

#### **Business Intelligence & Augmented Analytics**

Augmented Analytics for a Share Broking & Securities Trading Company in India





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### Client

The client is a leading financial securities firm that offers online digital contacts, transparent trading practices and extends personalized customer service and support. Their services include brokerage, investment advisory, financial services and portfolio management in stock markets, debt markets as well as derivatives markets. The company is a respected corporate member of the National Stock Exchange (NSE) of India.

### The Objective

The client operates its business from various locations in India and finds it increasingly difficult to take quick and appropriate decisions since it requires a detailed analysis of data scattered in different functional areas. Thus, they felt the need to have a comprehensive, secure and uniform multidimensional information architecture using which they could consolidate all data sources and perform extensive analysis operations from the vast silo of available data. To put it simply, they required a tool that would help them derive consolidated reports as well as intelligence by integrating, transferring and accessing data scattered across different functional areas and applications.

The core issues and challenges that were identified included:

- ERP system and other Enterprise applications spread across various entities did not adequately support the organization structure, resulting in silos of databases and information.
- Different databases for various entities and departments made it difficult to consolidate data through standard reporting system.
- Being a publicly listed company and a growing organization, the client needed timely reports to ensure both statutory compliance as well as organization performance.
- Defining and monitoring KPIs across the organization for performance management.
- Dynamic ad-hoc analysis at various levels for faster, more confident decision making.
- Reduce workload on client's IT department due to constant requests for new reports and MIS scenarios.



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- Adaptability to different ERP systems and popular data sources, including transaction log files from the National Stock Exchange systems.
- A cost effective BI solution that could cope with growing data in the organization and accessed by different locations across the country.

To overcome these challenges, the client desired a powerful Business Intelligence (BI) solution with traditional and modern BI components in one platform, built on industry standard architecture that was flexible enough to connect all data sources, including row transaction summary and details file from National Stock Exchange (NSE) systems. Client expected the BI system to answer all business as well as time-critical questions efficiently, and wanted a system that could be accessed through browsers from any location throughout the country.

### **The Solution**

After extensive discussions with the client's team, Smarten's team developed and presented a Proof of Concept to demonstrate how Smarten solution could fulfill their technical and functional needs. The PoC was critically analyzed and verified by the client's technical and management team. After a thorough evaluation, the client opted for Smarten as their enterprise BI solution. To start with, Smarten team worked closely with the client team to define functional areas and identify effective KPIs so as to implement them within the BI solution. Smarten team also helped create a comprehensive, consolidated data warehouse by harvesting data from various sources, and then integrating Smarten with the central data warehouse. Using this warehouse as source data, Smarten was configured to build multi-dimensional cubes followed by various analytical objects. Finally, an Automated Delivery and Publishing agent was used to schedule regular delivery of critical reports and objects via email to the management team.

As a next step, Smarten team conducted workshops on BI concepts, best practices, system administration, and end user training for power users who would in turn train all users within the organization. Critical points and Best practices for data warehouse design, cube structures and analytical objects were established to ensure that Smarten potential was fully exploited.

Smarten team worked closely with the client team, and provided consulting and implementation services necessary to build the data warehouse and BI objects (such as dashboards, cross tab, graphs, reports etc.). Implementation of the Smarten solution was accomplished within 8 person weeks and included 3 days of extensive training.



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### **Technology & Platform**

- Server : Windows 2003 enterprise server X64 bits
- Integrated System : Industry specific ERP from local vendor
- Backend (Database) : SQL Server 2005 X64 bits, text formatted file.

#### Key BI objects implemented in the first phase of deployment:

 DEMAT and Broking business constitute the core business functions and cover segments such as NSE, BSE, MCX, NCDEX (commodity) with capital market and derivatives.

#### Trading & Demat a/c (broking):

- Detailed analysis of P&L, trading, branches, franchises and customers.
- Brokerage turnover details along with branch-wise income & expense details.

- Inclusion of brokerage details from various branches and locations, city-wise and state-wise volumes (values) and % share.
- Sub-brokers or Remeshire's brokerage detail and amount distribution.
- Scheduling daily earnings reports and dashboards to be sent to Top Management in specified formats.
- Generating Expiry date-wise transaction reports along with detailed explanations.
- Branch-wise P&L analysis incorporating all income and expenses for both brokerage and DP services.
- Generating DP services related data such as client-wise opening balance and closing balance, summarized bill details, monthly client summary, monthly branch summary, etc.



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#### IPO:

 Detailed analysis of IPO's detail analysis with the detail: Monthly data of all the aspects with brokerage as well as sub-brokerage.

#### **Client Details:**

- Detailed client monitoring analysis on a monthly basis.
- Client (customer) details and compliance reports as required by regulatory authorities (IT, SEBI, Exchange, Service tax, Stamp Duty, etc.) at the time of inspection.

#### NSDL charges detail Analysis:

 Harvesting data such as Client-wise NSDL charges details, ISINwise invoices charged to client account, Total charges, Exchange charges etc. Transaction files containing this data were stored on NSDL systems as text files. The files were integrated in different reports and analysis objects for effective consolidation and analysis. Solutions for Key challenges:

- Created one data ware house in a staging database and then configured cube update schedulers to update data from various data sources and refresh BI objects within the system.
- Implemented Linked Cubes (UNION and JOIN) within Smarten to manage consolidation of data sources, as well as performance.
- Data for ISIN wise NSDL client charges, available in text format, was imported into the cube for consolidation, comparison and analysis required.
- DP and Trading data was present in different data sources. This was consolidated for all accounts along with details for both transactions.



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Screenshots not from actual implementation, and shown for relevance only.



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### **Smarten Team Role**

Keeping in mind the needs and business functions of the client, Smarten's team provided dedicated consultancy and support services to the client for:

- Installation & Connectivity with Data Sources
- Designing a consolidated data warehouse
- Development and Implementation
- BI Concepts and Best practices sessions
- Technical training
- Administration training
- Business Analyst training
- End user training

### Conclusion

The Smarten team successfully implemented an augmented analytics solution that fulfilled all client requirements. The Smarten team helped build a data warehouse and consolidate it with NSE source data that was most of the times available in a different format. In addition, team defined and implemented effective KPIs that were customized to suit the client's business and allowed easy monitoring of portfolio performance using the versatile BI tools incorporated in the Smarten Suite. This allowed the client to raise and answer critical business questions and derive desired information rapidly.

Smarten's primary value propositions – Simple to use, Practical to deploy, Traditional and Modern BI in one platform and Affordable to all contributed to the success of the project.

In addition:

- Rapid implementation of and the Smarten solution was accomplished within eight person weeks.
- The simple, easy to use, intuitive interface reduced training needs and ensured faster user acceptance.
- Users at various levels could easily create reports and analytics on their own, without any specialized programmer or developer support.
- Enterprise architecture with 100% browser interface ensured rapid roll out across various divisions to large number of users.
- Low cost of acquisition, Short rollout time, less training needs, added to lower TCO.



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Smarten has been a perfect fit for this client, by seamlessly integrating with varied data sources and converting the client's information and analysis challenge into a huge competitive advantage at an unbelievable cost and time. The success of this project provides yet another example of how Smarten's

superior architecture, simplicity of use and short implementation cycle helps leverage value of customers' existing IT investments thereby offering the best TCO to customers.



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