Building System-Wide Data and Analytics Capacity

HOW THE UNIVERSITY OF NORTH CAROLINA SYSTEM PARTNERED WITH HELIOCAMPUS TO CREATE REAL-TIME CUSTOMIZABLE INSIGHTS

HelioCAMPUS

Better Data. Brilliant Insights.

The University of North Carolina System Office sought to modernize the way data are shared among the constituent institutions and move to a flexible platform that would allow for broader access, better reporting, improved visualizations, and deeper insights. An additional challenge was to make the data easy-to-use and customizable for multiple user groups, from systems administrators to academic department heads.
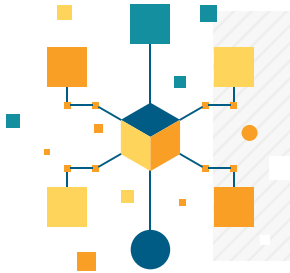
The UNC-System Office envisioned how a state system and all constituent institutions could work together to create and take advantage of a new data and analytics ecosystem. They knew that accomplishing this "would be a heavy lift," says Dr. Dan Cohen-Vogel, Vice President of Data and Analytics. After 20 years of flat file collection for primarily compliance reporting purposes, there was a strong need to supply decision-makers and external stakeholders with more timely, flexible, and detailed data supporting dashboards and visualizations as well as more sophisticated, policy-relevant and actionable analyses.

However, modernizing a system that encompassed a data pool of 233,000 students and 63,000 employees across 17 distinct institutions would be a complex undertaking.

After more than six months of intensive planning, the team began implementation, a process that spanned more than two-and-a-half years and involved a staggered schedule to carefully onboard all 16 of the System's postsecondary institutions. As a testament to Cohen-Vogel and his entire team, the entire implementation occurred on time and on budget. But the greatest yield? The new central warehouse, called the Student Data Mart, is a vast improvement over the previous system— in both data collection and deployment.

Vastly Improved Data Collection—and Speed

Abandoning the old method of flat-file collection, the Student Data Mart now pulls dozens of tables directly out of campus ERP systems. The new system both collects data more frequently and accesses data more robustly, which means there are larger amounts of raw data elements. And, perhaps most crucially, all of this is executed with much greater accuracy than before, with hundreds of edits and validations of the data provided on the front end, ensuring the institutions address reporting errors in their underlying ERP systems prior to taking the official snapshots of their student data. Moreover, it has become much more than a reporting tool.

"We expanded the data in the warehouse from the old regulatory-reporting-driven set," Cohen-Vogel notes, "to a much broader set that includes dozens and dozens of campus-specific fields."

To be able to group and analyze data at such a large scale is a huge boon; now the campus has the ability to use the system as a warehouse and a customizable reporting and analytical source.

One example of how this improvement plays out is the way that the Student Data Mart now allows academic decision-makers to analyze, plan, and program. In the past, data were grouped and reported exclusively via CIP codes (Classification of Instructional Programs). This made it difficult for academic decision-makers to leverage the data for tasks like analyzing the success rates of certain programs, since it was not easy to sort or group for the insights they needed. With the Student Data Mart, however, the data can now be sorted by departments and majors as well as by CIP codes—making it much more effective and powerful for institutions' academic decision-makers.

Tapping HelioCampus for a Customizable Analytics Architecture

Once the implementation of the Student Data Mart was complete, the UNC System pursued the next phase in its vision, seeking to convert the data from information to insight—helping decision-makers make the data actionable through visualization and models. For this step, the UNC System partnered with HelioCampus to spec out and build an analytics environment. As experts in analytics for higher education, HelioCampus was chosen over other vendors for their ability to meet four primary needs in this area.

System Office's Analytics Architecture Needs:

1 A product that leverages the existing data warehouse (Student Data Mart);

2 Architecture that is high-performing, portable, modular, sustainable, and scalable;

3 Flexibility to extend services to all institutions beyond the data currently in the Data Mart

4 A baseline set of services that would be available to all institutions with an additional set of services available on an as-needed, customizable basis.

"We were looking toward the future, and we had a range of needs in mind," says Cohen-Vogel, **"and all of these components—of being flexible, being an open environment—were important."**

Beyond providing cloud technology, data infrastructure, and data visualization, HelioCampus will build products with increasingly customizable options for each of the 16 higher education institutions in the UNC System on an ongoing basis.

Building for Individuals—and a System

One of the first pieces that HelioCampus built was the Admissions Summary Dashboard. With drill-down capabilities for each individual campus, this dashboard draws on data from the Student Data Mart to provide powerful predictive modeling around admission rates—such as which applicant pool should have the greatest yield. This information has the potential to revolutionize ROI for individual institutions' marketing and recruiting efforts.

This dashboard is just one example of the many tools that HelioCampus will eventually design for unique organizations within the UNC System—while always allowing for overall control and management from within the System Office. The vision is to build a set of analytical tools that allow individual decision-makers—be they chancellors, provosts, deans, or institutional research offices—to be able to examine their particular program and compare it to others within their campus as well as system-wide.

Connect your data dots.
If you would like more information on HelioCampus solutions,
email info@heliocampus.com.