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Roddy Flynn, Data Administrator, University of Sheffield

Introduction

The University of Sheffield is increasingly singled out as one of the UK’s leading higher education facilities. Established in 1905, the University now attracts over 24,000 students every year, across seven faculties and employs 6,000 staff on its near mile-long campus.

The teaching and research at the University is world-renowned and is another draw for students deciding on higher education facilities. As the reputation of the University grows and student numbers increase, so the amount of data and information reporting required within the institution also intensifies.

Challenges faced

Reporting back on any information at the University comes from data stored in its Corporate Data Model. This is an Oracle-based data store, drawing on information from at least four different data systems across the campus. While this met the most basic needs of the departments, the linking of information across different areas had previously only focused on the essential day-to-day knowledge, driven by ad hoc reports and one-off queries, so staff were unable to deliver more innovative activities or analysis on that information.

In turn this led to an administrative burden across all departments—Finance, Student Services, HR/Payroll, Accommodation Services, Research Office, and Corporate Planning. This was costing valuable time and money, so the IT department was keen to centralise information and reporting, rather than duplicate activity across multiple departments, and, more importantly, data sets.

One university department with complex reporting needs is student services. Staff here need to generate reports on student activity and progress year-on-year, as well as admissions handling. Added to this is combining information from the seven faculties and multiple departments for each student about fee payment,

Industry:

- Higher education

Geography:

- UK

Information needs:

- Streamlining and centralising staff and student information across all departments of the University

Users:

- 800 licences

Solution:

- Cognos 8 Business Intelligence and ETL Data Manager

Benefits:

- Fewer reports generated—delivering time and cost savings

registration, and exam results over their time at the University. Pulling all this information together was time-consuming and highly administrative, and then the reports had to be shared across various departments.

On top of these reporting areas is a further external reporting burden—that of submitting complex Excel spreadsheets to the Higher Education Statistics Agency (HESA) which checks the detail behind the operational work at the University. This is a massive job, taking two people’s constant time and attention, compiling information and statistics from several different data sources for external review and analysis.

Strategy followed

The University had been using Cognos for six years in various areas, but as it was growing and increasingly required one single version of the truth to generate accurate reports university-wide, it decided to tender for a next-generation business intelligence solution. After evaluating solutions from leading vendors and taking references from other users of the technology, the IT department chose Cognos 8 Business Intelligence and Data Manager ETL software.

“When reviewing the options to improve our reporting, Cognos stood out to us immediately and this has been validated by the work we have done across the University,” said Roddy Flynn, Data Administrator at the University of Sheffield. “Its single architecture means that all of our departments can work seamlessly, drawing different information together from various sources into reports which are accurate, real-time, and available online, in a user-friendly format. In contrast, the other solutions we reviewed were less robust and manageable, as well as being bundles of multiple tools and architectures.”

One key element of the Cognos 8 BI solution is data integration. The product’s extraction, transformation and load (ETL) function unites disparate data and automatically ‘pushes’ updated information out to users. This means hundreds of users can access one version of all data from one database—ensuring real time and easy distribution of information to all interested parties.

Before the technology could be rolled out to the users in the different academic departments and central services organisation, previous metadata and reports had to be migrated into the new architecture. Cognos provided technology and expertise to help ensure this was successful and seven temporary staff were trained up to migrate over 1,500 old reports into the new system. This took only two months, ensuring the system was ready to be used at the earliest opportunity.

Benefits realized

“The reporting culture at the University has been significantly reduced. Simply through reviewing which reports were generated has cut the number from 1,800 to around 1,000. Some reports were duplicated on the same information within different departments and these have now been centralised and streamlined, saving time, money, and effort,” said Flynn.

A pilot site went live with a relatively small set of student reports to be worked on. These however were standard reports and so the results could most easily be seen. Data is now more easily distributed in real time and access to a single set of reports has both cut down on reporting development work and reduced discrepancies between disparate sources.

Key benefits included bringing data closer to the people who need to access and act on it university-wide so that

decisions are informed and can be made more quickly. Because Cognos 8 Business Intelligence is Web-based more users now have access to the reporting solutions, allowing the IT team to focus on strategic areas, rather than administration and multiple variations of report generation.

Student services can now compare records such as admissions information and postcode analysis year on year, as well as exam results and course attendance—helping any trends or issues to be spotted and acted on as quickly as possible.

Distribution of reports has vastly improved. Within Cognos 8 BI, reports are distributed automatically and in real-time to all relevant users or managers, meaning information is up-to-date, accurate, and at their fingertips. The Web-based reports are now available online, rather than departments having to face costly and time-consuming hard copy distribution.

For the team reporting back to HESA about the student lifecycle, the Cognos technology has saved time and also ensures fewer errors from data input or duplication. The quality of the report is so high that HESA singled out the University of Sheffield as having provided one of the best reports of all UK higher education facilities.

“Being able to draw reports from only one data set has changed the way the University now works and reports,” said Flynn. “We can ensure that student and financial data for our staff is accurate and can track admissions trends to ensure our services meet the needs of the student body. Time spent on report generation and distribution has been significantly reduced.

Going forward

The amount of data that universities are reporting back on continues to grow. The UK’s Lifelong Learning campaign means that information on education and qualifications needs to be tracked and recorded throughout a person’s career, making it vital that the right reporting solutions are in place now, to ensure data consistency.

The University is planning to use Cognos further in different departments and is looking at deploying Cognos planning and dimensional reporting technology across the University. It is also keen to work with Cognos on a dashboard approach, providing high level reports for management over the next 12 months.

