

SUCCESS MEASURES

INFORMATION TECHNOLOGY

ANNUAL REPORT

December 2023



COLORADO

COMMUNITY COLLEGE SYSTEM

Mission for System IT

• Vision of Success (What we seek to be)

- We strive to be a model information and technology organization recognized for proactive leadership, collaboration, innovation, transparency and responsive customer service.

• Mission Statement (what we do)

- We, the employees of the Colorado Community College System Information Technologies, are committed to
- Providing a robust and solid technology infrastructure
- Facilitating the colleges' ability to teach and students' ability to learn
- Supporting operational services and business functions at both enterprise and distributed levels.
- Align our efforts and our projects with Colorado Community College System's strategic goals of transform the students experience, transform our own workforce experience, create education without barriers through transformative partnerships, redefine our value proposition through accessibility, affordability, quality, accountability, resource development and operational excellence.

• Core Values (Guiding Principles for achieving our mission and vision)

- **Pride:** we take pride in our work. We strive for personal and professional excellence. We recognize and reward initiative and problem solving.
- **Quality:** We ensure that our services and deliverables meet industry best practices found in both the technology and higher education industries while we adapt to an ever-changing technology environment.
- **Respect:** We appreciate and value one another. Our actions are carried out with trust, integrity and fairness.
- **Service:** We focus on our customer needs, while being flexible and adaptable to business requirements. We recognize in order to improve service, we must be a learning organization that seeks improvement and embraces accountability in a pro-active manner.
- **Teamwork:** We support a cooperative work environment. Our team is strengthened by the diversity and contributions of each member. We strive to communicate openly and honestly.
- **Collaboration:** We work together with our customers to find reasonable and flexible solutions to their business problems. We seek to listen to our customers, understand their perspective and support their needs. We strive to say, "yes, we can".
- We support and encourage an inclusive and transparent governance process for IT investments and projects.



1 INTRODUCTION

The goal of the Information Technology division at Colorado Community College System Office (System IT) is to provide the CCCS colleges and System Office with the highest quality technology-based services, in the most cost-effective manner, to facilitate the Colleges' mission as it applies to administration, teaching, learning, and community. Under the leadership of the Vice Chancellor for IT and CIO, System IT seeks to foster partnership and collaboration with academic and administrative units across all CCCS colleges in order to create a robust, best-in-class IT environment centered around student success and organizational effectiveness.

System IT creates a significant positive impact on the daily business activities across all the CCCS colleges and System Office and in this report we provide an insight into the contributions System IT makes on a daily basis by summarizing key figures and statistics that illustrate these accomplishments. Unless stated otherwise, the statistics included in this report are from July 2022 through June 2023.



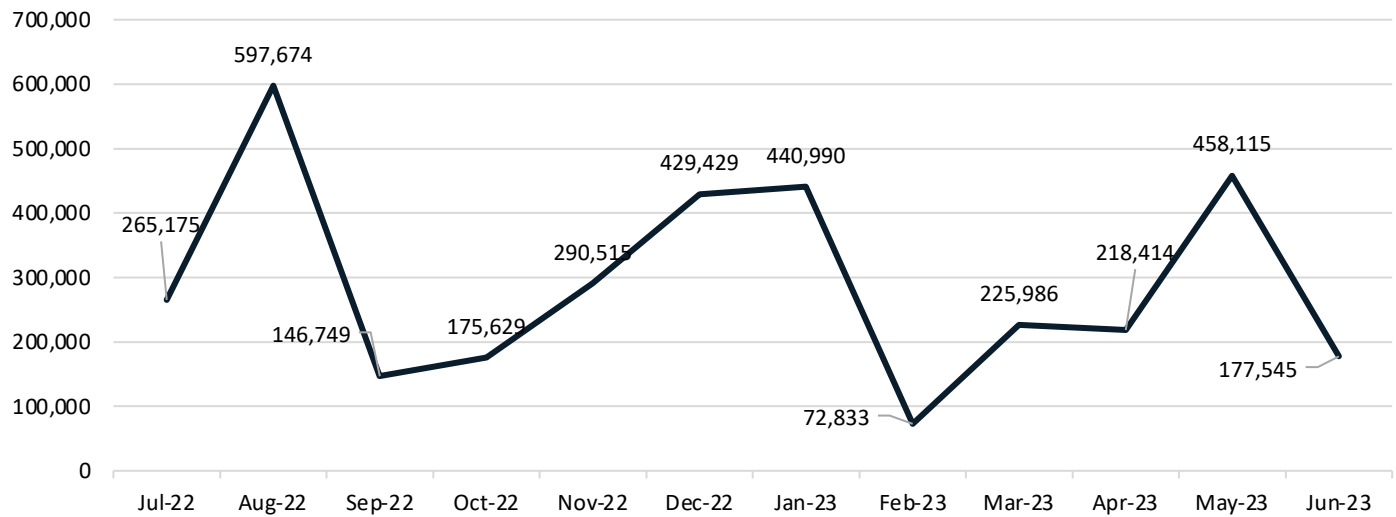
2 ELLUCIAN BANNER

- Ellucian Banner is the CCCS enterprise resource planning (ERP) system.
- System IT locally maintains and supports Admin Pages (also known as Banner 9) and Banner Self-Service (SSB).
- Banner 9 and SSB contain several modules, including Banner Student, Banner Finance, Banner Human Resources, and Banner Financial Aid.



2.1 BANNER STUDENT TRANSACTIONS

- Activities conducted directly by students within Banner applications.
- Includes student registrations, adds, and drops.
- Student registrations, adds, and drops can be initiated using other applications, such as Banner self-service, EAB Navigate, or the Mobile App.
- Regardless of the registration application, all student transactions are eventually processed by Banner and stored in the Banner Database.



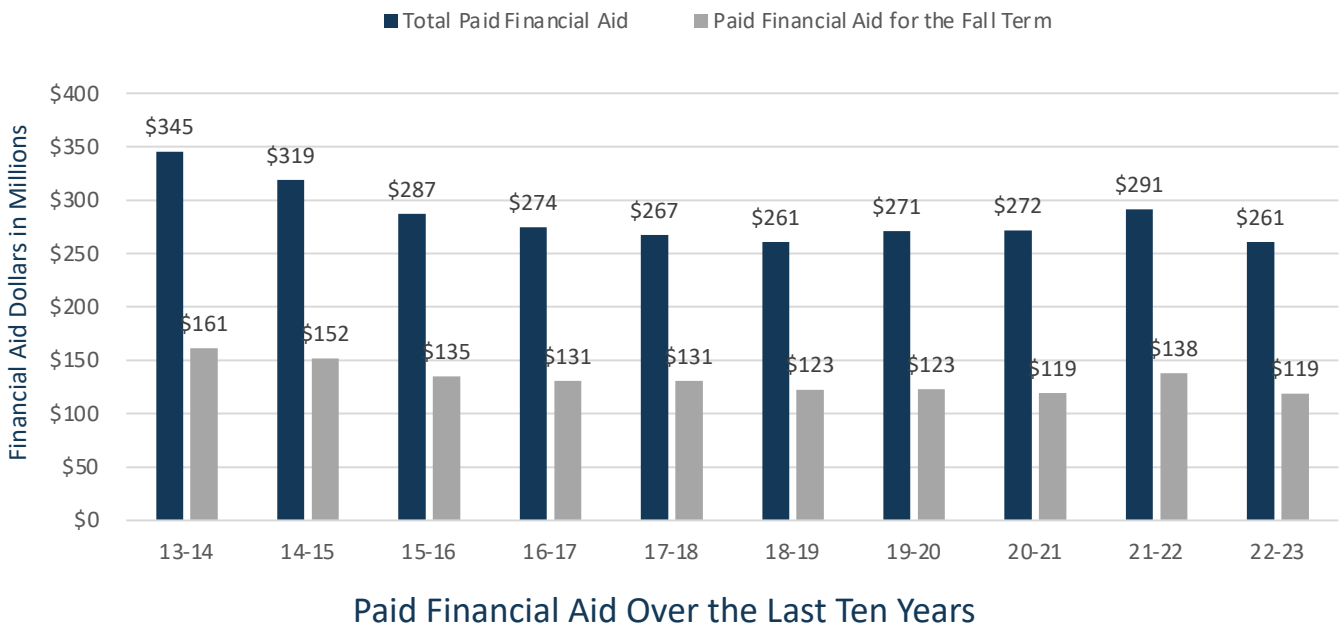
Total Number of Student Transactions in Banner per Month

- **Nearly 3.5 million student transactions processed from July-2022 to June-2023, 3.8% fewer transactions than the prior year.**
- **An average of 291,588 transactions per month.**
- **An average of 9,586 transactions per day.**



2.2 BANNER FINANCIAL AID

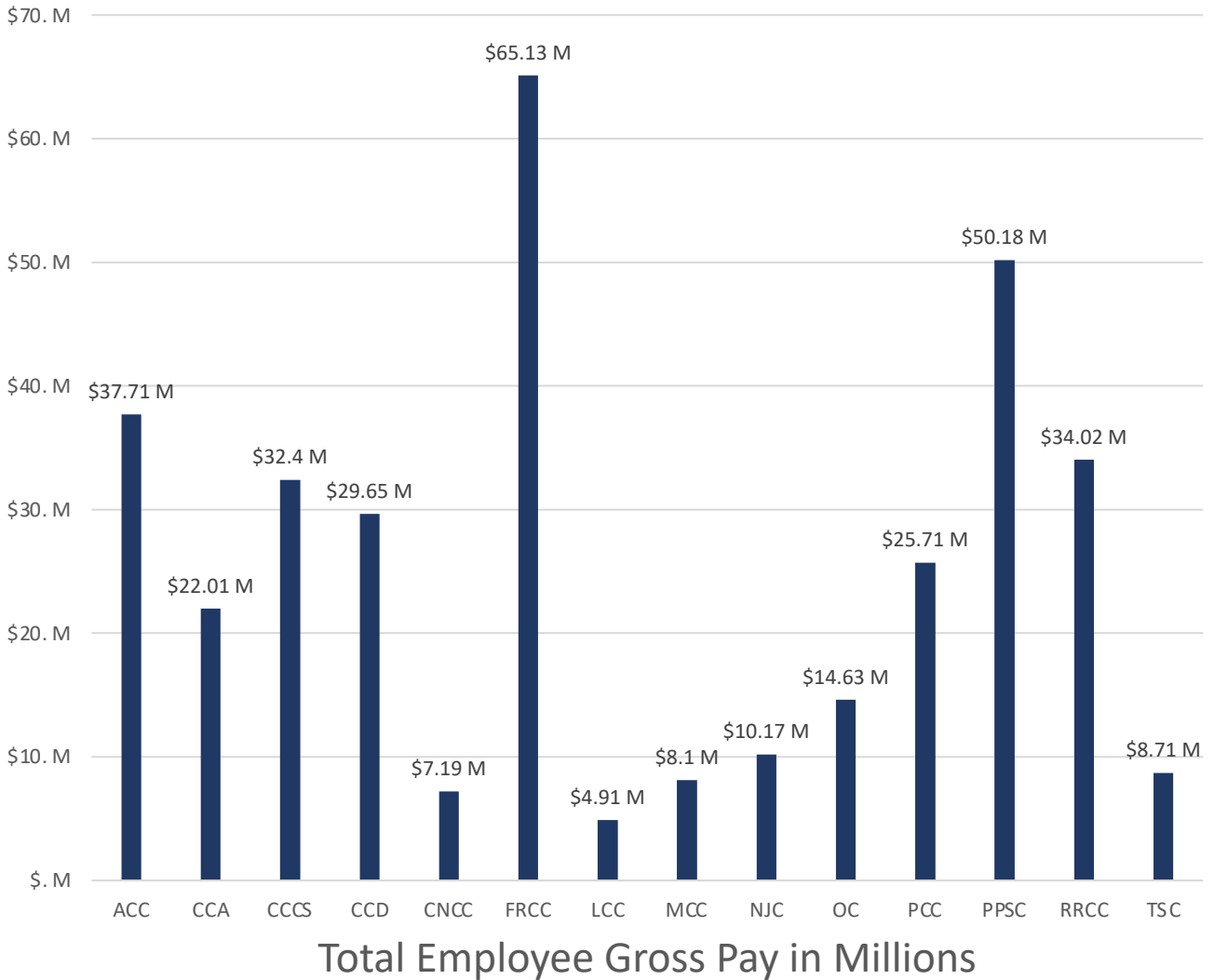
- Provides visibility and tracking of Financial Aid processes.
- Automates Financial Aid daily tasks.
- System IT has customized some Banner Financial Aid processes and implemented other processes to integrate Banner Financial Aid with other CCCS applications and state and federal education department applications.



- **Almost \$3 billion of Financial Aid grants processed over the last 10 years.**
- **Total Financial Aid for 2022-2023 (\$260,778,860) is 10.5% lower than 2021-2022 (\$291,307,347). This is on par with pre-pandemic numbers from 2018-2019 (\$260,875,194)**
- **Fall Term Financial Aid for 2022-2023 (\$118,769,465) is 14.0% lower than 2021-2022 (\$138,120,784).**

2.3 EMPLOYEE PAYROLLS (GROSS PAY)

- Banner supports the administration of employment, benefits, payroll, and all other aspects of the employee lifecycle.

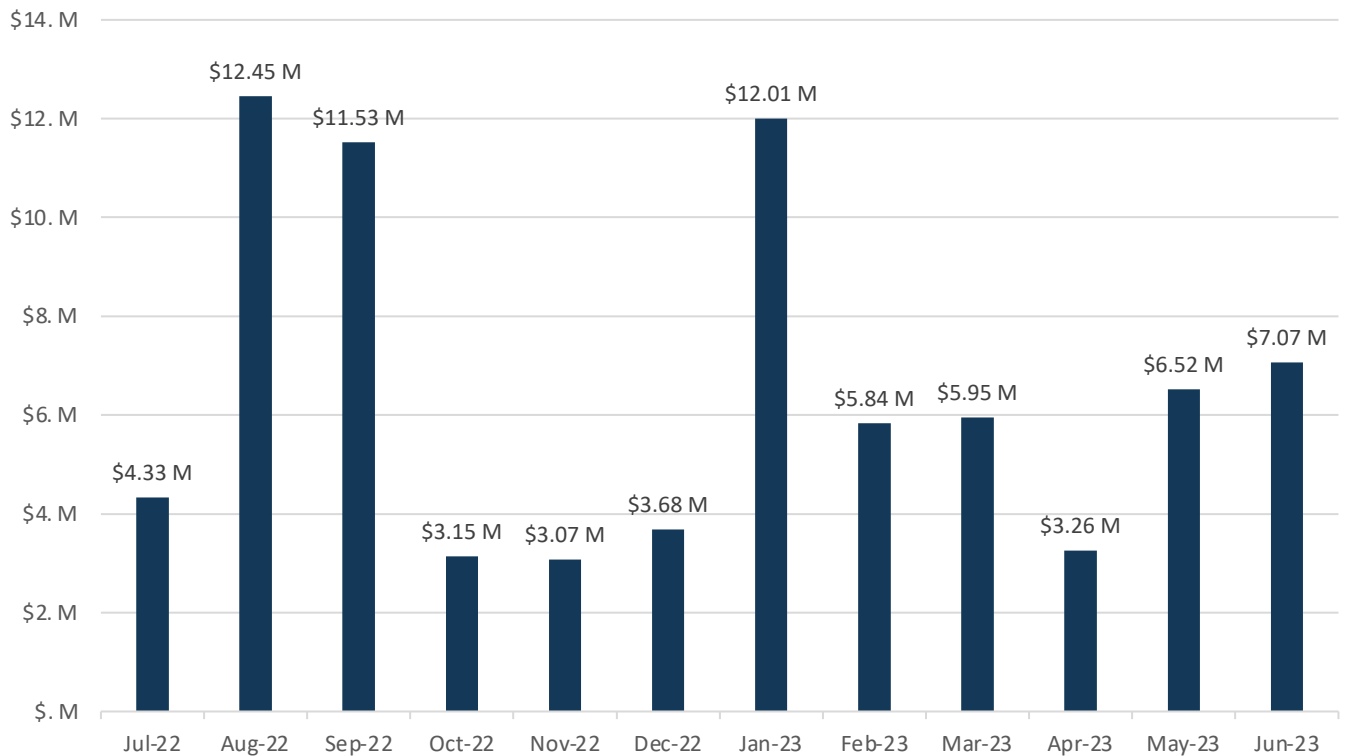


- **The total dollar amount of gross pay processed enterprise-wide from July-22 through June-23 was \$350,503,338, which is a 4.2% increase from the previous year.**



2.4 ONLINE TUITION PAYMENTS

- Online tuition payments are processed through our web payment gateway, Transact (formerly known as CashNet), which is integrated with Banner.



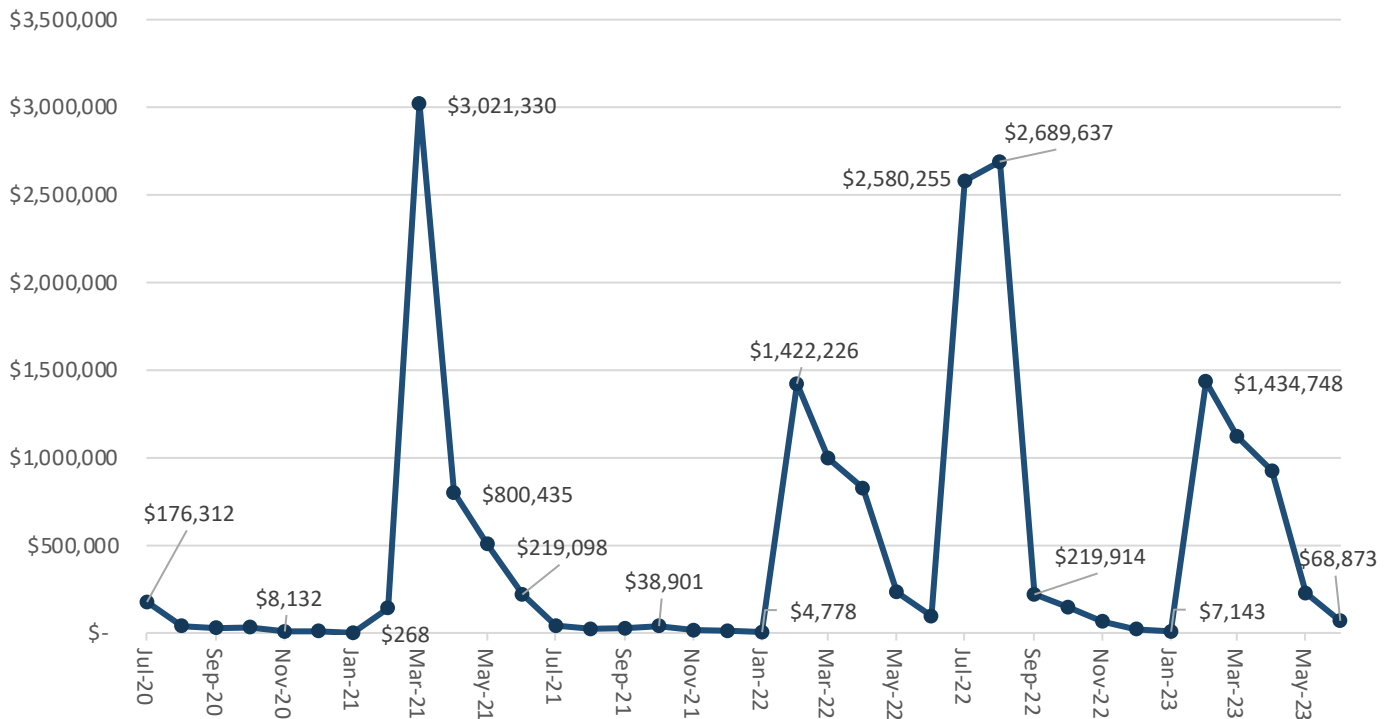
Total Tuition Payments Dollars Processed Through CashNet

- **The total amount of tuition processed over the last fiscal year through Transact for all colleges is \$78,846,365, which is 8.5% lower than the previous year (\$86,198,550).**
- **The collected tuition of \$ 78,846,365, required 65,573 Banner transactions, which results in an average of \$1,202 collected per transaction.**



2.5 TAX INTERCEPT FUNDS

- Tax intercept is a process to intercept State of Colorado tax refunds as payment of debts that have been submitted to collections.
- This process was developed by System IT in conjunction with the State of Colorado.



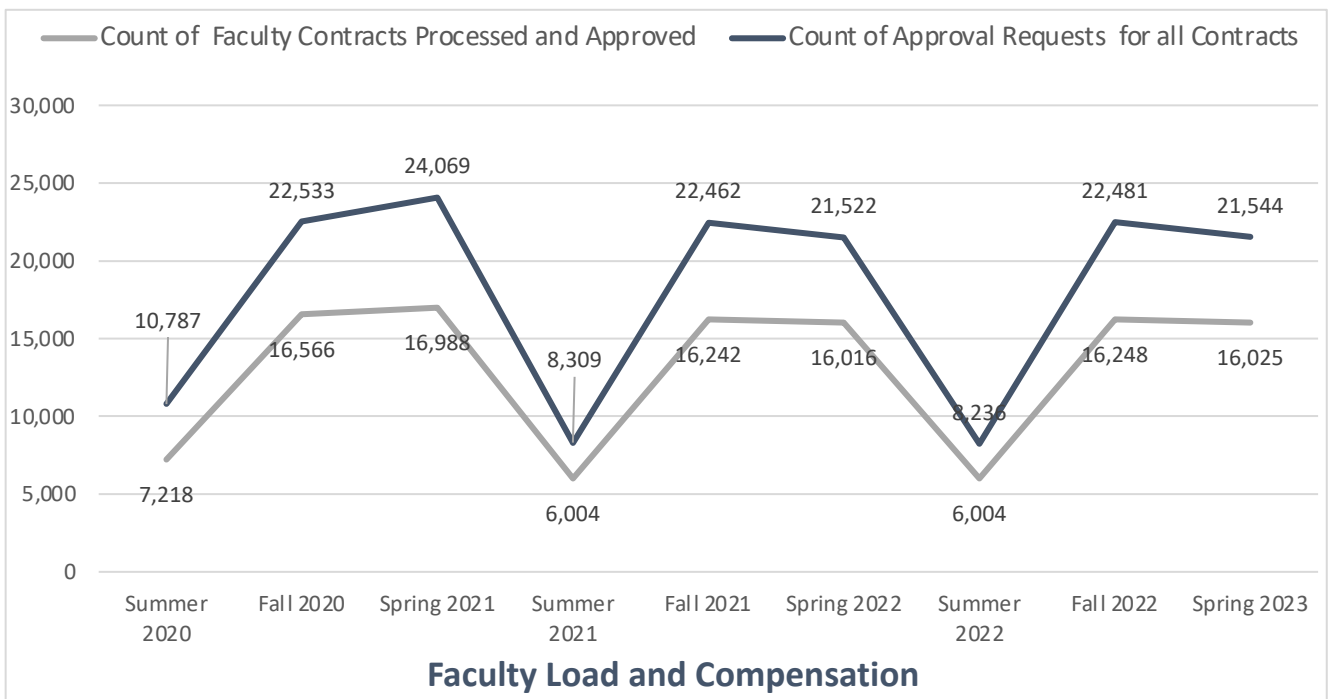
Tax Intercept Funds Collected Since July 2020

- **This process helped CCCS obtain \$18,219,982 in funds since July 2020.**
- **\$9,505,422 were collected automatically in the past fiscal year via this process. This is 155% higher than the previous year.**
- **The amount collected can fluctuate considerably year-to-year due to numerous factors, and typically correlates with higher enrollments and higher receivable balances**



2.6 FACULTY LOAD AND COMPENSATION

- Faculty Load and Compensation (FLAC R2) is a heavily customized Banner module that processes faculty, instructors, and overload teaching assignments into the payroll system.
- FLAC R2 bridges the gap between Banner HR, Finance, Payroll, and Student modules as well as providing an electronic workflow function to route educator assignments for approval before they are added to the payroll system.

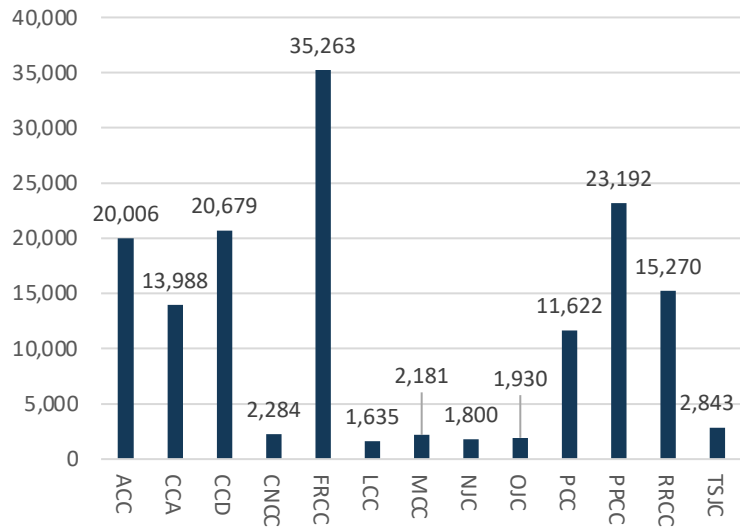


- **One contract may involve multiple approval requests.**
- **122,201 faculty contracts were processed over the last three years.**
- **38,277 contracts processed from Summer 2022 through Spring 2023, which is 0.04% more contracts than last year.**

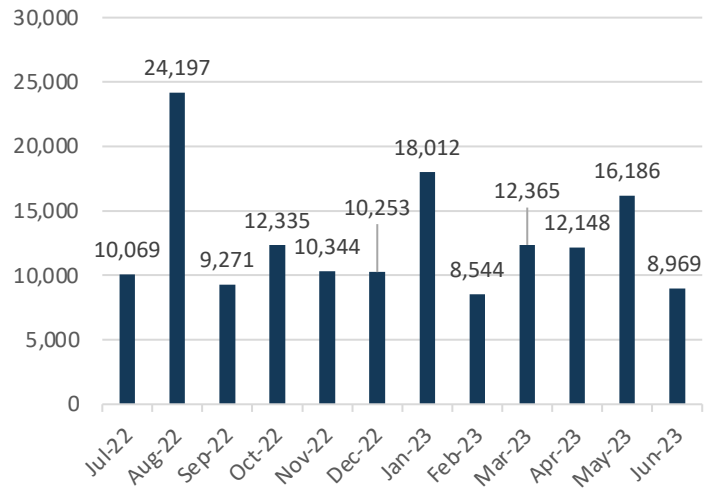


3 CRM RECRUIT

- Ellucian cloud solution that supports the recruiting and admissions lifecycle.
- Provides tools for students to submit and track their admission applications and engage with staff or peers.
- System IT customized some of the Recruit processes and forms and implemented other processes to integrate Recruit with other CCCS systems, such as Banner, Portal, and Identity Management Systems.



FY 23 Active Recruit Applications By College



FY 23 Total Active Applications By Month

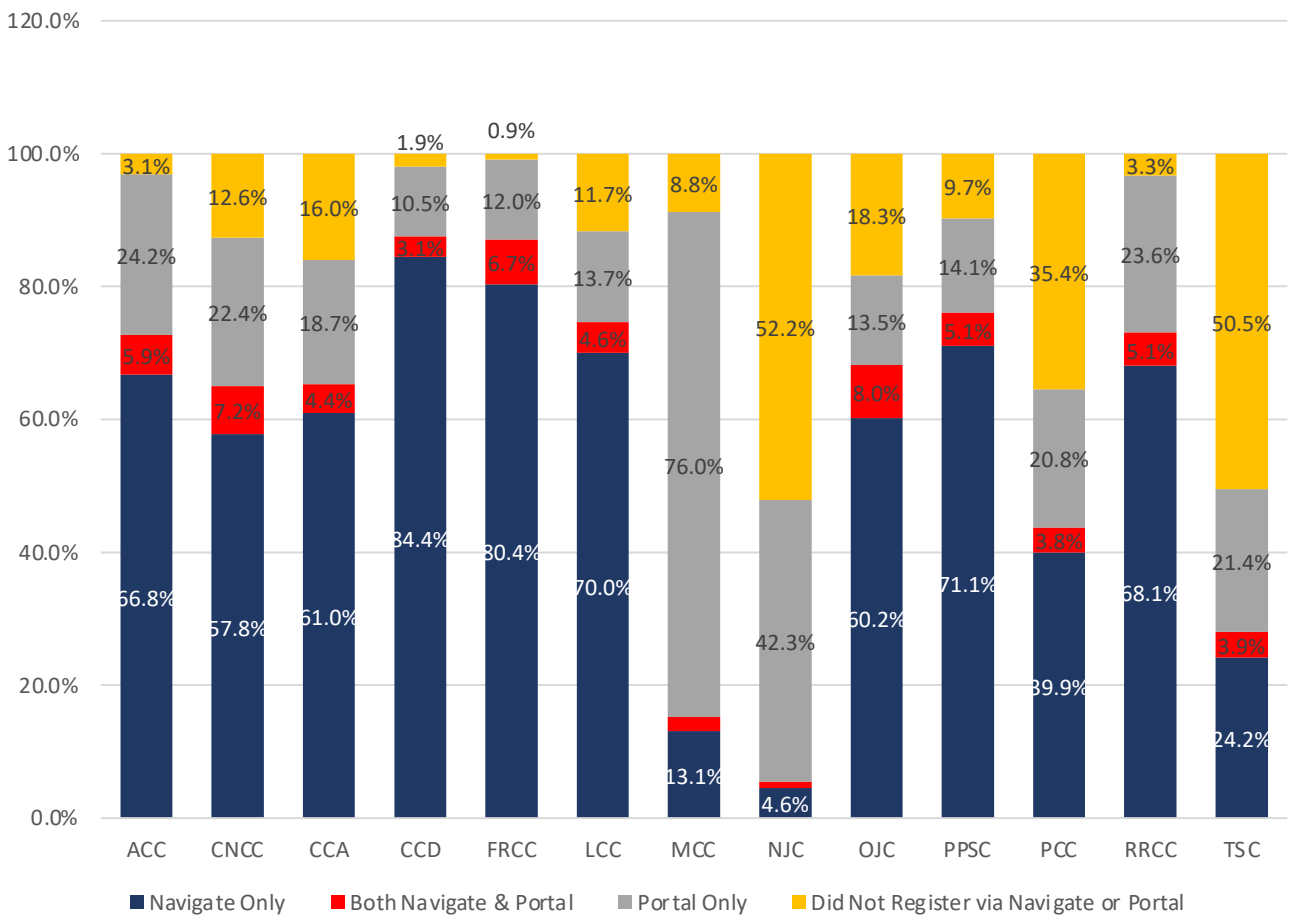
- Fraudulent applications that were deactivated by the colleges are not included.
- 152,693 active applications were processed for all colleges, 15.8% more than the previous year.



4 EAB NAVIGATE – STUDENT UTILIZATION

- A Student Success application that shows our students all the important things they need to do in one easy-to-view path.
- Helps students to pick a major, build a best-fit course schedule, register for classes, find resources on campus, and communicate and/or schedule appointments with their advisor.

Student Navigate Utilization For Fall 2022 Registration



- **Navigate was the most utilized method of registration in Fall 2023.**
- **In Fall 2023, 73% of students (35,382) used Navigate or a combination of Navigate and the portal to register for classes. This represents an increase of 31.8% of students utilizing Navigate for at least some registration over Fall 2022 (26,836).**

4.1 EAB NAVIGATE – STAFF UTILIZATION

- Navigate for Staff is a web-based student performance monitoring system that provides automated student services to assist with Student Success overall.
- Allows staff to create appointments and appointment summary reports and email and text students.

Navigate Staff Utilization

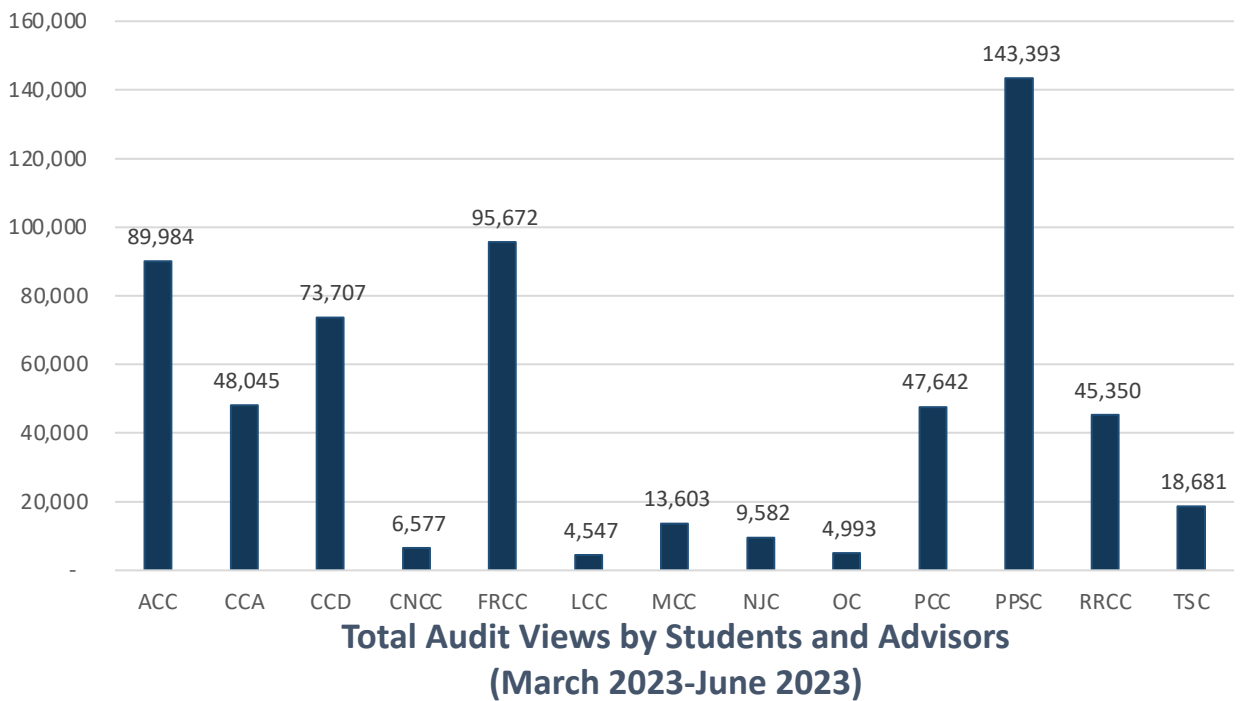
College	Total Number of Appointments Created	Distinct Students With Appointments	Academic Alerts Created	Distinct Students with Academic Alerts
ACC	33,384	4,141	2,351	1,540
CCA	28,630	5,912	142	113
CCD	25,104	7,766	1,395	1,046
CNCC	2,166	491	1,145	234
FRCC	77,490	17,521	0	0
LCC	1,139	385	0	0
MCC	2,440	729	434	246
NJC	5,345	427	502	304
OJC	3,984	609	6	3
PCC	35,588	7,628	1,935	1,081
PPSC	91,980	16,972	2,180	1,658
RRCC	24,268	7,551	3,156	2,090
TSC	2,663	842	402	210
Total	334,181	70,974	13,648	8,525

- **From July-22 through June-23, 70,974 students participated in 334,181 appointments. This represents a decline of 7% in distinct students (FY22 76,353) but an increase of 27% in total appointments (FY22 263,005) from the prior year.**
- **On average, each student had 4.7 appointments that were organized via Navigate compared to 3.4 appointments in the prior year.**
- **During the same time period, staff used Navigate to create 13,648 academic alerts for 8,525 distinct students.**



5 DEGREE WORKS

- Academic advising and degree progress monitoring tool that helps students and their advisors create a path to on-time graduation.
- Degree Works is fully integrated with Banner to allow students to easily identify which degree requirements have been satisfied.



- **Audit view counts every time an audit is viewed by students and advisors.**
- **Due to an upgrade, we lost a custom table housing the audit data for most of FY23. For this reason, we only have access to data beginning in March 2023. We should have full year data available for next year's report.**
- **601,776 audit views were conducted by students and advisors for all colleges from March 2023 through June 2023. That is 21.2% increase over the same time-period from the previous year at 496,365. This increase may be due in part to methodological differences in how the available FY23 data was pulled compared to last year.**
- **The highest number of audit views in AY23 were conducted during the end of Spring 2023. May 2023 had 254,179 views, which accounted for over 42% of views. Similarly, May 2022 had the highest views last (176,746) and accounted for 35% of views last year for the same time-period.**



6 PARCHMENT

- Parchment is the authorized vendor for all CCCS colleges to manage the ordering, processing, and secure delivery of official student transcripts.
- Provides students with the ease and convenience of ordering transcripts online.
- Transcripts requested online are sent securely to the colleges, universities, or scholarship funds that student select.
- System IT supports a number of processes that integrate Parchment with Banner.

Transcripts Processed

College	Electronic Processed by Parchment	Mail	Pick up on Campus	Total
ACC	14,324	379	0	14,703
CCA	1,536	90	4	1,630
CCD	8,916	241	18	9,175
CNCC	9,053	313	0	9,366
FRCC	21,248	584	0	21,832
LCC	1,131	120	2	1,253
MCC	1,603	65	1	1,669
NJC	1,882	75	1	1,958
OC	1,622	86	2	1,710
PPCC	15,549	801	13	16,363
PCC	5,575	215	10	5,800
RRCC	8,800	268	0	9,068
TSC	2,048	114	9	2,171
Totals	93,287	3,351	60	96,698

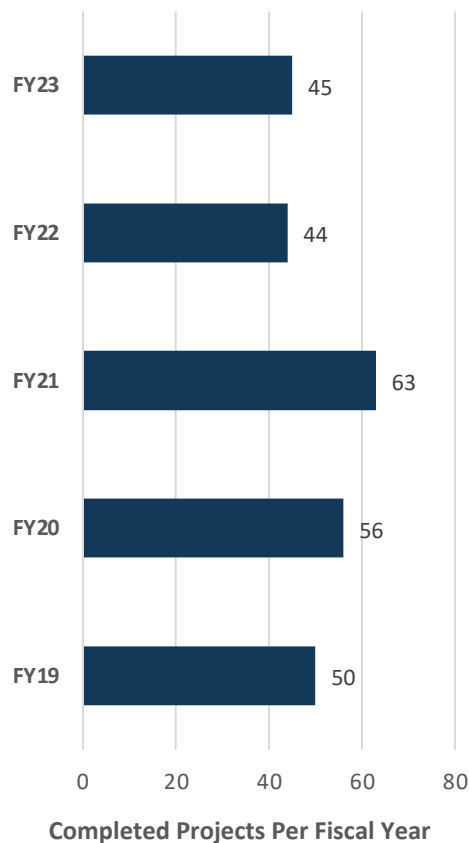
- 96.5% of requested transcripts were processed electronically by Parchment.
- The total number of requests this year was 96,698, which is around 0.8% more than the previous year at 95,908.



7 PROJECTS COMPLETED July 2022 through June 2023

Projects Completed from July-22 through June-23

Functional Area	Number of Projects
Accounts Receivable	2
Advancement	3
All	3
CCCOnline	4
Emergency Management	1
Finance	1
Financial Aid	3
Human Resources/Payroll	6
Infrastructure	9
Student	13
TOTAL	45



- **45 projects were completed during July-22 through June-23.**
- **In FY23 System IT focused considerable attention on supporting the CO Online project.**
- **258 projects were completed between FY19 and FY23. On average, 51.6 projects are completed per year.**
- **Student Affairs projects (Student and Financial Aid) represent 36% of all completed projects during FY 23.**
- **System IT also completed the work for 597 Request For Change (RFC) tickets during FY 23. This is 6% more than the number completed in FY22.**

System IT Help Desk Statistics

8 SYSTEM IT HELP DESK

- System IT Help Desk team provides support for the System Office as well as support on enterprise-wide systems and Wide Area Network support for the System as a whole.
- Requests through the help desk include a spectrum of inquiries ranging from programming, job scheduling and infrastructure to email, phone, video conferencing and network assistance.
- The desk is a single point of contact for all requests for System IT specific assistance.
- Standard desk hours are from 7:00 AM to 5:30 PM, Monday through Friday.

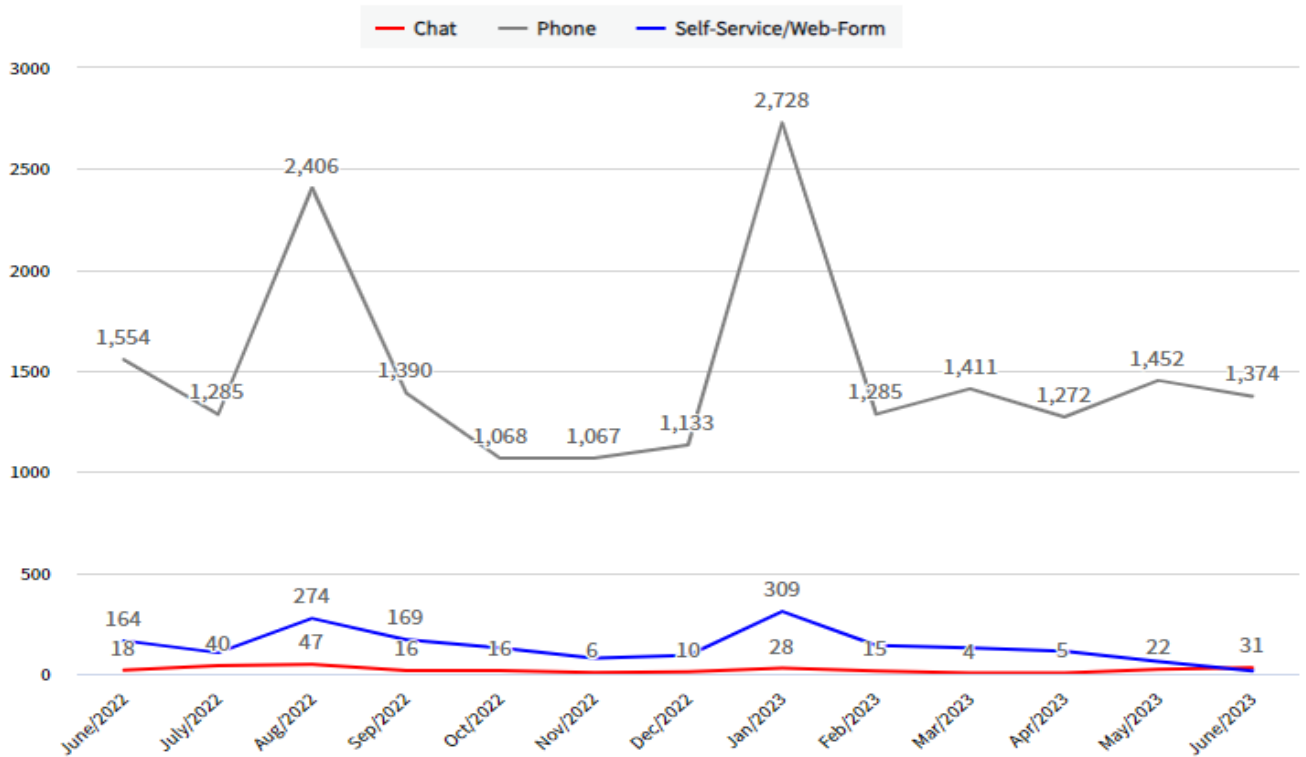
Month	Tickets Created	Tickets Closed
Jul-22	588	475
Aug-22	705	550
Sep-22	531	525
Oct-22	540	501
Nov-22	504	484
Dec-22	388	399
Jan-23	591	375
Feb-23	527	534
Mar-23	529	453
Apr-23	519	775
May-23	537	463
Jun-23	535	421
Total	6,494	5,955

- A ticket is created whenever the help desk staff is contacted. If the help desk staff is unable to answer or resolve the issue the ticket is escalated to other IT staff.
- 6,494 tickets were created in FY23, 5.2% fewer than the prior year.
- The System IT help desk is busy throughout the year with an average of 541 tickets created per month.
- Around 92% of the tickets were closed successfully before the end of June 2023 (the remaining are in process).
- Fifteen percent of tickets were closed on first contact.



9 24X7 SUPPORT DESK STATISTICS

- CCCOnline works on behalf of CCCS colleges to assure the 24x7 Support Desk agents provide the proper service.
- The 24x7 Support Desk offers support to all students and instructors within CCCS.
- Students and instructors may request help through telephone, e-mail or chat. The 24x7 Support Desk assists with the college portal, D2L, Office 365, e-mail, printing, browser troubleshooting, and Banner-related issues.
- The 24x7 Support Desk offers a self-help website (<https://help.ccs.edu>) where students and instructors may find how-to and troubleshooting articles.
- The 24x7 Support Desk is provided by a third-party vendor, Istonish.



- **24X7 Support Desk is busy throughout the year.**
- **21,460 help desk requests were received from June 2022 through June 2023, 3.5% fewer than last year.**
- **The beginning of the fall and spring terms are usually busier than the rest of the year.**



9.1 24X7 SUPPORT DESK STATISTICS - Call Metrics

Call Metrics

	Number of Calls Answered: Target: 85% of call answered	Average Speed to Answer: Target: 80% answered within 90 seconds	Average Handle Time: Target: 9-10 minutes
Jul-22	91.89%*	96.68%*	8:07 Min*
Aug-22	84.39%*	92.89%*	7:48 Min*
Sep-22	93.04%*	96.17%*	9:10 Min*
Oct-22	93.11%*	93.82%*	8:02 Min*
Nov-22	87.99%*	92.47%*	8:19 Min*
Dec-22	84.57%*	90.29%*	7:44 Min*
Jan-23	58.16%*	76.81%*	8:05 Min*
Feb-23	76.91%*	80.17%*	8:19 Min*
Mar-23	83.63%*	87.10%*	7:51 Min*
Apr-23	85.29%*	86.61%*	7:23 Min*
May-23	60.21%*	65.33%*	7:41 Min*
Jun-23	72.58%*	81.41%*	8:11 Min*
Monthly Average	79.88%	87.23%	8:06 Min

10 ACCESS REQUESTS

- System IT supports and administers various levels and types of access within Banner and IT environments.
- Access can be requested for a specific Banner module, with pre-defined roles, and other IT applications and resources, such as Degree Works, Cognos, Portal Admin, a server or shared folder.
- Access requests are submitted via email and they follow established procedures and require different level of approvals depending on the required access type.

Access Requests Processed

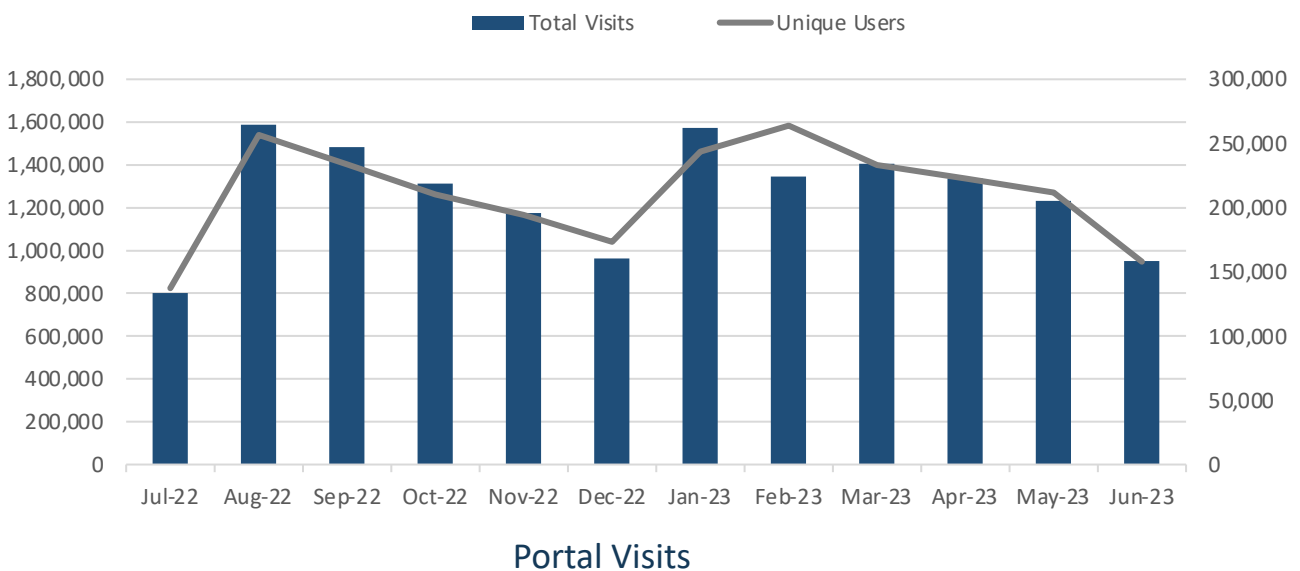
Month	Processed Banner & Related Access Requests	Processed Cognos Requests
Jul-22	274	24
Aug-22	452	18
Sep-22	289	43
Oct-22	394	68
Nov-22	395	56
Dec-22	264	27
Jan-23	300	32
Feb-23	256	35
Mar-23	209	29
Apr-23	317	25
May-23	254	33
Jun-23	224	38
Total	3,628	428

- System IT processed 4, 056 Banner & Cognos access requests over the last fiscal year. It is around 20% more than the previous year at 3,391 processed requests . This increase is due in part to the continued returning of work on-campus and more student workers. Supervisors may also be requiring more cross-training.
- Access requests include both granting and disabling access.
- An access request could be disapproved by due to various reasons.



11 LUMINIS PORTAL

- Ellucian web services and delivery environment that enables CCCS colleges to provide an interactive and collaborative environment with a more personalized user experience.
- System IT locally maintains and supports the Portal and its components, such as LDAP, BEIS, BanPortal, and Solr. The school Portal Admins support their school contents and some features.
- Each college's Portal is branded based on the preference and requirements of each college.
- System IT customized some of the Portal processes and implemented other processes to integrate the Portal with other CCCS applications as well as Banner, Office 365, Active Directory, EAB Navigate, Parchment, and many other internal and external applications.

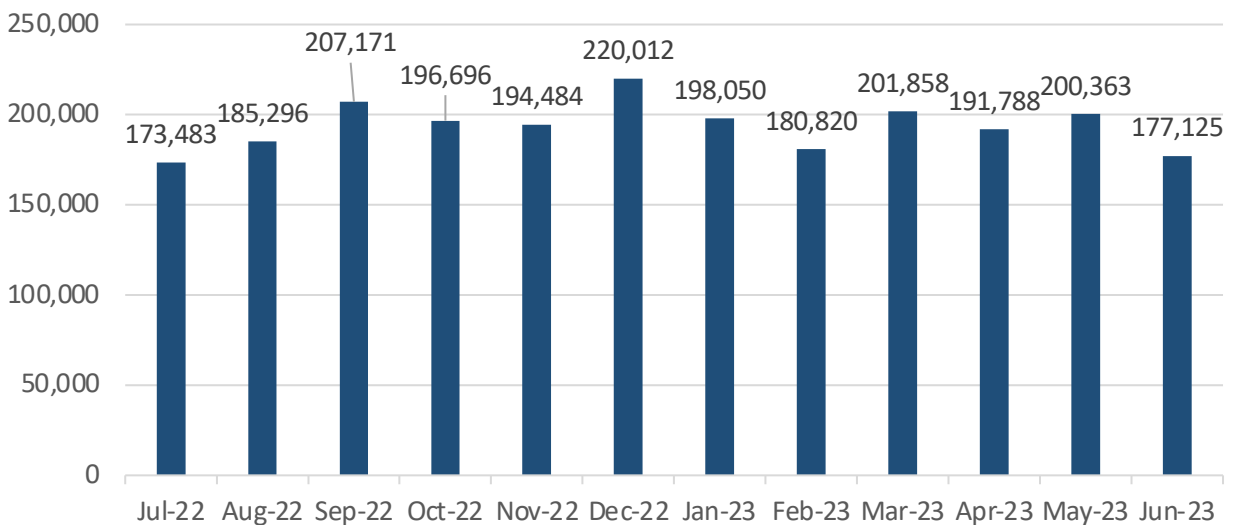


- **Unique users are counted based on the browser cookies/cache. When a user clears their browser cookies/cache, they will be treated as a new user.**
- **The Portal is used throughout the year with a total of over 15 million visits from Jul-22 to Jun-23, around 5 million more than the previous year. This increase may be due in part to increased enrollment and changes in tools used to measure site visit analytics.**
- **On average, there are around 1.26M portal visits per month.**
- **The monthly average of unique users is 211,584, which is an 8.3% increase from the prior year (195,367).**



12 AUTOMIC

- Automic (formally AppWorx) is a web-based application that is used to automate the running and submission of jobs and processes.
- System IT uses Automic to schedule most of Banner jobs, reports, and processes, such as payroll, financial aid, billing, finance control reports, placing advising holds and grade calculations.
- Automic is also used to schedule jobs and processes of other applications, such as Bookstores, Portal, Degree Works, and others.



Total Number of Jobs per Month

- **Automic processed more than 2.327 million jobs over the last fiscal year and that is 1.9% more than the previous year at 2.283 million.**
- **The daily average of processed jobs is 6,376 compared to 6,255 in the prior year.**
- **The monthly average of processed jobs is 193,929 compared to 190,252 in the prior year.**



13 INSTITUTIONAL RESEARCH & BUSINESS INTELLIGENCE

System IT IRBI strives to support the day-to-day operations of the system and empower leaders at CCCS and our 13 community colleges to make evidence-based decisions for the betterment of our students through high quality data, research, reports, and analytics. This work includes the development and maintenance of our Operational Data Store (ODS) and Cognos, which utilizes data in the ODS for reporting. Our team also produces system-wide data products, supports grants and the CCCS foundation, provides research support, and responds to legislative and media inquiries.

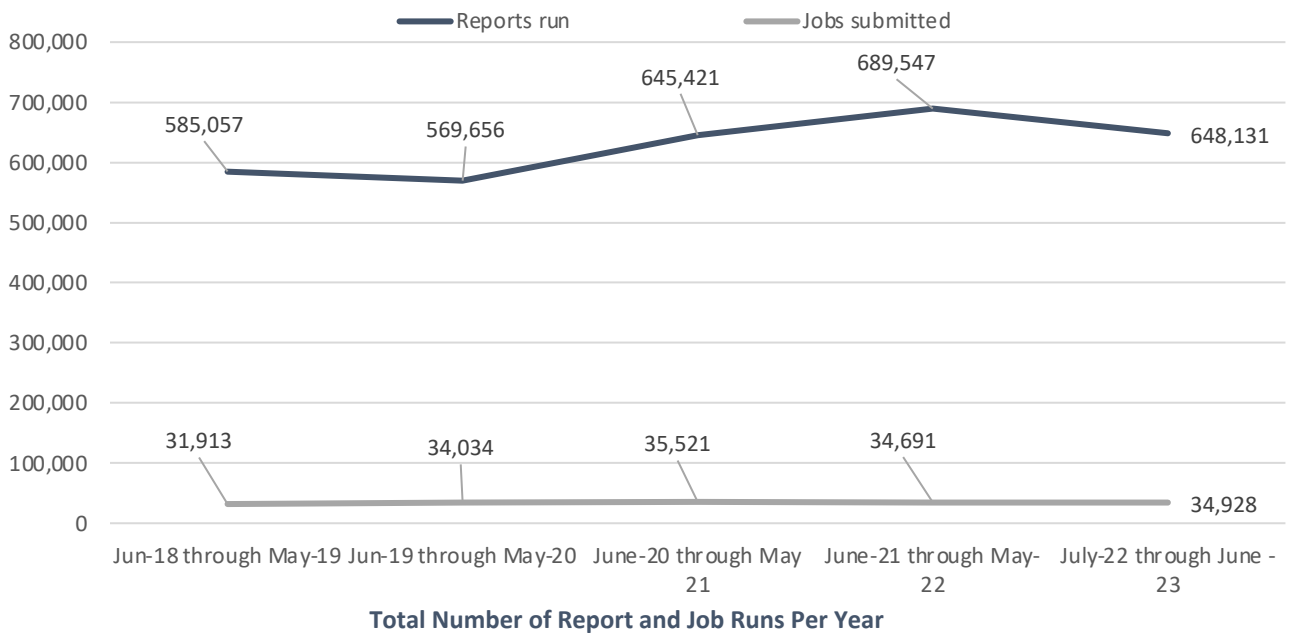
In total, IRBI completed 137 projects from July 2022 to June 2023. System-wide projects include::

- 14 Data Books (13 colleges plus the system)
- 7 Strategic Plan KPM Dashboards
- Ongoing Data Support for CO Online Project, including reports for CO Online Financial Sharing Model
- Data Support for Lumina Grant & Reisher Scholar Program
- Annual Concurrent, Dev Ed & Adult Learner (new!) Reports
- New SURDS Report – Prior Learning Assessment
- Degreeworks Reporting
- Began Data Warehouse Project
- Developed Cognos Function Catalog
- 7 Data Requests for the Legislative Session



13.1 COGNOS ANALYTICS

- IBM web-based integrated business intelligence suite that is used for creating reports and dashboards from various CCCS information systems.
- All data that is used for reporting is housed in the Banner Operational Data Store (ODS) which is the authoritative source for reporting across the System.
- The ODS at CCCS has been extended to allow reporting against “real-time” Banner data and will soon be the source of reporting for D2L and Degree Works data.
- All Shared Operational and Real-time Reports in Cognos are designed and supported by System IT.



- **Report dates were changed to July-June this year to better align with the fiscal year.**
- **3,137,812 reports and 171,087 jobs were processed by Cognos over the last five years. This past year the number of reports run decreased by 6% whereas the number of jobs has increased by 0.7%.**
- **On average, 1,776 reports were run, and 96 jobs were submitted daily for FY22-23.**
- **System IT’s IRBI Department has seen the annual total number of reports and jobs run has seen a 11% and 9% increase, respectively, in the past five years.**

14 ENTERPRISE SECURITY

CCCS Enterprise Information Security supports and maintains an information security program utilizing people, process, and technology that helps protect CCCS and college information systems. CCCS Enterprise Security's Mission Statement is: "CCCS Information Security collaborates with the Colleges to provide cybersecurity services, oversight, and advisement that assists the colleges and the system in reducing risk and safeguarding the confidentiality, integrity, and availability of CCCS's information assets."

The objectives of CCCS Enterprise Information Security program are:

- Educate Staff and Faculty with awareness and knowledge to protect institutional data and meet compliance obligations.
- Collaborate with colleges to enable the best student outcomes while protecting sensitive and confidential information.
- Information security leadership will be a trusted advisor/expert for institutional leadership.
- A robust set of security operations services that reduce risk while providing an excellent return on investment.



14.1 ARCTIC WOLF MANAGED RISK PLATFORM

Built on the industry's only cloud-native platform to deliver security operations as:

- A concierge service—Arctic Wolf Managed Risk enables CCCS to continuously scan Networks, and endpoints, to inventory digital assets quantify digital risks.
- The Arctic Wolf security operations expert from the Concierge Security Team works directly with CCCS to discover risks beyond simple vulnerabilities, benchmark the current state of your environment, and implement risk management processes that harden your security posture over time.

Arctic Wolf delivered services and operations are applied to all of CCCS applications and systems.

CCCS System Office Digital Risk Profile as of September 2023:

Network Risk Summary

Based on the latest set of risks, the following is a snapshot of your companies' risk landscape.



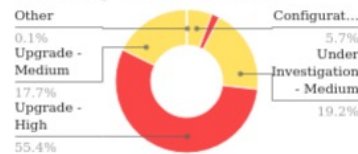
Risk Score Trends



Risks Classification Summary

Summary of risks broken out by Infrastructure Type and Classification Type.

Risks by Classification



Classification	Count
Breach	0
Upgrade	15761
Configuration	1255
Under Investigation	4545

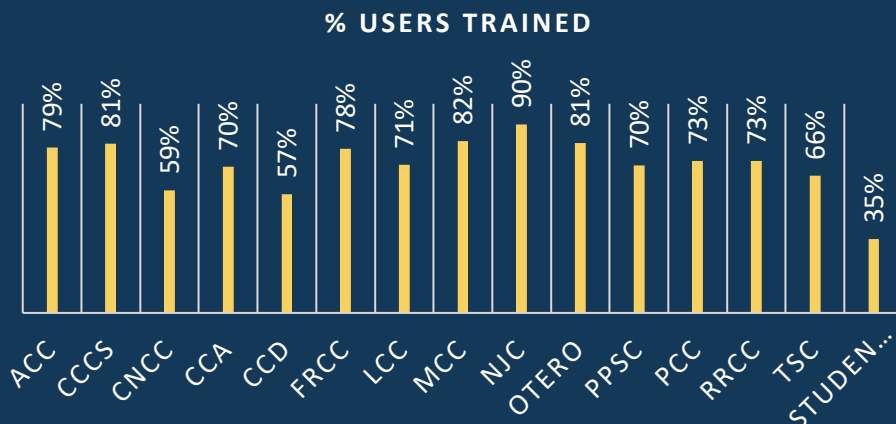
14.2 SECURITY AWARENESS TRAINING

Security Awareness Training educates employees about the cyber security landscape. Security Awareness Training helps to raise awareness of cyber security threats, reduce the risks associated with cyber-attacks and embed a culture of security compliance.

In 2023 CCCS delivered mandatory cyber security awareness training to all employees. The training covered the following topics:

- Social Engineering
- Phishing
- Pretexting
- Vishing
- Smishing (phishing via text messages)
- Spear Phishing
- Electronic Threats
- Software-Based Attacks
- Internet-Based Attacks
- Mobile Device Security
- Malware

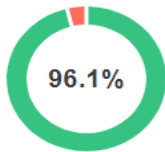
• The status of the 2023 information security awareness campaign:



14.3 MULTI-FACTOR AUTHENTICATION (MFA)

- Multi-Factor Authentication (MFA) is needed to reduce the risk of email compromise, breach, ransomware, and other cybersecurity threats that take advantage of stolen credentials (login and password). MFA is an electronic authentication method that adds one more "factor" to check in addition to a password.
- CCCS chose the DUO MFA solution to secure applications at significant risk of unauthorized access due to stolen/compromised credentials. The product was procured in July of 2021 and a project was launched to implement MFA across CCCS.
- In 2022 we implemented DUO on over 200 publicly facing resources including colleges' portals, EAB, Outlook email, and VPN, primarily by leveraging our Single Sign On Solution (SSO).
- In the last 60 days July – Sept DUO has processed over 567k authentications compared to 500k authentications for CCCS in a similar time frame as 2022.

Overview



Success Rate
[See All Authentications](#)



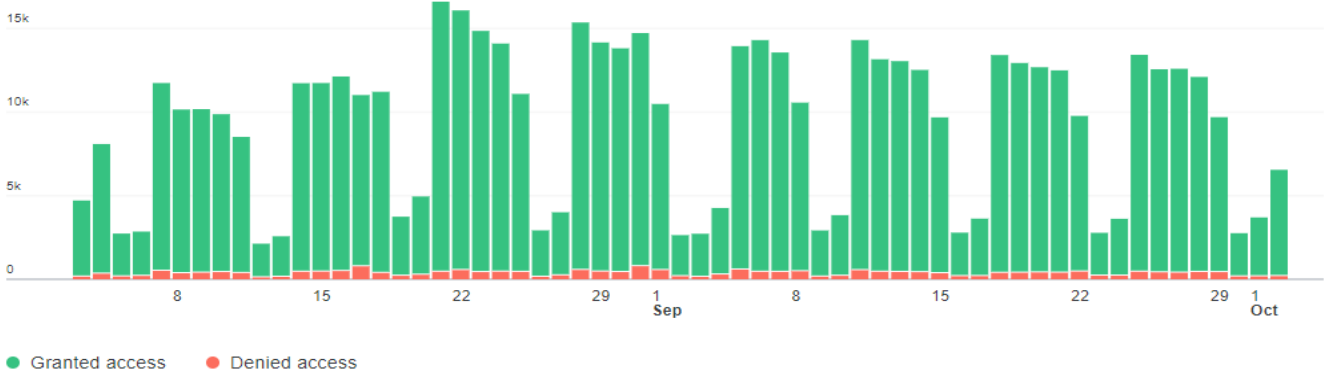
Duo Push
[See Top Auth Methods](#)



CCCS SSO
[See Top Applications](#)

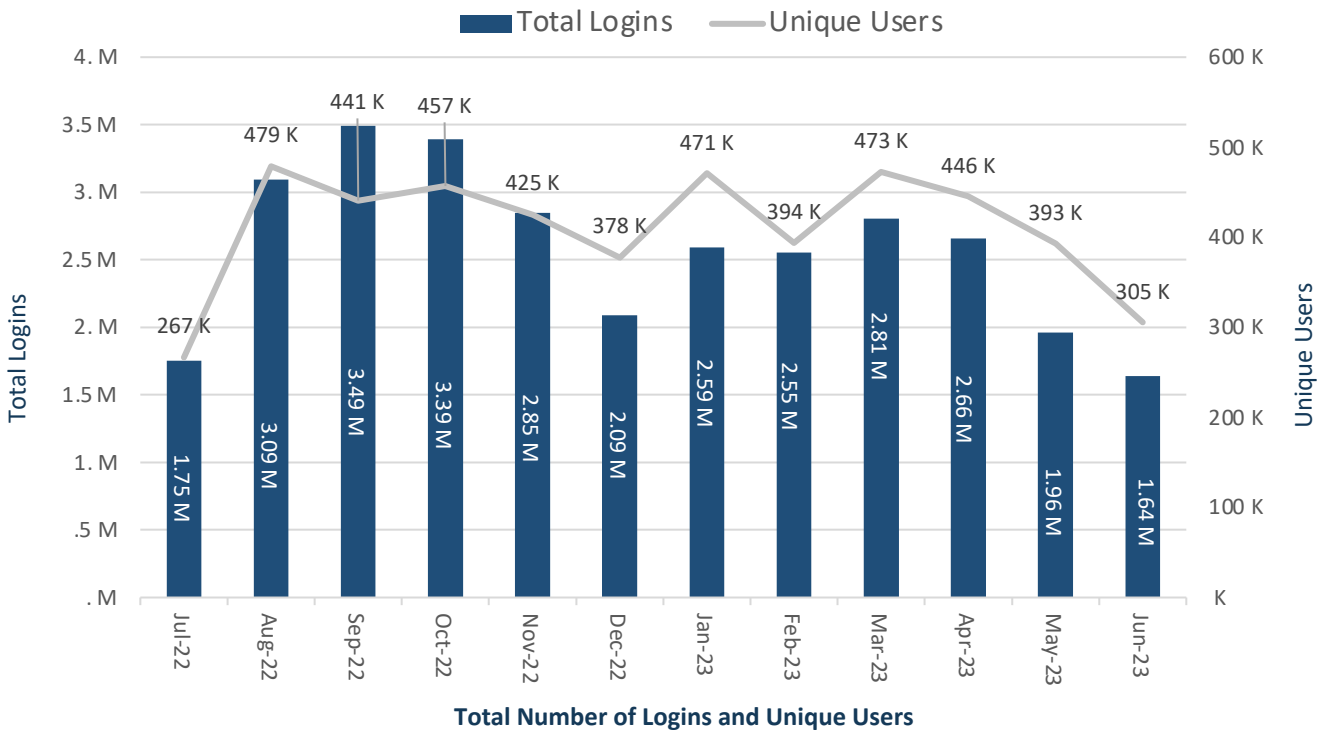
567.3k Authentications

Shown at every day.



15 ETHOS - SINGLE-SIGN-ON

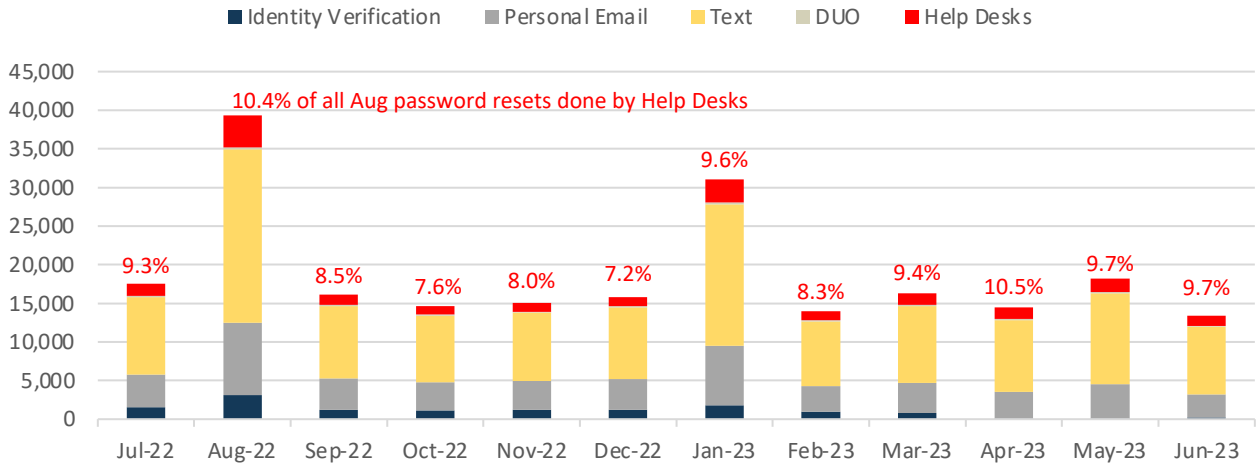
- Ellucian Ethos Identity is used for authentication and Single-Sign-On (SSO) for most of CCCS enterprise applications, such as Portal, D2L, Banner, Student Email, EAB, and others (130 applications total).
- Ethos is hosted within the System IT data centers and maintained and supported by the CCCS Portal Team.
- The School Portal Admins help maintain and support the branded sign-on pages for their school.
- System IT customized some of the Ethos functionalities and built new ones to meet CCCS requirements.
- Ethos support various SSO protocols and that made it easier to implement and support many SSO integrations.



- **Unique users are counted based on the browser cookies/cache. When a user clears their browser cookies/cache, they will be treated as a new user.**
- **In FY23, Ethos processed over 30.8 million logins with an average of 2.5 million logins per month.**
- **Ethos processed more than 4.9 million unique users' successful logins with an average of 410,557 unique users per month.**
- **Ethos processed 2.96 million fewer logins than FY22. This is likely due to moving student email authentication to Azure. Since January 2023 students are using Azure, instead of Ethos, to access their email.**

16 PASSWORD RESETS

Password Reset Options for Students	Password Reset Options for Faculty and Staff
Personal Email, Text Message, Identity Verification, or Call the 24X7 help desk	Personal Email, Text Message, DUO, or Call the college IT help desk



Number of Password Resets done by Self-Reset Tools Vs Help Desks FY 22-23

- The total number of password resets from July 2022 through June 2023 is 225,898, around 3% more than the previous year.
- Over 90% of all password resets are done via the password self-reset tools.
- The monthly average of password resets are 1,108 via Identity Verification, 4,571 via Personal Email, 10,234 via text message, 167 via DUO, and 1,731 via the 24X7 and school Help Desks.
- On average, 562 password resets are done daily by all password self-resets tools and 57 by the 24X7 and school Help Desks.
- 39,295 password resets took place during August 22 and it is common to see this large number of password resets during the beginning of the academic year and new terms.
- Password self-reset via text message feature was implemented in Jun. 2022 and it is quickly becoming the most used password self-reset feature (around 65.8% of all password self-resets done in FY23).

17 CISCO IRONPORT

- **Cisco IronPort** is an email security system that provides centralized reporting, message tracking, and virus, spam and other protection services.
- It is used to gain insight into email traffic, and provide protections from potential email threats.
- It incorporates the following features:
- **External Spam Protection:** Label spam and suspected spam messages for end users, and allow end users to review messages that are flagged as spam.
- **Virus and Advanced Malware Protection:** Detects and quarantines messages with virus or malware payloads, keeping them from users' mailboxes.
- **Malicious URL Detection:** Detect and quarantine messages with known bad URLs that would send users to malicious web sites.
- **Reputation Filtering:** Find and block messages from known bad actors on the Internet based on their IP, Domain, or DMARC reputation.
- **Advanced Content Filtering:** Stop messages that are known by IT to be coming from bad actors who have created well crafted spear phishing messages.
- **Advanced Graymail Tagging:** Identify and tag messages that are known to come from marketing, social media, or bulk mailings so users can quickly make informed decisions.

Outgoing Mail Summary (July 2022 – June 2023):

Overview > Outgoing Mail Summary		
Message Processing	%	Messages
Spam Detected	0.0%	0
Virus Detected	0.0%	4
Detected by Advanced Malware Protection	0.0%	0
Messages with Malicious URLs	0.0%	0
Stopped by Content Filter	0.0%	674
Clean Messages	100.0%	13.2M
Total Messages Processed:		13.2M

Incoming Mail Summary (July 2022 – June 2023):

Overview > Incoming Mail Summary		
Message Category	%	Messages
Stopped by IP Reputation Filtering	70.5%	71.7M
Stopped by Domain Reputation Filtering	3.0%	3.0M
Stopped as Invalid Recipients	0.1%	128.3k
Spam Detected	1.7%	1.7M
Virus Detected	0.0%	256
Detected by Advanced Malware Protection	0.0%	576
Messages with Malicious URLs	0.0%	7,346
Stopped by Content Filter	0.4%	425.9k
Stopped by DMARC	1.3%	1.3M
S/MIME Verification/Decryption Failed	0.0%	0
Total Threat Messages:		75.7%
Total Threat Messages:		77.1M
Marketing Messages	5.6%	5.7M
Social Networking Messages	0.6%	620.1k
Bulk Messages	5.3%	5.4M
Total Graymails:		11.6%
Total Graymails:		11.8M
S/MIME Verification/Decryption Successful	0.0%	0
Clean Messages	12.7%	12.9M
Total Attempted Messages:		101.8M



18 DISASTER RECOVERY/BUSINESS CONTINUITY

The significant flooding across the Denver metropolitan area in 2013 prompted the Colorado State Board of Colleges and Occupational Education to approve a specified spending authority to create a disaster recovery program to maintain continuity of operations in the event of significant weather or other events that could disrupt operations at the Lowry datacenter. After extensive research by System IT and consultation with Oracle and other key partners, System IT created an IT disaster recovery plan that encompassed the wide-area network, email, telecommunications, identity services, and Banner-related components. Planning and implementation of the System IT disaster recovery / business continuity project took place in FY17 and FY18. The culmination of this work included a detailed plan for disaster recovery and business continuity testing.

The software applications and infrastructure environment supported by System IT are constantly evolving to support the changing needs of the Colorado Community College System. Common changes include implementation of new software products, software upgrades, security patches, in-house developed solutions to meet new business needs, and enhancements to the underlying server systems and networks.

To ensure that the System IT disaster recovery and business continuity plan remains current, disaster recovery planning is built into all new projects. Failover tests are conducted six times a year to exercise the plan and highlight any required changes. Each test involves approximately 30 staff from System IT and CCCOnline. Four of these tests are conducted in a test environment and two tests are conducted in the live, production environment. Tests include a failover from our primary to secondary datacenter, followed by a failback from the secondary to the primary. Application testing is conducted at each step to ensure that systems remain operational. Each test requires between six and eight hours to complete. Prior to 2022, the testing process required eight to ten hours. Investments in automation have reduced the time required for failover and failback by approximately 30%. Currently, this testing process requires approximately 1,200 person hours every year.

The goal of the disaster recovery and business continuity program is to restore access to critical business systems within three hours of a catastrophic failure. System IT made additional investments in FY21 and FY22 to operate critical services like authentication, telephony, internet access, and wide-area networking in a highly available (HA) configuration. This enables these services to fail over to the alternate datacenter with very little service interruption. Other applications such as email and collaboration tools have been moved to hosted cloud providers which make them independent of any System IT datacenter.

System IT and CCCOnline are committed to the ongoing success of the disaster recovery and business continuity program. System IT continuously evaluates new techniques and technologies to enhance the disaster recovery and business continuity program with the goal of ensuring that systems are available to the System Office and colleges as close to 100% of the time as is possible.



CONCLUSIONS

Technology is ubiquitous in our world today and most of us could not do our jobs without it.

System IT Success Measures is a compilation of the end results of our technology, from registered students, to tuition payments collected, to paid employees, to malicious emails blocked and to help desk tickets. These are the activities that are assisted by our technology or are the result of our technologies. Hopefully this report sheds some light on the quantity and quality of services provided by System IT and demonstrates the extent to which our technologies and the work of System IT impact the colleges and system office.

System IT strives to be a model information and technology organization recognized for proactive leadership, collaboration, innovation, transparency and responsive customer service. Our complex technology environment as well as our support and governance structure has served as a model for other large institutions and systems.

We would appreciate your feedback on this report and well as on our technology and services.

