

Ventura County Community College District

Strategic Technology Plan

2015-2018



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I. Overview, Mission, and Vision

Overview

The Strategic Technology Plan for the Ventura County Community College District is intended to provide an overall framework for the strategic implementation of technology within the District. The purpose of the plan is to align the application of technology to the District's Mission, Vision, and Strategic Goals and Objectives. It will provide a roadmap for all major technology initiatives undertaken by the District for a three-year period.

This plan is divided into three sections. First is the vision and mission of the District and Information Technology. The second section outlines the goals and objectives. The third section lists the strategic initiatives that will be undertaken by the District to meet the goals and objectives, with initiative overviews, benefits, resource requirements, and timelines.

District Vision Statement

The Ventura County Community College District will become the leader in the development of high quality, innovative educational programs and services. Keeping in mind that students come first, we will model best practice in instructional and service delivery, student access, community involvement, and accountability.

District Mission Statement

Ventura County Community College District provides students, in its diverse community, with access to comprehensive quality educational opportunities that support student learning and student success.

Information Technology Mission Statement

The mission of the Information Technology Department is to provide secure, reliable, efficient, and effective technology services to the faculty, staff, and students of the District.

To align with the District's mission, the IT Department is committed to excellence, striving to provide technology leadership and long-term vision, sustainability through innovation, high-quality service and support, continuous improvement to assist in student learning, and support of the colleges in their missions and functions.

II. Strategic Goals and Objectives

The following are the Information Technology strategic goals and objectives identified to fulfill the mission and vision of the District.

Support Instruction and Learning

As part of the District's commitment to model best practice in instructional and service delivery, provide leadership, recommendations, and support for effective, high-quality instruction and learning outcomes through the appropriate use of technology.

Enhance Services to Students

Use technology to provide and enhance student support services, address student equity, and enable student access. Advance technology offerings, enabling greater student success and access.

Support Communication, Collaboration and Innovation across the District

Use technology to enable communication and collaboration, leading to the development of high-quality, innovative educational programs and services.

Provide more efficient means of communication through online collaboration and meeting tools in order to lower the necessity of face-to-face meetings, reducing costs and increasing efficiency.

Improve Service Delivery and Broaden Support

Streamline processes and implement technology to improve service delivery, and broaden support services with extended hours to support online learning.

Develop Sustainable Funding Strategies for Technology

Develop funding strategies in order to sustain and enhance mission-critical technologies.

Support Green Computing Initiatives

Implement 'green' technologies to reduce overall energy consumption related to technology usage, and extend hardware lifecycles.

Enhance Information Security

Use best practices and implement technologies to enhance information security and enable compliance, ensuring confidentiality, information integrity, and availability.

III. Strategic Initiatives

The following strategic initiatives will be undertaken in order to achieve the vision in the next three years. The initiatives have originated from various sources. Many of the initiatives have been brought forward through the Administrative Technology Advisory Committee (ATAC) and the Instructional Technology Advisory Committee (ITAC). Some have come from the various participatory governance and advisory groups within the District, and other initiatives have originated from the Information Technology Department.

The following chart displays the alignment of the Strategic Goals and Objectives with the Initiatives:

Information Technology Strategic Goals Cross-Referenced to Initiatives							
	Support Instruction and Learning	Enhance Services to Students	Support Communication, Collaboration & Innovation	Improve Service Delivery and Broaden Support	Develop Sustainable Funding Strategies for IT	Support Green Computing Initiatives	Enhance Information Security
Enterprise / Operational Initiatives							
Accreditation							
Banner Systems Review							
Capital Construction Project Support							
Disaster Recovery and Business Continuity							
District Technology Infrastructure and Support							
Green Computing							
Information Availability and Reporting							
Information Security							
Operational Efficiency Improvements through Technology							
Safety Technologies							
Instructional Support							
Campus Infrastructure Improvements							
Classroom Technology Improvements							
Distance Learning							
Information Technology Staffing Resources							
Services for Students							
Mobile and Online Technology Enhancements							
Social Media							
State Initiatives							
Training							

The sections on the following pages provide overviews of the initiatives, with a listing of benefits, estimated resource requirements, and projected timelines.

Accreditation

A new accreditation cycle for the VCCCD will begin in 2016. Standard III.C requires that an institution uses its technology resources to achieve its mission and to improve academic quality and institutional effectiveness. The standard includes the following criteria:

1. Technology services, professional support, facilities, hardware, and software are appropriate and adequate to support the institution's management and operational functions, academic programs, teaching and learning, and support services.
2. The institution continuously plans for, updates and replaces technology to ensure its technological infrastructure, quality, and capacity are adequate to support its mission, operations, programs, and services.
3. The institution assures that technology resources at all locations where it offers courses, programs, and services are implemented and maintained to assure reliable access, safety, and security.
4. The institution provides appropriate instruction and support for faculty, staff, students, and administrators, in the effective use of technology and technology systems related to its programs, services, and institutional operations.
5. The institution has policies and procedures that guide the appropriate use of technology in the teaching and learning processes.

The local college IT teams will need to work with their respective college accreditation steering committees to provide input for the development of the self-study reports, and also to gather and maintain documented evidence for meeting Standard IIIC.

Benefits: Compliance with all accreditation standards

Resources: The overall campus effort will be significant, but there should be minimal impact on IT resources.

Timeline: Accreditation efforts are ongoing

Banner Systems Review

The District began using the Banner system in 1998. The current Banner modules used by the District include Student, Human Resources, Finance, Payroll, and Financial Aid. Related systems now being used include the Luminis portal and DegreeWorks. The Travel and Expense module is being implemented.

Since being adopted by the VCCCD, the technology foundation of the Banner platform has not kept pace with modern software systems. Ellucian has announced a schedule to modernize the Banner platform with new technology it calls the Extensible Ecosystem, or XE. According to Ellucian, all Banner modules will be migrated to the XE platform by mid-2016. This new technology has the potential to reduce maintenance, development, and integration costs for Banner.

According to an EDUCAUSE study released in 2012, the various Banner modules were used by 27 to 45 percent of higher education institutions. Since the District implemented Banner, a number of other companies have released competing commercial products; these include PeopleSoft, Jenzabar, and WorkDay.

The District's current contract with Ellucian for Banner support runs through mid-2018. Alternatives to Banner will be looked at beginning in 2016. If after review a decision were made to look at the possibility of switching to a different platform, this would allow sufficient time for migration.

The upfront costs for licensing and conversion to any other system would be very expensive, so switching to an alternative would be challenging. A review of alternatives will allow for a comparison with the Ellucian product roadmaps to determine the best long-term solutions for the District.

Benefits: Improved core systems

Resources: There would be very high costs for moving to an alternative platform to Banner, and a significant effort would be required to do so.

Timeline: A review of options will commence in early 2016, with analysis and recommendations to be completed by the fall of 2016.

Campus Infrastructure Improvements

With the large growth in use of mobile devices, the need for onsite wireless access has grown tremendously. The current wireless infrastructure was deployed in 2008, funded by the Measure 'S' bond allocation for technology infrastructure. The wireless technology implemented at that time cannot handle current or future campus needs.

Newer, more powerful wireless technology is now available that overcomes the shortcomings of the existing wireless infrastructure. Rather than relying on a central controller for wireless network traffic, each access point has a controller built in, providing increased control and reliability. The newer access points use advanced signaling technology which provides greater signal strength, higher throughput, and less interference due to the use of more channels.

After a lengthy process to compare and test wireless technology options, Aruba was chosen for the newer access point technology. Deployment began in mid-2014, and the upgrades will continue into 2017. The upgrades will include providing access points to increase coverage in every classroom, office, and areas where students meet, including libraries, learning resource centers, and food services. It will also provide outdoor wireless coverage in selected areas.

The expansion in wireless coverage will greatly increase Internet utilization at each campus. The State Chancellor's Office pays for Internet connectivity for our three colleges and the District Administrative Center, with access via the state's CENIC network. The current connectivity includes 1 Gigabit circuits at Moorpark and Ventura, and 45 Megabit circuits at Oxnard and the DAC. There are state plans to upgrade circuits starting in 2015, with each of those four sites to eventually have dual 1 Gigabit circuits. This will provide not only greater throughput, but also redundancy for each site. The state has indicated that Oxnard and the DAC will be upgraded in the first phase, which includes sites that are still using the slower 45 Mb circuits. Moorpark and Ventura will be upgraded in a subsequent phase. The state has indicated that it may be possible to get 10 Gigabit circuits on CENIC at a later date.

The Measure 'S' bond funds for IT Infrastructure improvements have been fully expended; those funds paid for campus IT improvements for over a decade. The colleges will now be responsible for funding infrastructure improvements as local needs arise. It is estimated that \$50-\$100K will be spent annually by each college on its IT infrastructure projects.

Benefits: Successful completion of upgrades will provide a platform with increased performance and greater coverage and access.

Resources: Significant IT effort to complete upgrades; funding for wireless upgrades to come from campus technology refresh budgets.

Timeline: The projects will continue into 2017.

Capital Construction Project Support

In December 2001, the Ventura County Community College District's Board of Trustees approved a resolution for the placement of a bond initiative on the March 2002 Ventura County election ballot as Measure S. At the March election, the citizens of Ventura County approved the issuance of bonds totaling \$356.3 million for construction and rehabilitation of facilities within the District.

The IT Department has provided multiple services related to the construction of new facilities. Services are coordinated with the colleges under the direction of Heery International, the company overseeing the bond construction management for the District. These services include, but are not limited to:

- Time and effort is spent with the Architects and their subcontractors on the building specifications for technology infrastructure
- Interviews of stakeholders to determine long-term technology needs
- Input on bid specifications
- Review of bid submittals
- Meetings with the general contractor and subcontractor to review and discuss details of the infrastructure
- Review of work completed in conjunction with contract administration
- Work with Purchasing and the colleges on equipment budgets and procurement
- Equipment installation in facilities (network, computers, phones, Audio/Visual)
- Assist with moves into the new facilities

The Measure 'S' bond is entering its final phase, as the last of the projects are in progress. IT will continue to provide services for all projects through completion, and will maintain the infrastructure after occupancy.

Benefits:

- All work conforms to District IT infrastructure standards
- Ensure sufficient infrastructure for initial needs, and provide for growth
- All new technology equipment and software is deployed to campus and District standards

Resources: Funding from Measure S project budgets; Significant IT effort for remaining projects, including OC Dental Hygiene and Condor Hall, and VC Applied Sciences.

Timeline: The projects will continue through 2016.

Classroom Technology Improvements

The District has developed standards for technology in classrooms. This includes a projector with screen, a desk or podium computer for instructor use, a port for hooking up a laptop, wired Internet access for the instructor desktop or laptop, a document camera, a media player (DVD and VHS), speakers for audio, wireless access, and an audio-video control system. Over 500 classrooms districtwide have these capabilities, in whole or in part. Efforts to upgrade or add these installations will continue where needed, with a long-term goal that all classrooms will meet these standards.

For video projection, most of the current systems use analog technology, providing basic capabilities for PowerPoint presentations or standard definition video. The costs for high-definition video have dropped significantly, so upgrades for areas that can use HD (graphic arts, sciences, etc.) will be explored.

The use of carts with mobile devices, such as laptops and tablets, has been increasing in recent years. Using carts gives a program the ability to share equipment between multiple classrooms. Use of technology in this way has taxed the existing wireless networks. Improved wireless capacity in classrooms is needed to address this mode of instruction (see Campus Infrastructure Improvements section for more details on wireless infrastructure). With all future cart and mobile equipment installations, efforts will need to be coordinated to optimize the wireless access in the targeted classrooms.

Integration of mobile technologies in the classroom is needed for instruction, including the ability to integrate faculty or student mobile devices with video projection and audio systems. Inexpensive options are now available for such configurations, and testing has begun in some classrooms. Once a District standard is adopted, it should be added to the classroom standards list, and implemented in all current “smart” classrooms.

Integration of classroom technologies for content capture, such as smart boards and lecture capture products, should also be reviewed.

Benefits: Improvements will provide faculty with multiple options for classroom instruction delivery.

Resources: Video upgrade costs will vary, depending on room needs; integrating mobile devices into AV systems will be inexpensive.

Timeline: The projects will continue through 2018.

Disaster Recovery and Business Continuity

There were significant downtime events for critical systems in 2013 and 2014, involving networks, storage systems, and a power outage. These outages ranged from eight to over 50 hours. Two of the incidents took the Desire2Learn system offline for many hours. Another incident involved the failure of multiple electrical systems that took all district applications offline on the morning of the first day of the Fall 2014 semester, which historically is the busiest day of the academic year in terms of systems load and activity.

The main District data center is located at the District Administrative Center on Stanley Avenue in Ventura, a facility owned by the Ventura Unified School District. The District has set up systems for Disaster Recovery at Moorpark College, and data for critical systems is replicated continuously from the DAC to Moorpark. The current processes were designed for an event that would disable the entire data center, with the ability to recover and relocate all production systems at Moorpark within 24 to 72 hours.

The mentioned outages demonstrated that shorter windows are needed for systems recovery. Newer technologies are available that allow for much shorter recovery times, providing the ability to relocate services or recover applications in less than an hour. IT staff began an evaluation process in late 2014, looking at a variety of backup, replication, and routing technologies that would provide the capability to transfer applications between sites in a short period of time. It is expected that these advanced technologies will be acquired and implemented by late 2015.

As a direct result of these experiences, IT has also been reviewing and evaluating better documentation systems in order to have quicker and more efficient access to all needed documentation on a daily basis as well as at critical times. This will help mitigate future interruptions in services. With the implementation of new recovery technologies, all production applications will be reviewed and all related documentation updated.

Remote monitoring services are also being explored. Such services would monitor critical systems and networks on a 24x7 basis, and escalate after-hours incidents to on-call IT personnel, or would take remediation steps directly, depending on the Service Agreements.

Benefits: Enhancements should result in reduced downtime, with shorter recovery periods.

Resources: IT efforts will involve extensive testing and documentation; full disaster recovery tests will need to be scheduled on an annual basis. Approximately \$100K will be spent on this project.

Timeline: All systems should be online before the end of 2015.

Distance Learning

The state has begun an Online Education Initiative (OEI) to “develop an online course exchange that will enable students from any participating college to enroll in and complete a course from another participating college and easily apply that course towards completion of a degree at their home college. It includes student support services to address retention and faculty support for course development and conversion. The goal of the initiative is to increase the number of college associate degree graduates and transfers to four-year colleges and improve the retention and success of students enrolled in online courses offered through the exchange.”

Ventura College is participating as a full pilot member in the OEI, with pilot courses beginning in the Fall 2015 semester and additional courses in the Spring 2016 semester.

The Common Course Management System (CCMS) that has been chosen by the state is Canvas from Instructure. Ventura College faculty, staff, and students participated in the CCMS evaluation, and the feedback about the Canvas system has been very positive.

At some point, the state will provide the use of Canvas for non-OEI courses, with no cost to participating districts through the 2018-19 academic year. This opens up the possibility for the VCCCD to move to Canvas to replace Desire2Learn (D2L). The current schedule indicates that the Canvas system will be available in late 2016 or early 2017 for non-OEI use.

The District had a two-year agreement with Desire2Learn that ended June 30, 2015. The agreement allowed renewals for one or two years at the same cost. The renewal for one year has been executed to cover the 2015-2016 academic year, and the second year option will need to be executed as well.

Regardless of the long-term platform for online courses, a number of needs have been identified. These include 24x7 help desk support for both students and faculty, and also external hosting for 24x7 for the software and hardware. The cost to add those services from D2L would be approximately \$200,000 per year. These services will be included with the Canvas system. More will be known as the project progresses and the pilots get underway.

To make a decision for the future VCCCD platform, there will need to be substantial dialogue at each of the colleges and also at the district level via ITAC. This would involve the Academic Senates and the college Distance Learning committees. The governance process to make such a big decision will be defined as the OEI pilot progresses.

State Chancellor Brice Harris has called the Online Education Initiative a “Herculean Task,” with many logistical and technical hurdles at the state level yet to be cleared. On the VCCCD side, there would be substantial IT efforts for integration and testing, and a tremendous amount of work for faculty and support staff to transition to a new system.

Benefits: Broadened hours of support, including 24x7 support for faculty and students;

Resources: Migrating to a new Course Management System would be a significant effort for faculty, support staff, and IT. Moving to Canvas would save the District approximately \$175K per year in the 2017-18 and 2018-19 academic/fiscal years. State funding beyond those years has not yet been determined.

Timeline: The full-pilot participation for Ventura College will begin in the Fall 2015 semester. If the District decides to move to Canvas, a full migration would begin in late 2016 or early 2017, depending on availability from the state.

District Technology Infrastructure and Support

Most District applications are available online via the portal, and are utilized by students, faculty, and staff on an around-the-clock basis. Due to budget constraints, there is no IT staffing on weekends or evenings. Adding staff to provide 24x7 coverage is not currently feasible due to the high costs.

As mentioned in the Disaster Recovery initiative section, remote services are being explored to address after-hours monitoring of critical District-hosted systems. Help desk services and system options can also be reviewed to address student and faculty support needs.

The emergence of many cloud-based services and vendor-provided hosting options could address support in a variety of ways. Using vendor-hosted applications has become more common, with Software-as-a-Service (SaaS) available from many vendors. These systems usually have higher ongoing operational expenses but require little up-front capital investment, similar to renting versus buying. The advantage of SaaS is that the hosting is often provided by the vendor that is most familiar with the application, with deep technical expertise for the product and 24x7 support services for the infrastructure and the application. With such arrangements, contract terms and Service Level Agreements have to be clearly defined so that District needs are met and compliance can be maintained with laws such as FERPA and HIPAA.

An upgrade to the existing Microsoft Campus agreement will allow the District to take advantage of using Office 365 for both corporate and individual use, at no charge. This would include the hosting of our Exchange email system at Microsoft. It would also provide online file storage via the OneDrive for Business cloud service.

The state's Online Education Initiative would provide system hosting and support. If the District decides to fully participate after the pilot, then 24x7 support services could become a reality, with costs being paid for by the state through 2019. As timelines are fluid and decisions are still to be made, how and when this might be available to the District has yet to be determined.

Also, hosting for Banner and the portal can be explored as part of the review of Banner options (see section 'Banner Systems Review').

Moving the more critical systems to hosted or cloud based-services would reduce ongoing capital expenses for storage and servers, and could also reduce staff time managing those systems. By moving to cloud hosting, in some cases capital expense savings would be offset by operational expense increases.

The move to cloud-based systems will need to be evaluated on a case-by-case basis. But there will continue to be a need for onsite systems to provide access to local applications. The existing computing infrastructure will need to keep pace with the growing needs of the campuses, so upgrades are planned for 2015 and 2016.

Benefits: Improved performance and response time for upgraded systems; expanded support hours for cloud-based systems

Resources: All of the aforementioned projects would require significant IT resources; costs will vary by project.

Timeline: Upgrades to the existing campus computing infrastructures will occur in 2015 through early 2016. The timeline for moving to cloud-based applications will be dependent on various factors, including availability, costs, and applicability.

Green Computing

Southern California Edison (SCE) provides electricity to all District sites. The energy provider recently projected that the District's cost for electricity would increase 10 to 12 percent annually. Last year's costs were in excess of 2.5 million dollars; a significant portion of that cost for energy can be attributed to the use of technology.

The District has participated in multiple energy reduction initiatives in the past, some of which had financial incentives. The projects included virtualizing servers to reduce the number of physical systems, installing power management software on desktop computers, installation of lower-power devices that included thin clients, and implementation of power strips that would power down devices during periods of inactivity. There were mixed results from these efforts. It is difficult to ascertain the amount of energy savings from these initiatives since during that same period, there was a significant increase in the number of devices deployed at all sites. Much of that growth was due to technology implemented with new construction as part of the Measure 'S' bond projects.

Although the bond projects are nearing an end, other funding sources will likely continue the growth in use of technology. This includes one-time funds from the state for new technology, student success funds, a number of grants in which the District will participate, plus ongoing investment by the colleges using funds set aside for technology refresh.

One other factor in power consumption is the use of mobile devices by students. Access to power outlets is limited on campus. Increased access to power for student device charging would drive up District costs, but may be needed in areas where mobile device use is required.

To reduce the District's energy consumption due to technology, a number of options can be explored:

- Purchase equipment with a lower power usage, including mobile devices
- Look into newer technologies that use predictive analytics to help manage computer energy consumption, including the powering down of devices when not in use
- Continued consolidation of server resources through virtualization
- Possibly move some server computing loads to external, hosted services

With continued growth in use of technology, conservation efforts may not provide significant cost relief, but these efforts should help with mitigation of future increases.

Benefits: Efforts should result in lower energy bills and a reduced carbon footprint.

Resources: The staff impact and costs for energy conservation have yet to be determined.

Timeline: Efforts to reduce power consumption will be ongoing, through 2018 and beyond.

Information Availability and Reporting

Access to accurate information in a timely manner is needed for data-driven decision making. In order to provide accurate and consistent data across the District, a comprehensive, coordinated approach is needed.

The district-level Institutional Research Advisory Committee (IRAC) addresses data information needs and reporting capabilities. This includes when and how data is captured, what data should be captured, why the data is being captured, coordinated processing of data, and dissemination of appropriate data to internal and external components.

The Argos system provides a powerful set of tools for gathering and reporting information, including deep integration with Banner. It was implemented in 2014, with an initial focus on developing enrollment reports.

A number of manual processes were in place to gather and analyze enrollment data. With the Argos system, a number of those processes were automated, providing more timely access to critical enrollment numbers and tools for what-if analysis.

Plans are being made to develop new reports for other areas, including Finance, HR, and Student Success.

Additional tools may be needed for those employees with less advanced technical skills. Reporting and analysis tools specifically for researchers and data analysts will be evaluated to provide easier access to data.

Future data warehouse needs are also being reviewed. Such systems provide a repository for consolidation of data from many, diverse systems, enabling analysis across multiple data sources.

Benefits:

- Consistent and accurate data
- Coordinated processing of data
- Standard data definitions
- Standardized reports for public availability
- Standard and custom reports for internal usage
- Tools to streamline access to data

Resources: IT and research staff time will be needed to further develop the Argos system.

Timeline: Enhancements to information gathering, access, and reporting will be ongoing.

Information Security

Each year the number of security threats to systems and data grows significantly. In the past two years, there have been many highly publicized security breaches, such as Target and Maricopa Community College District, costing millions of dollars.

In order to maintain confidentiality, availability, and integrity, the District must continue to invest in technologies and develop processes for securing its systems. In the past few years, the upgrades have included implementation of upgraded next generation firewalls, implementation of a more advanced endpoint security system, and applying restrictions to remote access.

Information security is an ongoing process, and there are a number of challenges that need to be addressed:

- Finalization, adoption, and implementation of security Administrative Procedures with associated standard operating practices
- Compliance with laws and standards, including FERPA, PCI, HIPAA, GLBA
- Implementing encryption, including email, hard drives, removable media, and databases
- Enhanced monitoring systems to detect and prevent security vulnerabilities and intrusions
- Updating and improving Disaster Recovery procedures for critical applications (see section 'Disaster Recovery and Business Continuity')
- Providing secure cloud storage for district-related use by employees
- Ongoing user security awareness training
- Fulltime staffing to implement security measures, monitor security systems and remediate issues

Advanced security measures are expensive, so one-time funding may be needed to address identified needs.

Benefits:

- Data confidentiality and integrity is maintained
- Systems are available
- Compliance with applicable laws (FERPA, HIPAA, GLBA)
- Compliance with Payment Card Industry (PCI) standards

Resources: IT staff efforts will be significant; new technologies will be funded through various sources, including District technology budgets and possibly District reserves.

Timeline: IT efforts will be ongoing; draft Administrative Procedures have been developed and will go through the approval process in late 2015. Projects will be ongoing.

Information Technology Staffing Resources

State payroll data for California Community Colleges, released by the office of the Secretary of State, provides information on all paid positions, including IT staffing levels. A review of this data, combined with enrollment data for the same period, shows that the VCCCD has the lowest level of IT staffing relative to its size compared to all other CCCs (see Appendix B for additional details).

The number of administrative systems supported by the IT Department has more than tripled in the past seven years, and the number of computers increased by over 40 percent. Yet during that same period, IT staffing levels only slightly increased. The staffing levels could not be addressed due to the economic downturn that led to severe budget cuts in the District.

There has been an emphasis on efficiency to address growth with limited resources. But trade-offs were sometimes made to provide services with inadequate staffing. Slow turn-around times for service requests were sometimes the result. IT staffing levels will need to be addressed in order to provide the levels of service needed to provide quality instruction and student support.

The colleges have begun addressing local campus IT staffing through the Program Review process. Moorpark College added a technician in 2014 and another in 2015. Ventura College added two technicians in 2015. Oxnard College is currently reviewing its IT staffing levels.

At the district level, a review of staffing needs is also underway. This includes major changes to the Applications and Development area, as additional resources are needed to support current systems and also support new systems and state initiatives (see State Initiatives section for additional details). The technical support area will also be addressed, as the home location of certain positions will shift due to the relocation of hardware for critical systems (see District Technology Infrastructure and Support section for additional details).

Given the tremendous growth in reliance on technology, and Accreditation standards that require resource allocation to be tied to program planning, there is a need to move away from centralized IT management for the colleges. Plans are currently underway to replace supervisory positions with managers at the campus level, with oversight of the IT areas to fall under the VP of Business Services at each of the colleges. This transition will begin in 2015, to be finalized by mid-2016 at the latest.

Given the complex network that ties all District facilities together, support for campus IT infrastructure will remain under the District IT department, and funded at a district level.

This fundamental change in management structure will require that centralized standards be developed for support of administrative systems and infrastructure, under the guidance of ATAC. Where practical, district-level standards for instructional technology will come under the purview of ITAC. At each college, local IT requirements will be addressed through their respective governance processes, with support from District IT staff for infrastructure needs.

Benefits: Adding of staff will provide the resources to better respond to the growing technology requirements of each of the colleges and the District. The re-alignment of the IT structure will provide for addressing local needs where most needed, aligning resource allocation with program planning.

Resources: The changes to staffing structures will require budget adjustments to meet college and District IT needs.

Timeline: Staffing structure changes will continue into 2017.

Mobile and Online Technology Enhancements

The District has made a significant investment in mobile technologies in the past three years, including upgrading the portal and the public websites to work on mobile devices, and the release of a mobile application for student use.

Increased use of mobile devices in the classroom by both faculty and students will necessitate a much more robust wireless infrastructure (this is addressed in section 'Campus Infrastructure Improvements'). There is also a need to better integrate mobile technologies in the classroom (this is addressed in section 'Classroom Technology Improvements').

The mobile MyVCCCD app release was successful, with over 10,000 downloads in the first week, and over 20,000 apps downloaded in less than one year. The app provides students with access to campus maps, news and events, announcements, reminders of important dates, class schedules, access to Desire2Learn, mobile access to the portal, and access to pay for fees or parking permits. The ability to add or drop classes, which had been requested, should be available in early 2016. Improvements with calendar functions are also needed.

There is a need for greater use of text messaging to reach students, as email use by students has decreased with the growth in usage of mobile devices. A number of needs for using texting have been identified for enrollment, including notifications to students on wait lists.

The upgrade of the District's public websites in 2014 included implementation of a new Content Management System, Drupal. With the rollout of this open source tool, there were many training sessions for content owners. Drupal training will be ongoing.

Faculty web pages are handled differently at the three colleges. Developing a uniform process for faculty to post and upgrade personal web pages will need to be reviewed.

Compliance with section 508 legislation requires that all District websites be accessible to people with disabilities. A new service acquired in 2015 will provide reporting on section 508 issues on VCCCD websites. Employee training will be provided to assist with compliance efforts.

Benefits: Access for students to District systems will be available from any device.

Resources: The costs to add functions to the mobile app, portal, and website are minimal; depending on the functions needed, the IT efforts may be significant.

Timeline: Upgrades to the mobile app will occur in late 2015 or early 2016; upgrades to use text messaging for student needs will also begin in mid-2015. Section 508 compliance review will begin in late 2015.

Operational Efficiency Improvements through Technology

The District has many paper-based processes that are inefficient and time-consuming, slowing the delivery of services in many areas. To comply with Title 5 requirements and board policy for document retention, the college and district warehouses have a significant amount of physical space used for storing paper documents. The process to retrieve older stored documents can be very time-consuming.

To address these issues, a document imaging and management system was implemented in 2014. The system, OnBase, is currently being used in Financial Aid for tracking documents and forms submitted by students. It has also been deployed in Admission and Records at the colleges for transcript scanning and retrieval, and in District AP to scan and retrieve vendor paperwork, including W9 forms and invoices.

The use of workflow technology in Banner has helped streamline processes for managing field trips, and tracking contracts and renewals. Use of electronic forms in the portal has helped reduce time spent with absentee forms and student timesheets.

The OnBase system provides more advanced workflow and electronics capabilities than Banner, with easier development and reduced maintenance time. These capabilities can help reduce the processing time and eliminate paper in a number of areas. Combined with electronic approval and e-signatures, the ability to process requests should be significantly improved. To fully implement workflow systems will require development and adoption of an electronic signature policy.

Many ideas are being considered for workflow optimization, including mileage and travel requests, and the processing of instructor offers. Meetings with areas that generate a lot of paperwork will be scheduled to assess processes and prioritize projects, including Human Resources and Business Services.

Benefits: Efforts should result in reduced paperwork and increased efficiency.

Resources: IT resources will vary by project; development efforts may be substantial for sophisticated workflow processes.

Timeline: Projects will be ongoing.

Safety Technologies

In 2008, the board allocated \$1.9 million from reserves to fund multiple safety initiatives. Funded projects included implementation of a mass notification system (text and calling), on-campus speaker warning system, upgrades to Police radio systems, upgrading of the phone systems to include Enhanced 911, installations of additional blue-light emergency phones in parking lots, video surveillance enhancements, setting up a disaster recovery data center site at Moorpark College for District IT systems, emergency trailers with supplies, and training. The projects were completed and funds were expended by 2013.

Additional safety improvement and needs have been identified:

- Update and implementation of a new safety plan
- Continued training and testing
- Indoor speaker systems for public address and warning
- Improved outdoor speaker systems for public address and warning
- Door locking systems for shelter-in-place incidents
- Expanded video surveillance
- Infrastructure upgrades to support safety systems

The District Emergency Preparedness Committee was formed in 2013 to provide a forum for collaboration among the three colleges and the District Administrative Center. The committee will be prioritizing the needs and providing recommendations for future initiatives.

A funding request for the projects will need to go through the budget approval process and ultimately to the board, with funding from reserves or other sources to be identified. Grant funding may be available (FEMA or Homeland Security) for some of the projects. It is anticipated that the scope of the projects will be similar in cost and timelines to the prior initiatives.

Benefits: Enhancements will result in a safer environment for students and employees.

Resources: To address identified needs, the efforts and costs will be significant.

Timeline: Projects will continue through 2018.

Social Media

Since the early part of the 21st century, the use of social media networks has grown exponentially. As of the end of 2014, Facebook had 1.35 billion active users, and Twitter had close to 300 million. In higher education, social media has become a primary tool for recruitment, marketing, development, public relations, and alumni relations.

In a review of all California Community College websites in July of 2014, 70 percent had links to Facebook, over 50 percent linked to Twitter, and approximately 30 percent linked to YouTube. The VCCCD has yet to use social media as a strategic tool for official, approved communications, and does not have an official presence on the major social media sites. But a search on Facebook will show many pages posted for various areas within our three colleges.

Developing a framework for district-sponsored use of social media is needed, including guidelines and approval processes.

To address this situation, in 2014 the District interviewed consulting firms to review options for external assistance. The annual costs were significant, ranging from \$200,000 to \$500,000, and thus using consultants for managing social media was not pursued further.

Subsequent meetings with Instructional support staff, and discussions at ITAC and ATAC, led to ideas for addressing the District's needs. These included hiring consultants to assist in building a framework and also to develop processes for managing social media (Facebook and Twitter), hiring of fulltime or part-time staff to focus on social media, hiring student workers, working with the Student Voice to provide assistance (they may be dealing with social media in their Journalism class), and looking at interns from other institutions such as CSUCI or CLU.

Other identified needs include developing a central page to link to official social media postings, and setting standards and guidelines for content approval when posting.

Benefits: Social media can be used as a tool for recruitment, marketing, and communications.

Resources: The costs will vary depending on the options chosen.

Timeline: Options will be reviewed in 2015 with recommendations in 2016.

State Initiatives

With recent increases in state funding, there have been a number of legislative initiatives that include significant technology components for compliance. These initiatives address needs for improving student success, access, and equity.

The Student Success Act of 2012 (SB1456) provided a policy framework that targeted funding to the core matriculation services of orientation, assessment, counseling and advising, and development of education plans. The bill re-named the Matriculation program as the Student Success and Support Program (3SP).

Guided by a district task force to address 3SP requirements, a number of technologies were implemented, including online student orientations, implementation of DegreeWorks for education planning, and a new system for counseling and advising (GradesFirst). The VCCCD was one of the first in the state to fully comply with the 3SP MIS data submission requirements. There is still much work to be done to meet the ongoing requirements for the next phases of 3SP.

As part of 3SP, the state created an Initiative to develop a Common Assessment System for the benefit of all colleges and students. A centralized system will address testing, administration, data collection, and placement guidance. The goal is to improve access to data regarding assessment for students, faculty, and staff. The impact of implementing this system is not yet known.

Another component of 3SP is the Education Planning Initiative, which will develop the transcript, articulation, and curriculum inventory elements necessary to facilitate existing college Education Planning and Degree Audit Systems. It is not yet clear how the District's use of DegreeWorks will integrate with the state plans, but it is anticipated that this could be a major development effort.

The state's Online Education Initiative is addressed in the Distance Learning section of this plan.

Benefits: Compliance with state standards, increased student success and access

Resources: Efforts to comply with 3SP requirements will continue to be significant.

Timeline: Current projects will continue through 2017.

Training

Training is a key component in the effective use of technology. With the rapid pace of change in technology, it can be challenging for faculty and staff to keep pace with the latest available software and online services. Accreditation and recent legislation require that the District address training for technology, so continued investment in this area is needed.

Accreditation Standard IIIC requires that “the institution provides appropriate instruction and support for faculty, staff, students, and administrators, in the effective use of technology and technology systems related to its programs, services, and institutional operations.”

Recent state legislation, AB 2558, addresses community college faculty and staff development. It established the Community College Professional Development Program and authorized the use of state money for related activities, with an aim to increase professional development activities for all community college employees.

The VCCCD will continue to invest in training needs in a variety of ways. The District Professional Development Committee was recently established to address needs for classified employees, and is exploring multiple options and methods for training of staff.

Each of the colleges has instructional support staff responsible for providing training and support for faculty. The colleges provide faculty training for online instruction through flex workshops and other staff development activities as well as individual help on an as-needed basis. Each college has a faculty/staff resource center where hands-on guided instruction can take place. In addition, there are areas adjacent to the resource centers where the Instructional Technologist can work one-on-one with faculty to provide training and support.

Deployments of new technology or upgrades to existing technology include training components for employees and students (where applicable).

New students are provided training on using the portal during course orientation meetings. Online documentation is provided for self-help on using the portal and the Desire2Learn course management system.

The District has contracted with multiple vendors to provide online, self-paced training modules for various software applications. These online services provide web-based, self-paced lessons on dozens of software packages and technologies. Online training modules from Lynda.com are made available to all employees via the MyVCCCD portal.

The self-paced training model is cost-effective, but greater awareness is needed on the availability and use of online tools. Flex week workshops for faculty and hands-on classified training sessions will be provided for instruction on use of these tools.

Benefits:

- A highly-trained workforce with current skillsets
- Smoother technology rollouts
- Improved collaboration

Resources: Online training services will continue to be funded by the District Wide Services budget for IT.

Timeline: Training efforts will be ongoing.

Appendix A. Governance Structure

District Advisory Groups

Advisory groups are formed by the Chancellor to provide feedback on specific aspects of District functions. To accomplish the charge of the group, the Chancellor appoints members to advisory groups based on the need to create balanced, representative groups of individuals who are in the best position to provide feedback on that specific area of operation.

All Information Technology committees are classified as advisory groups.

Administrative Technology Advisory Committee

The Administrative Technology Advisory Committee (ATAC) advises the Chancellor on technology planning and priority setting for all technologies not used in the teaching/learning process, including Banner enhancements, with the exception of the distance-learning platform. Such activities may include, but are not limited to, evaluating and prioritizing tasks, including implementation timelines and the identification of needed resources; setting priorities for fiscal and staff resources; and making recommendations to revise business processes and functionalities to improve procedures and productivity.

Ad hoc committees are assigned specific components of projects as needed.

Chair: Associate Vice Chancellor, Information Technology

Members: Vice Chancellor, Business and Administrative Services
 Vice Chancellor, Human Resources
 Director of Administrative Relations

From Each College:
 Executive Vice President (or designee)
 Vice Presidents (or designees)

Guest/Resources:
 District Information Technology Project Support Staff

Typically, the committee meets bi-monthly, or as needed.

Instructional Technology Advisory Committee

The Instructional Technology Advisory Committee (ITAC) advises the Chancellor on technology planning and priority setting for all technologies used in the teaching/learning process. Such activities may include, but are not limited to, evaluating and prioritizing tasks, including implementation timelines and the prioritization of needed resources; and making recommendations to develop, review, and revise instructional technology processes and practices to improve student learning.

Ad hoc committees are assigned specific components of projects as needed for all instructional technology.

Chair: Associate Vice Chancellor, Information Technology

Co-Chair: The home College for the faculty co-chair is rotated among the three Colleges, and the maximum term for a faculty co-chair is one year.

Members: District Information Technology Project Support Staff, as needed

From Each College:

- Executive Vice President or Vice President of Academic Affairs and Student Learning

- Dean that oversees Distance Education

- Instructional Support Staff (up to 2)

- Faculty Members (up to 3), including Academic Senate President

Guest/Resources:

- District Information Technology Project Support Staff

The committee meets once per month during the academic year.

Additional Advisory Groups

Banner Student Group

This is a working group that meets monthly to discuss and prioritize tasks related to the Student module of Banner and related systems.

Portal Task Force

This working group meets monthly to address needs for the MyVCCCD portal and related technologies, such as mobile applications.

DegreeWorks Working Group

This working group meets monthly to address needs related to use of the DegreeWorks system.

College Committees

Each of the colleges has committee structures in place to address local computing issues.

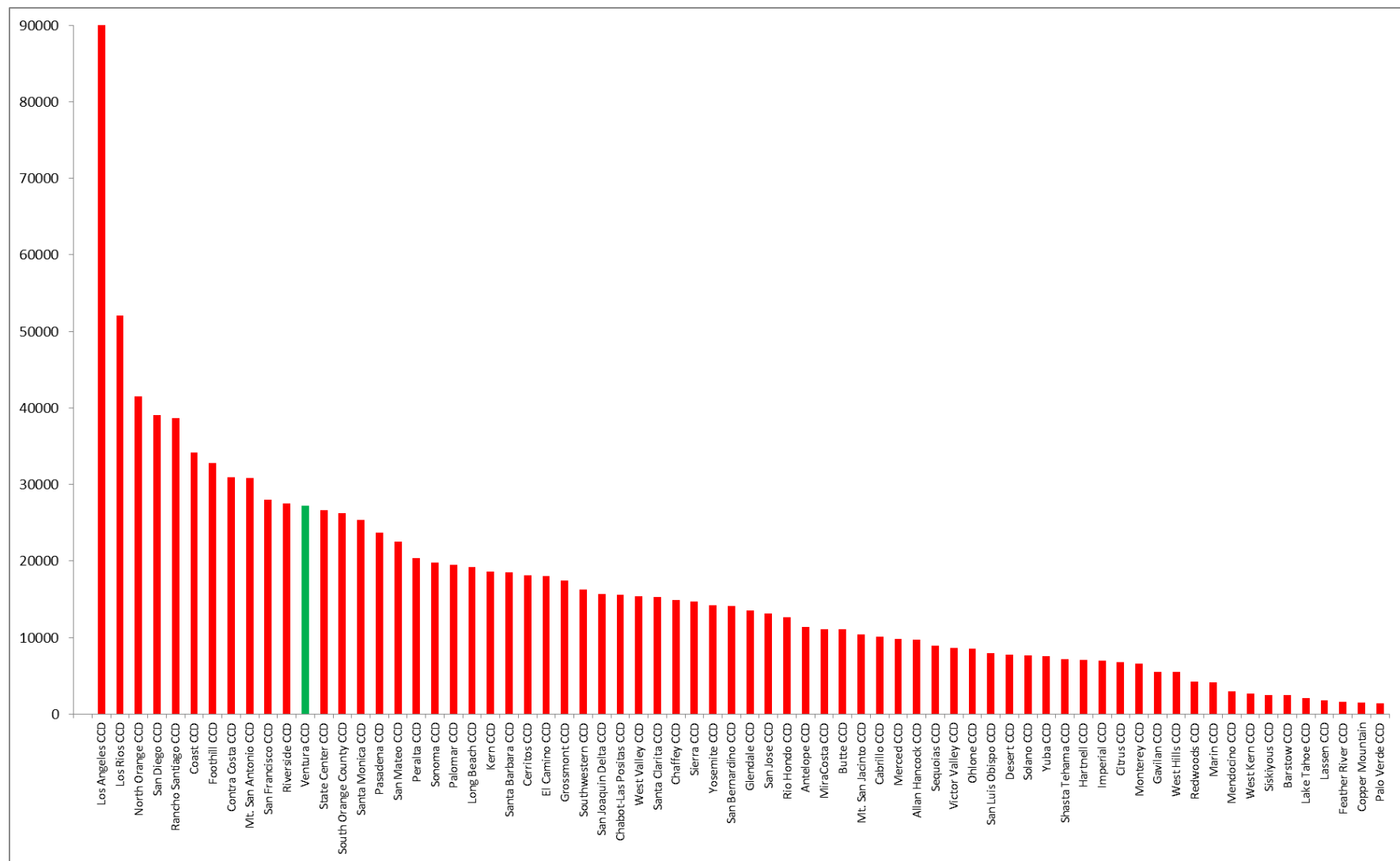
MC – Facilities/Technology Committee on Accreditation and Planning, Technology Resource Allocation Working Group (TRAWG)

OC – Campus Use, Development and Safety Committee (CUDS)

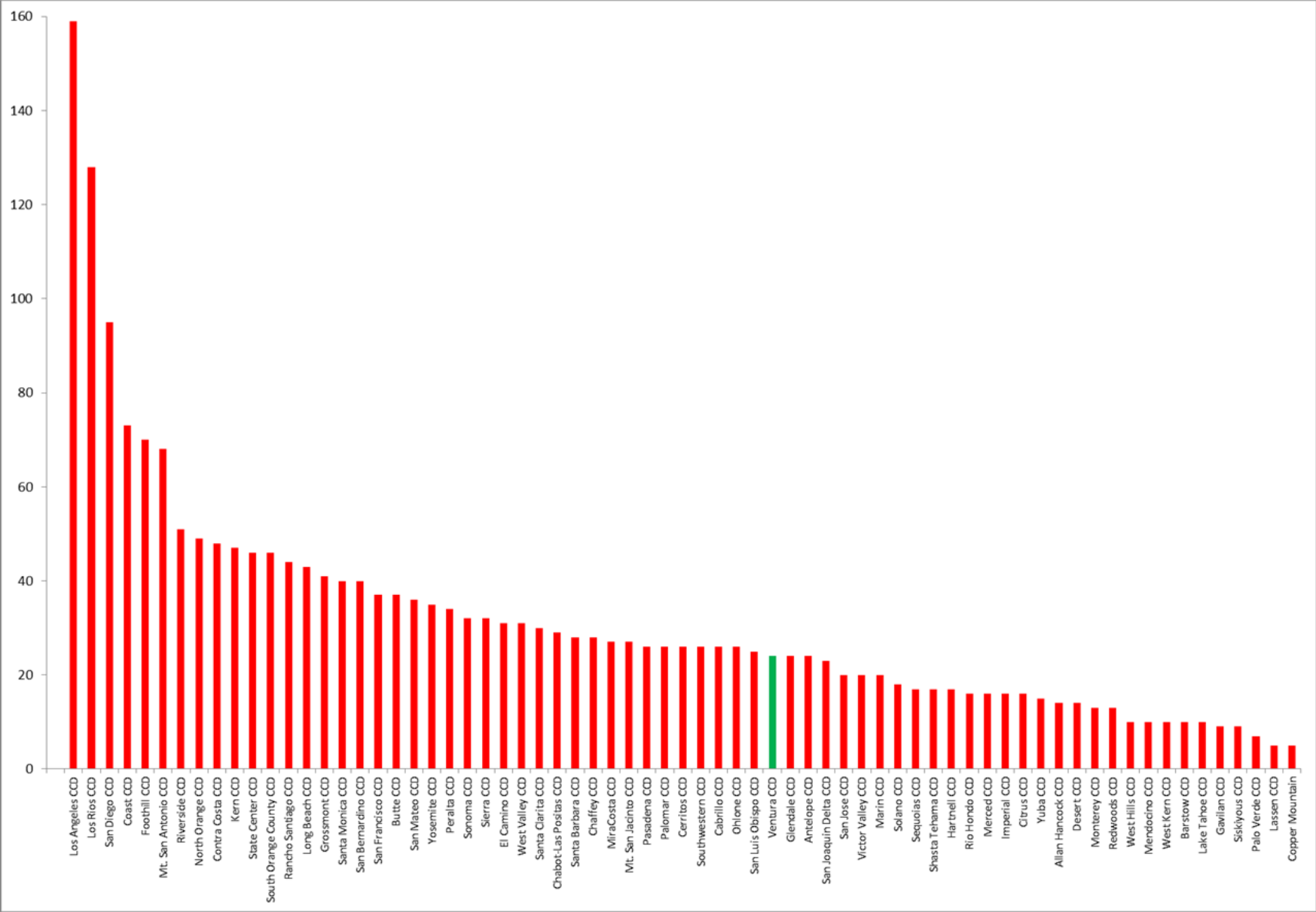
VC – Technology Committee

Appendix B. IT Staffing Information

FTES Comparison of CCC Districts 2013-14 (Source: CCCCCO Data Mart)

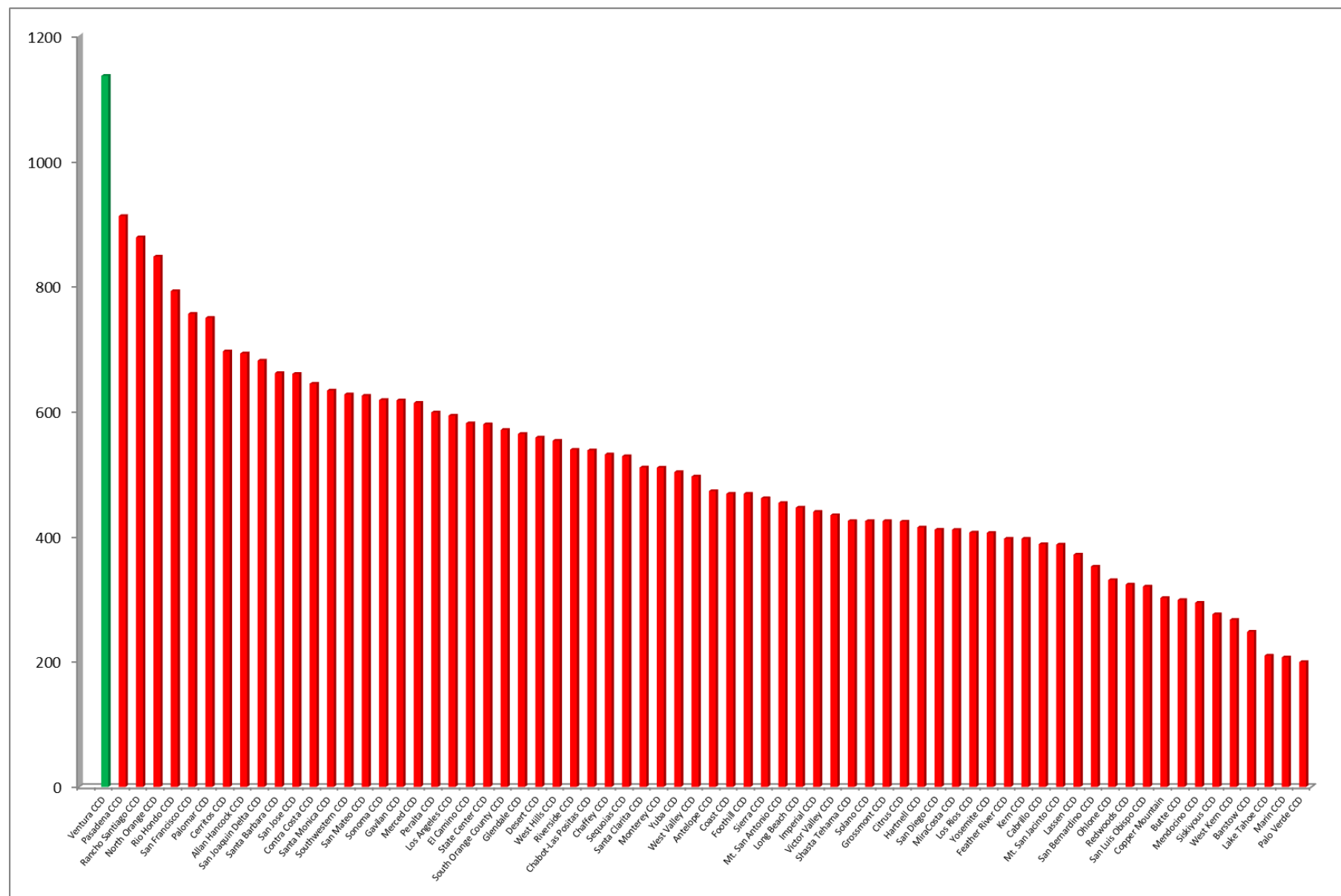


Comparison of CCC District IT Staff Size 2013



Source: California State Controller’s Office – Government Compensation: 2013 Higher Education - Community College District Data

Comparison of CCC Districts: Student FTE to IT Staff Ratios



Sources: CCCC Data Mart; California State Controller’s Office – Government Compensation: 2013 Higher Education - Community College District Data

Document Revision and Review History

Revision History

Version

1.0	Preliminary Draft, with six incomplete sections
2.0	Draft with completed sections
2.1	Initiatives reformatted
2.11	Edits from reviewer feedback
2.12	Added graph aligning initiatives with goals
2.13	Added staffing information, page numbers, and revision history
2.14	Edits to correct technical information
2.15	Added 508 compliance to mobile/online
	Adjusted Distance Learning section for OEI timing relative to accreditation

Review History

01-31-2014	ITAC Discussion of plan
02-06-2014	ATAC Discussion of plan
04-25-2014	ITAC review of preliminary plan
10-31-2014	ITAC review of preliminary plan
02-10-2015	Overview presented at board meeting
04-02-2015	ATAC review
04-08-2015	Moorpark Facilities/Technology Committee on Accreditation and Planning
04-10-2015	ITAC review
04-13-2015	Ventura Technology Committee
04-15-2015	Oxnard College President's Cabinet
04-15-2015	Oxnard College Planning and Budget Committee
04-21-2015	Moorpark Academic Senate
04-27-2015	Oxnard Academic Senate
05-06-2015	Ventura Admin Council
05-07-2015	Ventura Academic Senate
05-14-2015	Ventura Classified Senate
05-19-2015	Moorpark Classified Senate
06-02-2015	Oxnard Classified Senate
06-08-2015	Moorpark Admin Council
08-06-2015	ATAC final review
08-11-2015	Board of Trustees Adoption