



2019 Annual Report

UC SANTA BARBARA
Enterprise Technology Services

A Year In Review

Executive Summary

The Fiscal Year 2018-2019 moved us closer to our ultimate goal of Mission-Focused IT. Mission-Focused IT aligns our monetary and labor investments more closely with UC's missions of learning, teaching, research, and public service. We've made immense strides in shoring up our security posture, concluding major transformation efforts involving UCPath, making more data available in more ways to our community members through APIs and business analytics tools, and pivoting toward embracing a cloud-first world. These strides position us to more keenly focus on UCSB's core missions.

Mission-Focused IT strategy involves efforts on behalf of our community members - whether students, faculty, staff, researchers, alumni, visitors, or the general public. We endeavor to provide them with high-quality applications and secure, reliable services. Major elements include maintaining excellent service quality; liberating data from organizational silos; Campus Cloud deployment; increased information assurance protections; and recruiting, developing, and retaining talented, engaged personnel.

Two crucial mission-focused activities include our efforts related to data and the cloud.

The UCSB Enterprise Data Services team supports decision making and business process improvements by providing access to quality, timely, consistent, and secure sources of information through Data Warehouse and Business Intelligence. You can find more details at datawarehouse.ucsb.edu.

Our UCSB Campus Cloud enables administrative, research, and instruction workloads to reside safely in the cloud at a discounted price point. End users can now procure Campus Cloud services through Gateway, the UCSB procurement system, and each new release brings increased security, NIST 800-171 security compliance, and broader capabilities to our community for instruction, administration, and research.

I trust this report provides insights into the direction in which we are taking UCSB IT strategy, and it illustrates the massive amount of work our IT personnel undertake on behalf of our community.



Matthew Jett Hall
Associate Vice Chancellor of Information Technology & Chief Information Officer
University of California, Santa Barbara



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www.cio.ucsb.edu/about/annual.reports

Completed Projects

Network Peer Review

In April and May, network administrators from UC Irvine, UC San Diego, and UCLA reviewed UCSB's network to find opportunities for improvement. The administrators recommended UCSB scale staffing structure and skills, modernize physical network layers, and increasing resilience. The assessment demonstrates that UCSB will benefit by investing substantially into staff, physical plant, monitoring, automation, and routing equipment. With these investments, we will approach our goal of 99.999% network availability and no more than 5.25 minutes of network downtime per year.

IT Services Catalog

In February 2019, ETS and Administrative and Residential IT (ARIT) launched the IT Services Catalog at ithelp.ucsb.edu, a one-stop-shop where campus customers can find help with technology issues and requests. This ServiceNow Portal offers assistance via three channels: phone, chat, and the online service catalog. The IT Services Catalog also provides training material for using the self-service (ServiceNow) intake, and job aids for Electronic Timekeeping (Kronos) and UCPATH.

PeopleSoft Financials Upgrade

In April 2019, ETS upgraded to PeopleSoft 9.2. ETS built the upgraded environment on new cloud infrastructure using Amazon Web Services (AWS). Not only did PeopleSoft migrate to AWS, but the team also integrated a Central Authentication System (CAS) Single Sign-On so users can login with their UCSBnetID, similar to the majority of campus systems. These changes keep the PeopleSoft environment current and allow for better security and more efficient operations.

UCPath Stabilization

Last year, UCSB went live on UCPATH, the UC's priority program to implement a single payroll, benefits, human resources (HR), and academic personnel solution for all UC employees. Since go-live, the Program Management Office (PMO) managed stabilization efforts by coordinating cross-functional communications and training activities, producing knowledge transfer sessions in partnership with central offices, coordinating Data Warehouse report development, supporting UCPATH Center operational alignment activities, and providing operations support to central offices. The PMO expects UCPATH stabilization efforts to continue through June 2020.

Cloud Architecture Planning

This year, UCSB IT completed a high-level cloud strategy, the first step in migrating IT into the UCSB Campus Cloud. This project will help ETS transition from managing servers on campus and towards allowing administrative, research, and instructional workloads to be hosted safely with cloud services. The Campus Cloud will comply with University policies, and will use appropriate controls and best practices. Cloud services adoption will better enable UCSB IT units to achieve mission objectives by moving away from infrastructure management and towards customer-focused, discipline-specific service.

Completed Projects

GGSE Core Services Migration

At the end of June 2019, Gevirtz Graduate School of Education (GGSE) migrated its core IT services and unique, mission-centric operational support to ETS, including classroom technology. The core IT services migration includes moving physical servers and storage infrastructure to a virtual environment, replacing an aging wired and wireless infrastructure, and migrating the GGSE help desk and end-user support to the enterprise IT Services Catalog. This migration is part of an initiative to improve IT service reliability and continuity in GGSE, as well as achieve scale for value by allowing ETS to handle all IT functions.

Website Hosting to Pantheon

This year, ETS partnered with Pantheon, a cloud-based website management platform, to provide state-of-the-art development tools and affordable hosting plans with enterprise-grade security and expert hosting support. The migration team, which included team members from Letters and Science IT, Engineering Computing Infrastructure, Electrical & Computer Engineering, and ETS, successfully migrated 175 websites to Pantheon. To date, there are 396 websites actively hosted on Pantheon. This improvement enables our campus community to easily implement our UCSB-branded web theme for new websites.

IT Website Launch

In June, the Office of the CIO IT re-launched it.ucsb.edu, a consolidation of five legacy websites: the old it.ucsb.edu, ets.ucsb.edu, security.ucsb.edu, oit.ucsb.edu, and noc.ucsb.edu. Previously, the page count of all five sites stood at nearly 13,500 pages, many of them outdated or irrelevant. The new it.ucsb.edu includes just over 1,700 pages, an 85% reduction. The homepage includes a drop-down menu for users to select their persona, (student, student worker, faculty, staff, alumni, visitor, or vendor), which reveals services and software that applies to their role. The website is the first location where students, faculty, and staff can find the enterprise IT and security services they need.

Data Warehouse Modernization

In a mission to modernize UCSB's Data Warehouse with professional tools, enhanced data structures, and more resilient operational processes, 2019 focused on building a strong foundation for the future of the Data Warehouse. Enhancements include defining service offerings and a new intake process in ServiceNow, developing a new website, enabling a self-service password change module, developing and testing 12 new EZAccess reports, and rolling out UCPath Cognos Reports as an additional reporting option. The Data Warehouse modernization project is part of a larger strategic IT program to unlock our data for more efficient campus administration and decision-making called "Liberate the Data."

Virtual Application & Server Hosting

Gigabytes of RAM	4,712
Gigahertz of CPU	571
Virtual servers hosted	489
Terabytes of SAN storage	442
CPU cores	232
Virtual host servers	15

Information Security

Connect accounts using Multi-Factor	817
Total incidents of authentication	814
Average monthly malware events detected by Sophos	250
Indicators of Compromise detected by FireEye	38
Indicators of Compromise detected by Lastline	14

Collaboration Services

Total email messages delivered	94,903,134
Active Connect accounts	63,950
Websites hosted	311

Palo Alto Unified Threat Management Blocks

Total threats blocked	127,965,839
Total vulnerabilities blocked	52,264,881
Total URLs blocked (PAN-DB)	45,444,203
Since July 2019 CVSS high vulnerabilities	32,219,615
Total spyware blocked	31,841,614
Since July 2019 CVSS critical vulnerabilities	4,909,722
Total files blocked	1,327,432
Total scans blocked	648,260

Telecommunications

Station-to-station calls attempted	3,690,849
Station-to-station calls completed	1,920,816
Outgoing calls processed annually	1,581,445
Radio transmission processed annually	1,094,257
Telephone lines maintained	5,665
Telecommunications orders & tickets created	1,842
Radio service customers	644
Miles of outside plant fiber optic cabling maintained	62.8
Miles of outside fiber optic cable installed	2

HTML Pages on it.ucsb.edu

HTML pages on reduced it.ucsb.edu	11,729
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Network, Remote Access Connectivity

Percent network uptime at building switch	99.88%
Wireless service accounts supported	48,373
VPN accounts supported representing 185 departments	6,408
Active Secure Socket Layer certificates managed	1,230
Wireless access points in 93 buildings maintained	1,195
Secure Socket Layer certificates issued	441
Subnets with access control lists supported on core routers	217
Building switches maintained	125
New wireless access points with 6 new buildings added	117
Petabytes transported on border routers	25.79

Google Drive & Gmail Storage

Total gigabytes used	1,419,494
Gigabytes of Drive used	1,348,205
Gigabytes of Gmail used	65,592

Zoom Adoption & Usage

Total minutes	1,949,296
Number of participants	142,105
Number of Zoom meetings	35,107
Total accounts	6,631

Data Center Operations

NHDC monthly power consumption (in kWh)	165,000
Physical servers hosted at North Hall Data Center (NHDC)	644
Average UPS load (in kW)	153
Total racks at NHDC	69
Departments hosted in the NHDC	50

Accounts & Identity

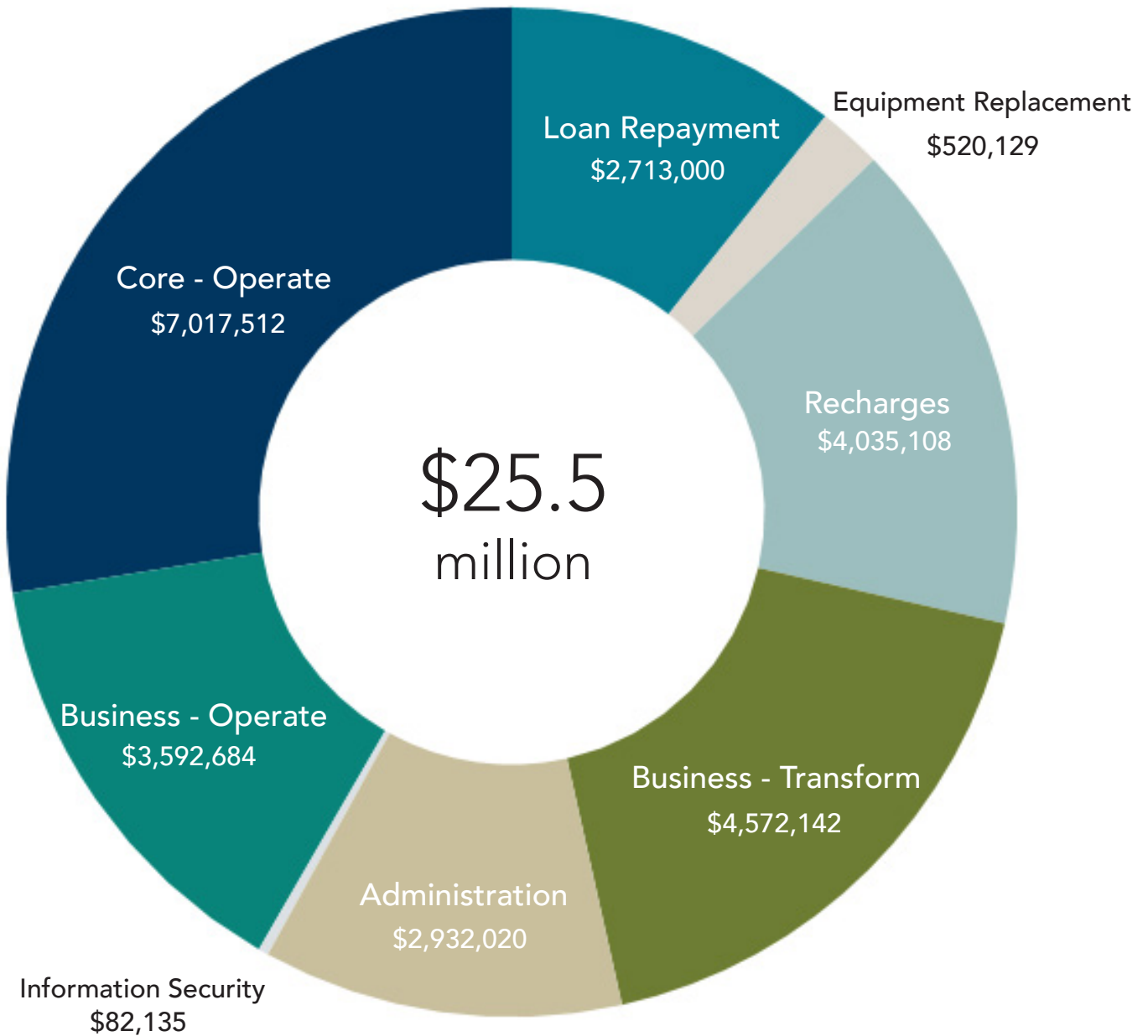
Total campus identity logins	137,009,102
Active campus identities	52,536
Applications integrated with Single Sign-On	172

End User Support

Service calls addressed	13,938
Kronos users	9,845
Kronos service requests	3,948
Connect service requests	2,206
Total workstations supported	2,023

Physical Security

Security cameras hosted in 21 locations	210
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