

eBaoTech® Big Data Foundation™

In the time of Big Data, pressing questions facing the insurance industry include how to capture the right “business opportunities” by selling the right products at the right place and right time to the right customers. The fragmentation of touch points (or sales channels), the fragmentation of products (or mass customization), and the fragmentation of data (big data in terms of amount of data and sources of data) are presenting both challenges and opportunities. How should the insurance industry respond to these trends?



"It is difficult for our management to get reliable information and make decision due to the lack of consistent and instant data and the statistical criteria of data sources are not identical. Deploying eBaoTech Data Warehouse will help our management team significantly increase the accuracy and pertinence of strategy and decision making. In 2011, Dah Sing Life Assurance Company Limited chose eBaoTech® LifeSystem Suite to replace its old policy administration system. Selecting eBaoTech® Data Warehouse solution will further enhance our cooperation."

Stephen Chow
Head of Insurance IT, Dah Sing Life Assurance Company Limited



Figure 2: Channel Analysis Dashboard based on Microstrategy

A Comprehensive Data Environment

eBaoTech® Big Data Foundation™ is a comprehensive data analysis environment with strong capabilities and future-proof vision. It is a solid data environment integrating the enterprise data from internal systems and absorbing the massive data from external resource, to help insurance company making the right decision quickly. The foundation provides the unified data services for various analytical applications, like Management Information (MI) reports, CRM, enterprise risk management to business users and the single view of business to ensure core system, ECIF, call center and other peripherals systems use the same detail information to serve the customers.

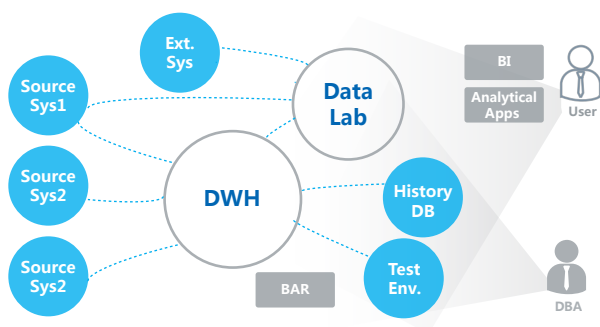


Figure 1: Big Data Foundation Bird's Eye View

Challenges for Insurance Companies in the 24-7-365 Big Data Era:

- More and more data sources from internal and external systems, leading to bigger problems in data processing, data integrity and data quality.
- The inability to observe business situations intuitively from different angles and make quick decisions.

- The increasing need for a way to leverage other ecosystems' valuable data for business innovation and enhancement.
- The difficulty of maintaining a powerful data analysis ecosystem at lower cost by leveraging open technology.

The Advantages of eBaoTech® Big Data Foundation

- **Strong Integration Capability:** Can integrate the data from any insurance core systems and other applications, and can be connected with any data visualization tools
- **Flexible Platform Adaptabilities:** Can be deployed on any database platforms
- **Powerful Database Management Tools:** Dramatically shorten Extract-Transform-Load (ETL) development cycle and have powerful scheduling and monitoring functions
- **No Constraints in Technical Option:** Support all BI applications, ETL tools and database platforms
- **Low Solution TCO:** Thanks to the super easy understandable data model
- **Great Apps Supporting:** Apps such as management reports, self-service data analysis, regulatory and solvency II reporting available for insurers to choose
- **Powerful Big Data Processor:** Can easily convert semi/non-structured data into structured result
- **External Data Supplier:** Partner with 3rd party big data providers to enrich data material for insurance companies
- **Big Data Insights:** Apps of internet customer portrait and industrial info cloud are ready to go

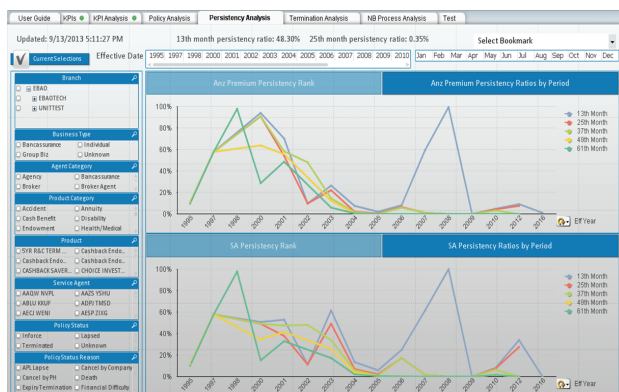


Figure 3: Region Analysis Dashboard based on QlikView

Start with eBaoTech Data Warehouse V2

As the center of eBaoTech Big Data Foundation, eBaoTech Data Warehouse V2 simplifies the process of database operations and lower the cost and difficulty of developing dashboards. It is one of the best sources of high quality data and data integration. eBaoTech Data Warehouse V2 includes analytical models for sales, policy management, claims, premium, finance, administration, etc.; it is able to provide various data sources and generate analytical reports from multiple angles, providing insurers with the following benefits:

- Provide information for decision making
- Identify market opportunities
- Improve management issues
- Optimize operation processes

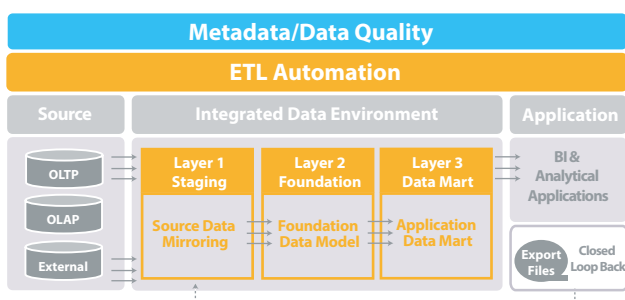


Figure 4: Architecture of eBaoTech Data Warehouse (DWH)

Powerful Insurance Logic Data Model

eBaoTech Data Warehouse Logic Data Model (LDM) has nine subject areas including party, product, account, organization, event, contract, campaign, channel and finance. These subjects are abstracted and categorized from insurance business operation, fully covering the business scope of insurance carriers and insurance organizations. When insurance companies expand their business to other financial areas, eBaoTech Data Warehouse LDM also has the reserved entities already prepared for them.

- 9 Subject Areas
- 277 Major Entities
- 129 Minor Entities
- 1473 Attributes
- 397 Relationships



Figure 5: Nine Subject Areas of eBaoTech Industry Logical Data Model

Never Embrace Your Data like This Before

Thanks to its powerful data model and data management tool, eBaoTech Big Data Foundation is specialized in processing, integrating and managing data from different sources and of different formats. It is compatible and integrates with any insurance core systems, other internal applications, or external data from internet, providing insurance companies with the single version of truth and efficient data service.

The foundation is a comprehensive, proactively designed data environment not only for analyzing internal data but also for leveraging massive external big data.

The combination and joint analysis of internal and external info triggers the chemical reaction of data and gives the insurance companies deeper insight, more precise decision-making and efficient approach to create more opportunities and revenue.

Quickly Turn Unstructured Result into Structured:

- File material
- Email
- Machine log
- Web material
- SNS material
- NoSQL DB info
- Search engine content

Powerful Text File Analytical Capability:

- Content obtaining
- Language recognition
- Word cutting
- Similarity judgment
- Categorization
- Clustering
- Pattern matching
- Summary generation
- Theme and trend
- Relationship identification

Data Format	Data Access	Data Writing
Text File (directly read .Z .zip .gz .tgz)	Fixed File Reader Variable File Reader CSV File Reader JSON File Reader	Fixed File Writer Variable File Writer CSV File Writer
Excel File	2-Dimension Data Reader	
XML	XML File Reader	XML File Writer
DB2	JDBC Reader	DB2 Load Command Writer
Greenplum	JDBC Reader	PostgreSQL Copy Table Writer Greenplum External Table Writer
Microsoft SQL Server	JDBC Reader	SQL Server BCP Writer
Oracle	JDBC Reader	Oracle SQL Loader Writer
PostgreSQL	JDBC Reader	PostgreSQL Copy Table Writer
Sybase IQ	JDBC Reader	Sybase Load Table Writer
Teradata	JDBC Reader Fastexport Reader	Teradata Fastload Writer Teradata Multiload Writer Teradata T pump Writer
Others	JDBC Reader	
SAP	SAP Table Reader SAP Function Reader	SAP Function Writer
Hadoop	HDFS Reader Hbase Reader Hive Executor Pig Executor	HDFS Writer Hbase Writer Hive Executor Pig Executor

Figure 6: Rich Data Operators of eBaoTech Data Management Tool

For more information

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About eBaoTech

eBaoTech's mission is to "make insurance easy". With more than 150 installations in more than 30 countries, eBaoTech is one of the global leaders in insurance technology. From its inception in 2000, eBaoTech has been an innovation leader at the intersection of insurance and internet. eBaoTech offers world leading insurance software solutions for both life and general insurances. eBaoTech's hallmark is "Rapid Customer Success" (RCS), with a strong focus on delivering business value to its customers fast. Digital insurance will remain as the central theme in the coming years and eBaoTech is well positioned to be a global leading partner for insurance industry to move to the digital age. www.ebaotech.com.