



BI Futures

Future Trends in Business Intelligence
Top 9 Trends for 2010

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Sean Kelly & Associates (SKA) is a specialist boutique consultancy that specializes in the provision of data warehouse and CRM solutions and professional services to the telecommunications and retailing industries. Founded in 1992, and based in Ireland, the company employs 14 field consultants who each have, on average, 15 years experience of working in the business intelligence industry. Because the company has both business and technical expertise it has been possible to develop sophisticated solutions to real-world problems and to develop close and durable relations with leading companies in the telecommunications sector. The following list of clients includes only those where an SKA consultant provided the lead design capability to develop a full enterprise data warehouse. In addition to these clients there are many more in the telecommunications industry who have engaged the services of SKA to provide professional services on smaller-scale projects.

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1. Foreword

The competitive environment has changed significantly during the past 12 months and businesses are fighting to protect and defend their businesses -consolidating and repositioning being just two responses strategically. The BI market is constantly evolving as a result of technical innovations and altering business priorities within the BI market and developments in the wider business environment. Taking a decade-long view from the perspective of 2009 the most striking thing is how little has changed and how we are still grappling with the same issues armed with only marginally better tools and techniques. Projects continue to proliferate and lead to a growing patchwork of disparate BI technologies that mirror stove-piped reporting systems of a decade ago. The persistent refusal of the organisation to take responsibility for corporate data ownership has not budged an iota and collaboration between IT and business users remain as brittle as ever. The main impediment to any step-change breakthrough has always been the lack of homogeneity in the business problems faced by each separate BI team. For every retailer the customer insight journey will be different because the market position, competitive challenges, customer profiles and business opportunities are different. BI is a space where different industries with different processes and different organisations encounter different priorities that demand different reports from the data that resides in different source systems complicated by different data definitions and different levels of transformation complexity. In this world standards and packaged solutions are slow to emerge and the market is maturing very cautiously. Where we have seen change in the past 12 months it has been in the consolidation of the software vendors. But the diversity of software products is only one dimension of BI complexity and not the most important one. Nonetheless, the market has changed and is set to change further. The following are our thoughts on the themes for the next 12 months.

2. Complexity in the business intelligence market

From a historical perspective, the business intelligence marketplace has traditionally been focused on decision support activities utilising the technologies of data warehousing, query-based

reporting, multidimensional analysis, data mining and, more recently, information portals. This set of technology has served us well over the past decade and the business intelligence market for tools and services was estimated at \$16 billion in 2010. Business intelligence has reduced risk and decision time in dealing with unconventional, unanticipated, and messy business situations.

Because of this success, the business intelligence marketplace is under stress, forcefully driven in diverging directions by smart horizontal applications such as customer relationship management, innovative vertical solutions such as churn analysis in telecommunications and risk profiling in health care, and advanced technologies such as knowledge management and text mining. Some think that business intelligence systems will be fragmented into small pieces and embedded in point applications, never to be seen by IT eyes again. The evidence supporting this view is widespread. Others pursue the mantra of integration and the logic of this position is compelling.

But most people are unclear as to how the dynamics for business intelligence systems will unfold over the coming years and every corporation is struggling with issues of complexity, architecture, privacy, cost of ownership, cost justification, integration, and application definition. Hence, there is a huge uncertainty within IT groups responsible for planning and implementing business intelligence systems. This is mirrored within vendors that are developing business intelligence products and services. From this complexity and uncertainty must come a solution that has the merits of simplicity.

It is estimated (by IDC) that over 80% of spending on CRM is accounted for by operational CRM systems. By and large, the operational CRM market is simply a re-incarnation of the database marketing and contact management segments of the application market that have been around since 1985.

It is notable that it is operational CRM products that have achieved the lion's share of revenues and this can be explained by the fact that these products are generally regarded as tangible business application solutions. This contrasts with the analytical CRM market, which is dominated by a more amorphous collection of more technically complex products such as tools, portals, methodologies, data models, infrastructure solutions and databases for ad hoc analysis rather than precise business applications.

Therefore the key trend to watch for is the closer association between the generalised BI infrastructure components that are delivered and the specific business processes that are served by it.

3. Permission marketing

One of the initiatives that have excited most interest and enthusiasm in the marketing sector in the past few years is that of permission marketing. The basis for permission marketing lies in providing prospective customers with an incentive to volunteer to be subjected to one or more marketing campaign. To the enterprise engaged in marketing, the benefit of permission marketing lies in the fact that the prospects are actively interested in listening to the marketing message. The waste of resources and the customer irritation associated with mass marketing are therefore eliminated. The theory of permission marketing is that the customer is in charge and that the customer has consented to receiving communications on specific subjects where they have an interest. However, it is noteworthy that no product has emerged in the business intelligence market to satisfy the need to facilitate permission marketing in any meaningful way, until now.

4. E-commerce

By any accepted standards of success the web, as a basis for the dominant basis of commerce, has so-far failed. The reasons for this are many and include most notably:

- Concerns about security
- Concerns about privacy
- Perceived failure of one-to-one messaging
- Persistence of junk mail
- Absence of standard user interfaces
- Perceived randomness of search engines
- Poor web page design and navigation

In summary, it appears to most web users that the internet has failed to live up to its promise and is, in reality, a replacement for catalogue-based mail-order firms. Few mainstream enterprises have figured out a way to make the web work for them. This situation largely arises from a widespread misconception about the potential of the web. Most enterprises see the web merely as a platform for marketing and order taking. Whereas the true potential of the web lies in its potential as a communication

device.

5. Master Data Management

Master data is reference data about an organization's core business entities. These entities include people (customers, employees, suppliers), things (products, assets, ledgers), and places (countries, cities, locations). The applications and technologies used to create and maintain master data are part of a master data management (MDM) system. MDM, however, involves more than applications and technologies, it also requires an organization to implement policies and procedures for controlling how master data is created and used.

The current industry focus on master data management (MDM) creates the impression that MDM is a brand new technology, but this is not the case as we have been creating metadata catalogs' in the BI environment for some time, and business intelligence applications and their underlying data warehouses have been providing a single view of key master data entities such as customers and products for analytical purposes for many years.

What is new about MDM is the fact that master data is now being managed and integrated outside of the BI environment. This will reduce the complexity and tedium of creating BI architectures for the business will ultimately act as an accelerator on the BI market to focus more on the business factors rather than the perennial technical obstacles. Packaged solutions for MDM that ease, reduce and standardise the effort required to enforce proper data governance will enable the BI market to focus more and more on packaged BI solutions.

6. The Death of Brand?

Business enterprises are under increasing pressures to improve customer loyalty and profitability while controlling, or even reducing, marketing costs. This requires businesses to effect a transition from mass marketing to individual communications with customers. This is leading, inevitably, to a leakage of investment from the above the line brand and advertising activities to below the line direct marketing activities.

What this means is that the existing customer base of the business needs to be broken down into smaller segments at which customized marketing campaigns can be directed. This means that

businesses need to learn how to predict customer behaviour with much greater accuracy than they have attempted in the past.

Even businesses that achieve the goal of one-tone marketing will continue to observe and study the formation of affinity groups among their customers. The power of segmentation is such that its use can extend beyond the planning and implementation of marketing campaigns: it can provide a basis for planning and operating the entire business. Quite frequently what occurs is the fragmentation of the brand as different brands are minted to meet the needs of different segments that are served by the business. BI will find itself at the epicentre of this political dispute during the next few years. Engaging in a customer insight project will not be an end in itself but the beginning of a journey that will progressively transform the way that the business operates by aligning the product range and repertoire with the range of customer profiles that the business wishes to serve.

7. The Age of the Appliance?

As the information tsunami continues to overwhelm organisations in a deluge of data businesses are being swamped by the pressure to store and analyse more and more data. In addition more and more BI applications are now mission critical and important business processes are increasingly dependent on them. In these circumstances the achievement of affordable scalability has assumed greater importance. The day when a business enterprise can run its enterprise data warehouses on older single-core CPU platforms has long passed. During the next few years attention will focus on which of the following hardware options comes to dominate the market.

- Legacy specialised database platforms such as such available from Teradata and IBM that can scale for a broad range of capacity and performance requirements, including various database sizes, user and query concurrency levels, data-loading speeds and volumes, and load and query latencies.
- The new generation of database appliances such as those available from Netezza, Oracle and HP which are more special-purpose EDW platforms optimized for a particular application or go with a specialized EDW that is optimized for particular deployment scenarios, queries, and/or latencies
- Specialised columnar database platform from Sybase, Vertica Systems, and ParAccel, which incorporate and

are best suited to deployment as scalable data marts in support of online analytical processing (OLAP) query acceleration against large table aggregates.

- Application-specific EDWs like SAP Business Information Warehouse (BW) and some telco billing systems where the EDW solution comes as a closely coupled packaged solution for users from the ERP vendor of the source systems.

8. The Pressure of Real Time

Real-time BI is coming rapidly to the fore as users demand continual reductions in end-to-end data latency — in other words, delay — through the EDW and out to marts and BI applications, from overnight batch loading to truly real-time, guaranteed, end-to-end latencies. Increasingly users expect that the data in their BI reports, dashboards, and scorecards — hence, in their EDW — be fresh and accurate up to the second. Clearly, this need for continual feeds, plus real-time interactive slice-and-dice of complex data sets, is putting fresh pressure on information managers and more stringent workloads and service-level agreements on the EDW. In addition, there is growing importance to define and manage the EDW Staging Area (SA) and Operational Data Store (ODS) more stringently.

9. BI Cost of Ownership

Increasingly it is the total cost of ownership (TCO) rather than the total cost of acquisition (TCA) that will determine vendor selection. Too often in the past enterprises decided which DW to buy based exclusively on up front capital costs without considering the long-term effects of maintenance, support, optimization, ancillary tools, staffing, consulting, DBMS management tools, training and user growth. It is now estimated that software costs account for no more than 20% of TCO.