



Back Office: Databases, ETL, & Data Warehouse Services

Unlike other firms that specialize only in Database, Data Warehouse (DWH) and Extract/Transform/Load (ETL) Back-Office implementations, Sindex concentrates solely on the investment management industry. Since buy-side firms often try to solve the same problem, we can draw on our experience to immediately identify where, if, and how a particular data management solution fits within a specific firm's business or workflow, and whether it is offering the highest value in its current state.

Sindex's familiarity with accounting, trading and contact management systems speeds the process of scrubbing and migrating data from disparate systems into a unified data warehouse view. Having solved data management problems for many different firms, Sindex employs internally developed tools to accelerate data warehouse gap analysis, design, development, implementation cycles and, if necessary, vendor "sunset" paths.

Sindex provides Database, Data Warehouse & Reporting Dashboard services in the following areas:

- End-to-end implementation studies, project planning, TCO, & Cost/Benefit Analysis.
- Business requirements matrix for data warehouse usage. Gap analyses on existing information technology systems. For small firms, a formal data warehouse solution may not represent an immediate value-add.
- Complete technical & infrastructure design for investment management firm's database(s), data warehouse(s).
- Infrastructure, change management, in-situ procedure assessment & auditing. Sindex audits are comprehensive, and not solely constrained to technology backbone streamlining, but encompass operational integrity, disaster recovery (DR), and business continuity procedure (BCP) assessment.
- Manage and implement vendor-to-vendor (V2V) mapping, scrubbing, and multi-source loading processes.
- Design & development of robust, fully automated data feeders, bleeders, and systems health/heartbeat monitoring.
- Custom data dashboards to providing unified views of all firm data.
- Vendor-neutral, (software) language-neutral reporting solutions, with unlimited output formatting, for publishing to the Internet, hardcopy, or various file formats for both external and internal clients.
- Integration of a client's data warehouse with the rest of the firm's technology infrastructure, or acquired infrastructure.



Databases, ETL, & Data Warehouse Case Studies

The following case studies illustrate some of the different roles Sindex has undertaken in the database and data warehouse area.

\$50B AUM, 4000 Accounts

Directed all aspects of design, development and support of a distributed data warehouse architecture. The solution provided both start of day snapshots for portfolio managers' tactical market analysis, and historical archives for both internal and client reporting. This multi-currency data warehouse handled reporting of domestic and international equity and fixed income instruments. It also provided additional views in the portfolio's base currency for non-USD clients.

Enterprise data was made available internally via a proprietary point and click user interface that allowed canned and user-customized filters and views of the data. For external clients, report generation was integrated with a contact management database and an accountant's workflow application that allowed report packages to be generated automatically when the portfolios were reconciled.

Architecture: This data warehouse was implemented on a distributed architecture using two-way replication to provide redundancy should one of the servers fail, and also to balance the processing across multiple servers. Different query applications hit different servers to provide end-users faster response time. The distributed architecture was also leveraged to implement internally developed daily rate of return calculations and other business calculations at a volume and speed that the portfolio management system could not manage in a stand-alone environment.

\$60B AUM, 1500 accounts

Sindex designed and developed a multi-currency DWH handling equity and fixed income instruments. Sindex was solely responsible for the IT architecture integration, database schema development, and the automation development that loaded data and ran business calculations on the DWH every night.

Sindex teamed with the client's employees in the business analysis phase. Sindex managed both its own and the client's developers in the building of an Executive Information System that provided a simple point and click interface to the DWH, and the integration of the DWH with the firm's legacy applications.

Sindex has been involved with this project through several release cycles, and provides support services for the entire software architecture to the firm's IT group, as well as provide end-users support for any DWH linked application.

\$10B AUM with 1000 accounts

Sindex helped the client design its strategy for using a third-party vendor's DWH. Sindex did needs analysis and data mapping for the client's multiple portfolio management system. Sindex was also responsible for developing the business logic that would pre-calculate data prior to loading the DWH, including realized gain loss, fixed income analytics, amortization, and gross, after-tax, and tax-equivalent performance.