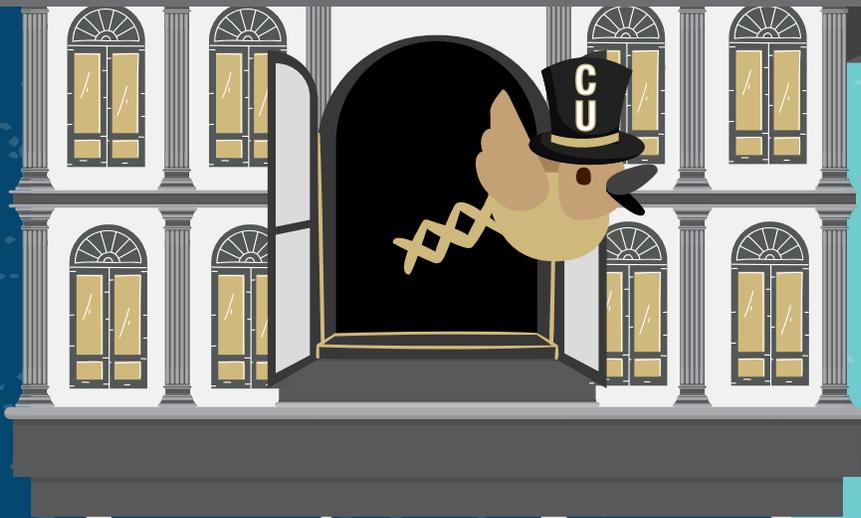




# UIS IMPACT REPORT

DELIVERING SOLUTIONS AROUND THE CLOCK



University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

UNIVERSITY INFORMATION SERVICES



University of Colorado  
Boulder | Colorado Springs | Denver | Anschutz Medical Campus  
UNIVERSITY INFORMATION SERVICES

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University Information Services has the privilege of serving the Anschutz, Boulder, Denver and Colorado Springs campuses, as well as CU System Administration. 2022-23 was marked by extensive planning and preparation for the data center move to Anschutz Medical Campus. New services and efficiencies were developed, like the Student Support Network at UCCS and CU Ascend for CU Advancement and Foundation. Cybersecurity hit several milestones, making data at CU safer than ever.

In addition to the projects and innovations you'll discover in this report, UIS also rolled out a Customer Success Team to help our customers reach their goals. The [UIS Customer Success Team](#) aims to meet customers where they are, coordinate the intake of their technology priorities and craft solutions that increase efficiency, collaboration and innovation.

**The UIS Customer Success Team and their Customer Segments**

 <b>Art Figel</b> Student and Academic Services	 <b>Aaron Mansfield</b> Campus and System Leadership	 <b>Jenn Millikan</b> Schools and Departments Campus IT Units and CU Foundation	 <b>Jen Mortensen</b> Advancement Online and Marketing Services
 <b>Scott Munson</b> Office of the President CU Board of Regents	 <b>Jennifer Silverthorne</b> Research Administration	 <b>Bob Sudo</b> HR Services	 <b>Jaya Vaidyanathan</b> Finance, Procurement and Admin Services Grant Management

All of us at UIS appreciate the opportunity to serve you — CU's students, faculty and staff — in the past, present and future!

Sincerely,  
Scott Munson  
Associate Vice President and Chief Information Officer  
University Information Services

# GIFTS OF PAST TIMES



## Past projects still serving CU today



The University of Colorado builds on the innovations and ingenuity of the people who make CU great. The greatest contributions often go unnoticed because when a crisis is avoided — no one hears about it. These three contributions helped to prevent interruptions to research and education on CU campuses.

## REROUTING DATA

Access to data and the internet are essential to the university's day-to-day operations. UIS invested in a dedicated fiber network ring. UIS provides automatic failover in case the primary data transfer path is disrupted. More than seven times in recent years, there have been incidents when our fiber network lines were cut by contractors in the metro Denver area. These outages last 11 hours on average, but with the network strategy UIS put in place, there was zero downtime or degraded service to our customers during each of these events.

## SHORTER MAINTENANCE WINDOWS

A collaborative effort from UIS teams successfully led to a reduction in the time required to deploy critical application patch updates. The teams were able to reduce critical patch updates for Oracle-based systems from 30+ days, then 12 and now only 4 days. The UIS maintenance calendar builds contingency windows into its schedule in case an update requires more time, but so far no contingency window has been necessary. While the [CU Data Center Move](#) required an extended outage, 2023 is the first year with almost all maintenance windows lasting 12 hours or less.

## SEMESTER START

Over several years, UIS has continuously improved its approach and processes to provide the smoothest user experience possible for CU students, faculty and staff during this critical time of the school year. Every semester, Student IT Services, Identity and Access Management and Portal teams put in hundreds of hours planning and preparing for a successful semester start.

Enterprise systems are monitored regularly using an application that emulates end-user activity from each campus. This system runs 24/7 across UIS services and alerts our team if any transaction becomes problematic, often in advance of impacting customers. In conjunction with extensive system logging, this enables the quick diagnosis and remediation of problems should they occur.

During the first 24 hours of each semester start, UIS operates a virtual command center, where staff continually monitors systems and is prepared to respond. Staff stays ready to engage campus IT Service Desks, key supplier contacts such as Oracle, technical teams and additional UIS staff, as necessary.

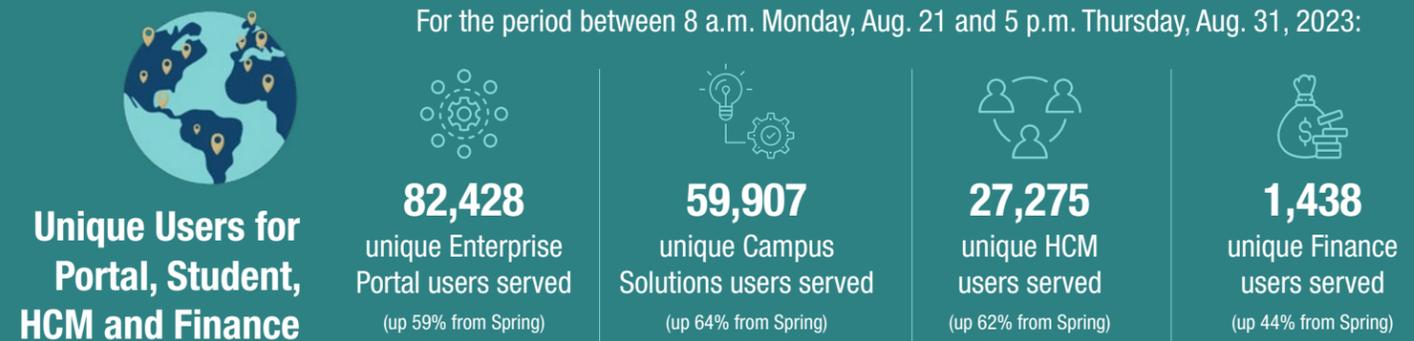
The Quality Assurance team runs several potential scenarios and performance tests to assure stable student systems and portal performance.

**Critical Patch Updates Automation saves CU an estimated**  
**\$520,000**  
 Source: Regent Finance Committee Efficiencies Report, March 2023

## SEMESTER START BY THE NUMBERS

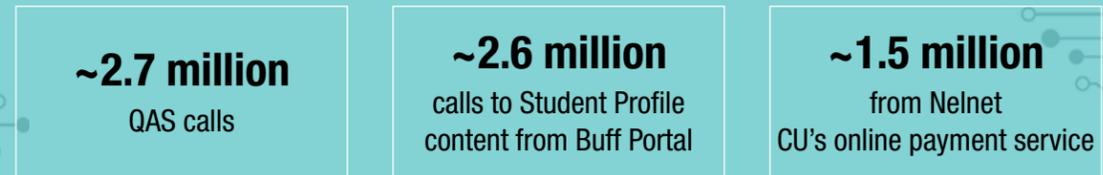


For the period between 8 a.m. Monday, Aug. 21 and 5 p.m. Thursday, Aug. 31, 2023:



### API Calls

Over 9 million calls into Campus Solutions were made, including the top three by volume:



### Network

Network utilization peaked at around **420 Mb/s**



## SNAPSHOT: MAKING ACCESSIBILITY QUICKER AND EASIER

Screen readers are a form of assistive technology, primarily used by people with vision impairments. These tools translate written text to audible speech. This year, UIS made improvements to the employee portal's screen reader functionality to make it easier to activate and use screen reader mode.

UIS added a new icon to the portal's menu bar that allows users to easily toggle screen reader mode on and off. A popup message confirms their selection, after which the portal will remember their screen reader setting — if they turn screen reader on, the tool will be activated every time they log in until they turn it off.

Improving the user experience of accessibility tools enables all CU faculty and staff to quickly and easily locate important personnel information, make changes, submit timesheets, leave requests and complete other portal tasks.



# UIS SAVES CU TIME



## Through collaboration, automation & greater efficiency

UIS partners with CU campuses and System Administration to deliver digital solutions that save time, money and resources. These collaborations improve the university's operations and create a culture of efficiency and innovation at CU.



Samantha Fildish, Linda Warren and Guy Chavez received a University of Colorado Innovation and Efficiency Award for their work on the GM Financial Report

### GRANTS MANAGEMENT (GM) FINANCIAL REPORT

The University of Colorado attracts more than \$1 billion in grants and gifts supporting research each year. Federal agencies award a large portion of CU's sponsored research funding, and those awards require financial reporting during and at the closeout of an award. Grant accountants and sponsored projects administrators on every CU campus devote time to the Federal Financial Reporting (FFR) process.

The GM Financial Report, a new custom-built tool from UIS, simplifies the process while highlighting potential expenditure issues.

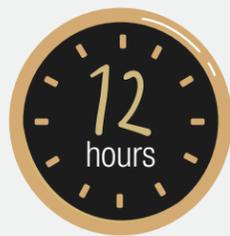
Rather than pulling data from a variety of queries and financial reports, grant administrators can now easily verify and pull all the information quickly. Perhaps best of all, they can run batches of the report.

"Prior to having the GM Financial Report, we used an internal spreadsheet, which took much more time to complete, especially on complex projects," said Koffi Gnatsidji, assistant director of Post-Award Financial Services at CU Denver and Anschutz Medical Campus. "Now, it's instant and more accurate."

TIME SAVED BY THE GM FINANCIAL REPORT



per report



per week



a year

(based on 1,200 financial reports due each year; Source: UIS Efficiencies Report 2023)

## UCCS STUDENT SUPPORT NETWORK

UIS, in collaboration with UCCS, integrated a new tool for faculty, staff and students that launched in June 2023. The Student Support Network, built on the Salesforce platform, is designed to foster a stronger, more interconnected network of services and departments to support UCCS students while reducing the number of systems required for staff to use.

"This years-long collaboration between UIS and UCCS brings us closer to achieving our 2030 Strategic Plan goal to integrate student service systems dedicated to recruiting, academic support, continuing enrollment and graduation services," said Harper Johnson, UCCS assistant vice chancellor for Information Technology and chief information officer.

## CU ASCEND FOR ADVANCEMENT

The UIS Integrations, Data & Business Intelligence, and Enterprise Content Services teams collaborated to rearchitect the way data moves in and out of Advancement systems, resulting in a new constituent relationship management platform called CU Ascend. The new integrations allow data to be delivered faster and more reliably.

CU Advancement and the CU Foundation launched CU Ascend in May 2023, citing how it gives Advancement staff better insight into donors' philanthropic interests through modernized databases and tools.



"CU Ascend is a foundation for how we will inspire our donors to support what they're passionate about across our campuses,"

— Annie Baccary, CU's Vice President for Advancement Administration.

## CU ENTERPRISE APPLICATION UPGRADES

Behind the scenes, UIS teams work for several weeks — and in some cases months — to prepare upgrades for applications like PeopleTools, InfoEd and Tableau with the goal of offering users greater stability, better navigation or new features.

InfoEd completed an upgrade to improve the application's daily stability, address bug fixes and enhance configuration tools. While the user interface did not change, annual upgrades like this one ensure applications are at their peak performance, which reduces the number of support ticket requests.

PeopleTools upgraded new features for HCM and Campus Solutions users. Both groups received customized guides and video tours for their specific upgrades that highlight the new homepage navigation options, global search bar, and enhancements to the NavBar.

The CU Tableau server upgraded three environments, which introduced new features like the Workbook Optimizer, a new search experience and an Ask Data Phrase Builder

Upgrades require a great deal of planning, coordination and collaboration across teams and with campus stakeholders. UIS is grateful to everyone who contributes to assessing, testing, customizing and implementing application upgrades.



## ONBASE AND INFOED INTEGRATION

The CU Denver and Anschutz Medical Campus Office of Grants and Contracts wanted a new way to manage day-to-day transactions and leverage existing data and content. UIS designed and implemented an innovative and flexible integration between InfoEd Proposal Tracking Module and Hyland OnBase, consolidating document storage and providing access in either InfoEd or OnBase to critical document data.

## PAYFACTORS INTEGRATION

CU Boulder needed a secure integration file that would capture employee compensation data and job history, and an upload and transmission process from HCM to their compensation management system, Payfactors. UIS created an automated, secure integration and transmission process that captures all employee data in a readable and usable format for the Payfactors system. This automation also delivers on a pre-determined schedule that is sent daily with current data as well as on an as-needed basis.

RESULTING SAVINGS:

At least 32 hours per month — 384 hours annually and more than \$20,000.



# UIS PROTECTS TIME...



## ...data and resources through cybersecurity



As cybercriminals continue their attempts to compromise the valuable data held within university systems, the University of Colorado has intensified its overall security posture. With the implementation of an Intrusion Prevention System and a new Security Information and Event Management (SIEM) tool — plus stronger passwords and an increased information security awareness requirement for CU employees — UIS, the Office of Information Security (OIS) and the campuses aim to further strengthen and align cybersecurity across the university.



### INTRUSION PREVENTION SYSTEM

CU now uses Intrusion Prevention System (IPS) firewall management tools to protect our network, users and data from continually evolving threats. This system allows us to identify and actively block attacks. The IPS inspects incoming connections for matches to known malicious patterns and blocks them. These malicious patterns are updated frequently and automatically, providing quick protection from emerging threats.

### SIEM TOOL

OIS and UIS completed the migration to a new Security Information and Event Management (SIEM) tool from Exabeam. This effort focused on redirecting existing log sources and introducing new sources not available in our previous SIEM product, as well as completing the learning period for the Advanced Analytics feature. In late 2023 and early 2024, OIS will focus on tuning the alerts and integrating this tool into our workflows.



## CU SYSTEM PASSWORD REQUIREMENTS

Creating a strong password is a critical step to protecting your data. Using long, complex passwords is one of the easiest ways to defend yourself from cybercrime. No one is immune to cyber risk, but CU System password requirements minimize chances of an incident. All employees must update their password every 90 days and must create a password that meets five requirements, including a new minimum length of 12 characters, up from the previous requirement of 8 characters.

## SMART MFA

Multi-factor authentication, or MFA, is a security measure that requires anyone logging into an account to use a two-step process to verify their identity. UIS added the extra protection of multifactor authentication (MFA) to all CU systemwide applications in 2022 and chose to use Smart MFA because it adds an additional layer of security with a customer focus that avoids MFA fatigue.

Smart MFA, also known as adaptive authentication, analyzes additional factors when a user attempts to log in and assigns a level of risk associated with that login attempt.



**“It’s a win-win solution. In addition to hardening CU’s security, Smart MFA provides better and more efficient usability, so that employees don’t have to step up their authentication constantly.”**

—Toby Lutz,  
UIS Assistant Director of Identity Management

## NEW INFORMATION SECURITY AWARENESS COURSE REQUIREMENT

Every CU employee has a shared responsibility for protecting data, student and employee information and our university’s ability to operate successfully. In an effort to protect the data that allows CU to deliver on our academic and research missions, a new employee requirement was announced Oct. 2, 2023.

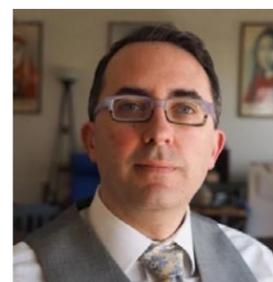
All CU employees (faculty, staff, and student employees) must complete the university’s Information Security Awareness training course within the first 60 days of employment and **every two years thereafter**.

The Information Security Awareness training course provides an overview of security principles, as they apply to data at CU. The course takes about 30 minutes to complete. The course content is updated annually as approaches to cybersecurity continually adapt to new challenges.

## MEET THE CU SYSTEM OFFICE OF INFORMATION SECURITY TEAM



Assistant Vice President and Chief Information Security Officer  
**David Capps**



Deputy Chief Information Security Officer  
**Brad Judy**



Information Security Officer  
**Keith Lehigh**



Security Awareness Program Manager  
**Janet Bravo**



Threat Intelligence Analyst  
**Desiree Dixon**



**“Our focus on aligning and strengthening cybersecurity across CU is a priority that is essential to the university’s future. Information security is critical at CU and we’re happy to have someone with David’s experience and expertise as part of our team.”**

— President Todd Saliman



# UIS PAUSED TIME



## — for the CU Data Center Move.

At 2 p.m. Oct. 10, UIS announced the completion of a yearlong project to move the University of Colorado systemwide data center from its Denver location to a new, modern facility on the Anschutz Medical Campus.

The massive effort involved moving and setting up more than 11 tons of equipment and required all four campuses and System Administration to be without access to systemwide applications for an extended time period.

“A project of this proportion was only possible with the contribution of our partners on each campus,” said Scott Munson, UIS associate vice president and chief information officer. “We are incredibly grateful for our OIT partners — and how closely they worked with their campus communicators and leadership to ensure everyone was prepared for the implementation window.”

The CU data center relocation marks a significant milestone for the university’s technology infrastructure, enhancing its capabilities and supporting its mission to deliver cutting-edge research, education and service to Colorado and the world.

### BY THE NUMBERS

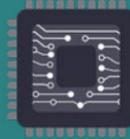
**11 TONS**

Weight of IT equipment moved to and set up at Anschutz Medical Campus



**98**

Hours to complete the move



**44**

CU enterprise systems reliant on the data center

While the necessary extra day and a half was unanticipated, the team’s preparation and perseverance kept the downtime from being further extended. With so many moving parts — figuratively and literally — we couldn’t have done it without great partners.

— Tony Brooks, senior director of Enterprise Cloud Services

## A DATA CENTER MOVE HAS MORE MOVING PARTS THAN A GIANT CLOCK.

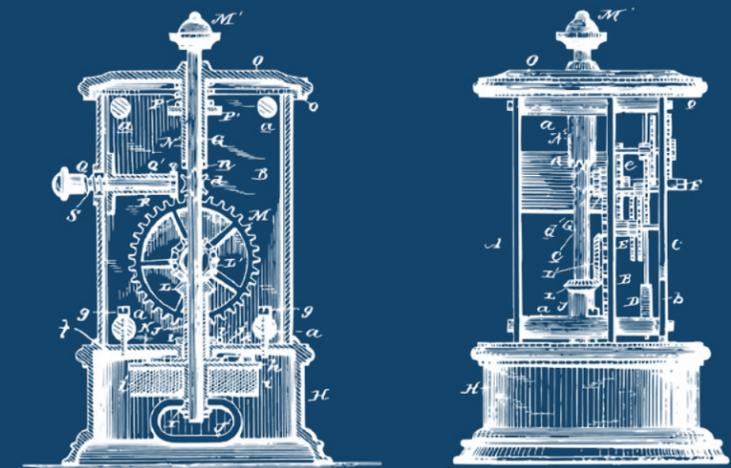
UIS WORKING AROUND THE CLOCK.

Every UIS team contributed to the data center move, especially:

- Enterprise Cloud Services
- Enterprise Application Administrators
- Identity and Access Management Team
- Integrations Teams
- Networking Team
- Quality Assurance Team
- Project Management
- UIS Communications
- Office of Information Security

**CU Partners:** Procurement, Legal, Security, Facilities, Planning, Traffic Control, and the four campus OITs, especially Anschutz.

**External vendors:** Ntirety, Data Canopy/Intellishift, Critical Facility Technologies, ANM, Cisco, Premier Data Movers, Hitachi, cable vendors, Zayo, Martinsen and many more.



### What is a data center? Isn't everything in the "cloud?"

A data center is a specialized facility for housing computer servers and networking equipment, storage systems and power distribution units. Data centers are used by businesses, organizations and governments to host websites, applications, databases and other critical IT services. They provide the necessary infrastructure to ensure that these services are available, reliable and responsive to user demands.

Even in the age of cloud computing, a data center provides the infrastructure required to run applications and manage and store data.

# UIS PREPARES...



## ...for the future

In 2023, the UIS Customer Success Team engaged in strategic interviews to source customer work requests and ensure alignment between UIS efforts and customer objectives. Additionally, internal product teams mapped out anticipated work and backlog items for the next two years.

The combined input was consolidated into a two-year roadmap view that can be sliced and diced along various criteria such as customer segment, campus and managing UIS team.

This new forecasting workflow feeds into UIS' goal to increase transparency into its prioritization processes and resource allocation. By looking beyond 2024, UIS will be better able to manage their capacity thresholds and better prepare their customers for project timelines.

## A SAMPLING OF UPCOMING PROJECTS

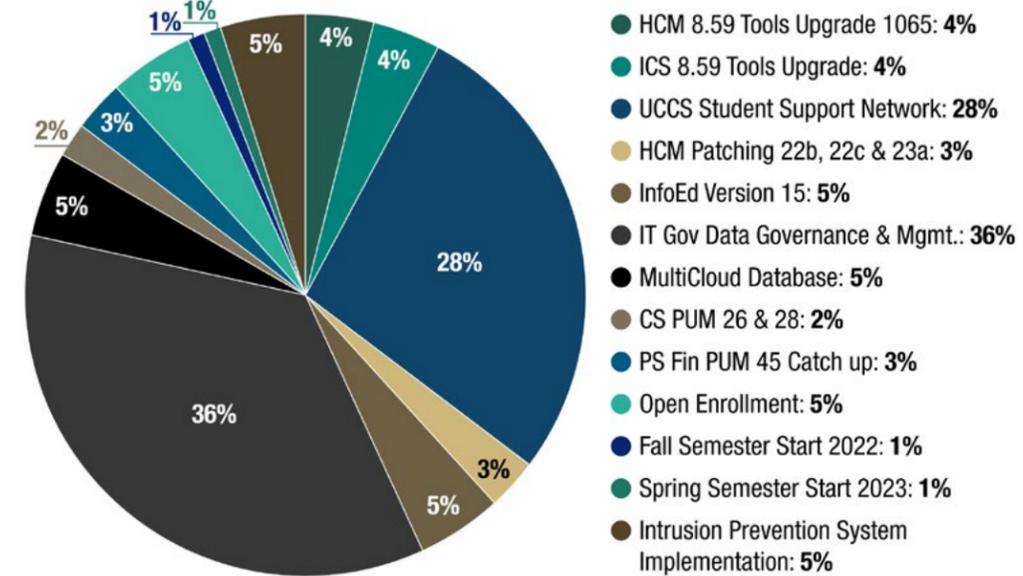
- Data Governance & Management
- Time and Labor
- Campus data hubs implementation
- Work intake and demand management phases of the UIS Service Framework.
- Cybersecurity enhancements
- Continued expansion and improvement of the CU Online platforms



## UIS GOALS BASED ON YOUR FEEDBACK

- UIS customers receive an annual survey to provide feedback and help determine priorities. Based on common themes, UIS plans to:
  - Increase visibility into UIS priorities and expected timelines for requested work.
  - Improve customer awareness of UIS solutions and how to request work from UIS.
  - Maintain and strengthen security and compliance of systems.
  - Develop more business efficiencies via process reengineering, workflow solutions and automation of routine tasks.
  - Continue to reduce data silos while providing richer data for improved reporting and decision making.
  - Improve integrations to support efficient flow of data between systems.

## % OF HOURS BY PROJECT IN 2022-2023

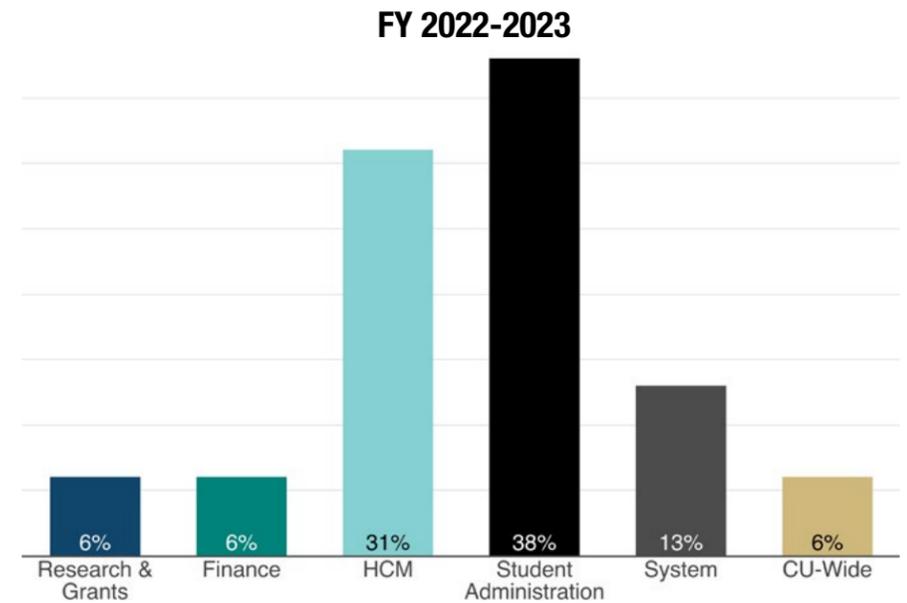


\*Does not include the hours spent on 35 initiatives, incidents or maintenance.

## A look at where UIS spent time in FY 2022-2023



## Who were UIS' biggest project customers over the past year?



## SNAPSHOT: EXPANDING EMERGENCY ALERT LANGUAGE OPTIONS

In an emergency, clear and timely information is critical to keep people safe. Information shared in a language a recipient doesn't understand can put them in a vulnerable position. The university's emergency notification system, RAVE, offers a translation process in multiple languages, but the campuses needed UIS to build those options into processes to allow students, faculty and staff to select their preferred language for emergency communications.

UIS collaborated with CU campuses, especially Garry DeJong, CU Boulder director of Events and Emergency Management, who initiated the systemwide project. CU Boulder was the first to implement this solution. Now, its students, faculty and staff have the option to select from 10 preferred languages for RAVE alerts. Other CU campuses will be able to follow suit now that UIS has built the foundational integrations.

**"This was a meaningful initiative with several teams working to ensure that — in a potentially scary or confusing situation — students and employees are able to obtain that message in their first language and eliminate confusion for them in the moment,"**

— Lindsey Apodaca, UIS Solutions Manager

# UIS STAFF



UIS contributions to the University of Colorado — past, present and future — exist because of UIS staff and their creativity, knowledge and dedication. This timeline highlights milestones in our department's growth and we're proud to call each of you our colleagues.

19:93

Donna Sewell

19:99

Yuki Busch

20:01

Jonathan Levenstein

20:02

Laura Haller

20:03

Christine Bauder

20:05

Chris Stange  
Kirk Walker

20:06

Art Figel

20:08

Bob Hasenhundl  
Scott Munson  
Sharon Price

20:09

Jennifer Silverthorne  
Milap Sharma  
Pravija Prabhakaran

20:10

Pamela Song  
Srikanth Gurram

20:11

Brad Baker  
Heather Tasca  
Marina Durbin  
Ridawn Cummings  
Robbie Wood  
Siva Jaligama  
Soumya Suresh

20:12

Karthik Chigururu  
Kevin McCarty  
Kevin Sarsen  
Lonnie Maynard  
Paula Ramirez  
Rakesh Vangapati  
Sasi Sunkari  
Tony Brooks

20:13

Adam Newby  
Jordan Wight  
Mayank Mittal  
Om Tandukar  
Toby Lutz  
Viet Phan

20:14

Aaron Mansfield  
Amar Tekriwal  
Joseph Ciecior  
Joshua Hernandez  
Matt Lemme  
Steve Thormod

20:15

Abhi Alampalli Shiva  
Bala Bhogaraju  
Lindsey Apodaca  
Stefan Garman

20:16

Al Wirtes  
Bob Sudo  
Dash Lingam  
Janelle Fossett  
Marlene Strickland  
Nabin Poudyal  
Scott Chalupa  
Rita Samaddar  
Sean Welshimer  
Siegfried Appelt  
William Shelby Jr.

20:17

Aaron Phillips  
Alicia Pickell  
Angelica Throckmorton  
Christie Ruemenapp  
Darlene Crow  
David Williams  
Fernando Loa  
Jaya Vaidyanathan  
Lara Ackerman  
Lisa Damboise  
Richard Escamilla  
Ryan Day  
RyAnne Scott  
Sharon Schryver  
Tanya Scott  
Timothy Thomas  
Tony Sengphirom

20:18

Faraz Ali  
Kaleb Schumaker  
Kelly Kim  
Laura Abeyta-Martinez  
Manali Agrawal  
Praveen Ghimire  
Robert Kerley  
Samantha Fildish  
Van LePage

20:19

Allmond McDermott  
Brandon Sine  
Brian Schaeffer  
Budy Chandra  
Cindy Kraft  
Isabell Mischo  
Jackie Hess  
Kim Sethre  
Larissa Armand  
Mike Monroe  
Rick Rowcotsky  
Shirley Eaves  
Sridevi Bankupalli  
Steven Bonser  
Vance Warnock

20:21

Antony Tran  
Arsadur Rahman  
Brian "Bruden" Ruden  
Carlos Mennechey  
Craig Watts  
Daniella Torres  
Deirdre Keating  
Dong Chen  
Gauri Jinu  
Jen Mortensen  
Jillian Callaghan  
John Radcliffe  
Jose Celis  
Matthew Eschenbaum  
Melanie Jones  
Messa  
Nonie Roberts  
Patricia Saillant  
Sean Golden

20:20

Bhavani Kambham  
Bradley Weidman  
Jeff Benn  
Kevin Reynen  
Lucas Win  
Marc Donohue  
Matt Anderson  
Mezmur Zedawit  
Tilak Brahmhatt

20:22

Andrea Kellogg  
Armani Vang  
Ben Saleh  
Brianna Fuller  
Chad Sziszak  
Claire Palmquist  
David Capps  
Drew Hitchcock  
Goutom Ghosh  
Heidi Misch  
Jennifer Millikan  
Joanna McCord  
Kim Wendelin  
Kumar Patibandla  
Laura Duncan  
Lauren Galena  
Mahesh Rao  
Nga Lam  
Nicole Leonhard  
Patti Smith  
Rachel Ashley  
Sam Moreno  
Sarah Wallace  
Shaun Pine  
Susan Dennis  
Talisha Bell  
Valerie Carricato  
Virginia Nystrom

20:23

Akhil Tadiparthi  
Becky Alberti-Powell  
Carla Boyd  
David Franz  
Francis Mawelle  
Hallie Davis  
Hans Smits  
Josiah Bartel  
Karah Evans  
Kavitha Jakkula  
Kelly Richter  
Kevin Perron  
Laura Leonard  
PhuLan Olson  
Ray Petrosek  
Steven Linenberger

MONTH: \_\_\_\_\_ YEAR: \_\_\_\_\_

SUNDAY MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY

# 30 YEARS



In August 2023, **Alan Vidmar** retired as associate director of Enterprise Content Services, after innumerable contributions and **thirty years** at the **University of Colorado.**



We hope you enjoyed the 2022-2023 Impact Report, highlighting the collaborative efforts between UIS, CU System and the four campuses in support of the University of Colorado's mission.

## Now we want to hear from you!

Visit [cu.edu/uisfeedback](https://cu.edu/uisfeedback) and share how you partner with UIS!

Complete the feedback form before Dec. 15, 2023 for a chance to win \$50 cash!

Five CU employees will be randomly selected from the feedback entries.

