The Data Management Challenge

Author: David Veal, Pentagon Consulting Ltd
September 2013

New system solutions that support buy-side business practices are offering more sophisticated functions and asset class coverage than ever before, as standardisation in the industry improves and a wider spread of financial instruments are becoming critical to ensure a competitive edge.

Advances in front office processes, data manipulation and simulations, algorithms and regulatory protocols, automated trading, data utilisation, risk management, performance measurement, client reporting and CRM, amongst many other business processes is resulting in data management becoming a critical area of focus for many clients. The growing demands from a wealth of regulatory changes and enhancements also serve to bring data management to the forefront.

Data Management History

Historically, data management was often perceived as little more than the management of static or reference data; often involving manual workarounds and processes to attempt to control the consistency of content for a few primary platforms.

Automating the cleansing and mastering of market data from multiple suppliers became a reasonably common goal, with many organisations implementing degrees of automation to minimise manual overheads.

“Golden Copies’ of static data were initially seen as the extent of standardisation, but extensive and complex data management processes are intrinsically linked with efficient connectivity and communication across the entire business.

Data Management Evolution

Significant increases in systems that support different business practices has raised concerns relating to how sustainable on-going data administration across all of these solutions could be going forward; often challenged further by strategic enhancements to components in a technical architecture.

Data enrichment is now commonplace, with enhancements required to ‘a number of pieces of a puzzle to make it whole’, often covered by development being delivered at local application level, resulting in the necessity for repeated enrichment and data management at multiple points in an integrated architecture chain.

Centralising data management, as a core element of a technical architecture, is not simple to achieve but this never gets easier with the passing of time.

Point to point data transfer between order management systems, trade confirmation, reconciliation, fund accounting platforms and a wealth of other components in the operational structure, is becoming unmanageable or at least a major operational overhead, with recognised weaknesses and risks. Different data structures, formats, sources, standards, etc. produce ever-growing dependencies on individuals to retain the knowledge of how the ‘string hangs together’.

Add to this, the regular upgrades to a number of core components that support the operating model locally or sometimes globally and clients are concerned that the growth of this almost invisible layer, critical to daily operations, is gradually becoming an unsustainable risk and a key function that could limit future growth and operational enhancements.

Adapting or enhancing each component in a typical technical architecture is becoming impractical, as it remains a moving target and many systems present limitations in underlying table structures and workflows to accommodate the increasing variables in data terms.

When considering derivative instruments and other more sophisticated investment vehicles, fixes at local system level are becoming unrealistic.

Data Management Approach

In the past, it has been a challenge to quantify and justify what might be a significant spend on what is often an intangible asset, but in recognising the limitations of poor data management capabilities: the operational overheads, risks, lack of standardisation and the restrictions this presents to future growth and the ability to comply with stricter regulatory requirements, clients now identify with the critical nature of this core business facility. It is no surprise then that over 50% of the project and programmes supported by Pentagon are related to data management and the enhancements this offers to technical architecture management and entire operational practices across the board.

In Pentagon's view, there is value in separating the mastering and '*exception*' management of data from any potential data warehouse solution or data store, although both elements tend to go hand-in-hand. A data warehouse could be a database that stores information oriented to decision-making and centralised cleansed data, but a common problem is that the existing data cannot be easily obtained or presented in a standardised and structured form.

Data transformation has to be applied to multiple source data elements for quality controls and cleaning, data integration, exception management and conversions, which might be better managed as a separate process.

Data Marts, being logical sub-sets of the data warehouse data, could be consistent in their representation in order to assure robustness, whilst securing the core prime records in the warehouse itself.

Data storage is an element that presents ever increasing challenges, as stored visions of 'a point in time' are a regular requirement, which in itself leads to significant data capacity and potential performance issues.

The ability to present data, as opposed to reports to external parties is now a common practice and demands for real-time or intraday data communication is a minimal expectation in many areas, with considerations that 'overnight' updates are simply too restrictive to support active management.

Data Management with Markit EDM and Pentagon

Whilst many clients select a number of different platforms to address elements of this issue, the Markit EDM solution (*formerly Cadis*) has become a popular component.

Pentagon Consultants have supported the selection and integration of this system for many years and have a comprehensive understanding of the design and utilisation of the platform.

Pentagon Consultants have directly managed all of the elements of an effective solution; project managing the programme of work, overseeing all of the functional design (*applying detailed knowledge of the actual underlying business functions*) and directly developing the solution to support data integrity. With many reference client sites and a growing team of expert consultants in this area, Pentagon Consulting offers a comprehensive service proposition to support the key business evolution, as opposed to individuals combined to create what is hopefully a coherent delivery team.

Addressing the Data Management Challenge

Clearly, data management is a critical component of any financial organisation and Pentagon offers direct experience and knowledge associated with the challenges that clients face.

For more information relating to this topic and how Pentagon could support your organisation, please contact Carole Wiles at Cwiles@pentagonconsulting.com.