SUCCESS MEASURES

INFORMATION TECHNOLOGY

December 2024

COLORADO
COMMUNITY COLLEGE SYSTEM

Mission for System IT

- ## Vision of Success (What we seek to be)

  - Be a model information and technology organization recognized for proactive leadership, collaboration, innovation, transparency, resource stewardship and responsive customer service.

- ## Mission Statement (what we do)

  - Enhance the colleges' ability to support diverse, equitable and inclusive student success;

  - Provide robust, secure & highly available enterprise applications & infrastructure;

  - Support enterprise operational services and business functions;

  - Provide high-quality enterprise reporting, research, and analytics to support data democratization and evidence-based decision-making;

  - 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; and

  - Align our efforts and our projects with the Colorado Community College System's strategic goals and key initiatives.

- ## 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 our colleagues & stakeholders. 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 responsibly say "yes, we can".

  - Governance: We support and encourage an inclusive and transparent governance and resource stewardship processes for IT investments and projects.

  - Resource Integrity: We support and reinforce systemwide IT risk management, including data quality, business process integrity, and cyber security.

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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. In this report, we provide an insight into the contributions System IT makes daily by summarizing key figures and statistics that illustrate these accomplishments. Unless stated otherwise, the statistics included in this report are from July 2023 through June 2024.
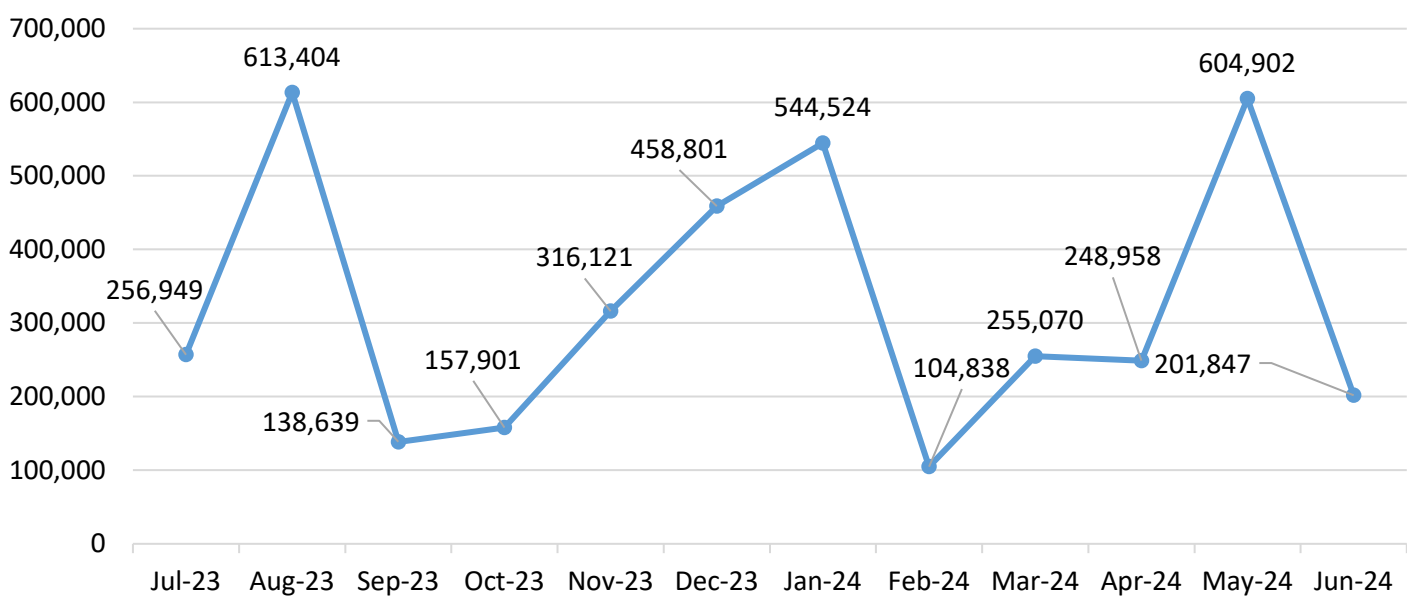
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2.0 ELLUCIAN BANNER

- 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.

Chart data points:
- Jul-23: 256,949
- Aug-23: 613,404
- Sep-23: 138,639
- Oct-23: 157,901
- Nov-23: 316,121
- Dec-23: 458,801
- Jan-24: 544,524
- Feb-24: 104,838
- Mar-24: 255,070
- Apr-24: 248,958
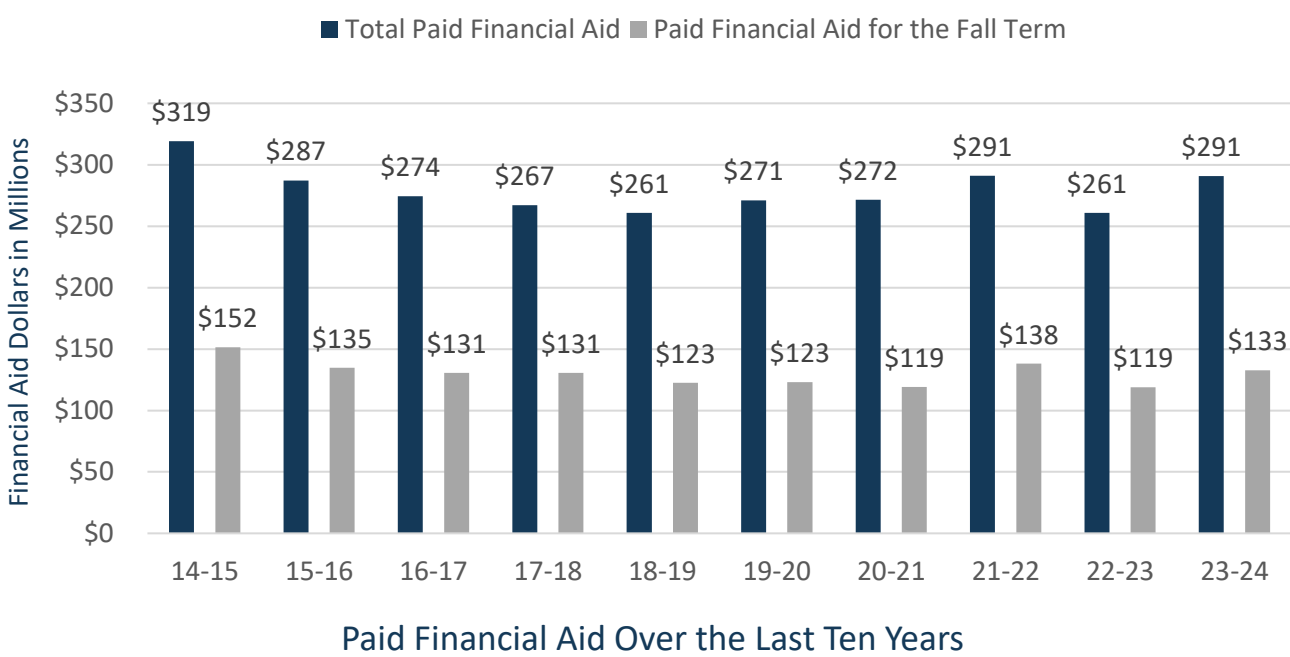- May-24: 604,902
- Jun-24: 201,847

Total Number of Student Transactions in Banner per Month

- **Over 3.9 million student transactions processed from July 2023 to June 2024, 11.5% more transactions than the prior year.**

- **An average of 325,163 transactions per month.**

- **An average of 10,690 transactions per day.**

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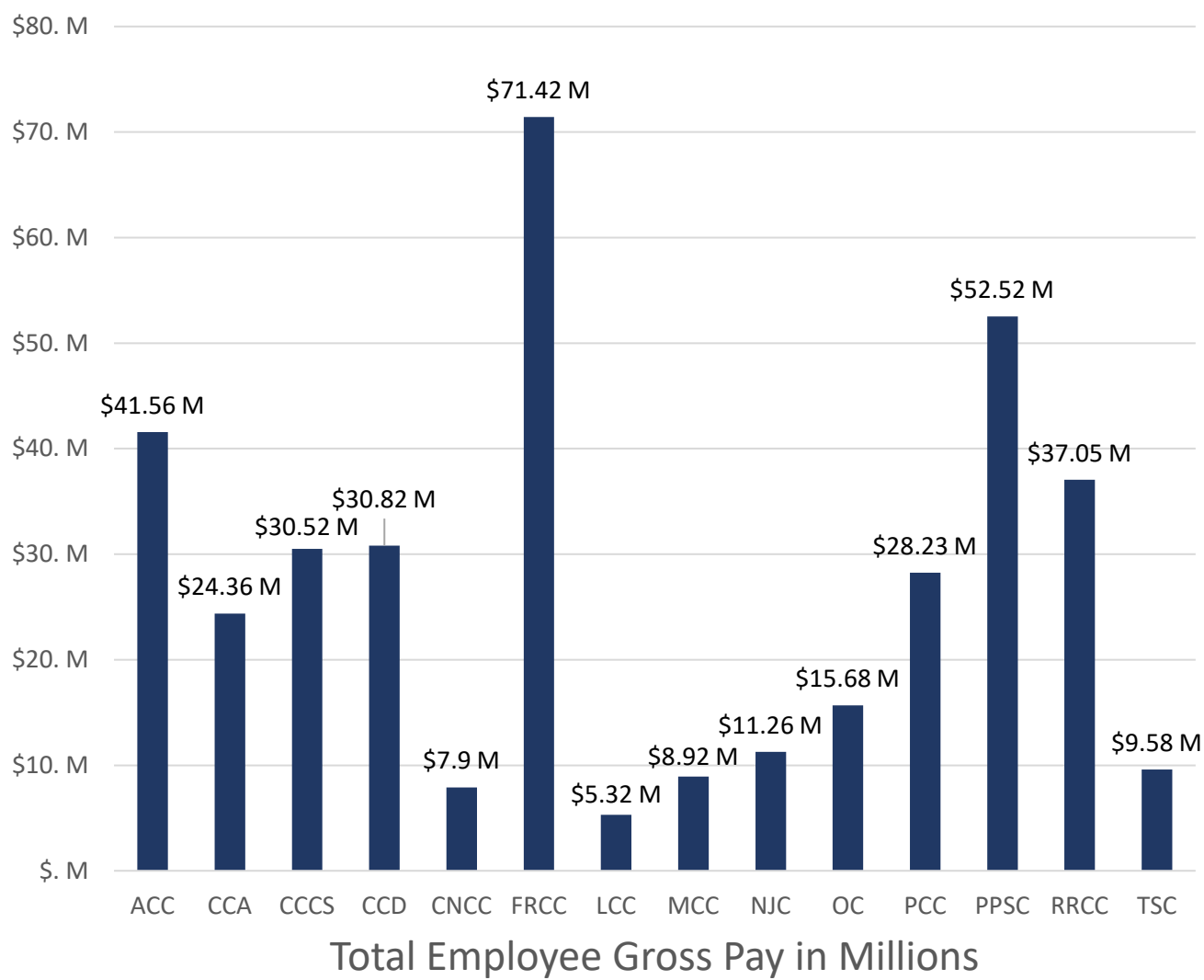
2.2   BANNER FINANCIAL AID

- 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.

Total Paid Financial Aid ■ **Paid Financial Aid for the Fall Term**

Financial Aid Dollars in Millions

	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
Total Paid Financial Aid	$319	$287	$274	$267	$261	$271	$272	$291	$261	$291
Paid Financial Aid for the Fall Term	$152	$135	$131	$131	$123	$123	$119	$138	$119	$133

Paid Financial Aid Over the Last Ten Years

- **$2.79 billion of Financial Aid grants processed over the last 10 years.**

- **Total Financial Aid for 2023-2024 ($290,724,033) is 11.5% higher than 2022-2023 ($260,810,174). This is exceeding pre-pandemic numbers and is on par with 2021-2022 ($291,111,921) and 2015-2016 ($287,206,615).**

- **Fall Term Financial Aid for 2023-2024 ($132,724,866) is 11.7% higher than 2022-2023 ($118,799,917).**
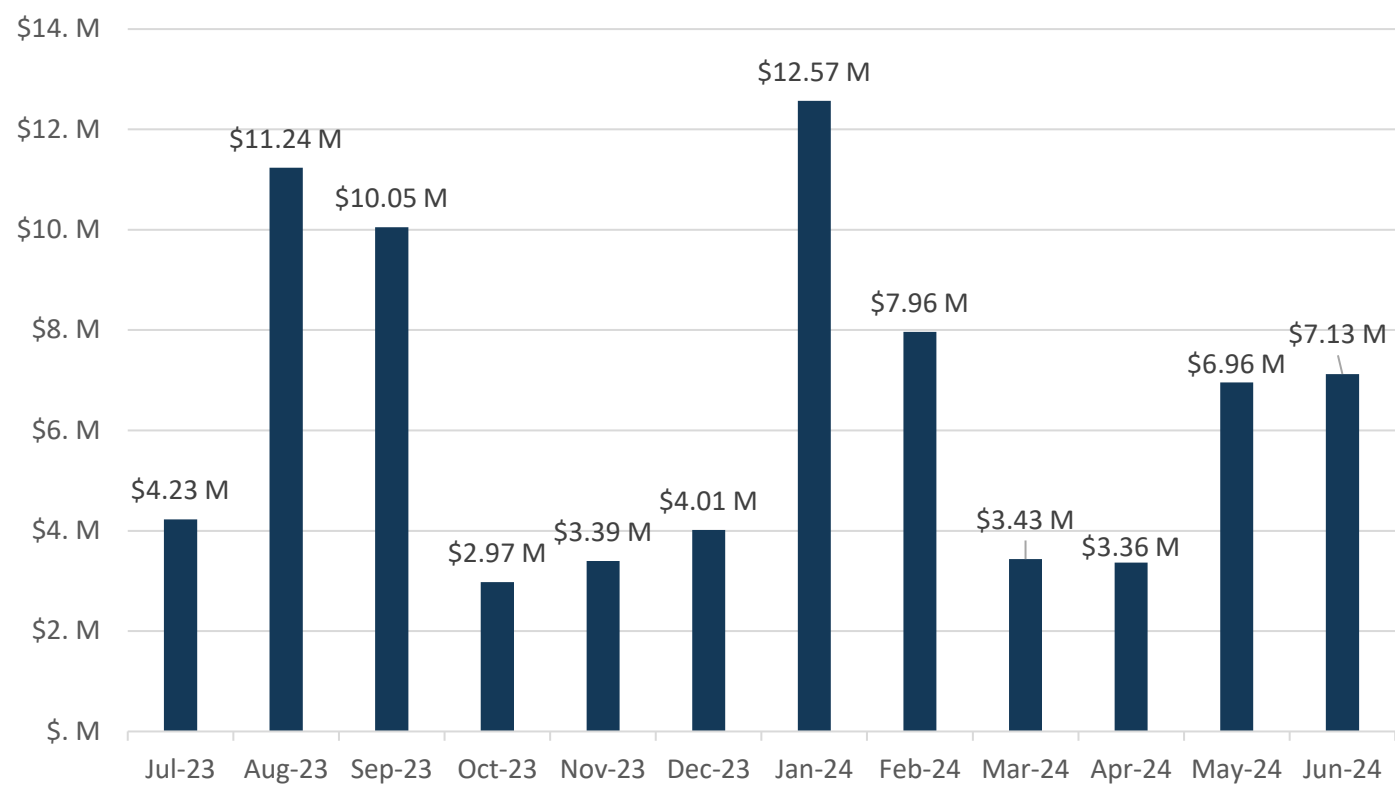
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2.3 EMPLOYEE PAYROLLS (GROSS PAY)

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

Total Employee Gross Pay in Millions

- **The total dollar amount of gross pay processed enterprise-wide from July-23 through June-24 was $375,144,457.55 which is a 7.0% increase from the previous year.**

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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.
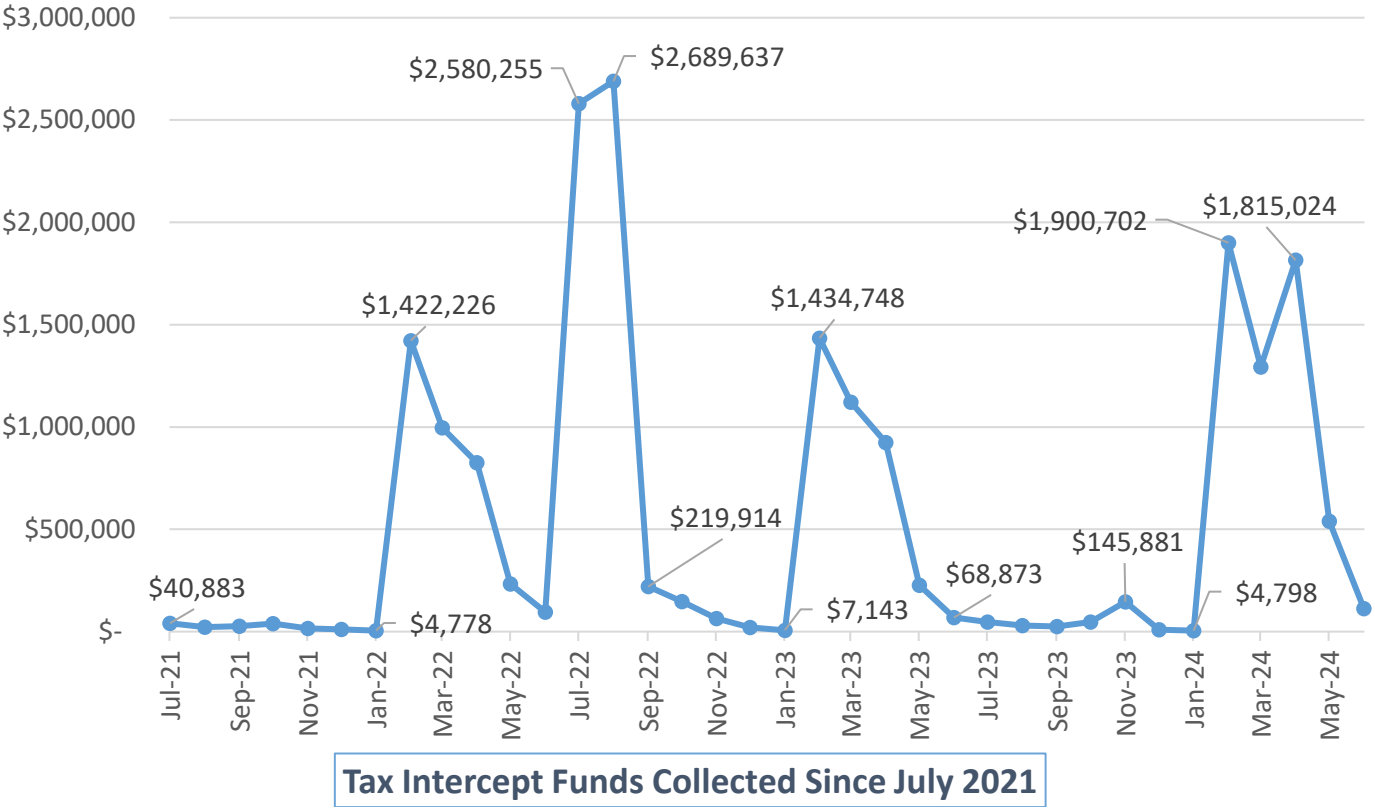

Total Tuition Payments Dollars Processed Through CashNet

- **The total amount of tuition processed over the last fiscal year through Transact for all colleges is $77,313,416 which is 1.9% lower than the previous year ($78,846,365).**

- **The collected tuition of $77,313,416 required 62,602 Banner transactions, which results in an average of $1,235 collected per transaction.**

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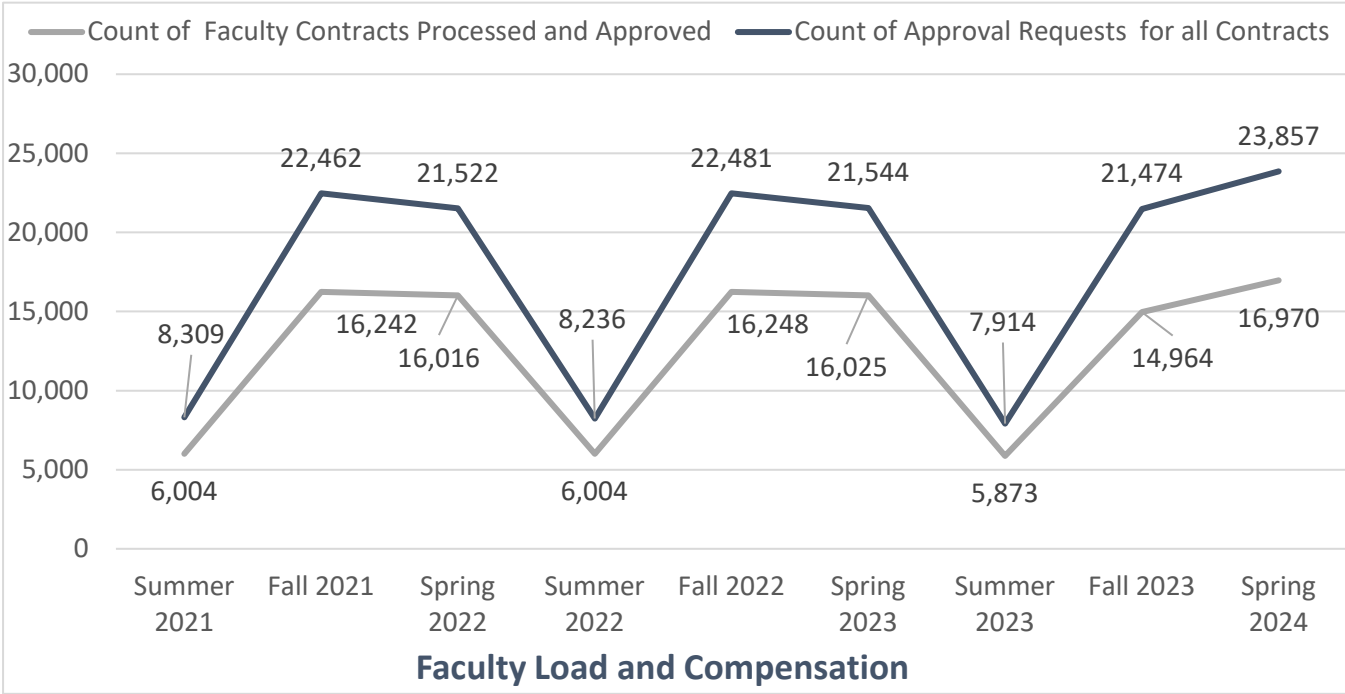
2.5 TAX INTERCEPT FUNDS

- 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 2021

- **This process helped CCCS obtain $19,208,831 in funds since July 2021.**

- **$5,969,611 were collected automatically in the past fiscal year via this process. This is 59.9% 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**

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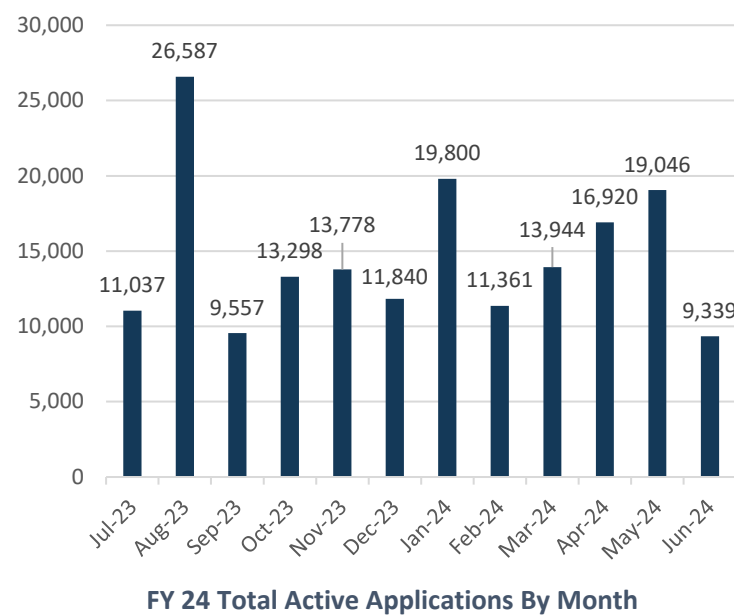
2.6 FACULTY LOAD AND COMPENSATION

- 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.

Count of Faculty Contracts Processed and Approved — Count of Approval Requests for all Contracts

Faculty Load and Compensation

- One contract may involve multiple approval requests.

- 114,346 faculty contracts were processed over the last three years.

- 37,807 contracts processed from Summer 2023 through Spring 2024, which is 1.2% less contracts than last year.

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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 24 Active Recruit Applications By College

College	Active Applications
ACC	21,364
CCA	16,199
CCD	27,543
CNCC	2,328
FRCC	40,427
LCC	1,571
MCC	3,913
NJC	1,832
OC	2,103
PCC	12,963
PPSC	23,280
RRCC	19,366
TSC	3,618

FY 24 Total Active Applications By Month

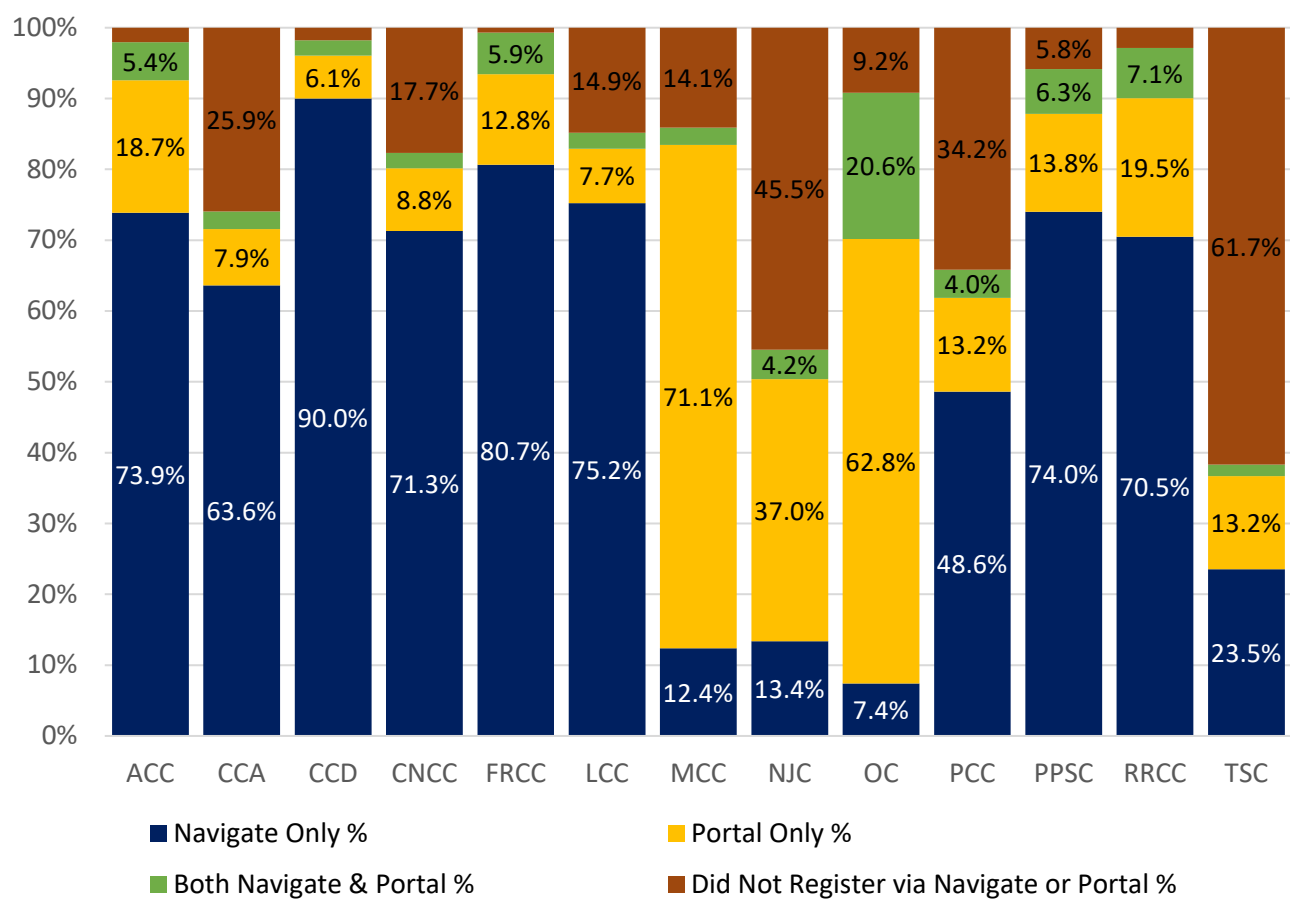| Month	Active Applications
Jul-23	11,037
Aug-23	26,587
Sep-23	9,557
Oct-23	13,298
Nov-23	13,778
Dec-23	11,840
Jan-24	19,800
Feb-24	11,361
Mar-24	13,944
Apr-24	16,920
May-24	19,046
Jun-24	9,339

- Fraudulent applications that were deactivated by the colleges are not included.

- 176,507 active applications were processed for all colleges, 15.6% more than the previous year.

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4.1 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 2024 Registration

Legend:
- ■ Navigate Only %
- ■ Portal Only %
- ■ Both Navigate & Portal %
- ■ Did Not Register via Navigate or Portal %

College	Navigate Only %	Portal Only %	Both Navigate & Portal %	Did Not Register via Navigate or Portal %
ACC	73.9%	18.7%	5.4%	
CCA	63.6%	7.9%		25.9%
CCD	90.0%	6.1%		
CNCC	71.3%	8.8%		17.7%
FRCC	80.7%	12.8%	5.9%	
LCC	75.2%		7.7%	14.9%
MCC	12.4%	71.1%		14.1%
NJC	13.4%	37.0%	4.2%	45.5%
OC	7.4%	62.8%	20.6%	9.2%
PCC	48.6%	13.2%	4.0%	34.2%
PPSC	74.0%	13.8%	6.3%	5.8%
RRCC	70.5%	19.5%	7.1%	
TSC	23.5%	13.2%		61.7%

- **Navigate was the most utilized method of registration in Fall 2024.**

- **In Fall 2024, 75.8% of students (36,802) used Navigate or a combination of Navigate and the portal to register for classes. This represents an increase of 4.0% of students utilizing Navigate for at least some registration over Fall 2023 (35,382).**

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4.2 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

	Total Number of Appointments Created	Distinct Students with Appointments	Academic Alerts, Kudos & Student Support Reasons Created	Distinct Students with Academic Alerts
ACC	36,196	9,575	10,180	7,067
CNCC	21,713	6,596	246	197
CCA	26,168	9,245	2,385	1,735
CCD	1,217	541	854	248
FRCC	91,568	24,825	77	68
LCC	2,945	711	730	254
MCC	2,361	880	473	275
NJC	6,180	467	706	343
OC	4,458	872	2	2
PPSC	44,304	10,732	3,344	2,111
PCC	85,513	21,296	1,182	826
RRCC	31,699	7,913	1,819	1,370
TSC	5,643	1,545	453	243
Total	**359,965**	**95,198**	**22,451**	**14,739**

- **From July 2023 through June 2024, 95,198 students participated in 359,965 appointments. This represents a increase of 24.7% in distinct students (76,353) and an increase of 36.9% in total appointments (263,005) from the prior year.**

- **On average, each student had 3.8 appointments that were organized via Navigate compared to 3.4 appointments in the prior year.**

- **During the same period, staff used Navigate to create 22,451 academic alerts for 14,739 distinct students.**

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5 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 several processes that integrate Parchment with Banner.

Transcripts Processed

College	Electronic Processed by Parchment	Mail	Pick up on Campus	Total
ACC	16,424	272	0	16,696
CCA	10,065	151	29	10,245
CCD	9,868	200	0	10,068
CNCC	1,697	81	0	1,778
FRCC	23,335	375	0	23,710
LCC	1,201	75	0	1,276
MCC	1,739	42	0	1,781
NJC	2,140	55	0	2,195
OC	1,583	47	0	1,630
PPCC	6,246	170	0	6,416
PCC	17,880	609	0	18,489
RRCC	10,070	152	0	10,222
TSC	2,267	77	0	2,344
Totals	104,515	2,306	29	106,850

- 97.8% of requested transcripts were processed electronically by Parchment.

- The total number of requests this year was 106,850 which is around 10.5% more than the previous year at 96,698.

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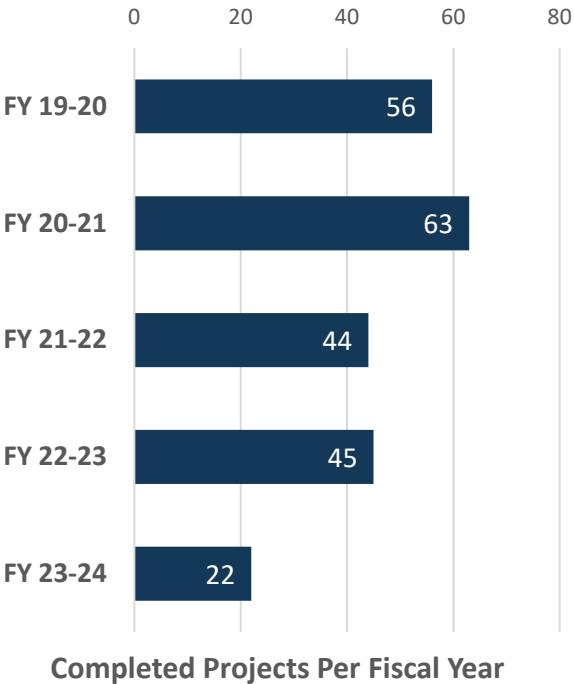COMMUNITY COLLEGE SYSTEM

6 PROJECTS COMPLETED July 2023 through June 2024

- 22 projects were completed

- 258 projects were completed between FY20 and FY24. On average, 46 projects are completed per year.

- Student Affairs projects (Student and Financial Aid) represent 40.9% of all completed projects during FY 24.

Projects Completed from July 2023 through June 2024

Functional Area	Number of Projects
Accounts Receivable	2
Advancement	2
All	6
Academic Technology	0
Emergency Management	0
Finance	2
Financial Aid	3
Human Resources/Payroll	1
Infrastructure	0
Student	6
TOTAL	**22**

Completed Projects Per Fiscal Year

Fiscal Year	Count
FY 19-20	56
FY 20-21	63
FY 21-22	44
FY 22-23	45
FY 23-24	22

- In FY 24, System IT focused resources on supporting major projects and initiatives, including enhancements to the CO Online solution, creating the Rural College Consortium sectionizer solution, and implementing Banner 9 Self Service, Ellucian Experience, and CampusCE.

- FY 24 was the launch year for the simplified FAFSA, which required considerable resources to support. System IT monitored legislative and vendor progress and applied several large sets of software upgrades and patches to support the 24-25 aid year processes.

- Lastly, 589 Change Requests (RFCs) were created and 418 were closed. This averages to 49/month and 35/month, respectively.

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7 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.

System IT Help Desk Statistics

| Month	Tickets Created	Tickets Closed
Jul-23	442	364
Aug-23	707	683
Sep-23	424	471
Oct-23	482	376
Nov-23	420	393
Dec-23	459	466
Jan-24	561	434
Feb-24	477	576
Mar-24	402	327
Apr-24	387	289
May-24	426	333
Jun-24	333	343
TOTAL	5,520	5,055

- 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.

- 5,520 tickets were created in FY24, 15.0% fewer than the prior year.

- The System IT help desk is busy throughout the year with an average of 460 tickets created per month.

- Around 91.6% of the tickets were closed successfully before the end of June 2024 (the remaining are in process).

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8.1 24X7 SUPPORT DESK STATISTICS

- Academic Technology 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.
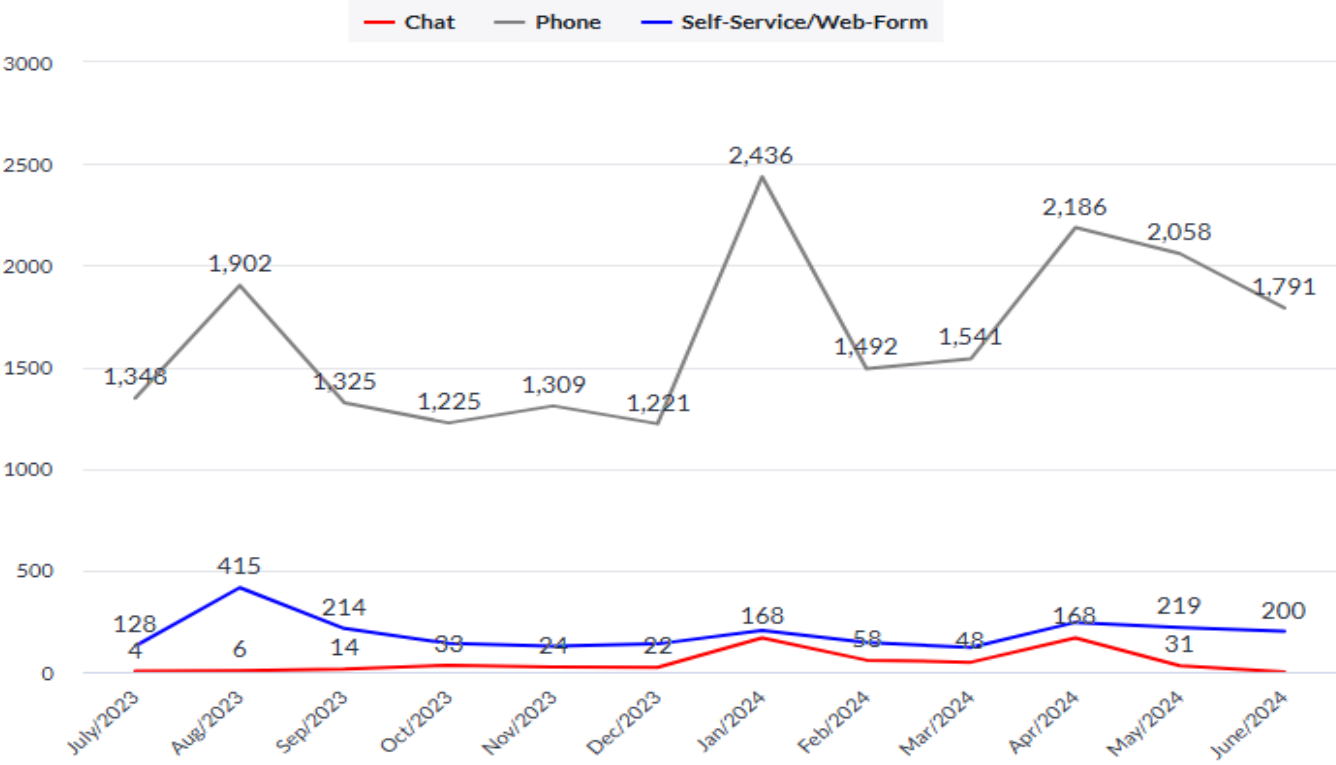
- **24X7 Support Desk is busy throughout the year.**

- **22,704 help desk requests were received from June 2023 through June 2024, 5.8% more than last year.**

- **The beginning of the fall and spring terms are usually busier than the rest of the year.**

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8.2 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-23	63.70% ↓	78.73% ↓	7:46 Min ↓
Aug-23	50.21% ↓	77.38% ↓	7:19 Min ↓
Sep-23	91.15% ↓	91.96% ↓	9:47 Min ↑
Oct-23	95.21% ↑	95.43% ↑	9:20 Min ↑
Nov-23	94.02% ↑	95.51% ↑	8:04 Min ↓
Dec-23	93.97% ↑	93.07% ↑	7:56 Min ↑
Jan-24	91.27% ↑	90.07% ↑	8:41 Min ↑
Feb-24	95.32% ↑	96.01% ↑	7:35 Min ↓
Mar-24	96.71% ↑	98.63% ↑	7:36 Min ↓
Apr-24	95.50% ↑	93.17% ↑	7:02 Min ↓
May-24	97.99% ↑	96.60% ↑	7:02 Min ↓
Jun-24	97.49% ↑	96.07% ↑	7:00 Min ↓
Monthly Average	88.55% ↑	91.89% ↑	7:55 Min ↓

*arrow after % indicates year-over-year comparison directionality

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9   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.
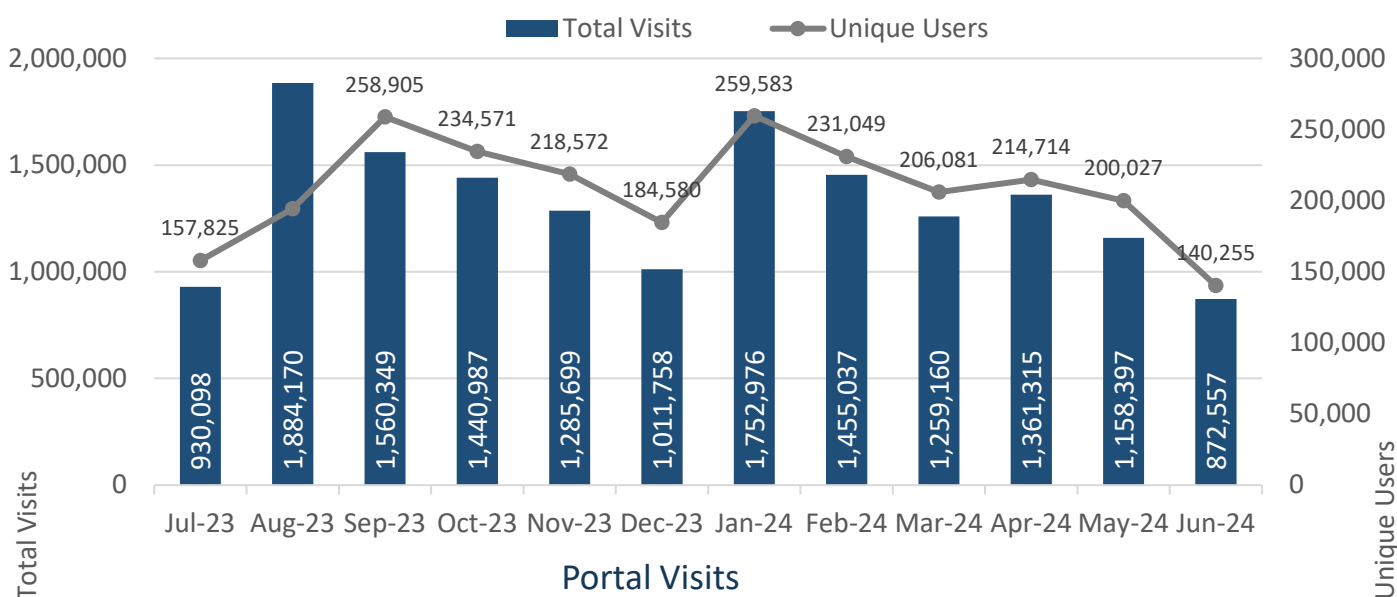
Access Requests Processed

Month	Processed Banner & Related Access Requests	Processed Cognos Requests
Jul-23	369	25
Aug-23	335	44
Sep-23	294	33
Oct-23	377	39
Nov-23	214	34
Dec-23	176	22
Jan-24	250	38
Feb-24	255	33
Mar-24	286	34
Apr-24	234	11
May-24	215	30
Jun-24	171	33
Total	3,176	376

- System IT processed 3,552 Banner & Cognos access requests over the last fiscal year. It is around 12.4% less than the previous year at 4,056 processed requests.

- Access requests include both granting and disabling access.

- An access request could be disapproved by due to various reasons.

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10 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.

Chart: Portal Visits — Total Visits (bars) and Unique Users (line), Jul-23 to Jun-24

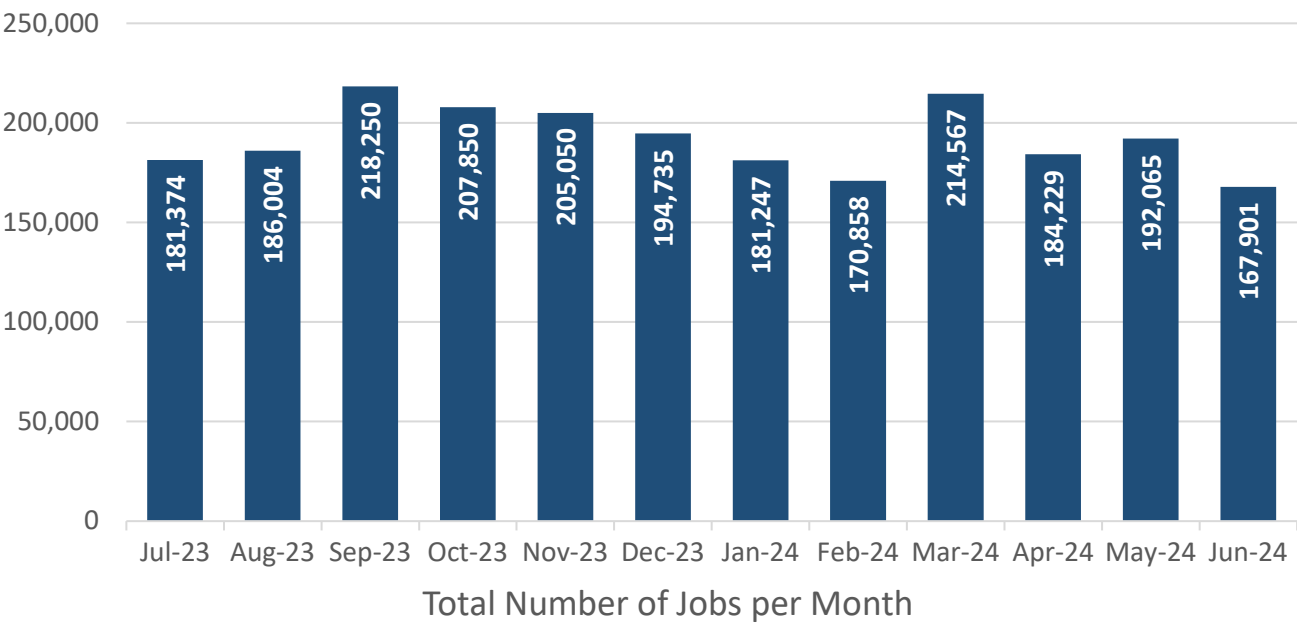| Month	Total Visits	Unique Users
Jul-23	930,098	157,825
Aug-23	1,884,170	(not labeled)
Sep-23	1,560,349	258,905
Oct-23	1,440,987	234,571
Nov-23	1,285,699	218,572
Dec-23	1,011,758	184,580
Jan-24	1,752,976	259,583
Feb-24	1,455,037	231,049
Mar-24	1,259,160	206,081
Apr-24	1,361,315	214,714
May-24	1,158,397	200,027
Jun-24	872,557	140,255

- **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 nearly 16 million visits from July 2023 to June 2024, around 1 million more than the previous year.**

- **On average, there are around 1.33M portal visits per month.**

- **The monthly average of unique users is 208,383 which is a 1.5% decrease from the prior year (211,584).**

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11 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

Month	Jobs
Jul-23	181,374
Aug-23	186,004
Sep-23	218,250
Oct-23	207,850
Nov-23	205,050
Dec-23	194,735
Jan-24	181,247
Feb-24	170,858
Mar-24	214,567
Apr-24	184,229
May-24	192,065
Jun-24	167,901

- **Automic processed more than 2.304 million jobs over the last fiscal year and that is 1.0% less than the previous year at 2.327 million.**

- **The daily average of processed jobs is 6,313 compared to 6,376 in the prior year.**

- **The monthly average of processed jobs is 192,011 compared to 193,929 in the prior year.**

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12.1 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.

IRBI completed 158 projects – including 85 IR project requests and 73 new or updated BI reports - from July 2023 to June 2024, an increase of over 15% from last year. In addition, a data warehouse solution, EAB's Edify, was identified and has begun implementation.
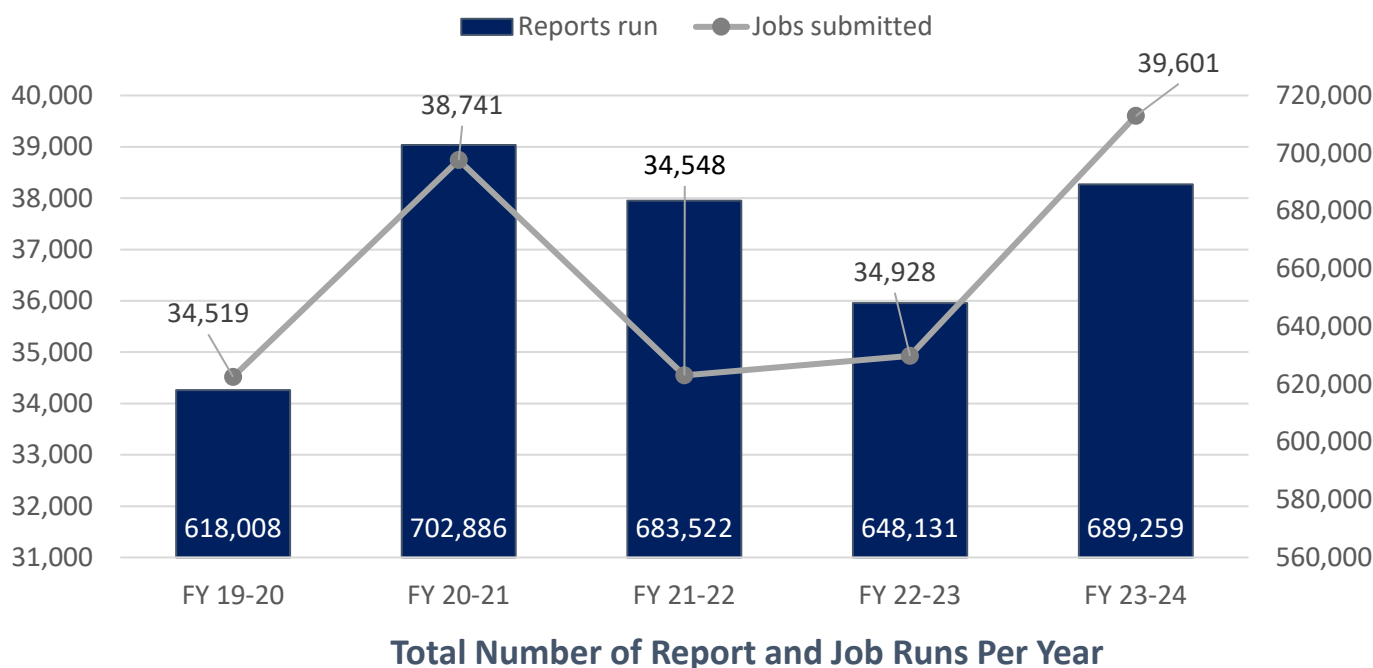
Other system-wide projects include::

- 14 Data Books (13 colleges plus the system)
- 7 Strategic Plan KPM Dashboards & 9 Adult Learner Dashboards (new!)
- Ongoing Support for CO Online & Rural College Consortium
- Data and evaluation support for state initiatives such as Care Forward
- Annual Concurrent and Dev Ed Reports

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12.2 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.

Total Number of Report and Job Runs Per Year

- **3,341,806 reports and 182,337 jobs were processed by Cognos over the last five years. This past year the number of reports run increased by 6.3% and the number of jobs has increased by 13.4%.**

- **On average, 1,888 reports were run, and 108 jobs were submitted daily for FY 23-24.**

- **System IT's IRBI Department has seen the annual total number of reports and jobs run has seen a 11.5% and 14.7% increase, respectively, in the past five years.**

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13.0 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.

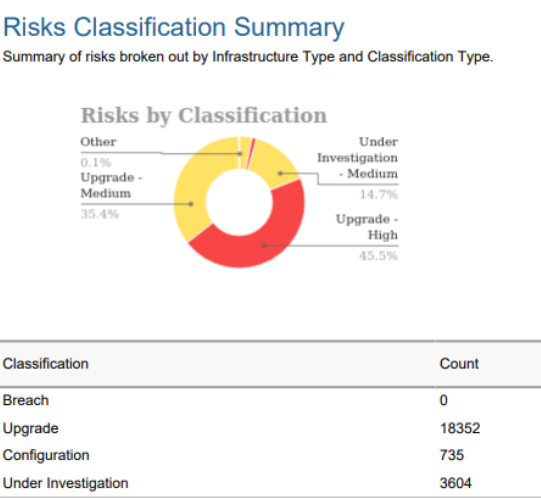- A robust set of security operations services that reduce risk while providing an excellent return on investment.

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13.1 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 2024:

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

7.8	7.1	13428
Current Risk Score	Benchmark Risk Score	Unresolved Risks

Risk Score Trends

Legend: Your Risk Score | Benchmark Risk Score | Target

Risk Score Trends bar chart, Risk Score (y-axis 0–10) vs Time (x-axis 2023-09 to 2024-09). Callout values: 6.9, 8.3, 7.5, 7.9. End values: 8.07, 7.24.

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

Risks by Classification

- Other 0.1%
- Upgrade - Medium 35.4%
- Under Investigation - Medium 14.7%
- Upgrade - High 45.5%

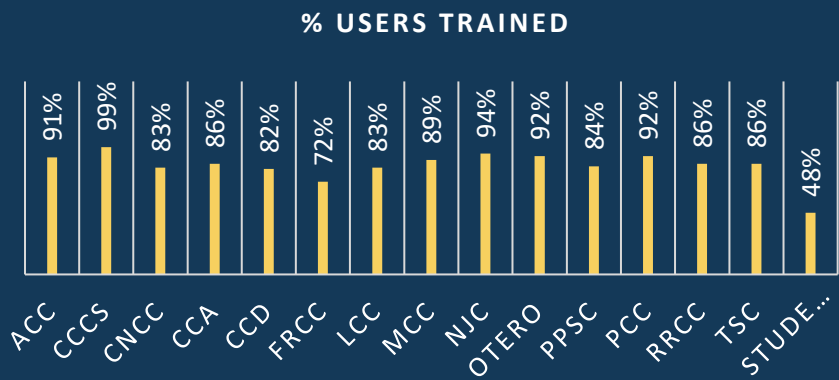| Classification	Count
Breach	0
Upgrade	18352
Configuration	735
Under Investigation	3604

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13.2 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 2024 CCCS saw an increase in mandatory cyber security awareness training for all employees. The training covered the following topics:

- Social Engineering
- executive level training
- Phishing
- Pretexting
- Vishing
- Smishing (phishing via text messages)
- Spear Phishing

- Electronic Threats
- Software-Based Attacks
- Internet-Based Attacks
- Mobile Device Security
- Malware
- Artificial Intelligence
- Role Specific Training

Status of the 2024 information security awareness campaign:

% USERS TRAINED

| College	% Trained
ACC	91%
CCCS	99%
CNCC	83%
CCA	86%
CCD	82%
FRCC	72%
LCC	83%
MCC	89%
NJC	94%
OTERO	92%
PPSC	84%
PCC	92%
RRCC	86%
TSC	86%
STUDE...	48%

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13.3 Simulated Phishing Campaigns

- Phishing attacks are a form of social engineering that cybercriminals use to gain access to sensitive information, trick users into installing malicious software, or attempt to gain access to a user's account.

- Phishing simulations mimic real world phishing scenarios to help create awareness about potentially harmful emails and educate users how to identify red flags.

- In 2024 CCCS Information Security Department began simulated phishing tests to determine our overall risk to phishing attempts.

- The education sector overall is likely to fall victim to these types of attacks about 19% of the time. CCCS has routinely scored below the industry benchmark.

%PHISH PRONE

SPRING — 11%

SUMMER — 6.5%

SEMESTER

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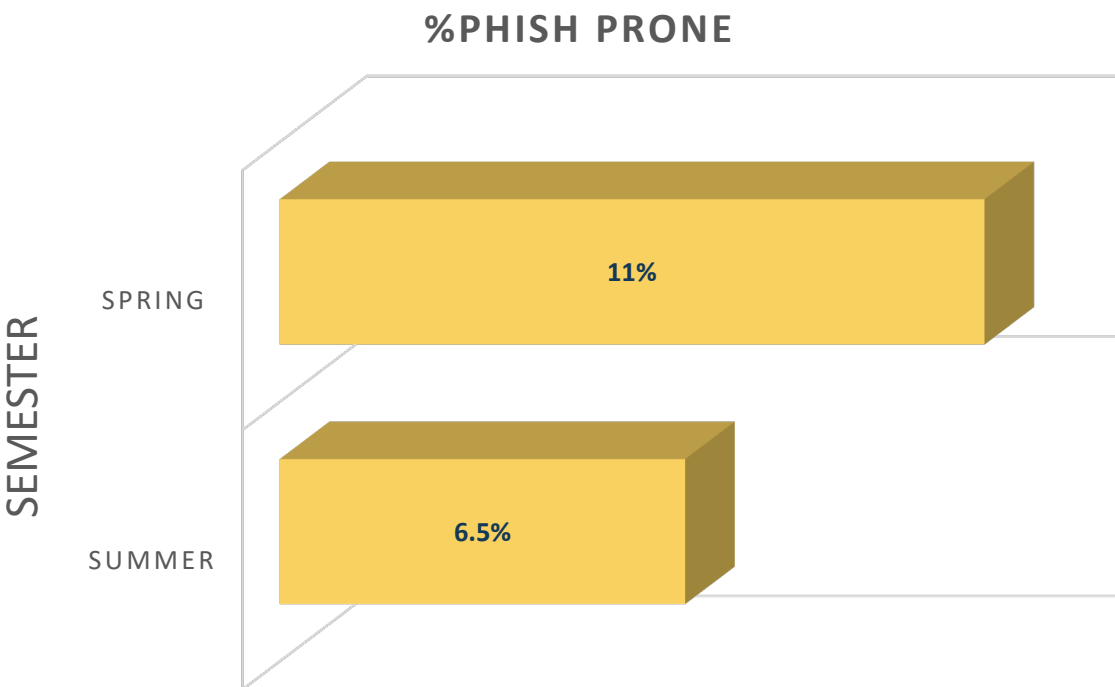
14 ETHOS - SINGLE-SIGN-ON

- 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
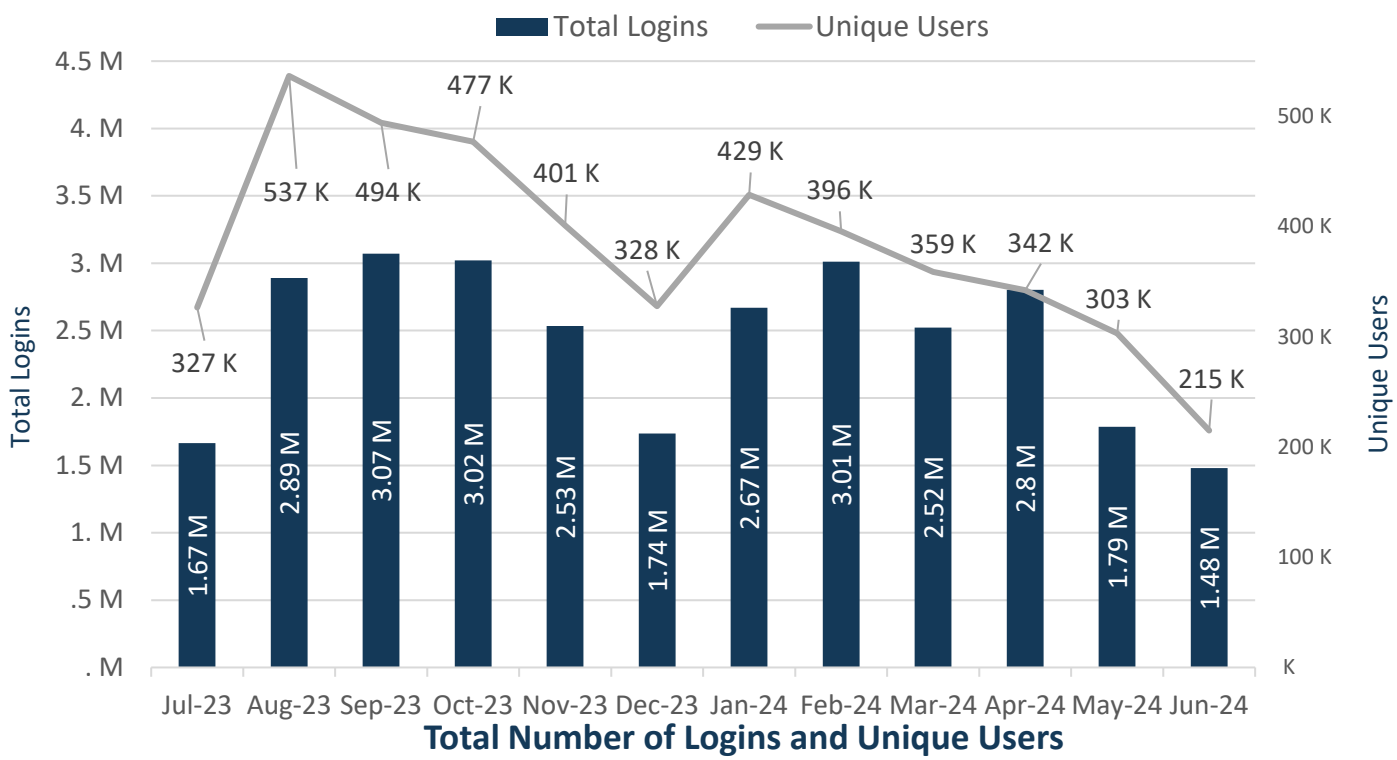
Total Number of Logins and Unique Users

- **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 FY24, Ethos processed over 2.91 million logins with an average of 2.4 million logins per month.**

- **Ethos processed more than 4.6 million unique users' successful logins with an average of 383,893 unique users per month.**

- **Ethos processed 1.69 million fewer logins than FY23. 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.**

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15 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 23-24
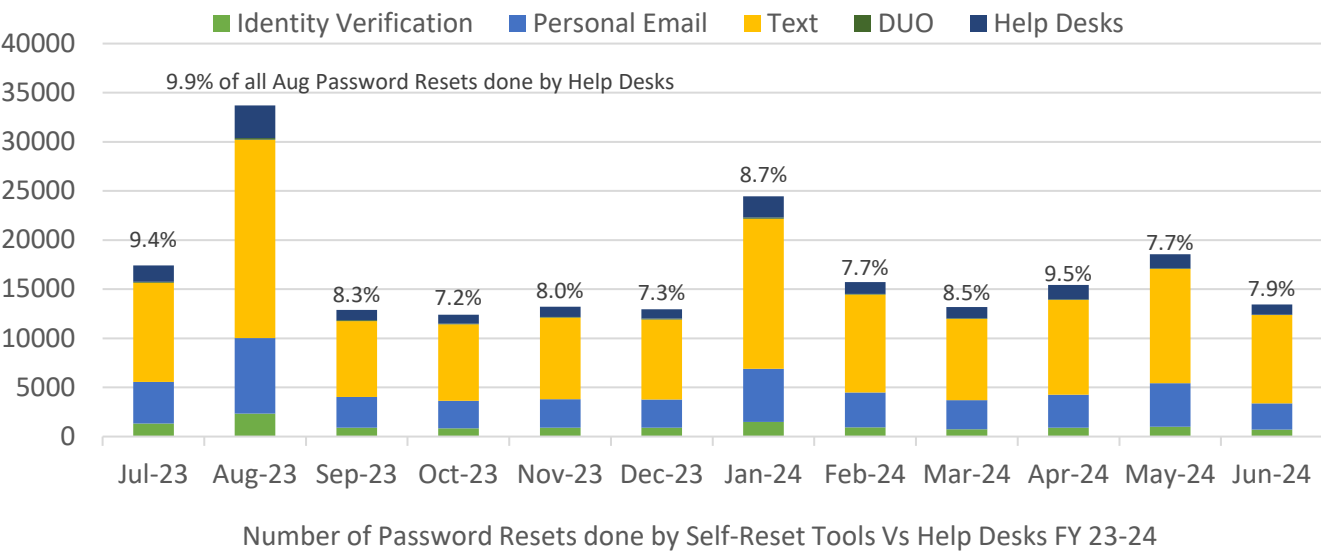
- **The total number of password resets from July 2023 through June 2024 is 203,390; around 10% less than the previous year.**

- **Over 91.5% of all password resets are done via the password self-reset tools.**

- **The monthly average of password resets are 1,087 via Identity Verification, 3,830 via Personal Email, 10,503 via text message, 84 via DUO, and 1,445 via the 24X7 and school Help Desks.**

- **On average, 510 password resets are done daily by all password self-resets tools and 48 by the 24X7 and school Help Desks.**

- **33,709 password resets took place during August 2023 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 67.7% of all password self-resets done in FY24).**

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16 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 2023 – June 2024):

Outgoing Mail Summary		
Message Processing	**%**	**Messages**
Spam Detected	0.0%	0
Virus Detected	0.0%	0
Detected by Advanced Malware Protection	0.0%	0
Messages with Malicious URLs	0.0%	0
Stopped by Content Filter	0.0%	833
Clean Messages	100.0%	12,335,325
Total Messages Processed:		**12,336,158**

Incoming Mail Summary (July 2023 – June 2024):

Incoming Mail Summary		
Message Category	**%**	**Messages**
Stopped by IP Reputation Filtering	82.9%	121,378,305
Stopped by Domain Reputation Filtering	0.4%	601,095
Stopped as Invalid Recipients	0.1%	125,891
Spam Detected	1.2%	1,732,186
Virus Detected	0.0%	234
Detected by Advanced Malware Protection	0.0%	384
Messages with Malicious URLs	0.0%	12,996
Stopped by Content Filter	0.2%	313,227
Stopped by DMARC	0.8%	1,118,404
S/MIME Verification/Decryption Failed	0.0%	0
Total Threat Messages:	**84.8%**	**124,164,318**
Marketing Messages	3.4%	4,926,199
Social Networking Messages	0.5%	662,515
Bulk Messages	3.1%	4,516,024
Total Graymails:	**6.9%**	**10,104,738**
S/MIME Verification/Decryption Successful	0.0%	0
Clean Messages	8.3%	12,134,449
Total Attempted Messages:		**146,403,505**

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17 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 and 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 Academic Technology. 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 Academic Technology 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.

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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.