Cardiff University

University supports strategic vision with Microsoft BI platform

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Cardiff University in Wales, United Kingdom is an ambitious and innovative university with a bold and strategic vision located in a beautiful and thriving capital city. Central to that vision is the Way Forward, which provides strategic direction and focus on research and innovation, education, international and engagement. In support of the Way Forward, the University has embarked on a comprehensive business intelligence programme.

University Executive Board with REF 2014 results

The solution uses Microsoft business intelligence to integrate data and deliver information. As a result, reporting is faster, data is easier to understand, and the Way Forward now rests on a solid foundation.

Solution Overview

Product and Services

Microsoft Office 2013

Microsoft SharePoint Server 2013 Enterprise

Microsoft SQL Server 2014 Enterprise

Windows Server 2012

Industry
Higher Education

Country
Wales, United Kingdom

Cardiff University
www.cardiff.ac.uk

Redwing Business Intelligence
www.redwing-bi.com

Related Links
www.cardiff.ac.uk

Related Stories
University Speeds Reporting and Improves Data Analysis with Microsoft BI Platform

Business Needs

Cardiff University is a leading University in Wales, United Kingdom. It has a bold and strategic vision, with ambitions to be amongst the top 100 universities in the world, and in the top 20, in the United Kingdom. It has chosen to focus on research and innovation, education, international and engagement.

Detailed performance goals have been set in each of these areas. In Research, for example, Cardiff set the goal that it will be firmly positioned in the top ten UK universities in REF terms with success judged by the effect on reputation.

Research Excellence is judged every seven years in the UK. This happened most recently in December 2014. It was crucial that a solution was in place to analyse the data after release by the four UK higher education funding bodies who undertook the 2014 Research Excellence Framework.

More broadly, the Vice-Chancellor's office had determined that there was a requirement for a university-wide Enterprise Dashboard system that could provide executive-level information on progress toward the Way Forward goals.

Additionally, there is a need to underpin this broad executive information system with deep business intelligence for each of the fourteen Way Forward areas, including student profile, research income, applications, and so on.

Solution

Cardiff University elected to bring in external expertise to assist them in getting their endeavours off the ground, and selected Redwing Business Intelligence, a Microsoft Partner, to provide assistance to the BI programme.

Redwing worked with senior stakeholders to determine the state of play, assessed budget and strategy, and recommended a way forward based on an end-to-end Microsoft stack using on-premise servers. This was considered best fit with existing Cardiff University patterns and practices. A critical consideration was security and authentication of users regarding access to data. Granular, atomic-level control of data access was deemed essential owing to the sensitivity and confidentiality requirements of some university data. It was considered that only an on-premise Analysis Services multi-dimensional cube would meet the security requirements for implementing the single data warehouse crucial to the overall solution.

Redwing supplied a top-to-bottom architecture and an infrastructure design, and assisted with installation and configuration of the Microsoft products.
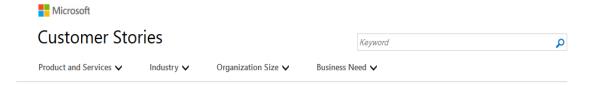
Cardiff University staff did the development work for most of the business intelligence products, with Redwing staff providing support, coaching and mentoring along the way.

An important factor in the programme's success was Redwing's provision of Evolutionary Development Methodology®, an agile methodology which has been in use for twenty-five years and which delivers value to the business in short discrete chunks called Releases. Over the year in which Redwing was involved with the programme at Cardiff University, four Releases were delivered.

One of the key Releases was Research Excellence Framework. From a standing start just three months earlier, the entire Microsoft platform was installed, and the business intelligence product delivered by the critical date. SharePoint was used as the delivery medium for the highly parameter-driven suite of Reporting Services reports.

Another key Release was the Enterprise Dashboard. Using a combination of Reporting Services and Visio Services in SharePoint, Redwing delivered an integrated solution to provide the executive-level information needed to support the Way Forward.

After assisting with the architecture for an infrastructure with long-term stability and full resilience, Redwing bowed out. Cardiff University now has the skills and abilities to continue to move the programme forward into the future, and is actively doing so.

Benefits

Using Microsoft SQL Server 2014 and SharePoint 2013, Cardiff University has created a single integrated data warehouse using Analysis Services, which is used to delivery new analytics and visualization solutions. It has enabled users to query, analyse, and visualize the University's wealth of complex research data in new and innovative ways to generate meaningful analytics and strategic insights.

Security requirements are complex, some data is sensitive and confidential, and authentication of individual users is required to control access to information. Analysis Services multidimensional provided the power and granularity of security required.

Access to data for regular users

With several suites of comprehensive set of parameter-driven reporting, information consumers can quickly and easily access the information they need. As noted earlier, with the powerful security mechanisms inherent in the Analysis Service multidimensional cube (the single data warehouse), proper authentication and control of access to data is assured.

Ability to self-serve

College data analysts and other authenticated users have the ability to connect directly to the data warehouse (the multidimensional cube) and extract data for their own analyses. Consistency of results is assured via storing all calculations and KPI in the cube,

Answering critical questions faster

Data is returned quickly and graphically, very largely reducing the need for experts to analyse, format, and chart the information. Presentation of the REF 2014 results to the colleges through a custom reporting suite meant that information consumers could immediately concentrate on explain the results rather than analysing the data.

Immediate analysis of the information provided stellar results:

> "Cardiff University has leapt to 5th in the Research Excellence Framework (REF) based on the quality of our research, a meteoric rise that confirms our place as a world-leading university.

> For the first time the funding councils have sought to measure the impact of our research, and again the University has performed outstandingly on this indicator, ranked 2nd in the UK

> An impressive 87% of our research was assessed as world-leading or internationally excellent."
> Professor Colin Riordan, Vice-Chancellor

Next Steps

The Business Intelligence team at Cardiff University will continue to deliver business intelligence product Releases using Microsoft tools and Redwing's Evolutionary Development Methodology®. Currently, work is proceeding on analysis of student applications, and further work is planned on student profiles. Eventually, all processes at the University will be supported by business intelligence.

Customer Stories

Keyword

Product and Services ∨   Industry ∨   Organization Size ∨   Business Need ∨

Several members of the Cardiff University Business Intelligence Team

Sample screens from Vice-Chancellor's Enterprise Dashboard (test version)