of globalization. Just-in-time delivery is fast becoming the norm in SME circles too. Every organization is being pressured into enhancing its performance in all the spheres of business — in accordance with the demands of stakeholders. Every organization is being forced to plug into the information arising out of its business functions and converting it into insight that is immediately available to all key decision makers.

Even small and medium size organization which is grappling with real time transactions, data ubiquity . . . is on the look out for a cheaper, yet effective solutions to capture, enhance and utilize its Business Intelligence (BI).

Vortex's BI Solution for SMEs

Softrack, flagship product of Vortex, is a 100% web-based business intelligence solution built on the Microsoft .NET platform.

Softrack provides all the components of a BI solution for a SME centered on SQL server.



Fig 2: Components of Vortex's BI solutions vis-à-vis Fig 1

Vortex's BI solution: Value proposition

Softrack as an end to end solution

Softrack provides the basic platform for a BI implementation (from data capture to data analytics) thus giving the much-needed head start for any organization. Once this platform is in place, the organization can then opt for Vortex's other customized services.

Handles measures across the information hierarchy.

Softrack handles most of the measures in a generic sense, taking into account the 80/20 rule. In any organization 20% of the measures contribute to 80% of the business performance. Softrack's in-built data capture mechanism can be used for such 20% measures. Rest of the data can be imported and integrated with the help of other components of Microsoft's BI solution.

BI for EI

Now strategic decisions no longer remain the prerogative of top management and business units across hierarchies have become responsible for their own bottom lines. Softrack's web based architecture and object oriented design allows the users across the organization to experience the same power.

Affordable cost

Softrack is built on Microsoft's .net architecture. This allows Softrack to utilize all the evolving features of Microsoft's BI platform while improving the core engine. As development and maintenance on .net platform is proven to be cheaper than other platforms, Vortex can continue to offer the same cost advantage over a period of time.

Future enhancements

All the future enhancements of Softrack will comply with Microsoft's .net standards and its solution offering in the BI space.

All of the above make Softrack the ideal choice for any organization looking for a cheaper yet effective BI solution.

[Convert your data into a real asset; deploy Vortex's BI solution on Softrack](#)

Softrack is the flagship product of Vortex Technologies.

Vortex is an innovative technology company headquartered in Hyderabad, India. Conventionally a product development company, Vortex is now fast expanding its services arm.

Vortex currently operates in the business space of business performance management with offerings in the fields of business intelligence and enterprise project management.

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