

Knowledge is power, and having the latest information on the marketplace is of paramount importance. *Eric Fishhaut* looks at why centralising information can have a big impact on tactical management and developing strategies

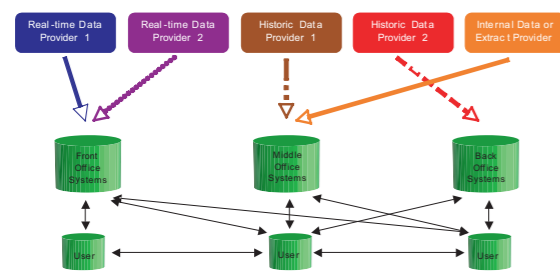
Integrating energy data

★ In today's complex and expanding energy markets, timely and accurate information is compulsory. Strategic and tactical decisions require the most complete knowledge and clearest view of the marketplace. While many companies have abundant information and IT solutions, they are often unable to leverage the full value of their data. Typically, data is scattered across the organisation in multiple systems and silos, making access difficult and many times impossible. The industry has turned its sights towards data integration to gain business advantages and efficiencies by increasing confidence and decision-making powers. The key is to maximise management and distribution of market information in the enterprise.

In the global trade environment, IT applications provide the central decision support infrastructure for both tactical management and developing strategies. The information systems, which include marketing, trading, risk management, financial, planning and others, increasingly share databases and information resources while at the same time, supporting unique global applications.

Most energy trading entities are seeking to streamline and improve their business processes to remain competitive. For many, data integration is a pursuit that targets gaining efficiencies and lowering costs, while increasing productivity and responsiveness to business demands.

F1. Evolution of energy data integration: traditional approach



- Numerous solo processes
- Large internal IT support cost
- Collaboration challenges
- Multiple data formats

Integration is the elusive goal of the software industry, pursued by many professionals as the state of software nirvana. The problem is that few software systems are indeed integrated, primarily due to the difficulties in achieving real data integration. At present, IT professionals across the energy industry are focusing like never before on integration, as only a low percentage claim they already are well-integrated.

Defining integration

What is data integration and what are the desired goals? There are at least two probable definitions that are closely related. On one level, integration can simply mean the movement of data between two co-existing systems on a regular basis. This represents the IT viewpoint. On another level, integration can be the process of combining two or more data sets together for sharing and analysis in order to support information management. That represents the business point of view. In the market data information realm, the focus for integration and solving real systems issues is ensuring that all systems that require particular data points have values that agree with one another.

Put another way, data integration is achieved when the data values produced and/or consumed by a component system are the same values produced and/or consumed by all the other component systems. There only needs to be one set of information used by the integrated systems, as information can be shared as needed and duplication avoided. As time passes and data values change, those changes are immediately and automatically available in all the other component systems. The benefits of integration can be quickly enumerated and demonstrated.

Integration payback

From a business-oriented perspective, measurable results in two targeted areas are the goal: lower costs and better business decisions. Fortunately, the two can be completely intertwined when pursuing data integration. Savings in hard and soft costs can be quickly realised by reducing the complexity of IT environments and bringing together unconnected systems. Productivity of energy professionals is improved by using one central source for price storage and discovery.

Process efficiency and speed can be improved by eliminating the need for manual data transfer to multiple applications for multiple groups. By replacing many manual processes with automation and potentially outsourcing, professionals can be

freed up with time for more business critical activities. High levels of automation in back-office functions can be achieved by performing daily and intraday information transfers from central sources. Other cost reductions can be realised by rationalising both systems within disparate IT infrastructures and data acquisition connections with external sources. Eliminating duplication and overlaps while establishing clear data flow patterns can dramatically lessen the operational overhead.

The integrated approach simplifies improving data quality and reliability. By reducing the number of data connections and channeling through a common interface, monitoring data quality becomes more manageable. Integration of data leads to improved data confidence. As users experience more complete, accurate, and timely information with less effort, uncertainties diminish, resulting in improved responsiveness to market movements and trends.

Additional benefits include increased ability to meet regulatory compliance standards – with clear audit trails and highly reliable data. A more robust regulatory compliance framework with more accurate reporting can be established by having a central data source and defined processes for pulling pricing and trading data.

Maximise data value

Data integration can empower people by delivering the right data to the right place at the right time. Energy market professionals need increased functions for reviewing, understanding and interacting with data in an organised platform that allows them to leverage the information. Once data is brought together cohesively, energy-specific data manipulations such as spread calculations and unit conversions can be applied by users in graphs and reports to meet their specialised needs. With improved data flow and distribution, managers and executives can be more empowered by gaining real-time access to information.

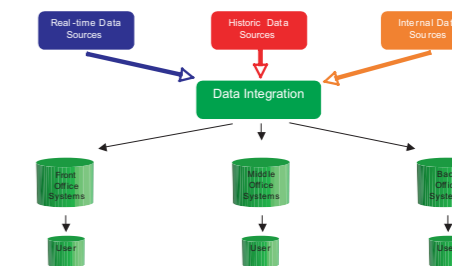
Examples of energy market data integration abound. Risk management systems are commonly integrated, where end-of-day pricing is critical to mark positions and determine valuations. The price data is most certainly external to the risk system and is likely to come from a combination of futures exchanges, OTC market assessments from publishers, broker values and even internally generated price points.

It is most important that the data matches with the values used in other related systems. To address this need in the most elegant way, a single connection that can supply the aggregation of all required data is most desirable. Another example is electronic transaction confirmation with brokers and counter-parties. Typically, web services provide easy access via the internet that allows interchange of information with external parties.

Elements of integration

The core component to achieving effective data integration in the enterprise is to centralise the data storage and eliminate unnecessary redundancy. In typical environments, this can only be accomplished through thorough, step-by-step re-engineering or replacement of complex systems that have been established over time, using both internally produced and externally supplied software. To be clear, there is one mantra in centralisation – do not duplicate

F2. Evolution of energy data integration: leading practices approach



- Single data connection and format
- Easy collaboration
- Low IT support issues
- Streamlined process

the data. While there may actually be multiple database repositories, each with its own unique data and characteristics, the key is to have one consolidated interface for importing and accessing the data. This represents a centralised data source from a logical standpoint for any and all components in the enterprise data system.

Simplifying the flow and management of data requires standardising the data language used to transport information. Newly developing data definitions are adopting open standards based upon XML (Extensible Markup Language), the emerging technology of business-to-business internet commerce. Standards are emerging for exchanging data between trading platforms and transaction/risk management systems used by wholesale electricity and natural gas trading companies. XML is rapidly becoming the key data interchange standard for time-critical, high-volume information sharing on the Web. This can also be an effective mechanism within the enterprise.

Common and simple data interfaces provide flexible data services that can support multiple systems and make real-time access to trade data available, while lowering or eliminating the cost of building and managing proprietary system connectors.

Meet the challenge

In order to capitalise on the wealth of market information available, data integration has rapidly become a necessity. The key integration needs to be within and between the applications that are used for price discovery, market information, trade execution, risk management and associated systems.

In today's challenging 'do more with less' environment, business and IT leaders must find innovative, practical, and cost-effective ways to meet the growing information sharing needs of their workforce. While technology has been called upon to meet many of these needs, its effectiveness in meeting the goals of data integration is tempered by the level of planning required to produce the desired results. ■

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