INSIGHT PAPER

Get Your Data Infrastructure AI-Ready

The 2025 Playbook for Education Leaders

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Only a few years ago, the question for most colleges and universities was whether their data was accessible and structured to support basic reporting and analytics needs. That remains a stubborn challenge for most institutions, but now a new question needs to be asked, raising the bar still further on every campus data management system: Is your data AI-ready?

In this insight paper, EAB discusses the persistent shortcomings of current campus data management practices, explores the potential for generative AI to widen access to data and analytics across campus, and shares what you need to do to bridge the gap between the present and an AI-powered future. After you read this paper, we hope you have a better understanding of four things:

- How the shortcomings of current data management systems and practices lead to widespread frustration across campus, with lack of access to data and the costs institutions incur as a result
- Why colleges and universities that invested in early data warehouses to solve these shortcomings have been frustrated with the results, and why EAB believes the answer lies in adopting a true data management platform (DMP)
- How institutions with data management platforms have been able to take advantage of generative AI to greatly expand access to data and accelerate results for end-users
- Why incorporating unstructured data (primarily text files) into our data management systems promises to decrease time spent on (often repetitive) administrative tasks for faculty and staff alike

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1 Struggling to Support Existing Campus Data Needs

College and university IT and data analytics infrastructure—struggling just to support existing campus data needs—is not ready for the AI advances transforming the workplace across other industries.

Talk to any CIO or IR director in higher education and they can easily list all the shortcomings of their college or university's IT and data analytics infrastructure: legacy systems not built for integration; explosion of siloed source systems across campus; myriad point-to-point system integrations; "black-box" data warehouses; limited or no data governance; BI tools only experts can use, and so on (see the section in teal, pages 3-5).

The immediate effects of underinvesting in current campus IT systems and data analytics—overwhelmed IT and IR staff, and end-users on campus starved for access to the data they need—ultimately result in slow institutional decision-making and frustrated administrators and staff. But arguably even more concerning is the real possibility that higher education will be left behind as other industries adopt AI to greatly expand access to data and automate paper workflows and manual processes, thereby dramatically increasing productivity and reducing costs.

The Shortcomings of College and University IT and Data Systems

Why do most colleges and universities have so much trouble accessing the data and information they need and getting it to end-users on campus?

In many, if not most, cases, it's a problem that starts with higher education legacy systems that weren't built for integration. And that problem has only gotten worse. Over the last decade, especially with the advent of cloud-based technology, most schools have gone from having three to four centralized core systems on campus to dozens or hundreds.

Over that same time, IT staff have been overwhelmed with one-off requests to link many of these systems to one another, resulting in a Byzantine maze of "point-to-point" integrations, with no central repository containing all data on campus. Analyzing many of the challenges facing universities requires bringing together data from multiple systems, something that point-to-point integration doesn't allow. While a growing number of colleges and universities have deployed data warehouses or lakes, the data is too often unorganized or organized in a way that makes it hard to use for analytics and reporting. And despite the current trend toward technology consolidation, schools still need to integrate a high number of systems and point solutions.

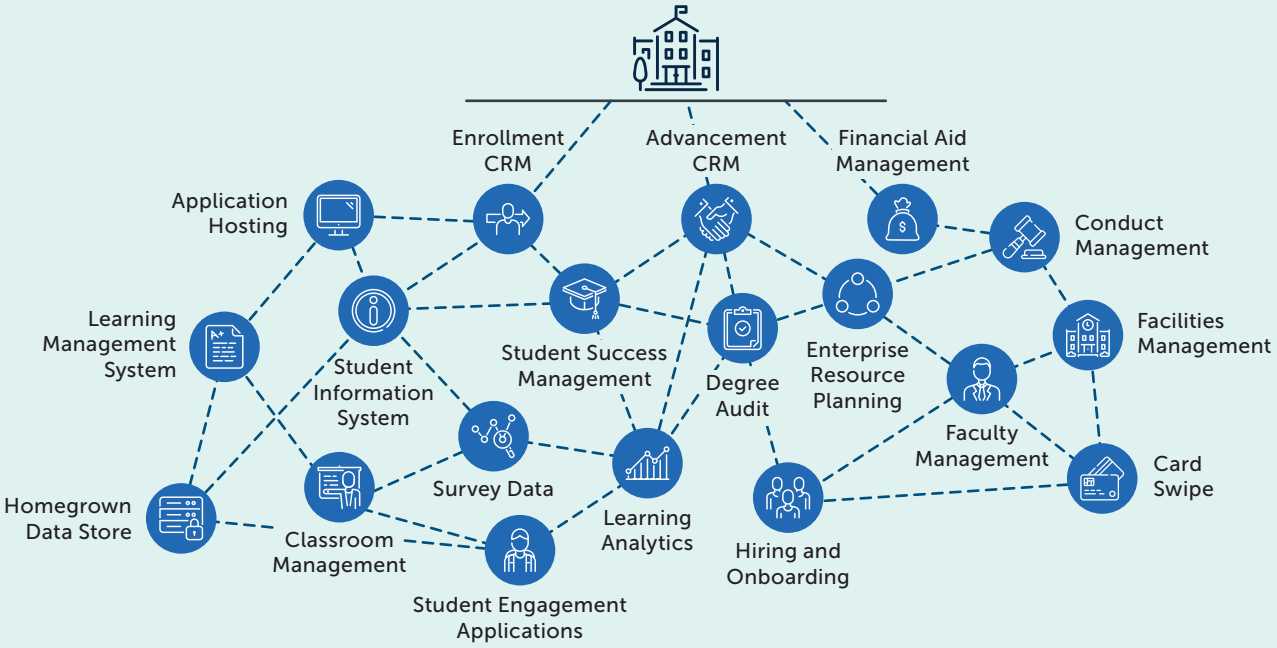
45%

of IR departments say all campus data is available in a central repository[1]

The number of new integrations we've built has doubled every year for four years. We did 80 this year. Trying to scale what we're doing is just not sustainable."

Director of Enterprise Infrastructure, Large Public Research University

IT Staff Overwhelmed by One-Off Integration Requests, Leading to "Architecture by Accident"



Even where data is integrated, having it initially collected and housed in multiple systems—often "owned" by one department or unit—inevitably leads to poor data governance. Different units across campus often have their own ways of defining broadly applicable terms, such as "student" or "section fill rate," that can lead to multiple versions of the truth and arguments over data quality, which slow down decision-making. Finally, because of poor data governance (no accepted campus-wide data definitions, few rules defining who can access what data, and other challenges), IT departments most often err on the side of protecting data privacy by limiting who on campus can access IT systems.

Key Challenges to Successful Data Governance

	Common Behavior	Negative Impact
Data Definitions	Units create their own data definitions and do not make them public	Multiple definitions of common terms
Data Collection	Workarounds and placeholder data are used at the unit level	Low adoption of central data and reporting tools, leading to data denial
Data Systems	Analysts and others store data in Excel spreadsheets and other "shadow" systems	Errors are corrected only in frozen data, not source systems

We're currently in our third iteration of getting a data governance effort off the ground. When our last Provost left, so did the enthusiasm for the effort. That just can't be the case."

CIO, Regional Public University

Finally, accessing and analyzing data on campus, whether housed in a central repository or not, requires a level of technical expertise few university staff possess. Extracting data requires knowing a programming language (typically SQL) as well as where different data is stored in the repository. Analyzing data and creating reports entails using tools like Power BI and Tableau. Combined with poor data governance (which often causes IT to restrict data access), a high bar of technical expertise results in IR staff having to handle almost all data requests as well as generate reports.

IR Staff Swamped with Ad Hoc Requests, Creating an "Analytical Bottleneck" on Campus[2]

$10,000
fully loaded cost per ad hoc report

3,500
hours spent on ad hoc reporting over 12 months at one research university

3–6
week backlog for typical unit-level requests

2 The Cost of Current Shortcomings

The existing (often hidden) costs of higher education IT system and data shortcomings: overwhelmed IT and IR staff, frustrated administrators, and slow decision-making.

In our conversations with cabinet-level college and university leaders, the suggestion that their campus's IT infrastructure is inadequate to meet institutional needs is often met with surprise. Many share that they themselves have little or no trouble getting the data and reports they ask for. And though the requests might be fulfilled slowly, they are still fulfilled. That may be true, but what these senior leaders too often don't see are the hidden costs involved in responding to their requests, or that the same access to data and information isn't enjoyed by all other administrators and staff on campus.

Most Institutional Research and data analytics staff will admit they prioritize cabinet-level requests for data. But given IR staffing levels at many institutions, that leaves little room for all other requests from across campus, which therefore get short shrift, turning the IR department into what one director referred to as the "analytical bottleneck."

Indeed, while Institutional Research staff overwhelmingly report that they serve as the institutional experts in data and analytics, only 37 percent say they have the capacity to meet all stakeholders' data needs, despite spending significant time handling ad hoc requests. (It's also worth noting that IR staffing levels have fallen in the last few years at most institutions due to tighter university budgets.)

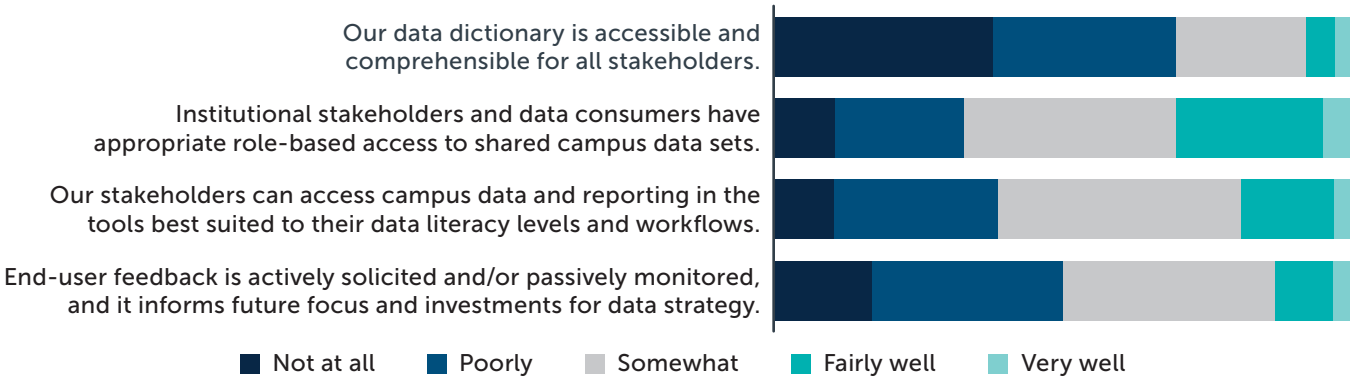
37%

of IR staff report they have capacity to meet campus data needs[3]

That lack of time and capacity shows. When asked, 40 percent of IR offices admit data and information are not widely available across campus. End-users on campus are even less positive about access to the data they need. The figure at the top of page 7 shows end-users across most campuses give mediocre to poor grades to their institutions when it comes to data access, ease of use, and responsiveness to their data needs. The result is long waits for data and reports, which invariably slows down decision-making and the time it takes to complete tasks.

Data Users Give Mediocre Grades to Campus Data and Analytics Support[4]

To what extent do the following statements describe your institution?
(n=653 higher ed data users and stewards)



And it's worth noting this doesn't include the many groups on campus who don't even know how to ask for data. And little wonder, since—given how busy they are handling data requests—fewer than half of IR offices say they're even able to provide education or coaching to enhance data literacy.

Measuring Your Campus's Decision-Making Speed

Besides surveying its own staff on their access to data and its effect on their work, campus leadership should audit its institution's ability to get answers to critical questions. In this infographic, we've assembled 84 strategic research questions for colleges and universities. If you tried to answer these, how often is accurate data either missing or too hard to obtain?

Low Data Literacy Among Faculty and Staff[5]

IR office leaders who agree the group has high data literacy

42%	35%	10%
Faculty	**Institutional Staff**	**Staff**

As the survey data above shows, few people on college and university campuses are well served by the current state of information systems, data access, or quality.

IT System and Data Shortcomings Frustrate Everyone

- **Cabinet-Level Leaders**
  - Debates over data accuracy stall progress on critical initiatives
  - Out-of-date information risks costly missteps
  - Costs—in IT and elsewhere—continue to balloon without a clear understanding of why
- **Administrators and Department Heads**
  - Data requests are filled slowly, if at all
  - Metrics aren't standardized across schools and departments
  - Lack of trust in the data leads to inaction and often lackluster outcomes
- **Faculty and Staff**
  - If data origins are unclear, it's hard to get buy-in for new priorities
  - A desire to improve student outcomes is left unfulfilled if data questions persist
- **IR Offices and Analytics Groups**
  - The reporting queue grows longer, with many of the same requests appearing repeatedly
  - Compliance reporting zaps all bandwidth, leaving little time for strategic analyses
  - Manual, archaic processes hurt morale and lead to staff turnover
- **IT Departments**
  - Custom integrations are difficult to maintain when systems change
  - Staff shortages create high workloads
  - Redundant systems increase costs and security vulnerabilities

3 Higher Ed Lags Behind Other Industries in AI Adoption

Struggling to keep up, colleges and universities lag behind other industries in leveraging AI tools to expand access to data, automate workflows, and reduce costs.

Due to the challenges and costs to maintain current data ecosystems, most campus IT and IR staff are unable to take advantage of emerging applications of AI in information management. In the corporate world, on the other hand, rapid advances in artificial intelligence are already enhancing data access and workforce productivity. For example, companies are deploying AI tools to get data to their end-users much more quickly, drastically reducing the technical know-how and expertise needed to analyze data, eliminating the "analytical bottleneck" that so many colleges and universities struggle with.

Even more exciting, companies are using AI to help employees find and use unstructured data that was previously hard to navigate: all the text documents, reports, files, emails, contracts, images and so on that comprise most of the information in any organization. Employees can now quickly find answers and information by entering a prompt, with AI drawing on all relevant text documents, reports, and files stored across an organization to deliver what they need. Further, with AI accessing unstructured data, companies are starting to automate paper-intensive, repetitive workflows, greatly increasing workforce productivity.

Think of all the time people on campus spend trying to find answers and information, especially related to administration. A researcher needs to close out a grant—what are the policies and procedures she needs to follow? A manager is writing a new job description—are there other similar positions across campus, and what HR compliance policies and procedures does he need to follow? The business office needs to identify all vendor contracts across campus up for renewal in the next six months—where is this data stored?

80%

of all global data is unstructured (text files, images, videos, emails, etc.)[6]

The Analytical Bottleneck in Practice: How Do I Close Out My Research Grant?

Research Faculty Forced to Search Multiple Campus Data Sources for Information

These are just a few examples of the myriad administrative and work tasks faculty, staff, and students face every day, with the biggest obstacle to getting them done quickly often being finding the necessary information.

By using AI to help faculty, staff, and administrators get answers more quickly, and especially by using AI to automate repetitive and time-consuming tasks, McKinsey & Company estimates higher education could reduce administrative costs by up to 30 percent.[8]

44%

of a typical faculty researcher's time is taken up by administrative tasks[7]

> *As artificial intelligence (AI) becomes more effective and machine learning becomes increasingly capable of internalizing complex concerns, we approach an age where faculty and staff can be relieved of many labor-intensive, but ultimately rote, tasks."*
>
> **Learning House report[9]**

Case in Point—The cost of manually reviewing university expense reports

A survey of financial administrators found institutions spend on average 2,000 hours each month manually reviewing expense reports and invoices, with errors in approximately 25 percent of reports.[10]

EAB is skeptical that productivity gains of the magnitude described in McKinsey's research will be available any time soon to higher education (or to the corporate world for that matter). That said, there are practical AI applications available now that would help make information of all sorts easier to find across campus. Our research tells us, however, that relatively few colleges and universities are able to take advantage of them.

4 The Journey to Being AI-Ready

Where is your college or university on its journey to leverage AI to expand and speed access to information for all campus users?

Based on our work with more than 2,500 colleges and universities across the country, EAB has provided a rough estimate of where higher education institutions are in their journeys to overcome existing IT and data system shortcomings, as well as to leverage AI. As you can see in the grid on pages 12 and 13, the vast majority (70 percent) are still in the early stages, with either little more than "point-to-point" integrations of their myriad source systems and applications (what we term "architecture by accident") or with only an early-generation data warehouse.

Moving to the right, 15 percent or so of institutions, in our estimation, have largely overcome the shortcomings of their existing systems by employing strong data management platforms. An even smaller number are starting to deploy AI to speed access to data and bring in unstructured data. Finally, a small group are automating work and employing the much-talked-about autonomous "AI agents," which are still in their early stages even in the corporate world.

Auditing Where Your Institution Is on Its Journey

In our experience, smaller colleges and universities predominate in the two earlier stages in our framework, while those institutions to the right tend to be larger research universities. To help you gauge where your institution falls, we've included a version of this grid formatted as a checklist at the back of this paper on page 26.

A Maturity Framework for Higher Education Data Management

	Architecture by Accident *Little to no centralized data environment or governance structure*	**Breaking Down Silos** *First-generation data lake or warehouse with some data ingested and defined*	**Building a Data Management Platform** *Central repository of 60%+ of institutional data that is defined and accessible to power users*
Data Storage	Data is stored only in the source systems that generate it.	There are integrations between source systems.	Data is stored in a centralized database accessible to technical users.
Data Governance	Data definitions and permissions are managed independently by the owner of each system.	Campus leadership has made some decisions about definitions and data access, but it is up to each system owner to implement those decisions.	There is an established process for making decisions about data definitions and permissions that is generally understood and followed.
Reporting and Analytics	Data is stored in the format generated by its source system and reports are written in an ad hoc manner as they are demanded.	Data is transformed from the application data model to a more usable data model, and queries that power common reports are saved and reusable.	Data is organized into a centralized data model where data from different systems can be joined together. The institution possesses tools for reporting and BI.
People and Culture	Systems have different owners, and knowledge of and access to those systems often depends on the willingness of the system owner.	There are a few campus leaders and data experts who can get things done across silos, but progress and knowledge are dependent on those individuals.	Access to most data is managed by a team (usually IT or IR) in which knowledge is shared and policy is written down.
AI Readiness	Some individuals at the institution may have used AI tools on their own, but there has been no institutional effort to adopt AI.	Individuals are encouraged to use AI chatbots (ChatGPT, Gemini, Perplexity) to accelerate their work.	The institution is purchasing AI licenses (e.g., ChatGPT) or tools (e.g., CoPilot) for its employees and expects them to use AI in their work.
Estimated Schools in This Stage	40%	30%	15%

AI-Ready

Modern and AI-Ready *80%+ of core data and ancillary data are integrated in a well-organized repository with clear business definitions and governed access*	**AI Is Accelerating the Insight Cycle** *Structured and unstructured data is centralized, with clear metadata signposts for AI; users access intel with confidence*	
Data is stored in a data warehouse with a user-friendly UI that is accessible to non-technical users.	AI is used to help write the SQL that both builds the tables in the data warehouse and helps less- or non-technical users access the data. Contributing to the data warehouse and accessing its contents is opened to new classes of users.	**Data Storage**
There is a transparent and accessible centralized system where data definitions, business logic, and permissions can be viewed and managed by all who need access to them.	AI is used to both write and read data governance documentation. Documentation of data sources and modeled data is created by the AI introspecting tables and SQL to describe their contents. Searching and synthesizing documentation can be performed with AI-powered user assistance tools.	**Data Governance**
Data is organized into a reporting- and analytics-friendly data model and stored in a location that is integrated with reporting and BI tools .	AI is used to write reports, interpret the content of reports, and generate data visualizations. AI can configure reporting or BI tools and write the SQL that underlies reports and BI dashboards.	**Reporting and Analytics**
Knowledge is passed through documentation and decisions are governed by process. Turnover can be confidently managed by the system.	An AI-forward culture exists in which both junior and senior employees use AI for their work and have a strong intuitive understanding of AI's capabilities and limitations.	**People and Culture**
The institution is building or buying AI solutions that are fully customized with its own data.	The institution has and uses AI tools as integral parts of multiple workflows and applications, wherever it is useful and appropriate.	**AI Readiness**
10%	<5%	**Estimated Schools in This Stage**

5 Getting Your Data House in Order

A strong data management platform is a foundational and necessary first step to be AI-ready.

Many institutions believe simply replacing their current Byzantine network of point-to-point system integrations with a data warehouse will solve most, if not all, their problems accessing data. But universities that had a data warehouse and then went on to employ a data management platform (DMP) will tell you that only the latter will completely solve your existing IT and data shortcomings.

What Is a DMP?

A data management platform (DMP) is a vendor-agnostic technology solution that integrates, organizes, and governs access to data from multiple sources. In the context of higher education, a DMP should, at a minimum, connect data from your student information system, learning management system, enrollment and advancement CRMs, ERP, and other common data sources, such as survey, IPEDS, and National Student Clearinghouse data. A higher ed DMP will structure data in a model that is organized around common college and university reporting principles, thus ensuring that data is accessible to both technical staff and non-technical data consumers.

A data warehouse places all campus data in one central repository, making it possible for a data analyst who knows the warehouse well to pull the data needed to answer stakeholder questions. But there are limitations in most data warehouses that make them difficult to use even for the data experts who know them well, and a black box for everyone else on campus.

Most higher education data warehouses we see use data models that are not suitable for reporting and analytics. Instead, they most often use the data model native to the application the data came from or a model optimized for storage efficiency. Even the institution's data experts, who know where different data elements reside, must spend hours writing complicated queries to extract and manipulate the data they want. And with most data warehouses, it's almost always the campus data expert who must query the warehouse. Faced with thousands of tables, columns, and rows of data (often with the same data replicated in different places), most potential data warehouse users would have great difficulty finding what they're looking for or knowing which data sets are most reliable.

There's only one person on my team who really knows his way around our data system. He's been here a long time. If he leaves or retires, we're in trouble."

Director of Decision Support, Private Liberal Arts College

Common Data Warehouse Limitations

- Not all source systems included
- Data is "dumped," not organized or mapped
- Data model unsuited for higher education analytics and reporting
- No commonly accepted data definitions vetted by functional users
- Preferred ("gold standard") data sets not identified
- Inadequate permissioning framework
- "Key-Man" dependent (handful of expert users)

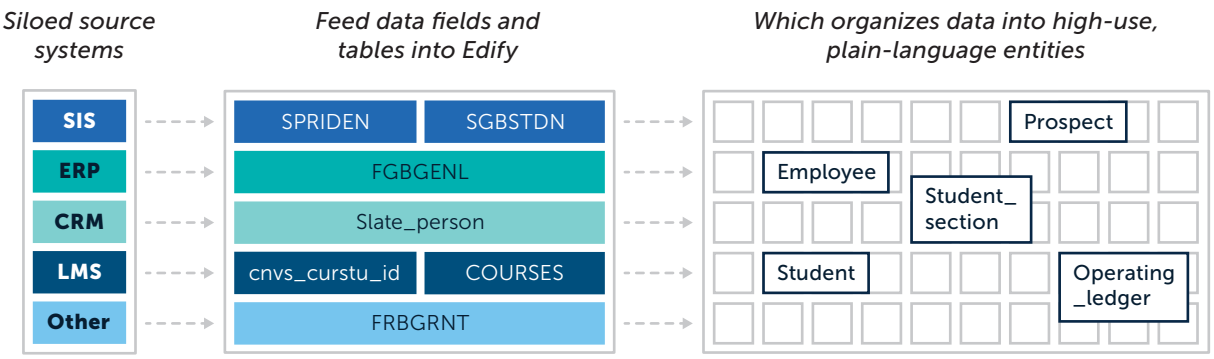
The fact that warehouses are accessible only to a handful of super-users on any campus also means few IT departments bother to build out a framework for provisioning and monitoring permissions, which only further places the analytics burden on a handful of expert users. No wonder IT and IR staff are overwhelmed responding to ad hoc data requests, and stakeholders across campus complain about lack of access to data.

At EAB, we built a higher education-specific data management platform called Edify to solve these problems. We designed Edify with these characteristics of a best-in-class DMP in mind:

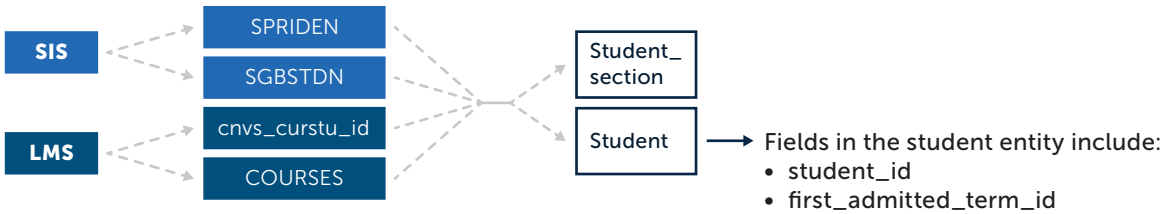
First, a strong DMP is truly vendor agnostic and can ingest data from any and all source systems efficiently. Efficiency here is measured in hours, not months. This may seem obvious, but to be AI-ready, it is a critical first step. Without a central repository, your IT team will have to spend large swaths of time establishing and then managing point integrations to every system the AI needs to access.

Second, a strong DMP leverages a higher education-specific data model built for institutional reporting and analytics, making it far easier and faster for users to get the answers they need. Edify's data model, for example, organizes data from campus systems using plain-language terms so data users don't have to decipher confusing table names and technical jargon. For AI-driven insights, the more data context available, the better.

Meet the Higher Education-Specific Data Model at the Heart of Edify



What this looks like in practice



Fields in the student entity include:

- student_id
- first_admitted_term_id
- ncs_pdp_first_gen_code
- is_athlete
- latest_lms_login_date

For more about Edify, see page 24.

Third, a DMP is equipped with a data dictionary or catalog that documents where relevant data is located, where it came from, which fields have the most reliable data, and what the accepted data definitions are (e.g., graduation rate, student, section fill rates). Documentation of the data and relationships among tables is critical for AI. These are the signposts that can substantially accelerate AI's ability to get insights from a relational database. AI requires API-accessible metadata to easily understand where to go to find the data you've asked for and how to interact with the database.

Finally, a DMP has a well organized framework for provisioning and monitoring permissions. While data governance is primarily a human process of setting policies, there are technical tools for helping to implement data governance policies. The two most important are the clear and centralized documentation of data resources and the transparent control of permissioned access to data. Once your data is stored in an AI-accessible location, the next most important thing that a technology leader can do is ensure that their data is well documented and permissioned to limit what people and AI can access. Providing clear guidance and having articulated governance policies in place not only protects data but also gives all stakeholders on campus the confidence they need to engage in AI initiatives.

With a data model built to support higher education analytics, a data dictionary, and a clear permissions framework, a DMP allows for faster and expanded access to reliable data across campus.

Essential Elements of a Best-in-Class DMP for Higher Education

- Includes 80%+ of critical campus data
- Organized in a higher education data model
- Defined by nontechnical nomenclature, making analytics and reporting accessible to staff
- Contains a comprehensive data catalog and AI "signposts"
- Provides a framework for provisioning and monitoring permissions

6 Using AI to Accelerate Finding and Analyzing Data

Leading universities are anticipating end-user needs and using AI to accelerate finding, extracting, and analyzing data.

While a Data Management Platform (DMP) makes it easier for more staff across campus to access data and do their own reporting and analytics, end-users may still need to know SQL or how to use analytics and reporting tools like Tableau and Power BI. A small but growing number of colleges and universities are looking to ease the burden they're placing on campus users.

First, data analytics staff at these universities are anticipating common data and reporting needs by building dashboards that provide commonly-asked-for data and reports. These dashboards typically cover critical areas of concern to most institutions, providing KPIs and trend data around student success, enrollment, financial sustainability, advancement, and so on.

Unfortunately, as these universities will tell you, there is a long tail to end-user data requests, and it's impossible to anticipate most. A strong DMP, equipped with a data dictionary or catalog, makes it easier for end-users to find data, but still time-consuming; and then, of course, users need to know the ins and outs of SQL to get the data out.

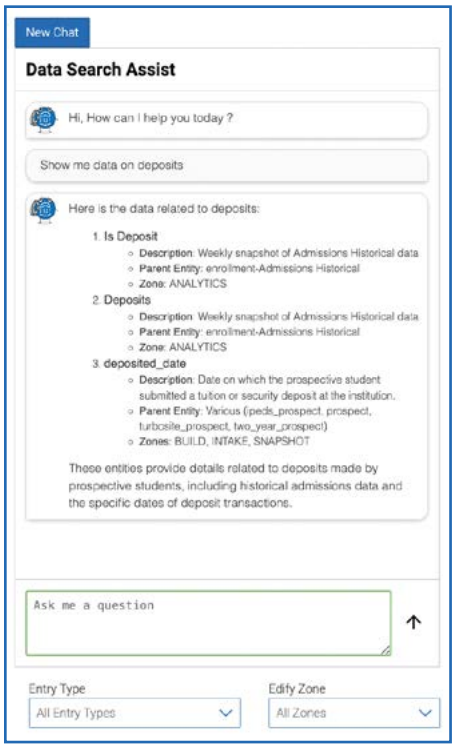
To simplify both tasks, these universities are leveraging AI. First, they are using AI to provide near-instant answers to initial user data questions:

- Do we even collect and store the data the end-user is looking for?
- Where is that data in the platform?
- If there are multiple places where a data point is housed, which is the "gold standard"?
- How is the data element defined?

Second, institutions are deploying AI to enable natural language querying in the system, rather than forcing all users to know and use SQL. At EAB, this is a hallmark of our approach to data management and how we've developed our technology solutions.

It is also important for campus leaders to be cognizant of the potential pitfalls AI tools can lead users into, including hallucination, biased answers, and the inadvertent revelation of sensitive data. To ensure responsible use and deployment of AI, leaders must be sure their tools match accurate, specific context to each prompt, manage AI permissions with the same diligence as human permissions, and reduce hallucinations to the greatest extent possible.

Edify's Generative AI tools can find data the user needs quickly and ...



Users of any technical ability can ask questions about the content, location, structure, and meaning of data stored in the DMP and get easy-to-understand answers.

... Turn requests into reports just as fast

Users write a plain-language description of the data they need and instantly receive executable SQL code to retrieve the data and create a report.

Want to see these AI tools in action? Visit this page to schedule a demo.

> *Right now, you would still need to be familiar with SQL to check that there weren't any mistakes in the code generated by AI. But the technology is improving so fast, it won't be long before that's no longer the case."*
>
> **Jim Mathews, Chief Technology Officer, EAB**

7 Boosting Workforce Productivity with Unstructured Data

A handful of universities are joining corporations by providing access to unstructured data, saving faculty, administrators, and staff countless hours finding the information they need.

Getting to right decisions faster is one benefit of investing more in a strong data management platform outfitted with AI capabilities, and it's where EAB would recommend most colleges and universities focus their attention. A handful of universities, however, are joining many large corporations in going after the huge productivity gains presented by improving access to unstructured data.

Unlike structured data, numbers that fit neatly in tables, rows, and columns and are easily manipulated in relational databases, unstructured data comes in all shapes and sizes. Think of policy and procedure documents, vendor contracts, internal web pages, course catalogues, degree requirements, job descriptions, research grant guidelines and rules—the tens of thousands of written pages housed everywhere across an institution. And as with structured data, that's the problem. There is no central repository for unstructured data, and even if there were, there is no organized way to store it.

Examples of Unstructured Data on Campus:

- HR hiring policies
- Job descriptions
- Faculty tenure guidelines
- Research grant guidelines
- Course descriptions and catalogues
- Academic department web pages
- Vendor contracts
- Finance forms and policies

The lack of access to and organization of this data is a huge problem (and equally large opportunity) confronting college and university staff, who must spend countless hours tracking down the information they need, often having to pull documents and review pages from multiple places to piece together the answer they're looking for.

A handful of universities are beginning to tackle this problem. First, they're centralizing all campus unstructured data in a non-relational database or the cloud, using metadata, indexing, and tagging to make all this data accessible. The traditional data analytics tools used to make sense of structured data don't work with unstructured data. So instead, these organizations use AI and natural language processing (NLP) to allow end-users on campus to quickly find and synthesize the information they need. What took hours or days now takes only seconds or minutes.

UC San Diego, for example, has begun rolling out several "AI assistants" that help faculty and staff get answers to questions and complete work tasks using natural language prompts.

AI Assistants at UC San Diego Help Faculty and Staff Get Answers Quickly

The UC San Diego Assistant provides targeted answers to campus-specific inquiries.

The Job Description Helper assists in creating comprehensively accurate job descriptions.

The Fund Manager Coach guides users through the complexities of grants administration.

The Contract Reviewer accelerates legal contract reviews by automating initial redlining.

The Internet Search Assistant improves efficiency in conducting internet-based research.

The Email Phishing Analyzer enhances cybersecurity by identifying potential phishing threats.

The General AI Assistant supports efficient communication and the execution of general administrative tasks.

The Fund Manager Coach, for example, provides faculty with answers to questions about budgeting, grant proposals, financial transactions, payroll, and research compliance. In the past, faculty would have to search in multiple places to find answers to their questions.[11]

By automating repetitive administrative tasks and enhancing output quality, power users have experienced significant benefits, including a 60 percent reduction in time spent drafting job descriptions and an 80 percent improvement in policy and document searches. Another solution in development leverages an AI-driven ruleset to generate initial redlines on contract agreements, with early tests showing a 70 percent reduction in non-disclosure agreement (NDA) modification time."[12]

EDUCAUSE Review

8 The Next Frontier: Deploying AI Agents

The frontier for leading institutions is deploying AI agents to fully automate workflows and decision-making.

For the most part, AI today is great for gathering and summarizing information when prompted by a human being, or automating simple tasks, such as redlining a contract, by applying predetermined rules. The next frontier is AI that can act autonomously by taking information from its surroundings, analyzing it, making decisions based on what it finds, then acting to achieve a predetermined goal, all with little or no human intervention.

There are already AI agents in our lives today. For example, self-driving cars use sensors to build a model of their surroundings, then make navigation decisions based on that model. AI sales agents can create prospect lists, send personalized communications, qualify inbound leads, create and execute marketing campaigns, and even analyze competitor activities.

To date, we've seen few next-generation AI agents designed specifically for higher education and deployed at scale. But the possibilities are intriguing—and they're being developed right now. At EAB, we're actively building AI agents into both our student success CRM, Navigate360, and our data management platform, Edify. Our vision is for autonomous agents to work alongside our partners' staff to:

- Monitor key thresholds related to section fill rates and raise an alert for the faculty or department chair
- Monitor card swipe data to identify students that have not left their dorm in two weeks, and actively ping a student mentor to do a wellness check
- Instantly generate and personalize student outreach
- Find the right-fit report and filters on demand
- Generate best-fit course plans for students
- And more

We expect to see more applications like these in the next five years.

> *By 2028, 33% of enterprise software applications will include agentic AI, up from less than 1% in 2024, enabling 15% of day-to-day work decisions to be made autonomously."*
>
> **Gartner**[13]

The journey to being AI-ready starts today

AI is transforming almost every field of work, and while higher ed is traditionally slower than most industries to change, it won't be exempt from the continued AI revolution. To eventually realize the vision of reliable AI assistants taking on the rote work that currently eats up so much valuable time, colleges and universities must first attend to the pressing work of improving their data management: updating systems and practices across data storage, governance, analytics, and culture so that everyone on campus can confidently find and use data for decisions.

Now is the moment to get AI-ready. If you'd like to talk to an expert from EAB's Edify team about where to start, email **edify@eab.com**.

Explore These Resources for More on Data Management

Data Integration:

Watch this webinar to see how integration can fuel innovation across campus.

Data Governance:

Explore this infographic to learn five pillars of effective data governance.

Data Analytics:

Read this blog post about the power of predictive modeling with LMS data to improve student support.

EAB

Edify: A Data Management Platform Designed for Higher Ed

Build a Stable Data Foundation for the Future

Today's complex decisions require increasingly nuanced data and analysis. Mounting pressures highlight the need for data and technology to deliver value and drive change. But too often, data is stored in disparate systems, and questions pile up faster than you can answer them. **How could you accelerate progress on your most important initiatives if your data were ready to answer questions as they arose?**

Enrollment

- Are we predicted to hit enrollment targets?
- What if we adjust our financial aid strategy?

Fiscal resilience

- Where should we reallocate spending?
- Can we predict capacity needs for next semester?

Success

- Are we recruiting and supporting diverse students and faculty?
- What students are at the greatest risk of dropping out?

Engagement

- What if we adjusted our major gift strategy?
- Are local employers hiring our graduates?

OUR SOLUTION

Edify pairs powerful data warehousing technology with direct-to-user analytics tools in one single solution to activate your data for the decisions that matter.

Access, Warehousing, and Integration

Cloud-native, secure, infinitely scalable data lake and warehouse to support critical initiatives

Data Governance

Higher ed best-practice rules and validations to ensure a single source of truth

Reporting and Analytics

Self-service, custom, and pre-built analytics to drive efficiency and support decision-making

Extend Your Team's Capacity

AI

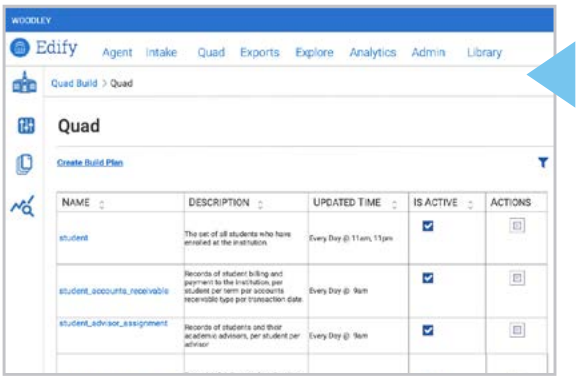
Interact with Edify in plain language to find, access, and report on trusted data in minutes

Professional Services

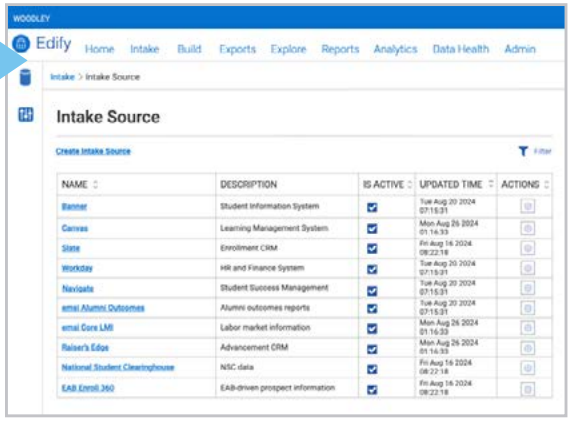
Work with experienced higher education data experts who understand your environment and goals

Make Better Decisions with Data Management Designed for Higher Ed

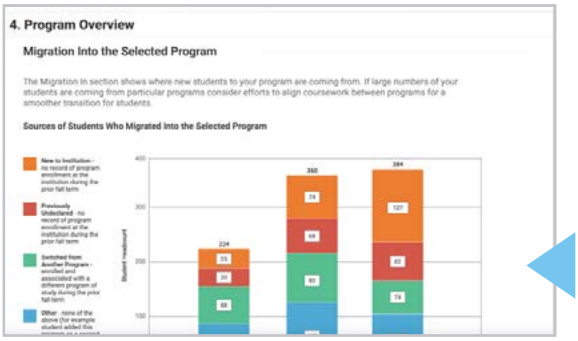
Inside Edify



At the core of Edify is a transparent and higher education-specific data model.



Edify can ingest data through a library of pre-built higher education system connectors or through custom extraction.



Edify supports no-code or low-code data exploration, analysis, and ad hoc reporting, as well as visualization through your preferred business intelligence tools. Our team of data experts will work with you to create user-friendly dashboards focused on your highest-priority needs.

OUR IMPACT

$115K

Year-one savings reallocated to student-centric initiatives

Oregon Institute of Technology

75%

Reduction in time required to make a data change across all systems

John Carroll University

3%

Increase in admit-to-enrollee conversion rate after identifying and addressing financial barriers

University of Montana

> "The ability to extend the value of my team is priceless."

Jim Burke, Chief Information Officer
John Carroll University

> "Without the infrastructure of Edify, strategic analyses are too labor-intensive. You're saving us having to hire a lot more staff."

Associate Vice President of Strategic Planning
University of Montana

Learn more and request a demo at eab.com/edify

A Maturity Framework for Higher Education Data Management

Assess your institution's data management maturity using the statements in this table.

☑ Check one box in each row to understand your performance on data storage, governance, and other elements of data management.

	Architecture by Accident *Little to no centralized data environment or governance structure*	**Breaking Down Silos** *First-generation data lake or warehouse with some data ingested and defined*	**Building a Data Management Platform** *Central repository of 60%+ of institutional data that is defined and accessible to power users*
Data Storage	☐ Data is stored only in the source systems that generate it.	☐ There are integrations between source systems.	☐ Data is stored in a centralized database accessible to technical users.
Data Governance	☐ Data definitions and permissions are managed independently by the owner of each system.	☐ Campus leadership has made some decisions about definitions and data access, but it is up to each system owner to implement those decisions.	☐ There is an established process for making decisions about data definitions and permissions that is generally understood and followed.
Reporting and Analytics	☐ Data is stored in the format generated by its source system and reports are written in an ad hoc manner as they are demanded.	☐ Data is transformed from the application data model to a more usable data model, and queries that power common reports are saved and reusable.	☐ Data is organized into a centralized data model where data from different systems can be joined together. The institution possesses tools for reporting and BI.
People and Culture	☐ Systems have different owners, and knowledge of and access to those systems often depends on the willingness of the system owner.	☐ There are a few campus leaders and data experts who can get things done across silos, but progress and knowledge are dependent on those individuals.	☐ Access to most data is managed by a team (usually IT or IR) in which knowledge is shared and policy is written down.
AI Readiness	☐ Some individuals at the institution may have used AI tools on their own, but there has been no institutional effort to adopt AI.	☐ Individuals are encouraged to use AI chatbots (ChatGPT, Gemini, Perplexity) to accelerate their work.	☐ The institution is purchasing AI licenses (e.g., ChatGPT) or tools (e.g., CoPilot) for its employees and expects them to use AI in their work.
Estimated Schools in This Stage	40%	30%	15%

☐ **AI-Ready**

Modern and AI-Ready *80%+ of core data and ancillary data are integrated in a well-organized repository with clear business definitions and governed access*	**AI Is Accelerating the Insight Cycle** *Structured and unstructured data is centralized, with clear metadata signposts for AI; users access intel with confidence*	
☐ Data is stored in a data warehouse with a user-friendly UI that is accessible to non-technical users.	☐ AI is used to help write the SQL that both builds the tables in the data warehouse and helps less- or non-technical users access the data. Contributing to the data warehouse and accessing its contents is opened to new classes of users.	**Data Storage**
☐ There is a transparent and accessible centralized system where data definitions, business logic, and permissions can be viewed and managed by all who need access to them.	☐ AI is used to both write and read data governance documentation. Documentation of data sources and modeled data is created by the AI introspecting tables and SQL to describe their contents. Searching and synthesizing documentation can be performed with AI-powered user assistance tools.	**Data Governance**
☐ Data is organized into a reporting- and analytics-friendly data model and stored in a location that is integrated with reporting and BI tools .	☐ AI is used to write reports, interpret the content of reports, and generate data visualizations. AI can configure reporting or BI tools and write the SQL that underlies reports and BI dashboards.	**Reporting and Analytics**
☐ Knowledge is passed through documentation and decisions are governed by process. Turnover can be confidently managed by the system.	☐ An AI-forward culture exists in which both junior and senior employees use AI for their work and have a strong intuitive understanding of AI's capabilities and limitations.	**People and Culture**
☐ The institution is building or buying AI solutions that are fully customized with its own data.	☐ The institution has and uses AI tools as integral parts of multiple workflows and applications, wherever it is useful and appropriate.	**AI Readiness**
10%	<5%	**Estimated Schools in This Stage**

Sources

1. 2021 AIR National Survey of IR Offices. https://www.airweb.org/resources/publications/studies-and-reports/national-survey#2021.
2. EAB interviews and analysis.
3. 2021 AIR National Survey of IR Offices.
4. EAB data strategy audits.
5. 2021 AIR National Survey of IR Offices.
6. "Tapping the power of unstructured data," MIT Sloan School, Ideas Made to Matter, February 1, 2021. https://mitsloan.mit.edu/ideas-made-to-matter/tapping-power-unstructured-data.
7. 2018 Faculty Workload Survey by the Federal Demonstration Partnership. https://thefdp.org/demonstrations-resources/faculty-workload-survey/.
8. "Notes From The AI Frontier: Modeling The Impact Of Ai On The World Economy," McKinsey Global Institute, McKinsey & Company, September 2018. https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Artificial%20Intelligence/Notes%20from%20the%20frontier%20Modeling%20the%20impact%20of%20AI%20on%20the%20world%20economy/MGI-Notes-from-the-AI-frontier-Modeling-the-impact-of-AI-on-the-world-economy-September-2018.ashx.
9. "Artificial Intelligence in Higher Education: Current Uses and Future Applications. Learning House." Learning House, 2018.
10. "Survey Finds Universities Waste Time on Manual Expense Reports," EdTech, July 25, 2019. https://edtechmagazine.com/higher/article/2019/07/survey-finds-universities-waste-time-manual-expense-reports.
11. Brett Pollak, Jack Brzezinski, and Vince Kellen, "Ushering in a New Era of AI-Driven Data Insights at UC San Diego," EDUCAUSE Review, February 20, 2025. https://er.educause.edu/articles/2025/2/ushering-in-a-new-era-of-ai-driven-data-insights-at-uc-san-diego.
12. *Ibid.*
13. "Intelligent Agents in AI Really Can Work Alone. Here's How," Gartner, October 1, 2024. https://www.gartner.com/en/articles/intelligent-agent-in-ai.

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ABOUT EAB

At EAB, our mission is to make education smarter and our communities stronger. We work with more than 2,800 institutions to drive transformative change through data-driven insights and best-in-class capabilities. From kindergarten to college to career, EAB partners with leaders and practitioners to accelerate progress and drive results across enrollment, student success, institutional strategy, data analytics, and advancement. We work with each partner differently, tailoring our portfolio of research, technology, and marketing and enrollment solutions to meet the unique needs of every leadership team, as well as the students and employees they serve. Learn more at eab.com.

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