Inside Reference Data

September 2010 www.irdonline.com

Enterprise Data Management

Special Report

Sponsored by KINGLAND SYSTEMS, PolarLake, SYBASE An SAP Company, XENOMORPH

Accelerate your decisions.

Centralise your market and reference data management.

As leaders in analytics and data management, Xenomorph understands that an integrated approach to the management of market and reference data enables better risk management and faster decision making.

Xenomorph TimeScape provides an enhanced single source of validated reference, market and derived data from front to back office in one single highly scalable platform. Our flexible data model supports any instrument in a consistent manner, regardless of asset type and provides a Golden Copy for use in downstream systems.

To find out how you can accelerate the performance of your data management and analysis go to www.xenomorph.com or email info@xenomorph.com.

Xenomorph. Analytics and Data Management.

Call: Europe +44 (0)20 7614 8600 | North America +1 888 936 6457
Email: info@xenomorph.com | Web: www.xenomorph.com

XENOMORPH

Editor's Letter

The Quick-Wins

Over a three-month period earlier this year, I attended financial information conferences and events in seven different cities, but the main theme for the data management panels were very much the same everywhere. While some enterprise data management projects were postponed in 2008 and 2009, the trend now is that programs aimed at integrating and centralizing reference data are back on the agenda, fueled by a need to drive down risk and meet coming regulatory requirements.

The change is that there is a growing focus on small-scale projects tailored at meeting business requirements. Firms are prioritizing value-adding investments linked to risk and compliance, and data managers are looking for pain points they can fix to generate quick-wins. By constantly being able to prove small successes, data managers say they are able to retain management support.

In this *Enterprise Data Management* report, which includes comments from industry experts and a news review, we hope to provide readers with an insight into the latest developments in the data management space, providing more information on how to find low-hanging fruit and secure budgets for the next project phase.

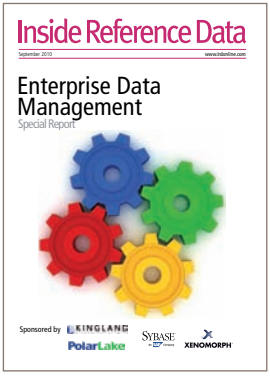
Yours sincerely,

Tine Thoresen
Editor, *Inside Reference Data*
Email: tine.thoresen@incisivemedia.com
Tel: +44 (0)20 7004 7470

Contents

FEATURES

NEWS



An incisivemedia publication

recycle
When you have finished with this magazine please recycle it.

Incisive Media
Haymarket House, 28-29 Haymarket
London SW1Y 4RX

HSBC's Serenita: "Data Management Business Cases Need to Be Based on Fixing Pain Points"

NEW YORK—The best way to secure support for data management programs is to identify business pain points and mobilize the company to deal with them, says New York-based Peter Serenita, global head of GBM data management, HSBC, in an interview with *Inside Reference Data*.

Data management challenges and project drivers may vary between different companies, so to get funding for strategic initiatives, it is essential to understand the problems the businesses need to fix. "If you can find the real pain point, the actual financial ROI business case does not matter," he says.

When a data management group understands the true pain, they are better able to address the problem and make a positive business impact. This may not directly translate to a quantifiable financial benefit, and that is when the ROI becomes less relevant, explains Serenita. It is about delivering business benefit that is sometimes difficult to capture in a standard ROI calculation.

It has gotten to the point where if a data manager reports on the successful cost saving resulting from the program, the question back may be whether the program has improved the quality of the information, as that is truly the prime objective of these programs and what is most important to the business.

The full version of this story appeared in *Inside Reference Data*, August 2010.

Tine Thoresen

Users Accelerate Focus on Data Centralization

PARIS—The majority of existing data programs relate to cost control, but firms are also now assessing opportunities for improving integration and creating a golden source of data across business units, according to a panel of speakers at the Paris Financial Information Summit.

London-based Kiou Nayer Nouri, global head of market data commercial management, Barclays Capital, said his firm is reviewing the integration process, following the acquisition of Lehman Brothers in the US, at the same time as managing costs.

One area of interest has been the potential introduction of a golden source copy of data, particularly for pricing and static data, across the business units. Nouri said the aim is to ensure everyone can view the same data.

The full version of this story appeared in *Inside Reference Data*, July 2010.

Tine Thoresen

Vendors Ready Functionality to Comply With Dodd-Frank Act

WASHINGTON, DC—Data management vendors are assessing opportunities for helping firms comply with the new requirements under the Dodd-Frank Wall Street Reform Act in the US.

The Act, signed by President Obama on July 21, includes the set-up of the Office of Financial Research (OFR), a data collection and analysis centre. Firms will be required to send data to the OFR, but the data items and formats needed for compliance are yet to be established.

Vendors are however starting to prepare for the coming changes. New York-based Gerard Bermingham, vice-president of business strategy at Information Mosaic, a provider of post-trade automation systems, says the company sees a lot of opportunities from the regulatory changes, particularly when it comes to firms that currently manage data in non system-based processes.

In fact, Information Mosaic has already seen client requests for improved position management. Bermingham says the focus is on having the ability to identify the holder and sub-custodians for each asset. "We get a lot of interest from clients in asset surveillance," he says.

To meet the new demand, the software company is developing a new module, which will become part of the standard platform offering. This will address issues relating to reconciliation and replace the need for doing reconciliation at multiple levels.

The full version of this story appeared in *Inside Reference Data*, August 2010.

Tine Thoresen

The Capital Group Selects Asset Control

The Capital Group has chosen data management software AC Plus from enterprise data management vendor Asset Control as part of an effort aimed at upgrading its middle- and back-office technologies to increase efficiencies and improve flexibility.

Performa adds Eagle

Asset management firm PRP Performa has gone live with data management, investment accounting and performance measurement systems from Eagle Investment Systems. The Bermuda-headquartered platform will aim to offer more timely client service and lower maintenance costs for Performa. STP Investment Services assisted with the implementation.

GoldenSource Launches Data Warehouse

Enterprise data management software company GoldenSource has introduced a data warehouse offering, which is set to provide clients with an enterprise-wide view of data from various operational and decision support systems, while creating an enterprise-wide view of risk, performance and compliance from the front to the back office.

Virtual Roundtable

Enterprise Data Management: Bringing it all Together

Inside Reference Data gathers leading industry professionals to discuss issues around enterprise data management, including costs, flexibility and the importance of golden copy

Is it viable for firms to think that costs of data management activities can go down in the future? What would need to happen for this to be the case?

Peter Serenita, global head of entity and account data management, GBM, HSBC Securities: It is feasible, once the organization has 'taken charge' of its data management processes. The initial phase of data management strategies in any organization is to develop the right processes, standards and infrastructure to put an effective data management capability in place. This is an investment and should be treated as such. Once this is accomplished, the process should become 'business as usual' and the cost should come down. Don't get me wrong, continual investment will be necessary, just like continual investment is needed in other business functions, but the size of the investments should be significantly lower than the original cost.

Tony Brownlee managing director, data solutions, Kingland Systems: Yes, it is likely the costs of data management activities will go down, but only in certain areas. In other areas, they will likely go up, and across the data management spectrum, all areas will require periodic investment. One of the critical aspects here

is to set realistic expectations with senior management. If data management is a constant (which is arguable), the business in which data management is conducted is not a constant. There are always systems that require integration, there are new business drivers, there are acquisitions, and new technology strategies; all are complicated, and require investment. If data management is important to a firm, the costs will follow.

Tom Dalglish, director, chief information architect, Bank of America Merrill Lynch: The current trends are exactly that—costs must go down for managing reference data and we need to establish chain-of-custody procedures to keep up with our competition and the regulatory agencies. Thus far, many efforts have been directed towards rooting out the almost innumerable systems within a large company that process reference data. They invariably number in the scores or even hundreds of systems! So, data consolidation is a key component of any realistic strategy for robust data management practices. We are spending far too much money maintaining data in too many systems and a pragmatic viewpoint indicates that fewer systems mean lower costs.

First, data groups need to be given the mandate to consolidate systems and have the business sponsorship to proceed; this has always been the challenge. Over the past two years, the mandate has been easier to establish, which is excellent news, and the economics are being realized through consolidation across development, support and stewardship teams. Second, data governance needs to be owned within the operations groups and data stewards so we can have a single point of entry for data manipulations and overrides.

KINGLAND SYSTEMS

Tony Brownlee
Managing Director,
Data Solutions
Kingland Systems
Tel: +1 641 355 1088
www.kingland.com

Finally, developers need to "get real" and deliver systems within much shorter time frames. Firms should probably avoid forced integration to a large-scale, highly centralized database that everybody must migrate to and favor instead more agile techniques for interacting with systems via entitled interfaces.

Such interfaces facilitate federated systems and can support not only multiple outputs but also "just in time cleansing"

PolarLake

John Randles
Chief Executive Officer,
PolarLake
Tel: +353 1 449 1010
www.polarlake.com

whereby data is only cleaned or updated when needed, as opposed to trying to build a single "perfect" golden-copy-type implementation.

John Randles, chief executive officer, PolarLake: It certainly is viable if you look at the main drivers of cost, which are data costs, operational (business and technology) and core technology/development costs. Data costs can be controlled by implementing a modern data supply chain and managing data as a valuable commodity.

There is still a lot of manual processing of data and inefficient processes, which can take out significant cost, as does any improvement on data quality. Also, the ability of the core technology to allow various stakeholders to communicate their semantic understanding of data will help developers, business analysts and business operations to take significant costs out of the development process for data management solutions. All these costs always need to be looked at as business growth is back on the agenda, which will drive consumption and workload, while the data management team may still have a frozen budget.

Peter Thawley, senior director/architect, CTO group, worldwide markets and business solutions, Sybase: With Enterprise Data Management (EDM) being the lifeblood of most companies, the desire to push data wherever it is needed is in violent opposition to the desire to minimize direct and indirect costs of managing that data. Given the sheer number of redundant copies of data within organizations, it appears the business appetite for data is winning that battle. Consequently, the most viable way to reduce costs is through greater efficiencies in the data management lifecycle.

Solutions that minimize storage costs through better on-disk compression or even distribution to other systems utilizing in-memory computing models can significantly reduce these costs. Additionally, metadata management solutions extending farther into the operational ecosystem will allow data consumers to more easily find usable sources rather than defaulting to obtaining and managing yet another

copy for themselves. At Sybase, we continue to work on innovations that balance these costs through technology while not diminishing the business users' access to data, anywhere.

Ed Ventura, president and chief executive officer, Ventura Management Associates: About the only things that seem to have gone down in recent times are real estate values and the DJIA. I believe data management costs will continue to rise and have close to a zero chance of going down in the future. Complexity of the products offered in the market-place will continue to increase, even in light of new legislation, as history shows us how regulatory hurdles are usually circumvented through the innovation of market participants. Data speed and infrastructure to maintain and manage data are continuing to push boundaries while requiring investment in technology and support. Also, while data quality is improving, monitoring and governing the data has moved staff from processing exceptions at the back of the data stream to the front; nevertheless, they are still required.

Brian Sentance, chief executive officer, Xenomorph: As a market need matures, there is potential for costs to go down as the problem becomes better understood and the technology more standardized. However, to take an analogy from road construction, building a new motorway does not necessarily have the desired outcome of improving traffic flow. More people take advantage of the new route, often leading to increased car density and continuing congestion. Now I am not (necessarily) trying to make the "green" case for not building any more new roads, rather the point I am making is that a problem can be improved only if the problem being dealt with is static and not itself a function of its inputs.

I believe this is the case in the data management market—as technology becomes more capable of handling larger volumes of data, of greater complexity, in shorter timeframes, so people will apply this new capability to larger and greater problems concerned with analyzing trading opportunities, risk management and regulatory requirements. So, if your requirements are reasonably static, it should be possible to see your data management costs fall in time. However, it is not hard to see that currently the vast majority of finan-

"There is still a lot of manual processing of data and inefficient processes, which can take out significant cost, as does any improvement on data quality"

John Randles, PolarLake

XENOMORPH

Brian Sentance
Chief Executive Officer, Xenomorph
Tel: +1 212 461 2376 (New York)
Tel: +44 (0)20 7614 8600 (London)
www.xenomorph.com

cial institutions are dealing with changing requirements that are demanding more from their data management infrastructures. So in summary, only when business requirements mature will costs start to fall significantly.

In recent times, some market participants have started to question the golden copy concept. Is it enough to have one golden copy, or should firms be operating with multiple golden copies?

Serenita: The management of multiple golden copies is achievable but brings with it a different set of complexities. Whether there is one golden copy or multiple golden copies, the key is to ensure clear ownership, policies and processes to actively manage the data upon its initial inception as well as through its lifecycle.

Brownlee: A single golden copy is useful for some areas of the firm, but unrealistic for most complex financial services firms. Most business units have a fair amount of budget and decision-making autonomy. This decision-making ends up in technology choices, data vendor choices, and business process choices, which all make golden copy implementations difficult. Additionally, certain compliance and risk management practices lead many firms to segregate data across divisions, which further complicates golden copy.

When we at Kingland Systems advise firms, we work to advise how firms can leverage golden copy but also address specific data needs all from common technology, which lowers total cost of ownership and can increase data quality. A well-defined Master Data Management (MDM) strategy can help align a firm's needs with an appropriate plan.

Dalglish: I think the tenets of golden copy engines are quite sound and form the foundation of good data management. However, the notion that there is a single golden copy has been outdated since the term was coined. There is a clear need to support multiple representations or "shapes" of a particular record as well as compositing this shape from varying "scrubs" or rules run against the data, which may vary client-by-client. Even if we could declare a "canonical form" for golden copy data,

there will always be a client who wants their data in some slightly different format, resolved from a different rule set, potentially favoring different vendors than our internal clients.

Thus, although we may find it fairly straightforward to create an initial rule set to surface an enterprise canonical form, we still need to be able to present the data in various styles to suit the clients. This is particularly true for prime brokerage clients, who have widely varying data expectations. In short, there is no such thing as a single golden copy.

Randles: With the best of intentions, a lot of firms have discovered the hard way that data-consuming applications and departments are more concerned with what they want rather than what is good for everyone else. A more pragmatic way to view golden copy systems today is that in many cases there is no possible single version of the truth. Pricing is a classic example, where firms may legitimately use differing sources and prices for trading, risk management and clearing and settling trades.

Many other systems may want the raw feed and trust the data vendor's view above all others for particular fields. I believe golden copy is only part of a bigger picture in the data supply chain, where choice and flexibility is more important than a one-size-fits-all approach of the past.

Thawley: While an admirable goal, many wonder whether the concept of a "golden copy" is achievable. With a firm's data sources ranging across internal and external groups, none of which provide everything and each of which have their own business processes and policies that affect the data's semantics, it is indeed a daunting idea to create a single golden copy. Perhaps our expectations are too high.

The real organizational value is actually in the process of deriving the golden copy. This puts the focus on a rigorous methodology to clearly understand data that, in turn, provides the opportunity to assess and improve data quality within a firm.

Ventura: The debate continues. I recall participating in conversations about this some 10 years ago or so. The fact remains that a single source of data that has been

"As technology becomes more capable of handling larger volumes of data, of greater complexity, in shorter timeframes, so people will apply this new capability to larger and greater problems"

Brian Sentance, Xenomorph

SYBASE
An SAP Company

Peter Thawley
Senior Director/ Architect, CTO Group, Worldwide Markets and Business Solutions, Sybase
Tel: +1 925 236 5000
www.sybase.com

normalized and standardized and that is complete, consistent, accurate and governed is hard to dispute as being the preferred data repository. However, the issue comes down to one of economics. It is very expensive to get from a decentralized, redundant data environment into a single golden copy state. Just about every area within the organization will require change to some degree. In addition to the financial aspects, the implementation of a golden copy is complex and often cumbersome, which in turn can derail a well-intended effort.

"With a firm's data sources ranging across internal and external groups, it is indeed a daunting idea to create a single golden copy"

Peter Thawley, Sybase

I've seen numerous situations where once the direction has been set to develop a golden copy, companies opt to first create multiple golden copies that they eventually hope to move into a single version of the truth. This becomes a common sticking point, where the "interim" solution actually becomes the final state. While it may differ from the original plan, this interim state often satisfies the organizations' needs because it is governed, has common access methods and provides benefit to the company.

Sentance: It is confusing to listen to the data management vendor community on this issue. Following the recent financial crisis, new initiatives such as the management of systemic risk across the financial markets have driven regulators to ask for complete datasets of all trading positions and all supporting data to be available. This points the entire industry back to the kind of firm-wide "big EDM" projects that proved so costly and generally unsuccessful over a decade ago (T+1 is a distant memory now I guess).

At the same, data management vendors are proposing "smaller" data manage-

corporate subscription options

Benefit

Inside Market Data
Inside Reference Data

Why bulk subscribe?

We recognise that there are often several people in a department or company who would benefit from seeing copies of our range of market data publications.

You can make substantial savings off the standard cost of subscribing with our bulk subscriptions solutions.

Every scheme is designed to exactly match your information needs and is the serious choice for the financial professional. Whether you are a large or small company, we have the solution to suit you.

Whenever, wherever and however you need it.

The additional benefits

Designed to help you fulfill the information needs of your company in the most cost-effective way possible. We offer members a wide range of time-saving services and benefits such as:

- The right information to the right people
- Access anywhere
- Hassle-free ordering
- Easy payment options
- Personalised account management

The saving benefits

Offers extensive savings off the standard individual subscription price

The more you order, the greater the saving.

contact today

Contact **Pat Courtney** now for more information or to place your order:
t: +44 (0)20 7484 9929
e: cso@incisivemedia.com
w: incisivemedia.com/cso

incisivemedia
incisivemedia.com

Tom Dalglish, Bank of America Merrill Lynch

ment projects on a department-by-department basis, driven by the need to have more manageable-sized projects and to do business when all budgets are tighter than before and under more scrutiny. Unless this is carefully managed with an "incremental" approach in mind to the desired firm-wide solution, this "smaller project" approach leads quickly to more data silos, with all the duplicated costs and operational risks that siloed management implies.

So in some ways, the data management vendor community finds itself taking a schizophrenic approach to this—on the one hand proposing smaller more manageable projects (read "more silos") and on the other proposing regulator-friendly firm-wide solutions (read "big EDM"). I think the best solution is to take an incremental approach, but with the overall firm-wide solution as the ultimate aim.

Moving on more specifically to whether there should be more than one golden copy within a single data management system implementation, I think business requirements dictate that there has to be more than one version of the "truth." For example, accountancy departments may have different needs in terms of defining a valid price (maybe defaulting to a traded price, however small in size) for external reporting purposes, than risk departments that need a more theoretical value where risk sensitivity is the business priority.

Systems need to be designed to cope with multiple golden copies, allowing easy multi-sourced viewing and comparison of data. Maybe an old quote is appropriate here: "There is no truth, there is only perception" —the business challenge is to decide how many "perceptions" are required and valid when dealing with multiple golden copies.

Data consumers typically want to see flexible and extensible offerings from vendors. What more can vendors do to help meet this request from clients?

Brownlee: I cannot speak for other vendors, but at Kingland, we've worked to do three things that I will highlight. Continuing from the golden copy question, we've developed Master Data Management (MDM) technology that allows downstream consumers of data to specify

which sources they prefer and manage the master data as well as support those different preferences all from one system. Second, we partnered with IBM, which has been respected as an industry leader in MDM and excels at bringing scalable and extendible software to the market. Third, we've tried to address the integration aspects for our customers, which can be a big hold-up to the flexibility they require. We've worked to shorten the time to on-board new sources and to leverage a service oriented architecture (SOA) to more flexibly provide data to consumers.

Dalglish: One of the most vexing issues in buying vendor data is the daily acquisition of files. It is quite normal for even a moderately sized system to ingest more than 10,000 files per day. It would be a great boon for vendors to offer an in-house managed service whereby they push their data directly into our own internal version of their database and provide event notification as the data flows across. If we could get out of the cracking-and-loading business, that would be ideal. Now, it is true that some vendors already have this type of support, but it is not ubiquitous across some of the mainstream feeds we require.

Randles: A lot of firms are going through a re-architecture of their reference data infrastructure at the moment, with an underlying goal of better flexibility and extensibility. With this as an objective, one of the most important things to consider is the age and legacy of the vendor application you are considering. Vendors trying to present 20-year-old technology as flexible and extensible, with re-engineering the edge of the products, are simply trying to make the most cash possible out of end-of-life products without fundamental reinvestment.

Clients should really look at how the whole package and application is put together and remember that if you continue to do things in the same manner you will get the same result as before (inflexible and non-extensible solutions). Vendors must fundamentally rethink their approach and reinvest in a modern end-to-end architecture if they hope to provide the extensibility and flexibility required in 2010.

"It would be a great boon for vendors to offer an in-house managed service whereby they push their data directly into our own internal version of their database and provide event notification as the data flows across"

Tom Dalglish, Bank of America Merrill Lynch

Virtual Roundtable

Peter Serenita, HSBC Securities

Thawley: As an infrastructure software vendor delivering EDM solutions such as transaction processing databases, analytic/data warehousing databases, streaming analytic engines (CEP) and mobile middleware, we are often asked for this, albeit in a different context than a data consumer. For us, the focus has been to offer compelling technology that is highly efficient on both system and human resources. An example of this is Sybase's core engineering tenet that "one size does not fit all." While we strongly believe transaction processing and analytic processing require different processing and storage models, we created common administration and management tools to minimize the cost and resources required to manage this infrastructure.

The "one size does not fit all" tenet also leads us to focus a lot of R&D on integrating more closely our solutions, as well as third-party solutions, to provide data architects and system designers with more options at less cost and faster time-to-solution. For example, we built real-time synchronization to keep our analytic engine, Sybase IQ, primed with transaction data from our OLTP engine, Adaptive Server Enterprise. At Sybase, we strive to make it easy and cost-effective to use and securely manage data, both within the data center and increasingly to data stores outside the traditional data center.

Ventura: There is no question that data consumers want to see more flexible and extensible offerings from vendors. The interrelationship of all types of reference data generally requires consumers to correlate data obtained through multiple providers; for example, counterparty data along with settlement data, along with standing instructions of the counterparties and any corporate actions that may apply. These mandates are usually built in-house due to limited services of certain providers and/or the desire of the consumer to license data from multiple providers.

I think most vendors in this space are responsive to the needs of the consumers, and usually jump at the chance to satisfy customer needs, provided there is commercial benefit to the provider. Where things fall short, it seems consumers aren't always clear in expressing their needs due to the limited resources they

have. They also fail to recognize end-to-end opportunities because of their organizational structures.

Sentance: The biggest thing vendors can do is design data management systems with flexibility in mind from the outset. Consumers should demand systems they can easily customise themselves, rather than having to engage the vendor to make changes and pay for this to be done. Too many vendors are reliant on services revenue and are not motivated to deliver easier-to-configure systems. Clients should ask for more, in my view, and expect systems that can adapt to new requirements more easily through open, well-documented architectures and interfaces.

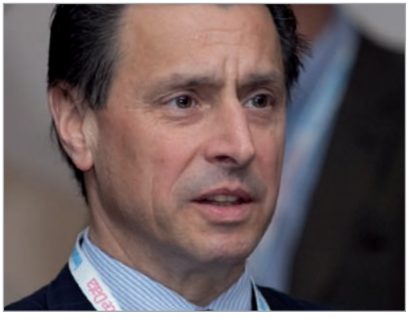
How can a metadata management layer help facilitate data integration?

Serenita: A metadata management layer captures the business and technical aspects of the data, which helps to focus the effort on data analysis. Through metadata management, we are able to automate some of the data analysis processes, and software can leverage this intelligence to compare data definitions from different sources and ultimately the data content. By automating the discovery and comparison process, analysts can spend most of their time with the exceptions.

Brownlee: We think it can make it simpler and shorten integration time if done well. Using leading architectural and data model patterns similar to those found in cloud computing and metadata management tooling, we are working to improve data integration both at data source on-boarding as well as making data management more manageable as time goes by and "enterprise knowledge" of the data changes. Metadata is important for this.

Dalglish: A strong metadata capability is central to several aspects of data interactions: acquisition, generation and distribution. Interestingly, the role of metadata differs in each of these three activities and is not always essential, though nice to have uniformly. Metadata essentially provides a means of understanding the "thing" you are looking at. In the acqui-

> "A metadata management layer captures the business and technical aspects of the data, which helps to focus the effort on data analysis"
>
> *Peter Serenita, HSBC*



Ed Ventura, Ventura Management Associates

sition interaction, metadata can be used to quickly model or add new feeds at the loading dock. In the generation/repository interaction, metadata could be used to allow seamless traversal of all versions of a particular record type as attributes are added, deleted or modified over time—potentially without having to modify a database table.

The most important place for metadata is in the expression of the various shapes of available data in the distribution layer. That is, we can forego metadata management in the acquisition layer, or in a back-end database serving as a system-of-record in the generation/repository layer, but we must have a flexible and discoverable metadata behavior in our distribution layer; the one most important to the client. If we consider the distribution layer as the abstraction between what the client sees and what is "behind the line" in our internal systems, then we can largely ignore metadata in the first two interactions.

It certainly makes for more robust systems to have metadata management at each layer, but if I had to pick only one, the distribution layer would come first.

Randles: Reference data distribution and integration is a very difficult, manual and risky process without a good metadata management infrastructure. We are working with many clients to use our metadata to help in the reference data integration process. This can take many forms, but essentially it provides a tailored view onto a central reference data store based on the requirements of the data consumers (subscriptions, format, protocol etc).

The interesting thing we have done with metadata is to allow multiple systems to have a common vernacular. This helps developers, business analysts and data consumers have a common understanding of the data universe outside each individual repository. Data integration isn't like the traditional view of data management, where all data is mapped to a proprietary model and left for others to integrate, and metadata is core to that process.

Thawley: I may be going out on a limb here, but I would argue that the greatest

single factor affecting the success of a data integration project is in fact whether the data in both the source and target environments is well-defined and understood. I am not only referring to the pure data perspective (eg, datatypes, domains, etc) but more importantly, the business process perspective such as how, where, and when that piece of data is used and updated—it is the latter that affects the semantics of the data itself.

Since metadata is "data about data," its management includes the concepts discussed above.

Therefore, it seems to be reasonable that if you have comprehensive and accurate metadata, it will be simpler and less error-prone to integrate data between multiple systems. Of course, the challenge for us vendors is bridging the modeling and operational worlds. Even modeling tools such as Sybase's PowerDesigner still require information architects to have visibility into the run-time operations of systems where business processes are implemented.

Without tighter integration of a model with an implementation's behavior, we have to continue to trust people and manual processes to tie the two together... correctly.

Ventura: Metadata is an essential component of data integration for most companies now. Understanding data from the perspective of how it is used and viewed by the consuming applications/business users provides an efficiency that is hard to ignore.

Sentance: Data about data is the key to understanding what data you have and how it is being used in your organization. Only when data and systems become more self-descriptive (taking the principles behind web services and SOA to heart), can integration become easier, as an integration "connection" between two systems can be written, configured or automated once per connection rather than for each and every data item.

Put another way, having a common language as a means of discovering previously unknown information is as important to computer systems as it is to humans.

"Understanding data from the perspective of how it is used and viewed by the consuming applications/business users provides an efficiency that is hard to ignore"

Ed Ventura, Ventura Associates

How likely is it that we will see the introduction of a global reference data utility?

Serenita: The jury is out on that one. In the current environment, there are certainly a number of factors to support the introduction of a global reference data utility. But that does not make it a certainty.

Brownlee: It may be likely in the next 10 years, but the adoption of such a utility will still require a series of integration efforts from industry participants, which require budget and implementation strategies. Growing regulatory concerns may push us to think about utilities, but growing privacy and cost/benefit concerns will likely weigh against them.

Dalglish: It would be great to have, but we are likely to be thwarted by vendors and intellectual property concerns, as much of the data we buy today contains lots of proprietary information. Also, there are lots of questions as to who would be responsible for errors, omissions and data timeliness concerns. We would all like to see it materialize, though there are still some enormous legal hurdles to overcome first. If you look at the ECB model, there are lots of overlaps with today's discussion: chain-of-custody (data tagging), which reduces the need for golden copy (or supports the notion of multiple golden copies), obtaining the mandate and funding for enterprise reference data, the metadata model flavor to the EDM's semantic repository and so on. At least we are headed in the right direction here, and it would be great fun to build.

> "Growing regulatory concerns may push us to think about utilities, but growing privacy and cost/benefit concerns will likely weigh against them"
>
> *Tony Brownlee, Kingland Systems*

Randles: With the advent of the OFR in the US and the ECB utility proposal, it is very difficult to see a global reference data utility coming online as a superset. Also, what a lot of people forget in the discussions about global reference data utilities is complex global firms use multiple data vendors for different asset classes across different geographies for many reasons, including completeness of data, asset class specialization, quality of service and price. The notion that the need for multiple data vendors today (who already provide a utility service) may be subsumed by a global utility is somewhat unrealistic.

A lot of people confuse outsourcing of data management functions with the

notion of global utility, and these are two very different animals.

Thawley: From a pure technology perspective, a global reference data utility is certainly achievable—the EDM industry as a whole understands how to build, maintain, and replicate large shared database systems across the globe. Unfortunately, as we discussed in the previous question around metadata management, it is not clear to me that most firms have a good handle on their reference data today. If that is correct, mandating a global reference data utility is likely to be met with great resistance, both operationally across firms both big and small, as well as politically across the spectrum of different countries and their respective regulatory bodies.

Ventura: By global reference data utility, I assume we're talking about a single utility that will be mandated for use by all parties. Under that assumption, I believe we may never see one. If the premise described is accurate, not only will all users need to walk in lock step, but all governments, agencies and regulators will need to agree on content, format, distribution, etc. As we all know from history, this won't easily happen. However, we may see build-out of various components, such as a consistent taxonomy and standardized data definitions over time. This will require the industry and the regulators to pull together to accomplish something that would benefit all participants if implemented.

Sentance: From what I understand, it is highly likely that the industry will have some form of reference data utility. Whether this becomes the industry-standard data source for certain types of data or another cost and compliance burden remains to be seen. I think the aim of standardizing the sourcing of non-subjective reference data is very valid; I am simply (and openly) unsure as to whether some of the new initiatives are best placed to achieve this, rather than for example mandating improvement in the data provision already available in the industry.

In my opinion there are a lot of old scores being settled, electorates being kept happy and political land-grabbing going on following the financial crisis. While something obviously needs to be done to make the industry less risky, introducing a tidal wave of new regulation and systems is a recipe for more instability in the future. For example, does anyone want to bet against a centralized clearing crisis in the next decade? In a complex system like financial markets, you need to make simple changes in an incremental way if you are to stand any chance of understanding and managing the effects of the new mechanisms implemented.

Sponsor's Statement

Integrating the Front Office

A quote from Homer Simpson that you may recognize:

"If something is too hard to do, then it's not worth doing"

Now, whether or not you believe like me that Matt Groening has become one of the truly great philosophers of our age, I am however sure that the above quote will resonate with many of you. Not addressing a difficult issue because there are easier ones to deal with is part of human nature, both at work and at home. The "path of least resistance" is one that we have all traveled down many times.

So, what's this quote got to do with "integrated data management?" To set the scene, I would like to start by briefly reviewing the development of data management in financial markets. Its origins go back to financial institutions needing to address back-office data issues. Since then, the list of benefits of successful reference data management has become long and relatively well-known, including: greater efficiency; improved data consistency; higher data quality; reduced operational risk; greater data security; and reduced data costs.

Over more recent years, the above benefits have also proven themselves in the middle office and risk functions. Given the focus on open trading positions, this area of the business often deals with instrument volumes that are less than those in the back office. However, this upside to the problem is offset by the cross-asset/cross-departmental nature of risk and the complexity of the types of data required, extending from reference data, to market data and all the "model" related data needed for theoretical pricing and sensitivity analysis.

While the use of data management in the back and middle office is well understood, front-office data management doesn't seem to be "integrated" currently in the thinking of many data management practitioners. I think it should be, given the benefits that can accrue.

If we revisit back- and middle-office data management, we'll probably see that many data management projects were implemented with little or no attention paid to front-office data needs, issues and data usage.

A key point is that not all data is created equal. By that, I mean some of the most intrinsically valuable data, such as valuations, are built on a pyramid of underlying analytics, model data, market data and reference data.

Given the importance of this data, what is the point of investing significant time, resources and money on consistent data

in Data Management

management when the front office is left to use whatever data it likes and stores it in *ad hoc* spreadsheets and access databases? Where is the consistency (data or otherwise) in this? Where did our integrated, non-silo approach go when we chose to ignore this issue?

If more justification is needed, ask anyone in product control where the most operational risk is found in a financial institution. There is some in the middle and back office for sure, but the front office is where most risk is found.

Focusing on the positives of a more integrated approach to front, middle and back office data management, then it is often the front office that has the most financial knowledge and business context about the data used in a financial institution. Enabling easy (and controlled!) access to data for non-technical business users will benefit all through the sharing of this knowledge (from front to middle and back office). This kind of "wiki" approach to data quality could benefit all, but it is only when the crowd is large and knowledgeable that crowds gain wisdom.

So if integrating front-office data management is so important, why hasn't it been implemented extensively? I believe the biggest barrier so far has been a human/political one, where historically the front office has been powerful enough to avoid a more integrated approach to data. The front office is also used to doing its own thing (tick database anyone?), in part due to paranoia but in part due to understandable concerns that trading timelines will be slowed by batch-based and inflexible systems architectures.

To summarize, can we achieve an integrated approach to back-, middle- and front-office data management? I think the answer is yes. For the first time ever, regulation and capital costs are causing the front office to think at a much more granular level about data quality and cost.

The time has never been better to approach the front office and see how your data management projects can benefit them and how their involvement can benefit all.

So let's show Homer that he is wrong in this case, and get data management truly integrated across back, middle and front office.

Brian Sentance is chief executive, Xenomorph
Tel: +1 212 461 2376 (New York)
Tel: +44 (0)20 7614 8600 (London)
www.xenomorph.com

Q&A

More Visible Transparency

Inside Reference Data Speaks to Fritz McCormick, senior analyst at Aite Group about the development of data management in 2010, and what we should expect in 2011

What types of data management projects should firms prioritize at the moment?

Firms seem to be prioritizing projects that support risk management and efforts to increase transparency around positions and transactions both internally and with counterparties. This is of course a reaction to the current economic climate. The hope is that these increases in transparency will also assist in fulfilling regulatory obligations coming down the road.

Do you think some firms are still trying to reinvent the wheel when it comes to data management?

I don't think so. Data management has grown as a discipline within firms, and with that comes some a body of knowledge, based upon experience, about best practices. The challenges specific firms face are often unique, but the methods to address those challenges are becoming more similar.

How has the focus on EDM developed in the past year?

The focus has broadened to include support for risk and regulatory obligations, but still addresses specific application integration pain points such as trading, accounting, settlement as in the past.

What are you seeing in terms of 2011 budget expectations for EDM projects?

We expect spending on data management to reach approximately $1.23 billion, an increase from $1.18 billion in 2010. Feedback from the market suggests individual project budgets are growing modestly.

GLOBAL REFERENCE DATA, MASTERED

360 DATA™
Powered by IBM InfoSphere Software

Master File | Reference Desk | Enterprise Hub

"…the work effort was a complete success"
-April, 2009

"…Kingland can more quickly deliver flexible and scalable financial services master data and software solutions"
-November, 2009

"In other words, these guys really know their stuff"
-January, 2010

Enterprise Data Management

Enterprise Risk Management

Kingland Systems' 360 Data™ suite of solutions are optimized for the enterprise data management needs of the financial services industry. With more than 20 years of financial services experience, 900 million records under management, 500,000 financial services users, and industry-leading Master Data Management (MDM) software, it's time to learn more about 360 Data™ from Kingland.

KINGLAND SYSTEMS
We Solve **Data** Problems

Learn More
WWW.KINGLAND.COM

Incisive Media, Haymarket House, 28-29 Haymarket, London SW1Y 4RX