



The power of performance management

Success in higher education

Overview

While universities and colleges know they must ensure solid funding, attract high quality staff and students, enhance course offerings and improve student achievement, the majority have little insight into how. Structural silos, paper reporting and manual financial processes all waste precious resources and block access to the real-time information that can provide deeper insight into current and future performance. Many universities and colleges are starting to demand better information on which to base decisions.

Technology is now supporting decision-making processes in universities and colleges and helping staff spot patterns, identify critical thresholds and monitor for financial, academic and operational issues. Performance management software is helping institutions of higher education take advantage and make sense of their rich data to monitor performance levels against scarce funds, all the while freeing up deans to lead and professors to teach.

IBM® Cognos® software provides an integrated platform for education performance management. It aggregates and leverages critical data, and delivers the scorecarding, reporting, analysis and planning tools to optimize performance and accountability. Performance analytics software and processes from IBM can help institutions make timely, informed decisions in all areas base on new insight into:

- Individual student performance across courses and disciplines
- Student and staff recruitment
- The most effective fundraising and donor cultivation programs
- The exact costs of curriculum
- Budget against actuals



Read on to find out how leaders in higher education are using Cognos software to turn a rich field of data into beneficial insight. Learn how:

- **The University of North Texas** is using Cognos software to drill down into student data, identify student preferences and develop programs that are attractive to current and future students. Read how it is enabling them to create reports in minutes that used to take hundreds of hours.
- **The University of Wollongong** is using Cognos Planning to unite data from over 680 cost centers just to provide high-level faculty and department budgets. Learn how Cognos 8 Business Intelligence (BI) is delivering consistent, accurate and timely information available across the university.
- **Victoria University of Wellington** is using Cognos 8 BI and Planning to deliver accurate information at the lowest cost possible and enabling users to delve into details and look at all the factors that are driving performance. Read how they have reduced month-end processes from a maximum of 14 days down to three days.

University of North Texas

The University of North Texas (UNT) is a recognized student-centered public research university that harnesses the power of ideas through a culture of learning based on diverse viewpoints, interdisciplinary endeavors, creativity and disciplined excellence. With nearly 35,000 students, UNT is one of the largest universities in Texas and is the flagship of the UNT System, which consists of UNT, UNT Health Science Center at Fort Worth and the UNT Dallas Campus. The university has 11 colleges and schools offering 99 bachelor's, 103 master's and 49 doctoral degree program in the Dallas/Fort Worth region. UNT is in its 11th consecutive year on the list of America's 100 Best College Buys, compiled annually by Institutional Research & Evaluation, Inc.

UNT's mission is to be known for its educational, intellectual, research, public service and cultural achievements. In support of these objectives, UNT wanted to provide employees with

the IT foundation necessary to help improve the quality of its education and overall student experience. In pursuit of these goals, UNT decided to overhaul its IT environment. It began by moving its mainframe system to PeopleSoft ERP, and then selected an Oracle data warehouse. With its new IT environment in place, the time was right for UNT to deploy a BI solution. UNT selected IBM Cognos 8 BI so that it could easily provide employees with information needed to do their jobs more efficiently and effectively.

Challenges faced

"We wanted an easy-to-use tool that would provide our employees with quick access to the information they needed to do their jobs effectively," explains Robert Jones, Assistant Director, Computing and Information Technology Center, EIS Tools and User Services, at the University of North Texas.

With its existing system, UNT had struggled with delivering information to decision-makers in a timely and easy-to-read manner. Using a cumbersome reporting method that pulled data from their mainframe system slowly, the reports delivered results in a format that was difficult to analyze. These issues often hindered users from securing data needed to make the best decisions possible.

Strategy followed

UNT reviewed business intelligence solutions from IBM Cognos, Business Objects, SAS and Hyperion. The university was looking for a solution that would integrate with its Oracle data warehouse and PeopleSoft ERP portals that housed student information, financial accounting, and HR systems. Additional requirements included Web-based access, ease-of-use, flexibility and scalability. UNT was drawn to Cognos due to its best-of-breed offering and tight integration with PeopleSoft and Oracle. "Cognos is the recognized market leader so it was an easy choice. We were also able to talk to other higher-education users that had deployed Cognos. These references made us confident about moving forward with Cognos," explains Jones.

With the help of Cognos Technology and Consulting partner, Focus Technologies, LLC, UNT went live with Cognos 8 BI in April 2006. "Cognos Consulting, along with Focus Technologies, was incredibly helpful during our deployment and implementation process," states Jones.

The university also used Cognos phone support services and was pleased with the quick response time. In addition, UNT invested in public classroom training from Cognos Education as a way to make sure report authors and data modelers, as well as users, were employing the best practices and procedures for using the system right from the start.

The university was up and running in only four months, a success attributed to the assistance provided by Cognos and Focus Technologies, the knowledge gained from Cognos Education, the help from Cognos Support, the ability to seamlessly integrate with its Oracle data warehouse and PeopleSoft ERP portals and the intuitive ease-of-use of the solution. Standardizing on Cognos for all of its reporting and business intelligence needs, UNT has rolled out the solution to its finance and Institutional Research (IR) departments. Between these departments, the university runs approximately 200 reports that are accessed daily by 1,800 users.

The strong functionality of Cognos 8 BI has created excitement within the university community. As a result, many departments have requested Cognos, with the Admissions department slated to deploy the solution next. Employees clearly see the benefits and want to use Cognos for their own reports, so the university is expanding its use beyond budgeting and institutional research.

Moving forward, UNT is investigating Cognos 8 BI to develop an executive dashboard. It also plans to round out its solution by deploying a Cognos planning solution to help with planning, budgeting and forecasting.

Benefits realized

“We’re really happy with our decision to deploy Cognos 8 BI. We’ve already experienced a strong, positive response with IBM Cognos and we anticipate so much more. We plan to continue expanding our solution and making it available to more users,” emphasizes Jones.

The tight integration between Cognos and UNT’s PeopleSoft portal has been the most important feature for the university. Cognos 8 BI offers a common interface to UNT’s portal, which allows users to operate in a familiar setting and gain access to all data from one central location.

In addition, users are able to log on from a single sign-on point, saving them time while eliminating the hassle of remembering multiple passwords and sign-on procedures.

Another key benefit has been the flexibility to work within the university’s home-grown security system, a decentralized function controlled by each department. Cognos was one of the only solution providers that offered this integration. Using Cognos, UNT minimized training and eliminated the need to re-train users on an additional security administration process. With Cognos 8 BI, the IR department has saved time reporting and has been able to identify trends in the student body. Prior to Cognos, IR had to manually develop and print Microsoft Word reports that took many hours to produce in a process that was cumbersome and time-consuming.

With Cognos 8 BI, these reports are done automatically, allowing Deans to monitor enrolment periods easily in real time. In addition, the IR department is responsible for developing The University Fact Book, which was honored with the “Best Electronic Fact Book” award by the Texas Association for Institutional Research for its 2004-2005 edition, based on its effectiveness and ease of use. The University Fact Book provides statistics on enrolment data to the public, which previously took hundreds of hours to complete each semester. Now, UNT is able to produce this information instantly.

“With Cognos, we can drill down into student data, identify student preferences, and develop programs that are attractive to current and future students,” states Dr. Allen Clark, Institutional Research Director, UNT. “Cognos is helping us provide a more positive experience and attract students who will thrive at UNT.”

Cognos software has significantly streamlined the Finance department’s budgeting process while increasing accountability. With Cognos software, users now have instant access to account information, eliminating previous calls to the Budgeting office for help securing this data. Cognos software also provides UNT management with an easy audit check by allowing them to track department budget expenditures and ensure money is being allocated correctly.

Jones sums up UNT's Cognos experience, "With Cognos, information is always at users' fingertips. The solution has replaced processes that were inefficient, or weren't even there before. This has thrilled our user community and we have heard nothing but strong, positive feedback."

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Computing and Information Technology Center, EIS Tools and User
Services, at the University of North Texas*

The University Of Wollongong

The University of Wollongong is located on the south coast of New South Wales, one hour to the south of Sydney. It has over 21,000 students and 2,000 staff spread across six Australian locations and its international campus in Dubai.

The University of Wollongong has been repeatedly recognized for its excellence including:

- Times Higher Education Supplement Commonwealth University of the Year 2006
- Ranked by the Australian Newspaper as the number one teaching university in Australia in 2005
- Ranked as the Australia's top university for educational experience and graduate outcomes for the last five years
- Per capita, one of Australia's leading research universities

The university offers leading-edge academic courses and world-class research programs, and it maintains a commercial enterprise arm.

Challenges faced

As early as 2000, one of the university's strategic goals was to improve operations through the development of a single, integrated, Web-based information management system.

At the time, the university's finance, human resources and student services staff and faculty all used different decision support applications to generate reports, for example, on income and expenditure and HR statistics. This disparate approach resulted in an inconsistent view of the university's business data, with reports created in multiple styles and formats, making it difficult to collate and integrate information, particularly for cross-indicator business reporting.

In addition, users who wanted information related to their business function had to go through an intermediary, which was both unproductive and time consuming. Users wanted timely access to management information in a consistent format no matter where the data resided.

Strategy followed

The university initially piloted the Cognos solution to establish a proof-of-concept for its report building and generation capabilities. The project incorporated 25 users in the academic faculty, as well as staff in finance, HR and student services. Upon completion in 2001, the system was rolled out to 100 users.

Since 2001, the university has expanded the deployment of additional Cognos PowerPlay cubes across many different areas, including finance, HR, research, students, teaching and facilities management.

The implementation then expanded with the deployment of Cognos Analysis Studio, which enables users to 'slice and dice' large volumes of data retained in 'cube' structures to see factors impacting their business. Data 'cubes' encompass all the university's major information sources, including finance, HR, research, consultancies, students and facilities management.

"We have a number of metrics (data cubes) that help us track profit and loss margins, student and staff details, activity based costing and asset management. The flexibility of our system has allowed users to drill down from a 'big picture' overview. This allows us to make decisions on everything from constructing a new building to the individual cost of teaching a class of 10 students in a particular subject," said Chris Grange, Vice Principal Administration at the University of Wollongong.

"PowerPlay really has transformed users' focus around information and reporting," said Nikita Atkins, Project Director of Performance Indicators at the University of Wollongong.

"They no longer want a print-out or screen with a single metric or key performance indicator (KPI); they now use PowerPlay to drill into that number to understand what is driving it. Users don't want to only report on their performance, but understand and analyze that performance."

Planning for success

Following on the success of its PowerPlay experience, the University of Wollongong acquired Cognos Planning.

Previously the university had used approximately 25 spreadsheets to manage over 680 cost centers just to provide high-level faculty and department budgets. "Enterprise planning has allowed the university greater transparency and control over its budgeting process. We now create faster budgets and forecasts down to a lower level and can link budgets to key metrics such as number of staff and students," said Atkins.

"Although Cognos Planning was originally brought in for financial operational budgeting, we are now expanding its usage into areas such as workforce planning. Cognos Planning has become a critical piece to the University Performance Management puzzle," added Atkins.

Reporting on success

The university has always recognized the need for detailed transactional reports. To meet its reporting needs, Cognos Impromptu was acquired at the same time as PowerPlay, and has since migrated to Cognos 8 BI using Framework Manager, Report Studio and Query Studio.

ReportNet reports complement and enhance the PowerPlay cubes. ReportNet provides the university with detailed transactional reports, high-level summary and management reports, as well as powerful, graphical digital dashboards.

"Report Studio is the natural partner for Analysis studio. Users want to be able to drill from a high-level cube to view their transactions," said Atkins.

"The power of Report Studio to build, deliver and manage ad-hoc, transaction, summary and dashboard-style reporting is fantastic. Users don't have to learn different systems for different style of reports. It is all there, one product, in one location for all their reporting needs," added Atkins.

Monitoring success

With the success of streamlining and standardisation of enterprise reporting using Cognos 8, the University of Wollongong identified the need for decision-makers to gain access to important KPIs on a scorecard. The university developed and implemented a modified Balanced Scorecard methodology through Metrics Studio.

"Allowing managers and decision-makers to get their most important KPIs in one single location is invaluable. The clear structure of the Balanced Scorecard makes it easy for decision-makers to navigate the scorecards, perspectives and KPIs with ease. Decision-makers can see how higher level scorecards are being impacted by smaller business units' scorecards. Not only does Metrics Studio allow the university to easily monitor its performance but it is also driving changes to our performance culture through improved accountability and transparency," said Atkins.

Benefits realized

With the performance management system built up organically over a six-year period and encompassing over 200 users, the university has achieved significant progress towards meeting its strategic goals.

“The feedback we are getting from our users is that the time savings are just incredible. Using Cognos to develop our integrated management information system is part of a strategic plan to take our business forward,” said Grange.

“The Cognos performance management solution has not only allowed our users to understand the many aspects and dimensions within the University of Wollongong, but also to find efficiencies and drive effectiveness in those same areas,” added Atkins.

The Australian Universities Quality Agency (AUQA)— an independent, not-for-profit national agency that promotes, audits, and reports on quality assurance in the Australian higher education sector— further reflected these comments in a 2006 audit report.

“... [The university] has, as a matter of priority, been developing its use of data reporting tools (Cognos). The university is building up an information capability and capacity which will, in time, provide excellent support for both strategic and operation management purposes,” the report stated. “...The university is improving its support of management by, for example, developing a comprehensive information analysis and reporting process...”

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*Nikita Atkins, Project Director Performance Indicators,
University of Wollongong*

“We think we have got a significant competitive advantage from Cognos’ products. It has helped us to get extra insights into how the university’s business is going and to work out ways of improving what we do. We think that a number of the areas of information we have developed is really helping to give as an edge as a university,” said Grange.

“Moving forward we are looking at further ways to reduce the decision-making cycle and increase insight into all the activities that University of Wollongong is engaged in. This includes alerts and notifications through Event Studio, improved business metadata, predictive analytics, spatial and location intelligence,” added Atkins.

Victoria University of Wellington

For more than a century, the Victoria University of Wellington (Victoria) has developed a tradition of strong international links in teaching, research and programs of national significance and international quality.

Victoria is committed to providing students with opportunities to acquire, understand and apply disciplinary and interdisciplinary knowledge, as well as related skills and attitudes, and to enhance their personal development. In 2007, the university had 21,880 students enrolled - a figure equating to 17,085 equivalent full-time students (EFTS).

Challenges faced

Managing finance in an institution like Victoria is no mean feat. Student populations and therefore funding and income can vary markedly from one year to the next. Dealing with multiple faculties and schools, each having its own hierarchy of needs, requires coordination, cooperation and strong oversight of financial activities. The Victoria Finance team recognizes this, and some time ago established the service-oriented culture and flat structure that has helped to ensure a close working relationship with administrative managers and staff.

The Finance team's goal is to support proactive decision making with data that can be relied upon and which is easily and clearly interpreted.

In 2001, Victoria's expansive budget process became too onerous to complete using Microsoft Excel spreadsheets. Until then, all schools and faculties had compiled budgets in spreadsheets, which were then manually consolidated. However, the size of the university and the extent of consolidation meant that calculation errors and data inaccuracies were creeping into the process, making the information unreliable.

Mark Hewitson, Victoria's Manager of Financial Advice, explains, "We decided we needed a real-time planning tool that had the look and ease of a spreadsheet, but we also wanted the flexibility to be able to use it for other purposes. It

was important that we have a single repository of data that could be maintained and also primarily developed by Finance. But, above all, we wanted ownership of the data to stay with the budget holders all the way through the process.

Hewitson's vision was for an intranet environment that would enable budget managers to prepare and input their data online, providing university management with instantaneous updates on financial status. He was adamant that the solution must interface with a wide range of other systems already in use at the university, so that data could be imported easily and exported as required.

Strategy followed

Following product evaluations, the Finance team selected Cognos 8 Planning, and began implementation. Within a couple of months, the solution was up and running. Twice a year, users are provided with a budget model that is pre-populated with data drawn from sources including Oracle financial and Alesco human resource applications. The model includes an individual profile for 2,000 staff and provides significant advantages to Victoria, since staffing is the major cost for any university. The user community has responded well, embracing the increased level of data ownership and the knowledge that no one can adjust another's figures.

From this relatively simple start, the Finance group has developed an extensive series of models to help faculties and schools report on and analyze almost every aspect of their operations.

One of the earliest models accelerates month-end processes and year-end forecasts. The model has also paved the way for easier variance analyses, automatically importing financial data at the end of each month before making it available to managers to edit or add to using the intranet. The process has cut month-end consolidation time down from an average 10 to 14 days to just three working days. "It has given us a huge increase in productivity and has released some very expensive people to concentrate on other value-adding activities," Hewitson says.

Human resource management received an additional boost with the development of improved fortnightly salary and resource reports, and dynamic access to Human Resource information with Cognos 8 BI for queries and analysis.

An EFTS model enables Finance to access data from the Student system before preparing a central forecast of student numbers and projected revenue. Like the month-end process, this data is then published for review and input over the intranet. Since EFTS figures have to be accurate—there is only a three percent variance allowance before heavy penalties are allocated by government—it is a fundamental model for all universities.

Other models have been developed to ease the calculation and apportionment of revenue for courses that are offered across multiple schools, and to manage the capital expenditure request process. The latter model, Hewitson says, “has become a communication tool, providing users with a status update on the approval or rejection of a capital expenditure request.”

Benefits realized

Over the years, the initial software deployment has grown to include the full set of Cognos BI tools. Hewitson notes, “The main objective for using Cognos BI tools is to focus on consistent, accurate information for better decision-making. We also want to deliver the best information at the lowest cost possible and to enable users to delve into the details and look at all the factors that are driving performance.”

One way Finance has achieved these aims has been through the creation of a metadata layer of financial information. “We’ve trained about 30 or 40 people to use that information,” Hewitson explains, “so that they can use the tools to monitor metrics and KPIs, create reports and so on. We believe we still have quite a long way to go, but at the moment the metalayer is giving access to metrics such as general ledger by cost center account, EFTS by cost center, occupancy value per square meter per school and HR data such as the salary and leave balance per person.

While mindful of the fact that IT is not the responsibility of the Finance group, Hewitson is hopeful that having shown the potential, there will be a wider role within the university for a performance management system in the future. It’s a move that would fit nicely with Victoria’s desire to pursue innovation in its management and organization of the university.

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Victoria University of Wellington*

Nearly eight years after its initial Cognos deployment, Finance is still finding new ways of applying the technology to benefit Victoria. A revenue-planning workload model with scenario forecasting functionality is currently under development and will eventually provide faculties with the ability to schedule resources based on student load. A related costing model is also planned to enable managers to determine the costs of operating a given course. Further down the track, refinements to the EFTS reporting model will streamline the work required to meet stringent government reporting demands. There’s also an opportunity to improve operating reports that are currently produced directly from the Oracle database and sometimes lack consistency.

It’s an extensive body of work for one organization, and Hewitson is quick to attribute the success of each model to the goodwill and energy of Victoria’s staff. Another important contributor has been honesty. “One thing that’s kept us going so well has been the fact we are always clear with our users. We’ve never overstated the benefits or underestimated the risks. We’ve always approached each project as a business issue that needs to be solved and presented technology as a tool that can help us to achieve this,” Hewitson concludes.

To find out more about IBM Cognos solutions for education, visit www.ibm.com/cognos/education.

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Produced in Canada
February 2010
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