

# Indiana University Improves Strategic Decision Making Across the Organization Using Data Virtualization



## INDIANA UNIVERSITY

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### Industry

Education

### Profile

Indiana University (IU), a multi-campus institution with 8 locations spread throughout Indiana, serves a student body of more than 114,000 individuals and boasts more than 21,000 employees. Ranked 38th amongst public colleges by Forbes Magazine in 2022 Indiana University is also recognized as an “R1: Doctoral University – Highest Research Activity” by the Carnegie Classification<sup>TM</sup> and operates with an annual budget of \$4B.

***“The Denodo Platform is at least three integration tools in one and likely more. We routinely discover new and inventive ways to access data using the platform.”***

Daniel Young  
Chief Data Architect  
Indiana University

As with most educational institutions, Indiana University (IU) has had a long history in business reporting and business intelligence, dating back to the days of the mainframe. Recently, the university began a new, multi-year project called the Decision Support Initiative (DSI), dedicated to helping IU improve decision making through enhanced data, models, and processes. DSI aims to improve access to data and analytic technologies, thereby providing transparency across the IU system, leading to better-informed decision outcomes.

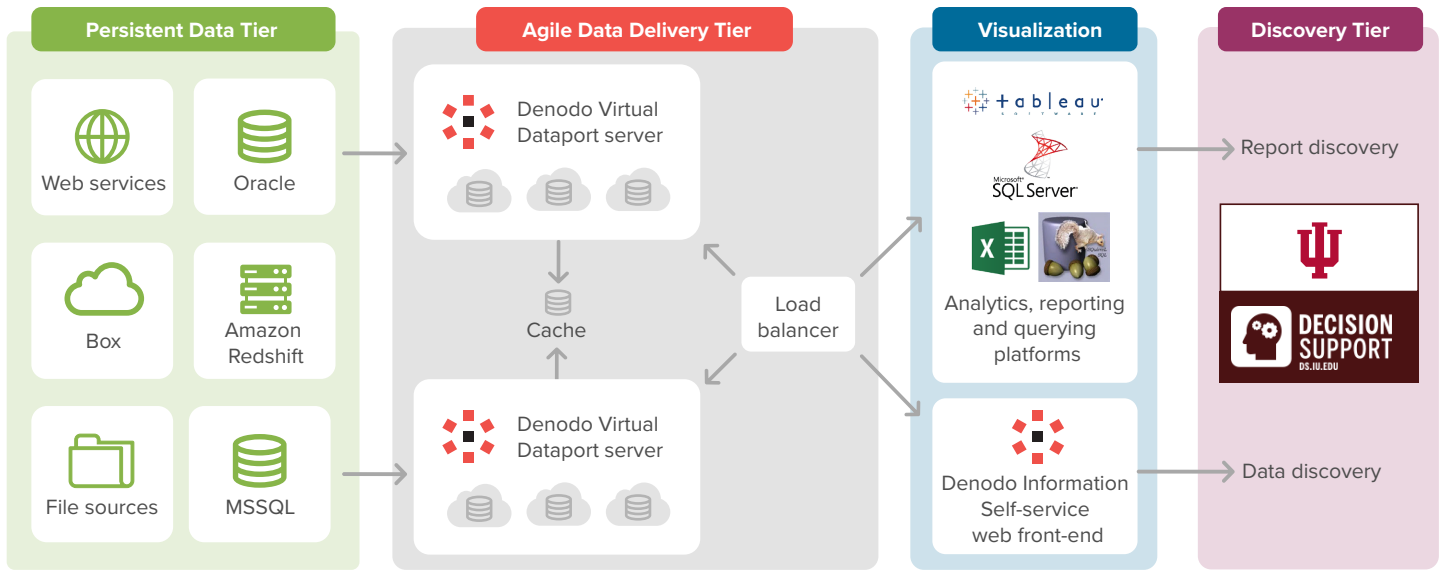
### Challenges

To empower decision makers and enhance decision making at all levels within IU, the university needed to drastically increase the availability of timely, relevant, and accurate information. Historically, data and its corresponding business logic were stored across multiple, siloed systems, making it extremely time consuming to gather and combine the relevant information decision makers needed. In some cases, data activities would fail entirely as required data elements could not be found and no common definition of sources of record were kept. Furthermore, the university’s data integration toolset, primarily built around ETL processing, required broad skillsets and scarce resources to deploy, maintain, and manage. As a result, the development time needed for information access was long—so long, in fact, that by the time data was retrieved, it was often less useful or even irrelevant for decisions.

In addition to the noted challenges of data and development timeliness, data security and privacy were also at risk within the traditional university reporting approach, as row-level access controls were integral only within the enterprise data warehouse (EDW). Other data sources and reporting environment offshoots (shadow systems) outside the EDW often lacked this same, fine-grained access control, thereby increasing the possibility of a compromise.

### The Solution

Responding to these historical challenges and preparing for the future, members of the DSI team focused on the creation of a single system of easily consumable information assets to meet the data needs of the university. Harnessing the power of data virtualization, IU chose the Denodo Platform to create a logical data warehouse (LDW). In this particular architecture, Denodo connects the university systems of record to data-consuming applications, providing heterogeneous data connectivity, delivery, security, and governance services. With Denodo, IU has successfully combined data sources such as Oracle, MS-SQL, Amazon Redshift, Web services and Box.com, securely serving information to consuming applications such as Tableau and Excel. Perhaps most importantly, the Denodo Platform vastly improves the university’s security and compliance posture, providing fine-grained access control and auditing across data sources of many types. With Denodo, user management is simplified via active directory groups and SAML integrations, providing the right access to the right users at the right time.



## Benefits

With the logical data warehouse in place, decision makers at Indiana University now have ready access to the data they need, when they need it. The Denodo Platform seamlessly delivers the information required to improve outcomes while requiring fewer technical resources, improving security, and enhancing agility when compared to its traditional data warehouse forerunner. In fact, the university is leveraging the Denodo Platform well beyond the LDW, satisfying data blending and access needs through use of Denodo java extensibility in new and inventive ways. Although still in its early days, the Denodo Platform shows great promise of becoming IU’s enterprise platform of choice for information access and management, including self-service business intelligence.

Benefits of the Denodo Platform:

- The Denodo Platform has significantly improved information agility across the university. Data can now be defined and accessed almost instantaneously, no matter where it resides and with minimal effort.
- Diverse data spread across the entire enterprise can now be accessed securely with a proper authorization structure. Rules can be applied no matter when the data is accessed or where the data is stored.
- Core Business Intelligence logic is becoming centralized, thus reducing duplication of effort and enhancing development efficiency.
- Indiana University now has a searchable data dictionary, which helps report writers find the data they need and help improve the self-service experience when using the Denodo Information Self-Service tool.

## About Denodo

Denodo is a leader in data management. The award-winning Denodo Platform is the leading data integration, management, and delivery platform using a logical approach to enable self-service BI, data science, hybrid/multi-cloud data integration, and enterprise data services. Realizing more than 400% ROI and millions of dollars in benefits, Denodo’s customers across large enterprises and mid-market companies in 30+ industries have received payback in less than 6 months.