

## CASE STUDY

---

### The Path Toward Pervasive Business Intelligence at Cardiff Pinnacle

Sponsored by: Progress Software

---

August 2008

#### SUMMARY

The trend toward evidence-based decision-making is taking root in commercial, non-profit and public sector organizations. Driven by increased competition due to changing business models, deregulation or, in some cases, increased regulation in the form of new compliance requirements, organizations in all industries and of all sizes are turning to business intelligence (BI) and data warehousing (DW) technologies and services to either automate or support decision-making processes.

An increasing number of organizations are making BI functionality more pervasively available to all decision makers, be they executives or customer-facing employees, line-of-business managers or suppliers. IDC defines pervasive BI as follows:

Pervasive BI results when organizational culture, business processes and technologies are designed and implemented with the goal of improving the strategic and operational decision-making capabilities of a wide range of internal and external stakeholders.

Despite the fact that the term Business Intelligence was first coined in 1958 and the first BI software tools emerged in the 1970's, BI is not truly pervasive in any organization. As organizations identify more stakeholders who can benefit from improved decision-making capabilities, they are choosing to deploy BI and thus come increasingly closer to achieving pervasive BI. For organizations struggling with changing organizational structure and culture, business and IT processes and technologies, several lessons can be learned by examining the best practices organizations employ on their path toward achieving pervasive BI.

#### METHODOLOGY

In 2008 IDC launched a global market research project with the goal of uncovering best practices in expanding the use of BI and analytics processes and technologies. The research project was underwritten by eleven competing BI software, services and hardware providers. The project methodology, which was developed by IDC and contributors from Boston University School of Management Information Systems department included both a survey of over 1100 private and public sector organizations in 11 countries and in-depth interviews with 22 of these organizations resulting in a series of case studies on best practices in achieving pervasive BI. One of the organizations interviewed was Cardiff Pinnacle.

## ORGANIZATION

Formed in 1971 as Pinnacle Insurance Company Ltd, Cardiff Pinnacle is part of the global banking group BNP Paribas SA, a European leader in global financial services and one of the strongest banks in the world with a AA+ Standard and Poor's credit rating (reaffirmed in July 2008 by Standard & Poor Ratings Direct). Cardiff Pinnacle has established itself as a specialist provider of financial services and investment products. It continues to be one of the UK's leading providers of creditor, warranty and protection insurance including medical cash plans, sports injury, pet healthcare, accidental death, personal accident and income replacement coverage. Cardiff Pinnacle also provides competitive, tax efficient investment products via independent financial advisers (IFAs) and direct to the public. Its sister company, Financial Telemarketing Services Ltd. provides contact center and outsourcing services to leading banks, building societies, finance houses, and insurance companies. Cardiff Pinnacle currently employs about 900 staff in the UK and Ireland.

## SITUATION OVERVIEW

---

### **Business Drivers**

Like all organizations that took part in IDC's research project, Cardiff Pinnacle was influenced by both external and internal factors that triggered a need to re-evaluate its decision-making processes and the supporting BI and analytics technology architecture. In the case of Cardiff Pinnacle, these business drivers were both strategic and operational.

#### ***Strategic***

Access to timely information is a basic building block of any successful financial services company. Cardiff Pinnacle is no exception. The decision makers in the company's various lines of business have ongoing and specialized information access and analysis requirements. Over the years, as the need for information grew due to competitive, corporate governance and regulatory compliance reasons, it became increasingly clear that IT, even with best of intentions, was unable to keep pace with the ongoing, changing BI requests of end users. There was an information management and BI environment consisting of siloed data repositories and stand-alone spreadsheets that could not ensure data quality and consistency, and lacked features for metadata and sufficient user access rights management. The unintentional complexity of the BI architecture resulted in delayed response to requests for non-standard reports.

The resulting frustration on the part of both IT and business groups led to the realization that a new approach to BI had to be instituted at Cardiff Pinnacle that would re-assign the responsibility for specific processes in supporting a BI environment to most appropriate groups. The goal was to enable a self-service query, reporting and analysis process that would provide end users with on-demand access to relevant and timely information, while charging IT with the technology infrastructure management tasks.

#### ***Operational***

Operationally, the drivers for a new BI solution included the need to decrease the latency of information availability, to eliminate duplication of reports created by different departments, and to decrease the amount of manual development effort that was expended on new reports or changing existing reports in response to new end user requests. There was also an important requirement to improve training of end users about the meaning of the data and metrics to ensure that they could be used appropriately to support decision-making and information delivery to both internal users and customers.

At the same time, Cardif Pinnacle was aware of the need to maintain some level of continuity with the previous BI solutions so as not to alienate end users. Although the company decided there was a need to decrease reliance on stand-alone spreadsheets, it needed to continue to provide MS Excel access to highly skilled analytic staffers in finance, underwriting, and actuarial groups that relied on this technology.

## **SOLUTION**

---

### **Towards Pervasive Business Intelligence**

To address its BI and analytics needs, Cardif Pinnacle embarked on a path towards pervasive BI that would require changes to the organization's culture, technologies, and business and IT processes.

#### ***Organizational Culture***

Cardif Pinnacle had always had a culture dependent on data to inform decisions, which meant that this aspect of the organization did not have to be changed or influenced. The issue was never a lack of interest in information and fact-based decision making. Rather, the sub-optimal BI processes that developed over time prevented broader and deeper diffusion of BI throughout the organization. In January 2008, Cardif Pinnacle launched a new, specialized BI group. The BI group has always enjoyed strong executive support. This backing continues to come from multiple BI program and project champions, which assures support continuity when changes in management occur.

Organizationally, the BI group exists outside of the IT department, but is led by a former member of the IT department. The BI group has four dedicated staffers who collaborate closely with a virtual team of information analysts in various business units. The biggest organizational change for Cardif Pinnacle was the clear delineation and acceptance of responsibilities among the BI group, the IT group, and end users.

#### ***Technology***

As already mentioned, end user frustration with the lack of timely access to information led various Cardif Pinnacle business units to acquire and deploy their own BI technology. In 2003 underwriting and actuarial departments had begun to use technology from a software vendor EasyAsk, which was acquired in 2005 by Progress Software.

Progress EasyAsk software provides natural language search and query capabilities that let business and consumer users to quickly find and retrieve critical information from multiple data sources. EasyAsk was deployed along with data management software from Aruna Solutions, named FastPath. This software was subsequently acquired from Aruna Solutions by Progress Software and is now sold by Progress as EasyAsk FastPath, which acts as a data repository and a high performance query engine.

With the creation of the BI group in 2008, the EasyAsk functionality was expanded to the rest of the organization. Today, data from many internal and external sources is fed into the FastPath data repository where all this data is indexed. EasyAsk forms the next layer of the BI solution by providing a natural language query interface to the data in this repository as well as other relational databases throughout the company. The EasyAsk natural language queries aggregate information into a MS SQL Server database and EasyAsk functionality is thus exposed to end users through dashboards built using Microsoft technology. One of the features that the BI group expanded throughout the company was the ability to also download relevant data from an EasyAsk query into MS Excel (the population of Excel is accomplished with FastPath). Cardif Pinnacle has found that the three main technologies of their BI solution work well together, creating a highly integrated solution that does not require much ongoing maintenance.

One of the results of using natural language query software from EasyAsk is the elimination of the possibility of an end user writing a 'bad' query that negatively affects database performance. This is an occurrence that sometimes happens when ad-hoc query tools are used with relational databases. In addition to a search-like interface that enables the end user to ask questions such as those listed below, there is the ability to use a drop down list to select table fields and parameters. By using this feature, end users are provided guidance on how to build a query by the software.

- Report the sum of personal auto policies, sorted by activation month, branch, agent and scheme.
- Show new business and renewal coverage premiums by agent, broker and intermediary and policy number, written during the year.
- Identify which employees were rated 'exceptional' or above in their annual performance review.

Like most large companies, Cardif Pinnacle has BI software tools from multiple technology vendors. Besides the tools already mentioned, there are others for specific tasks such as financial modeling and pricing analysis. As Adrian O'Brien, head of the BI group at Cardif Pinnacle said "many front-end or end user facing report or dashboard display tools are similar. It's the quality of the data and rapid, flexible access to that data that is more important." Cardif Pinnacle does not have a specific policy to consolidate on a single tool, but the BI group does re-evaluate its technology at regular intervals.

### ***Business and IT Processes***

The BI group was not established simply to take over the work done previously by IT. Instead, the BI group provides strategic direction for BI throughout Cardif Pinnacle. The BI group's goal is to identify key performance indicators (KPIs), to build a central source of all KPIs, and to focus on master data management, ensuring consistency of information. This competency has especially high value when communicating with external parties, be they customers, regulators or IFAs. Cardif Pinnacle does not want customers to call different departments and receive different answers.

The BI and IT groups have taken several steps to make the BI solution more pervasive at Cardif Pinnacle. First, the technology is available on the corporate intranet, which makes its availability obvious. The BI group also publishes intranet articles to promote BI in general or specific applications such as the performance dashboard. There is an email group list that is used to disseminate the latest information about new features and functionality of the BI solution, but given the large number of users, word of mouth promotion has also been very effective. Definition of data elements, metrics and KPIs are also posted on the intranet, where users can access them on their own. These definitions, along with training on specific software tools, are also part of formal training sessions held by the BI group. At the end of a training course, end users received certification on the BI solution.

During a recent project in response to a new legislation, the BI solution was effectively used to provide compliance with the new rules. The BI and IT groups used KPIs from different business groups and aggregated them into an executive dashboard. The dashboard was deployed on the intranet along with information that included calculations, data definitions, data sources for KPIs, and outcomes the company is trying to achieve. One of the operational challenges the company had to overcome during this project was the building of consensus among the different business units around the KPIs. In this case the BI group worked with the data governance group to facilitate extensive discussions and to resolve any discrepancies among business units.

Finally, an important part of Cardif Pinnacle's BI program is ongoing monitoring of the use of the BI solution and internal end user satisfaction surveys. For example, using EasyAsk log files in FastPath, the BI group can see how many people are using the system and whether each query is successfully executed. If the BI group notices problems with certain queries it contacts the end user to suggest a better way to ask questions or modifies EasyAsk to accommodate the specific requirement.

## **BENEFITS**

The benefits accrued by Cardif Pinnacle since the establishment of the BI group and broader dissemination of both existing and new BI technology are varied. The company is now able to provide faster access to information, there are consistent enterprise wide KPIs, and very importantly, a greater understanding of those KPIs and the underlying data that enables end users to ask new and better questions.

O'Brien pointed out that "when end users need something that can't be run in the existing BI system, they send a specification to the BI group, which along with specific analysts from business units, engage with the end user to identify and recommend better or different ways of asking a question. As a result, a better final specification is handed to IT for development and deployment." The goal is not to limit the types of questions being asked but to ensure that the right questions are being asked based on consistent data and metrics. In other words, Cardif Pinnacle has been able to make substantial progress toward providing the right information to the right people at the right time using the right tools.

### ***The Right Information***

- ☒ Right information can mean different things to different user groups. At Cardif Pinnacle one of the goals of the BI group is to ensure that each of the many internal and external user groups can access and analyze data that is relevant to them. The new BI group is able to rationalize the information requests that support business processes ranging from sales, finance and investments to actuarial, underwriting and claims management. The BI solution is also used to report on throughput statistics of the document imaging system.
- ☒ To comply with corporate governance and external policies, it is important for the BI group to ensure consistency in data definitions through centralized master and metadata management. EasyAsk is also used for data quality measurement to support these processes. The BI group runs queries using EasyAsk when data is loaded each month into FastPath to count the number of policies and amount of premiums. This data is presented through a dashboard, which helps to quickly identify any anomalies in the data and prioritize corrective actions.

### ***The Right People***

- ☒ As of mid 2008, Cardif Pinnacle had about 140 internal end users of EasyAsk. These employees are spread across all major business units and contain two types of users: users who create their own queries and information consumers who run pre-built queries. About 40% of the users are create their own ad-hoc queries. There is also a range of users across various positions within Cardif Pinnacle, with customer facing, operational and management level employees having direct access to the BI solution. In general, access to the BI solution is given at the request of department heads. Thus, based on business needs there is higher penetration of users in the finance department than in operations.

- ☒ Cardiff Pinnacle also has external users who have access to the information from the BI solution. Customers receive regularly scheduled reports that have been gathered using EasyAsk. For ad-hoc questions, customers need to request the information from Cardiff Pinnacle. At this point, due to business policies, the company is not providing customers with direct access to the BI solution over an extranet. Government agencies are another group of external users of BI content. Recently a request by a government agency for five years of data to be delivered in 30 days was successfully fulfilled by Cardiff Pinnacle using the new BI solution – a task that the company thinks would have been infinitely more complicated with traditional data warehouse and query tools.

### ***The Right Time***

- ☒ Providing information at the right time refers both to the timing of information delivery and the ability of end users to access their BI tools whenever the need arises or on-demand. The frequency of data capture and integration into the BI solution varies depending on the specific business processes. At Cardiff Pinnacle most operational data is loaded into the analytic data repository on a monthly basis, but there are discussions about moving to a weekly schedule. At the same time, the intranet deployment of an intuitive tool based on natural language query has made the existing information available on-demand to all users with access rights to the BI solution.
- ☒ With the immediate access to information has come the freedom to create a lot of reports. Some end users' business processes require ad-hoc exploration of the data, but for many other operational end users and customer reports, more flexibility in data manipulation may result in less consistency in reports even if they are based on a single data set. The BI group and business analysts have to question whether all these new reports provide actionable intelligence to business users. The BI solution provides them with the flexibility, in cases where it is needed, to run EasyAsk queries in the background without providing the natural language interface directly to end users, but still utilizing these queries to deliver fixed KPIs through dashboards.

### ***The Right Tool***

- ☒ The tools used in Cardiff Pinnacle's primary BI solution have improved not only end users' self-service access to information, but have also streamlined the IT process for development and deployment of new information assets. The BI solution provides a single point of entry to all enterprise data that is available for access and analysis. Although it was first deployed for basic information access and reporting needs, the BI solution's use has expanded to incorporate analytic capabilities that support the decision-making process in several business units.
- ☒ The tools have also fit Cardiff Pinnacle's needs in terms of the server-based pricing structure. Today, the company utilizes two server licenses (one for production, the other for disaster recovery), which has so far made it easy to accommodate all the users. As end-user needs evolve, the BI group will evaluate the need for additional servers.

## **LESSONS LEARNED**

IDC's goal in interviewing Cardiff Pinnacle was to identify best practices that other organizations can apply in their efforts to make the use of BI and analytics processes and tools more pervasive. Neither Cardiff Pinnacle nor IDC would claim that Cardiff Pinnacle has fully achieved the goal of having pervasive BI. Nevertheless, there are several important lessons that the case highlights:

- ☒ Creation of a shared services group, such as the BI group, does not have to involve a large investment in resources if care is taken to identify appropriate centralized resources and balance them with related decentralized resources. Cardiff Pinnacle's BI group is staffed with four full time employees who are further supported by business analysts from different lines of business, as well as the IT group, which is responsible for technology development and maintenance.
- ☒ All BI initiatives are iterative with one project leading to the other. This means that care must be taken to identify the scope of initial projects before the BI technology is spread through the organization. A number of years ago, EasyAsk was introduced at Cardiff Pinnacle to overcome a specific problem: delays in reporting and the image that data was in the hands of IT not business users. Over time, as the information access issue was addressed, the BI solution has led to new efforts to create a common language around data, metrics and KPIs throughout the company, which in turn is leading to new ways of looking at the data within and across business units. Therefore, any new BI initiative that is designed to overcome existing shortcomings should not be viewed only as a technology replacement or enhancement project. Given the right level of support, organizations should take the opportunity to re-evaluate decision processes and performance metrics.
- ☒ Many mistakes in decision-making can happen because of misunderstood data. The BI vision of Cardiff Pinnacle's BI group took into account that allowing end users to learn from their own mistakes under the guidance of BI experts would be important to establishing a self-service environment where end users would not be dependent on IT to build reports for them. To help end users in their learning process, the BI group's sharing of master and meta data on an intranet became an effective means to facilitate inter-company understanding of the data. Furthermore, ongoing training about the data and tools encourages more pervasive use of the BI solutions at the company.
- ☒ A single software tool will rarely support the needs of all decision makers for all use-case scenarios. Self-service query and reporting functionality should include a balance of standard reports and ad-hoc query functionality. Cardiff Pinnacle provides its users with a mix of pre-built reports and dashboards, as well as ad-hoc access using natural language query.

---

## Copyright Notice

External Publication of IDC Information and Data — Any IDC information that is to be used in advertising, press releases, or promotional materials requires prior written approval from the appropriate IDC Vice President or Country Manager. A draft of the proposed document should accompany any such request. IDC reserves the right to deny approval of external usage for any reason.

Copyright 2008 IDC. Reproduction without written permission is completely forbidden.