University of Kentucky: Continuing a Tradition of Success with a Real-time Data Platform from SAP

From championship basketball to nationally ranked programs in public affairs and healthcare, the University of Kentucky has a strong winning tradition. Faculty and staff work together to ensure a successful experience for every student. Today, the university uses **advanced analytics based on the SAP HANA® platform** to help it retain and graduate a student body of 28,000.

Executive overview

Organization
University of Kentucky

Location
Lexington, Kentucky

Industry
Higher education and research

Products and Services
Graduate and undergraduate degrees in a variety of majors, medical research

Employees
12,345

Budget
US$2.68 billion

Web Site
www.uky.edu

Partners
SAP® Consulting, Dell Inc.

BUSINESS TRANSFORMATION

The company's top objectives

- Provide holistic view of data by integrating various data sources
- Improve student retention rates by enabling earlier intervention by faculty advisors
- Gain greater insight into finances and use of resources

The resolution

- Product suite that included SAP HANA® platform, SAP® Data Services software, SAP Landscape Transformation software, and SAP BusinessObjects™ business intelligence solutions
- Partnering with SAP Consulting and Dell Inc.
- Rapid 2½-day initial setup

The key benefits

- Better support services with real-time insight into student performance
- Reduced extract, transform, and load process time from 8 hours to less than 1 hour
- Ability to conduct predictive tuition and revenue modeling

Read more

TOP BENEFITS ACHIEVED

420x
Faster reporting speeds

15x
Improvement in query load times

$250K
Projected annual savings in IT costs

See more metrics

"We have a challenge in education to use the data we have to build a better experience for our students. SAP HANA is going to be at the center of this effort at the University of Kentucky."

Vince Kellen, Chief Information Officer, University of Kentucky

Building better student experiences

Located in the heart of Bluegrass Country, the University of Kentucky (UK) combines a rich history with a commitment to academic excellence. Founded as a land-grant university in 1865, UK now offers programs in 17 different colleges including the renowned University of Kentucky Medical Center.

They call it "seeing blue" in Lexington, and the student experience is paramount to everyone at UK. "We all share the same objective," says Vince Kellen, chief information officer at the University of Kentucky, "which is helping each of our 28,000 students to be more successful here."

For the school's IT staff, part of that mission is leveraging better data integration and advanced analytics to build an even stronger institution. UK is particularly interested in using its technology to help raise retention rates, optimize the use of university resources, and support what Kellen calls "personalized education."

Like students studying at the school's William T. Young Library, UK administrators have a lot of information at their disposal. The school's production system contains about 1.5 terabytes (TB) of data. Its data warehouses hold another 4 TB.

But in the past, UK had to extract this data from several source systems and load it into a large Oracle data warehouse. Hours were spent each day just moving data around, leaving less time for in-depth data analysis. To maximize this invaluable resource, UK needed a new approach to using its "Big Data."

> "We want to provide analytic capabilities that everyone at the University of Kentucky can use to improve the institution and advance its goals."
>
> Vince Kellen, Chief Information Officer, University of Kentucky

University of Kentucky on SAP HANA: Fast. Forward.

As an existing customer, UK was familiar with SAP solutions. But a SAPPHIRE® NOW conference gave school leaders the opportunity to learn about something new – the SAP HANA platform. "It became clear to me right then that in-memory computing was groundbreaking," explains Kellen. "It would provide the technology we needed to address our most complex analytical problems."

Ultimately, UK chose a real-time data platform that included SAP HANA, SAP Data Services software, SAP Landscape Transformation software, and SAP BusinessObjects business intelligence solutions. Today, UK is replacing its Oracle database with an SAP HANA platform and commodity hardware from Dell Inc. The initial implementation was surprisingly fast. "We installed the hardware, configured it, and started replicating data in about two and a half days," says Stephen Burr, business intelligence lead at the school.

By consolidating its tool set and retiring several systems, UK has already seen significant savings. The university was also able to redeploy some IT staff to more strategic activities. These people can now focus on developing new applications and creating analytical objects that school administrators can use to improve the student experience and help manage the rising costs of higher education. "A little bit of analytics can go a long way," says Kellen, citing one example. "Just a 10% improvement in classroom utilization can help accommodate hundreds more students without the need to build new buildings."

> "We are no longer in the business of data movement – now we're in the business of using information to make better decisions."
>
> Stephen Burr, Business Intelligence Lead, University of Kentucky

Improved performance and more immediate insight

With its new systems in place, UK is managing its Big Data with far greater efficiency. This includes faster query load times and reporting speeds that are more than 400 times faster than before. "A query that once took 20 minutes now executes in only seconds with SAP HANA," remarks Kellen.

You can also add unprecedented availability to this superior performance. UK reports that 80% of its data warehouse is updated in real time. "An administrator walking on campus can use an iPad to pull up data in real time from five different systems and take business action based on that information," says Burr. "Six or twelve months ago that just didn't exist – it wasn't possible." UK leaders are using this instant insight for everything from evaluating complex tuition models to predicting a student's chances of graduation by analyzing a range of factors such as grades, participation in campus activities, and the use of tutoring services.

KEY BENEFITS

420x
Faster reporting speeds

15x
Improvement in query load times

$250K
Projected annual savings in IT costs

87%
Reduction in extract, transform, and load times

80%
Amount of data updated in real time

Seeing blue for generations to come

Graduation day in Lexington represents the culmination of a lot of hard work and the beginning of a promising new future.

Acting upon a deeper understanding of specific success factors can help make a UK degree a reality for even more graduates. For example, the university now uses its analytic capabilities to quickly identify students who need additional support in their critical first weeks on campus. In fact, many of the university's data analysis initiatives directly support its goal to improve retention rates by 10%.

The benefits are far reaching – especially in these times of state funding cuts. Kellen estimates that even a 1% increase in the retention rate will result in US$1.1 million in added revenue for the school. And better retention rates also mean that thousands of additional students will have the opportunity to pursue their dreams at the University of Kentucky.

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