CASE STUDY

Pentaho and Cineca Help Universities Get Smarter

By Deploying Pentaho Business Analytics, Cineca is now able to Manage Universities More Efficiently

About

Cineca is a non-profit university consortium and Italy's largest high-performance computing center. It supports the scientific community's research activities through supercomputing and by developing applications such as advanced systems for data management and analysis.

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To address the specific needs of universities, Cineca developed an integrated information system for higher education institutions, called U-GOV, which includes a business intelligence suite specifically designed for universities and called U-GOV Planning and Controlling. U-GOV Planning and Controlling consists of nine different integrated modules including accounting, hr, research and student analytics, a planning and budgeting process, dashboards and key performance indicators, as well as best practices adapted to the university environment.

QUICK FACTS

- Industry: Education, NonProfit, OEM
- Headquarters: Bologna, Italy
- Website: cineca.it/en
- Products: Pentaho Business Analytics

Challenges

Between 2002 and 2009 Cineca implemented approximately 80 business intelligence modules in 30 universities that ran U-GOV, including BI software from Microstrategy or Qlikview. To make the system more sustainable and easier to manage, Cineca decided to move all its BI applications from the different proprietary platforms to one open source business intelligence platform in 2009. This would be a major undertaking as U-GOV had upwards of 400 business metadata objects, 80 BI applications and what-if scenarios running, and every year it ran more than 600,000 reports. In order to move ahead, the 30 universities would all need to agree on the new BI system.

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> By embedding Pentaho Business Analytics, Cineca can provide its customers with much less complexity and more benefits. We can now deliver sophisticated views of operation data in time, to support much sounder planning decisions. Embedding Pentaho has been such a success we are looking to expand our operations internationally.
>
> – NICOLA BERTAZZONI
> *External Relations, Cineca*

To ensure Cineca chose the right business intelligence and analytics software that met the functional requirements and accommodated the large number of stakeholders, the internal BI research lab started a software selection to determine the best open source platform for the future development of U-GOV. The vendors evaluated included Jaspersoft, Pentaho and Talend. Its checklist included:

- Integration capabilities
- Unlimited number of users
- Meta-data management
- OLAP capabilities
- Cost of solution
- User functionality
- Service support
- Coverage of the whole BI life-cycle
- Centralized product management of all BI solutions

Solutions

After an intensive evaluation phase, the BI research lab recommended Pentaho Business Analytics Enterprise Edition to embed into U-GOV.

- Three-step Migration Process – All the university members of the Consortium followed the recommendation and in 2010 the migration process started in a three-step-process:
  - Move and re-engineer Cineca's BI modules on Pentaho. (As of October 2011, U-GOV has migrated seven of the nine modules.)
  - Start new implementations using Pentaho. In the future, all the new university customers will use Cineca's BI applications based on Pentaho and not based on the previous platforms
  - Migrate previous customers from the old platforms to Pentaho. This step will start in 2012 – 2013.
- Full Business Analytics suite – U-GOV Planning and Controlling embeds the data access and integration, discovery, analysis and visualization capabilities of Pentaho Business Analytics Enterprise Edition.
- Flexible environment – Cineca runs Pentaho in the following environment: Operating System: Linux; Web server: Apache; J2EE Container (Tomcat/JBOSS); Database: Oracle RDBMS (in both versions: 32-bit and 64-bit with cluster supported).

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- Pentaho OEM Partnership – Enrico Brighi, Head of Planning & Controlling Division at Cineca said, "Thanks to Pentaho's open source architecture and our OEM partnership, Cineca can provide a better integration of business intelligence and analytics into U-GOV planning and controlling, thus enhancing the critical and complex information delivery process for the universities. As Pentaho Business Analytics is made up of different components, it's easy for us to reuse or integrate single components into U-GOV on the fly, whenever needed."

Results

- Successful Roll-Out – U-GOV Planning and Controlling based on Pentaho has gone live so far with one university using the accounting analytics module (analysis and reporting in the financial area). Five universities are currently in beta test with the U-GOV research analytics module (analysis and reporting in the research area) based on Pentaho analysis and reporting capabilities. The test phase will end and go live by end of 2011.
- Trusted for high-level reporting – Cineca plans to use Pentaho Business Analytics not only for operational reporting, but also for "high level" analysis for administration managers and university leadership. Two universities are currently running this type of report, using U-GOV's Dashboard and KPI module which will be migrated to Pentaho soon.
- Seamless integration – Because Pentaho and U-GOV's modules are both developed in Java, the integration is seamless.
- Better user experience – Pentaho's open source architecture enabled Cineca to develop a better integration for U-GOV's user authentication and authorization which ultimately resulted in a better user experience.
- Happy end users – The combined Pentaho and U-GOV planning and controlling solutions works exactly as promised to end users and the feedback has been so positive that Cineca plans to offer it outside of Italy.

Summary

Cineca is a non-profit University Consortium and Italy's largest high performance computing center. Its product, U-GOV, is an integrated information system designed for higher education institutions, and includes a full BI suite, called U-GOV Planning and Controlling. Thirty universities currently use U-GOV Planning and Controling, which consists of nine different modules originally based on vendors' platforms like Microstrategy and Qlikview. To make the system more sustainable and easier to manage, Cineca decided to replace all proprietary business intelligence applications and standardize on a single open source business analytics platform. After an in-depth evaluation by its research lab, Cineca chose Pentaho for its integration capabilities, meta data management, OLAP capabilities, cost, user functionality, service support and centralized product management. Currently, U-GOV Planning and Controlling is in its second phase of migration and the results have been so positive already that Cineca plans to offer U-GOV beyond Italy.

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