

# No Exceptions: How UMass Transformed Their Data Culture



The University of Massachusetts Amherst Board of Trustees named Javier A. Reyes the school's new chancellor in July 2023. The ink wasn't even dry on the contract before an email popped up in Kristina Filep's inbox.

Can we get the chancellor trained on Flagship Analytics so he can have full access?" the sender wanted to know.

"We have a no exceptions policy...everybody has to come to training," Filep said.

Still, Filep was pleasantly surprised to get an email requesting training, not demanding access. That's the moment Filep, director of operational analytics for University Analytics and Institutional Research (UAIR) at UMass Amherst, knew the years-long culture shift around data at the university was complete.

Filep hopped on a Zoom call and walked Reyes through the training three months before he started the job. And Reyes, like just about everybody else Filep has trained, understood immediately the power of [UMass Amherst's Flagship Analytics](#), the university's analytics platform and the go-to resource for all institutional data exploration and reporting needs.



## BURIED IN SPREADSHEETS AND DISTRUSTING THE DATA

In 2018, before Flagship Analytics existed, UMass Amherst was “data-rich and knowledge-poor” according to Christopher Misra, vice-chancellor and chief information officer of the campus.

UMass Amherst possesses a wealth of data, covering budgets, enrollment, student success and retention, as well as admissions and financial aid. This information, however, was scattered across various systems and sometimes in different file formats. If the provost or a faculty member or a dean had a question, the University Analytics and Institutional Research (UAIR) staff could get the answer, but it wasn’t simple. The UAIR staff would pull the information from various sources, glean the answer from the data, and share their results. Sharing those results meant emailing pages of spreadsheets. And, inevitably, Misra said, the email didn’t get to all the right people, or they couldn’t find the spreadsheet when they needed it.

While the UAIR team had access to curated, official data, no one else on campus did. The ad hoc way the UAIR team had to approach answering complex data-related questions led to a second, larger problem.

For example, imagine a scenario where a dean, a professor, and an admissions officer from the same college all wanted to address a drop in student retention rates. If they each pulled data at a different time, and the numbers changed in between each request,

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“You query our transactional system and you do it on Monday during a really busy time of year and I do it on a Thursday. We go to the same meeting, but my numbers look different than yours,” said Barb Chalfonte, associate provost for analytics and assessment at UAIR. “And you know, even if they’re off by a little bit, people get fixated on that.”

The institution knew they could put their data to better use and started looking for solutions.

## THE CHANGE MANAGEMENT TROJAN HORSE

UAIR needed a way to connect their disparate data sources into one platform. They needed dashboards that would

consolidate crucial student data and offer faculty and administrators real-time data. And they decided they needed it fast.

“We definitely talked about doing it ourselves...but the more we thought about that piece, the clearer it became that it takes a lot of resources and a lot of time,” Filep said. “Whereas, with HelioCampus, it was going to be a lot faster.”

UMass Amherst’s data is hosted on Amazon Web Services (AWS), allowing the university to scale the server capacity on demand to accommodate the storage and management of their trove of data. The university turned to HelioCampus to help facilitate better access to that data — and to make better sense of it so they can put the data to good use.

HelioCampus is a higher education technology company with institutional performance management tools, including a data analytics platform. An AWS Advanced

Technology Partner, HelioCampus also uses a number of AWS services to power their solutions. Once UMass Amherst decided to partner with HelioCampus to create their Flagship Analytics platform, it freed them to focus on introducing a new approach to data on campus alongside the launch.

This partnership also supports an overarching principle of the university’s strategic plan to “instill a culture of evidence at all levels that applies the best possible information and analysis to decisions.”

The new intuitive, interactive analytics solution consolidates data, facilitates broad data access, and streamlines analysis for improved decision-making; however, staff and faculty need to take Filep’s training to get broad access to Flagship Analytics (all faculty and staff have access to some basic data).

With the unveiling of the platform generating considerable enthusiasm across campus, this wasn’t an issue. Many people



signed up for the in-person training sessions. What they didn't know was the training was more about data in general, and less about the platform.

"Yes, it's a practical training, but it's also a lot of scaffolding about how you use data on campus because, let's face it, no one really needs to know how to be trained on using a report dashboard," Filep laughed. "It's pretty easy. It's point and click, right?"

Instead, attendees learned about how to use data responsibly. Filep taught staff and faculty how to protect data privacy and how to read the data. Trainees discovered the dangers of taking surface comparisons of data, like retention rates between colleges. Rather than jump to conclusions or be led astray by faulty assumptions, they learned to use the information to ask probing questions and dig deeper into the underlying causes of the trends they spotted.

Today, Filep holds most of her training sessions over Zoom. It's an even more efficient way to spread the UMass culture around data, Filep laughed. She's about to train her 1,000th participant.

"This was really a change management exercise wrapped up in a platform launch," Misra said.

## TRADING COMPETITION FOR CURIOSITY

Thanks to Flagship Analytics, data is no longer department-specific or even college-specific.

With a couple clicks, users can see how their data compares to campus peers. At first

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there was some hesitation about that level of transparency. One college may not want others to see they are underperforming on, say, graduation rates.

However, the culture shift at UMass Amherst has changed two things to help skeptics get past their concerns. First, you're expected to bring your data as part of every conversation. Second, transparency can lead to conversations around best practices.

Misra has seen this play out firsthand. When Reyes first got to campus, he brought all the deans together to talk about what was happening at their colleges.

Every dean included a retention rate graph as part of their presentation, Misra said with a smile. That was the expectation.

The strongest sign of the UMass Amherst data culture shift happened when one school presented a three-percent drop in their retention rate.

Instead of talking around the dip, the dean owned the data and embraced the challenge.

That allowed the start of a more productive conversation in the room around how to get the school and the students the resources they needed to reverse the trend.

“It’s normalizing the conversation around data, even if the data doesn’t say sunshine and roses. And that’s healthy for an organization,” Misra said.

## CONNECTED STUDENT DATA NETS NATIONAL GRANT

UMass Amherst recently [won a \\$2.5 million Howard Hughes Medical Institute grant](#), a competitive award distributed to about half a dozen institutions each year.

It took a collaborative effort and the help of Flagship Analytics, powered by HelioCampus, to make it happen. The College of Natural Sciences, College of Engineering, School of Public Health and Health Sciences, and the Manning College

of Information and Computer Sciences dove into data about the retention rates, success outcomes, DFW (D, F, Withdrawal) rates, and more among different student demographics at each school.

The group matched that information to survey data and climate data to create several hypotheses about how to improve student outcomes and a plan for how they’d put the grant money to use.

Chalfonte said the Flagship Analytics tool was a powerful driver of this initiative for two reasons: visual impact and interactivity.

“When the questions you’re asking are complex and nuanced, that means the volume of data you need to answer is also significant. When you deliver all that information by Excel spreadsheet, the actual impact of seeing the story in the data is diminished tremendously,” Chalfonte said.



With Flagship Analytics, trends showed up as plummeting or climbing lines while one bar towering over the other reflected demographic differences. The tool laid out the answers to their questions in stark pictures, not inscrutable cells.

Flagship Analytics also made it easy for the group to jump in on the same dashboard, ask questions, and play with the data in real time.

“Spreadsheets are static, versus the dashboards, which are interactive,” Chalfonte said. “So, I can be sitting there and looking at some data and generating some hypotheses about what’s happening and I can interact with the data...I can change the filters and the parameters on there and get an answer. So, the interactivity of the data is a tremendous change for people...they feel like they have a much richer, nuanced understanding.”

## IT’S ABOUT THE STUDENTS

“Data itself can be mind-numbingly boring,” Misra said. “But what it enables and the student outcomes that can be supported from accurately understanding it — that is interesting. There are real students positively impacted. What you don’t see is the student who was on a DFW for physics who got the help they needed...that those stories are happening is what matters to me.”

The latest chapter in those student success stories on the UMass Amherst campus has been the equity action plans. Chalfonte has worked closely with a handful of departments

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experimenting with this initiative. The idea is to use student surveys, climate surveys, and performance metrics like retention, graduation, and pass rates to get a sense of how a student’s college experience correlates with their success.

Chalfonte listed some of the variables the team explored:

“Do they feel a sense of belonging in their department, their college, their school? Do they have mentorship? Do they have connections with their peers?”

From that collaborative work, the team generated equity action plans, which faculty and staff at each college can use to proactively give students the resources and help they need to succeed.

Many of the people who contributed to the equity action plans and another initiative Chalfonte participates in, the Partnership for Advancing Completion Equity (PACE) — a cross-disciplinary group of academic leaders and administrators that observe how certain

policies and procedures impact student success rates — are not the typical faces she remembered seeing at the table before Flagship Analytics.

“There’s more people being appreciated for their knowledge and being invited to these tables,” Chalfonte said. “I think it’s leading to richer, more inclusive groupings of people trying to solve some of these problems... and they’re being appreciated beyond their day-to-day work for their knowledge of the nuance and the business processes that lead to the outcomes we want.”

## DITCHING THE BORING QUESTIONS

Thanks to the success of Flagship Analytics, the UMass Amherst UAIR team has a problem.

“They have an increased appreciation for what data can tell them...and they have a billion more questions,” Chalfonte laughed.

Filep cracked a smile and nodded. Yes, the UAIR team is busier than ever, but it’s the

quality, not the quantity that has shocked her.

“I spend a lot less time answering boring questions and more time answering interesting questions,” Filep said. “For the boring stuff, I can send them to the dashboards.”

More complex and nuanced questions mean the answers require data from different sources.

For example, someone recently asked Chalfonte about the impact of quality research space and available startup funds has on faculty retention. That’s three different data sets.

So, the next challenge is carefully, thoughtfully introducing new data sets to the database and connecting them to what’s already there.

UMass Amherst has created a data culture that is knowledge-rich. Now it’s time to feed that culture’s curiosity.

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