

Building Blocks of Game-Changing Big Data Analytics



"We want to capitalize on opportunities—to uncover insights and turn them into actionable intelligence for enhancing value to students, faculty and the community."

 Jelena Roljevic, Assistant Vice President of Business Intelligence Services, Division of Information Technology

Head of the class

The George Washington University boasts more than 25,000 students engaged in dozens of academic disciplines, spread across three campuses. The diversity of students, programs and geographies generates enrollment, student, financial and faculty data which must all channel into decision making.

Becoming BI ready

For years, the university's business intelligence team supported strategic decision making with purpose built applications and spreadsheets that captured information such as enrollment figures, budget updates and departmental financial plans. As an example, data was exported from one of three different ERP applications to a number of independent data stores and spreadsheets where they were manually reconciled before being distributed around campus, a process which often took several weeks to complete.

"When we re-architected our information management strategy, a primary objective was to provide transparency into data from across the university—defining what we have, what we're missing, how accurate it is," says Roljevic.

Researchers and the deans of GW's ten schools and colleges require targeted data to help manage grant budgets and allocate departmental assets. "To be BI ready, data has to be organized, integrated, governed and shared across the university."

Ahead of the curve

To support actionable insights across the enterprise, Roljevic and her team set out to transform the GW business intelligence environment. After an evaluation of options, Roljevic's team chose the Informatica Intelligent Data Platform including Informatica PowerCenter, Informatica Data Quality, and Informatica Intelligent Cloud Services as the hybrid data management foundation. With an



Business Needs:

- Timely access to trusted information across academic and administrative functions, schools and departments for actionable insights and fact based decision making in support of student retention, enrollment trends, financial performance and staffing
- Increase GW's efficiency and effectiveness
- Reduce operating cost of labor intensive manual data acquisition
- Better support regulatory compliance requirements
- Minimize risk

Data Challenges:

- Time-consuming manual cloud and on-prem data management processes take resources from more strategic activities and increase operating costs
- Inconsistent data quality and a lack of transparency reduce credibility of the analytics environment
- Insight discovery was interrupted by data spread across multiple ERP applications and spreadsheets
- New data enters the university all the time and must be rapidly incorporated into analytics
- Departments require real-time or near real-time data access for operational reporting



George Washington University's business intelligence architecture ensures that data is integrated and governed to provide actionable insights for university stakeholders.

Oracle Data Warehouse as the target, GW relies on Informatica PowerCenter to integrate data from a variety of sources and Informatica Intelligent Cloud Services to manage data from and to Salesforce. This enterprise data warehouse environment enables self-service BI through a variety of tools including Cognos and Tableau. The diagram below illustrates the GW BI Environment.

In particular, GW selected Informatica for its intuitive user interfaces, data management capabilities and flexible application connectivity options. Unlike other solutions that might require costly rip-and-replacement of legacy systems, Informatica PowerCenter and Informatica Intelligent Cloud Services feature prebuilt connectors to seamlessly integrate Cognos, Salesforce and Tableau with existing ERP applications and data stores creating an accessible data environment.

At the same time, Informatica Data Quality tools help GW standardize business rules for better governance practices ensuring data accuracy and consistency. In the past, decision makers could receive as many as five or six different versions of the same data, making it difficult to determine which to trust. Data Governance solutions from Informatica, including Data Quality, help to ensure that this issue is a problem of the past.

GW is also using Informatica metadata management tools to visualize the end-to-end flow of data throughout their environment. This gives them the data transparency they require while also helping to manage change to the data integration environment, without introducing errors.

"The quality and consistency of data is often what separates good decisions that move a business forward from costly poor decisions that can put you on the wrong path," Roljevic says. "Informatica has a proven track record as a reliable tool for enabling quality data and governance. It's instrumental in helping us document data definitions and assumptions so everyone is working from the same information, discovering insights and taking smarter actions."

Immediate returns

Even as the first step in a longer-term data transformation strategy, adopting Informatica has made an immediate impact across a number of GW's core business intelligence functions.

"Automating data delivery and standardizing data quality parameters alone has already pushed our BI plans further along than we could have gotten with more manual processes," says Roljevic. "It's freed up resources to focus more on planning future integrations or expanding self-service BI and governance capabilities to other departments while also creating an environment in which decision makers across campus can proactively seek out the data they want on their own."

Roljevic says that the freer flow of consistent and accurate data from an integrated environment has helped operationalize change at the university and delivered additional data-oriented capabilities like real-time or near real-time reporting across a number of departments and business functions. As a result, more than 500 researchers can now generate specific reports to visually manage their grant budgets and be alerted when new funding becomes available.

Similarly, deans of GW's different schools will be able to leverage this same information to generate a real-time snapshot covering the entire research portfolio in their respective departments and confidently determine how to allocate research resources. As an example, The Office of the Vice President for Research is taking advantage of timely data delivery to automate the production of reports and improve the efficiency of its operations.

"Informatica has fundamentally altered how we view and interact with data," Roljevic says. "Armed with the transparent data access, we are able to discover new insights and take informed actions."

The road ahead

GW's data-first approach has garnered the respect of peers and earned them the esteemed National Association of College and University Business Officers (NACUBO) Innovation Award. Roljevic says that the award is validation that her team is on the right track.

Looking ahead, GW plans to incorporate other information systems and continue

scaling its data governance and big data analytics initiatives with an eye toward building predictive analytics capabilities around enrollment and student retention.

Roljevic says. "The further we get into this transformation, the more comforting it is to know that our agile BI approach is supported by a partner with powerful technologies, data integration expertise and a responsive team of professionals."

Benefits:

- Institutionalized BI and Data Governance
- Introduced a variety of dashboards for actionable insight including: travel and expense, missing grades, general ledger, financial trends and enrollment
- Accelerated time to insight discovery by replacing manual integration with pre-built connectivity and friendly data management interfaces
- Reduced operational overhead by accelerating report compilation time by as much as 100 person-hours
- Earned prestigious NACUBO Innovation Award for innovating

Inside the Solution:

- Informatica PowerCenter
- Informatica Data Quality
- · Informatica Intelligent Cloud Services
- Informatica Global Customer Support



Digital transformation is changing our world. As the leader in enterprise cloud data management, we're prepared to help you intelligently lead the way. To provide you with the foresight to become more agile, realize new growth opportunities or even invent new things. We invite you to explore all that Informatica has to offer—and unleash the power of data to drive your next intelligent disruption. Not just once, but again and again.

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