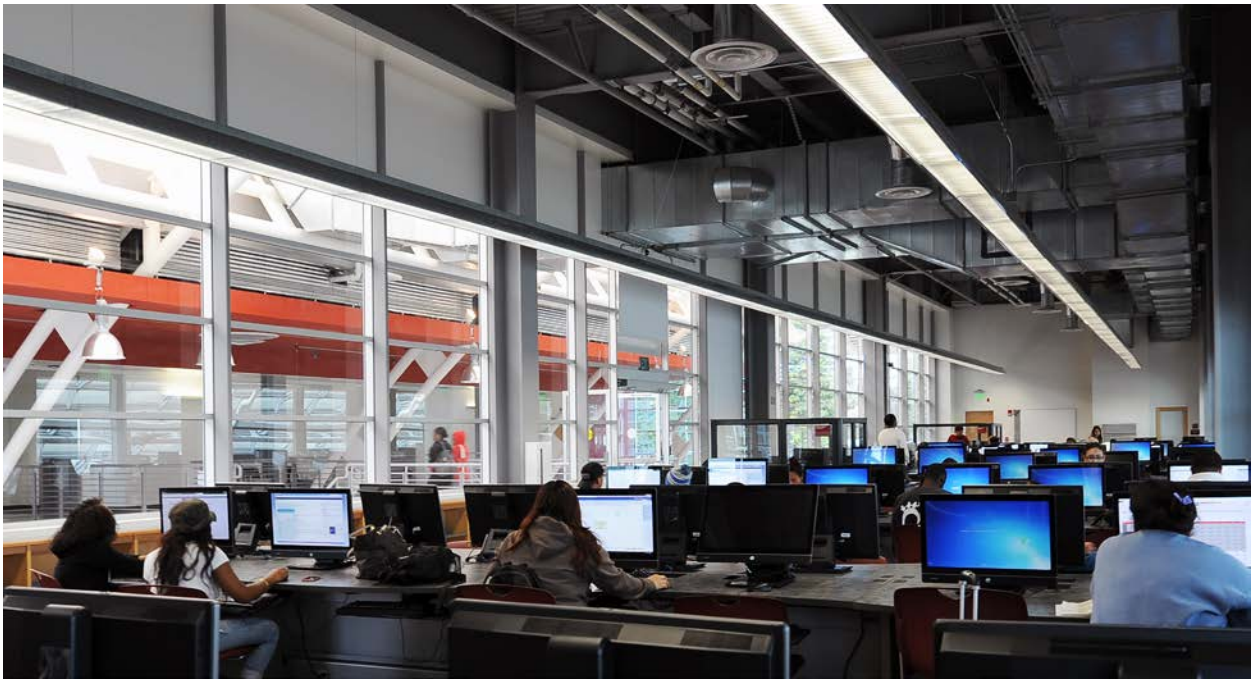
Technology Master Plan

2018-2022



Compton College

Compton Community College District

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Introduction

Compton College, of the Compton College Community District, celebrated 90 years of services to the community in 2017. The College's focus is student success and providing essential educational needs to the community. In support of the College's mission statement, "Compton College will be the leading institution of student learning and success in higher education. Compton College is a welcoming environment where the diversity of our students is supported to pursue and attain academic and professional excellence. Compton College promotes solutions to challenges, utilizes the latest techniques for preparing the workforce and provides clear pathways for transfer, completion and lifelong learning." the Technology Master Plan (the Plan) defines the platform for the expansion and support of future technologies.

The Plan identifies technology guidelines for Compton College for the next five years. The Plan is a set of visions and recommendations that determine technological improvements for the educational experience for all students at the College. The evolving technologies and the College's funding may influence this Plan. The Technology Committee will review the Plan annually and present a report to the CEO/President based on the analysis of the necessary modifications.

At the June 7-9, 2017 meeting, the Accreditation Commision for Community and Junior Colleges (ACCJC) acted to grant initial accreditaion to Compton College. The Initial Accrediuation allows Compton College to separate its operations from El Camino College, including technologies and systems that were provided to Compton College through the partnership with El Camino. The Technology Master Plan sets the roadmap of separating the core systems and building technologies for independent operations.

"The number one benefit of information technology is that it empowers people to do what they want to do. It lets people be creative. It lets people be productive. It lets people learn things they didn't think they could learn before, and so in a sense it is all about potential."

- *Steve Ballmer*
  Former Microsoft CEO

Technology Plan Mission

To enhance learning capabilities of students; provide faculty with tools that boost educational methods; and streamline business processes with effective information and communication systems.

Goals

The implementation of this Plan is designed to improve the quality of services provided by the Information Technology Services (ITS) Department and give faculty and staff better tools to serve student administrative and learning needs. The College also set the following technology goals:

- Deliver tools, services, and applications that support teaching in classrooms and through distance learning systems.
- Provide IT services that are based on the responsible stewardship of the College's resources
- Improve the entire student life cycle: recruitment, enrollment, and retention to graduation.
- Implement technologies that impact student success.
- Stay current with evolving technologies.
- Secure all confidential and sensitive information, protecting all systems and data storage.
- Develop and implement IT business continuity and disaster recovery plan.

Technology Governance

The Technology Committee serves as the advisory group for technology-related planning and technology- related needs assessments and recommendations. The Technology Committee makes recommendations on new technology infrastructure (equipment or systems) being considered for purchase by the District, reviews technology needs, policies and procedures on an annual basis and determines the best allocation of technology equipment that is donated or granted to the District. It coordinates the plans and proposals that develop, implement, and evaluate distance learning and related instructional technology activities.

The Technology Committee is a standing institutional committee of the College whose charge is to address priorities and changes in technology strategies. The Technology Committee meets monthly to evaluate and set technology practices and strategic priorities as part of the annual updating of the Technology Master Plan. Membership is voluntary, and the Technology Committee is expected to give a report to the Planning and Budgeting Committee every spring semester.

Compton College Technology Committee Team

This Plan was prepared by the members of the Technology Committee:

- Andrei Yermakov, Chair, ITS Director
- Rodney Murray, Co-chair, Dean of Student Learning Divison 2
- David Maruyama, Co-chair, Instructor, English
- David Simmons, Senior IT Technician, ITS Divison
- Andree Valdry, Acquisitions/Reference Librarian
- Eduardo Estrella, Telecommunications Technician, ITS Divison

- Brent Kooiman, Faculty Member, Auto Collision and Repair
- Gary Narusawa, Faculty Member, Auto Collision and Repair
- Dale Ueda, Faculty Member, HVAC
- Nicole Gordon, Staff Assistance
- Thomas DeHardt, Faculty Member, Psychology

Facilitator:

- Art Leible, CTO, El Camino College

Organizational Analysis

"The art of progress is to preserve order amid change and to preserve change amid order."

- *Alfred North Whitehead English Mathematician & Philosopher*

Information Technology Objectives

Compton College strives to provide continuous improvement of information technology systems and services to meet or exceed students, faculty and staff requirements. Focus is on maintaining the reliable and secure environment that support academic and administrative services. The best efforts are made to provide students with easy access to information to achieve their educational goals. The College analyzes emerging trends and institutional priorities by conducting surveys, following the Chancellor's Office initiatives, and monitoring other higher education strategies. the goal is to maintain a campus of the 21st century, creating enhancements in classrooms for students and faculty, addressing and optimizing our administrative technologies that ease the use of institutional systems.

Objective 1	Improve systems management by implementing Microsoft System Center
Objective 2	Implement business continuity and disaster recovery with cloud backup
Objective 3	Create responsive website and student portal aligning to mobile devices popularity trend
Objective 4	Implement a single sign-on, identity management services system

Objective 5	Campuswide assistive technology to ensure technology accessibility with ADA and 508 compliance standards
Objective 6	Continue enriching classrooms with interactive audio-visual systems
Objective 7	Secure student and employees confidential information with best methods in the industry
Objective 8	Optimize contract management and procurement processes
Objective 9	Implement document management system
Objective 10	Migrate all users to Office 365
Objective 11	Develop equipment life cycle program

Desired Outcomes

Deployment of the Microsoft System Center Configuration Manager will allow centralized management of servers, desktops, and mobile devices. Using Configuration Manager, the College will increase IT productivity and efficiency and drive down the cost required to manage infrastructure.

The System Center Data Protection Manager will provide continuous data protection with the cloud offload of critical data. The Data Protection Manager allows replicating mission-critical servers to the cloud, providing instant disaster recovery option.

Most people own or use multiple electronic devices today. Students can use a web portal to enroll in college and then check their schedule or communicate with the instructor using their mobile devices. The responsive design should respond to the user with multiple devices. Web pages and portals created with the responsive design methodology solve the problem of multiple device usage, and it requires a single set of content.

Compton College, as all public schools, operate in a mixture of cloud and in-house applications, providing access to educational and administrative resources. The Identity management system automates the process of signing on to multiple systems with a single set of credentials. It does not only simplify the procedure for students, but it also reduces the IT support that requires the resetting of passwords in various applications.

For students with disabilities, Compton College offers a variety of software and hardware tools to help them with learning materials and using technology. The plan is to extend those services to every lab on campus and to install assistive software on every computer used by a student.

With many contractual changes on campus, all new classrooms are equipped with the latest audio-visual (A/V) equipment. The instructors have software-controlled video and audio

equipment at their disposal. The CEC continues with the classrooms A/V upgrades to the existing and new classrooms and labs.

Today's IT security threats and attacks vary in delivery methods and complexity that change on a daily basis. Therefore, the managed security services by an experienced security company will provide a well-tuned, comprehensive security practices to ensure that all confidential and sensitive information is well guarded. This service will eliminate the need for maintaining expensive risk detections tools and the need for 24/7 staff for proper preventative incident monitoring.

The ITS Department needs to improve its maintenance contracts' management for all hardware and software assets. The aim is to automate the contracts lifecycle from the contract creation, approval, renewal to the closing phase. The contract management system will enhance the visibility and will ensure that all critical assets protected by the maintenance agreements.

Moving to an electronic document management system will improve the security of the stored information, will facilitate the collaboration among departments and timeliness of retrieved information, will eliminate the need for physical document storage, and will provide better control of the most consistent content.

Migration to Microsoft Office 365 will bring deployment and maintenance savings, as well as allow users to have service with anywhere access. Office 365 integrates with the existing Microsoft Office and other Microsoft products, allowing seamless communication and collaboration with colleagues and students.

The College will develop a capital equipment and technologies replacement program. The program will ensure that the school has the right equipment to meet immediate needs as well as long-term goals. The Technology Committee recommends replacing personal computers on a five-year cycle and servers and networking gear every seven years. The planning of the equipment and other technologies replacement will be determined with the help of the asset management system, and the report will be provided to the CEO/President and the Business Office for the budget forecasting.

Future technology and staff planning

The Technology Master Plan sets the roadmap for separating core systems from El Camino College, as well as implementing the core technologies and rebuilding the ITS Department to be able providing support to students, faculty, and staff. The Plan identifies new IT positions, and implementation of the new Enterprise Resource Planning (ERP), Student Information System (SIS), and Learning Management System platforms.

Core technologies

Three primary platforms are essential for the College's information services: SIS, ERP, and LMS systems. In the midst of selecting a new system, there are multiple decision points and various factors. The top criteria used for system selection are:

1. Ability to fit college needs
2. Can work with existing hardware
3. Ease of use
4. Functionality
5. Level of support provided by vendor
6. Price of software
7. Developer's track record of performance
8. Growth potential
9. Ease of implementation
10. Quality of documentation

The roadmap to successful ERP/SIS system implementation and deployment consists of the follow steps:

Upper management support is imperative to any successful project. Management does not need to be involved in all details, but must be aware of project delays and milestones.

Collect extensive list of requirements before looking at vendors. With the help of the business analyst, the detailed requirements and list of business processes should be documented and match with the specific project tasks and milestones.

Focus on mobile capabilities. Bring your own devices (BYOD) and mobile applications have become a standard in modern higher education business processes. Students want to have access to essential services for mobile devices, so we would need to keep in mind this trend while selecting an ERP/SIS system.

Carefully evaluate all options before choosing an ERP/SIS system. We would need to engage all stakeholders in the selection and evaluation processes. Both systems, ERP and SIS, must be completely compatible, well integrated with the existing systems and between each other.

Get references. A vendor should present at least three verifiable references. All departments should contact their peers in other colleges and gather feedback regarding their modules' functionality, capabilities, and vendor support experiences.

Avoid excessive customization. Highly customized systems will lead to higher cost of maintenance, release upgrades, and other systems integrability.

Factor in change management. Major systems implementations facilitate massive changes in business processes. These changes may impact the culture of the organization and without precise control and communication, can result in an adverse reaction in the new system implementation and adoption.

Appoint an internal project manager. A vendor-assigned project manager is not the best representation of the College's needs. An internal project manager should be assigned to monitor the project implementation.

Provide sufficient time and resources for training on the new system. Achieving an acceptable comfort level with the new software will require a commitment from everyone involved in the implementation process. The project team should provide support and easily accessible help during the transition period.

One of the biggest factors that will affect the selection of the ERP and SIS system will be a vendor's web portal that will extend the capabilities of the core systems to the users across all platforms: mobile and desktops. The portal will carry functions such as easy access to schedules, making payments, and increased collaboration across all communities. The portal will aggregate information to a single location from multiple sources and will be tailored to the needs of students, faculty, and staff needs. Access to information from any device with a single sign-on is the main benefit of the web portal.

Compton College has started collecting information about all business processes that would require having a technology replacement that is currently provided by El Camino College. Compton College is going to work on the gap analysis with the collaboration of the Institutional Effectiveness Partnership Initiative (IEPI). Without the institutional commitment, it would be impossible to design and implement the future systems that can address multiple objectives and provide valuable student success tools.

Staff development and expansion

Human capital is the most importance resource of any organization. Compton College continues with its best efforts in hiring the right talent who want to be with the organization, investing in the employees training and development. Compton College should conduct salary studies for any new position to stay competitive in this complex, fast-growing informational age. While IT infrastructure is always evolving with the new technologies, we ought to take a proactive approach to preparing employees for adverse conditions.

To provide support services for the new financial and student systems that will be serving Compton College students, faculty, and staff, additional human resources are necessary to provide quality services. The ITS Department needs to increase services in areas of network and applications support; systems maintenance, and helpdesk response. The proposed transitional organizational chart displays the new positions within the ITS Department that are necessary to provide quality services.

The proposed jobs roles and responsibilities:

Helpdesk Supervisor: oversee three technicians; manage helpdesk coverage schedules; serve as a backup for three technicians; supervise outsourced printing services.

Helpdesk Technician: maintains over 1,200 computers on campus, remote and in-person support to all faculty, staff, and students technical problems, provides support services for special events and other activities.

Systems and Network Support Manager: supervise system administration, network support, and telecommunication services; lead systems updates and expansion projects; work with cabling and security monitoring vendors.

Information Systems Engineer: responsible for installation, troubleshooting, and maintenance of all servers and enterprise systems; supports virtual environment, storage; in charge of the systems and data backups.

Network Support Specialist: maintain District's network infrastructure, consisting of 60 IDFs, core data center switches, Aruba controllers and over 100 wireless access points; perform logs monitoring, firmware upgrades, and backups; maintain proper documentation and inventory.

Telecommunication Specialist: support District's Cisco phone system; performs system administrative tasks; phone, voicemail, emergency responder, and Informacast notification systems maintenance and update; manage District's land lines, faxes, and eFax; verify billing invoices; maintain emergency location records in Intrado system; repair and configure Code Blue emergency devices; coordinate communication vaults and security camera maintenance; assist in security and fire panels repairs.

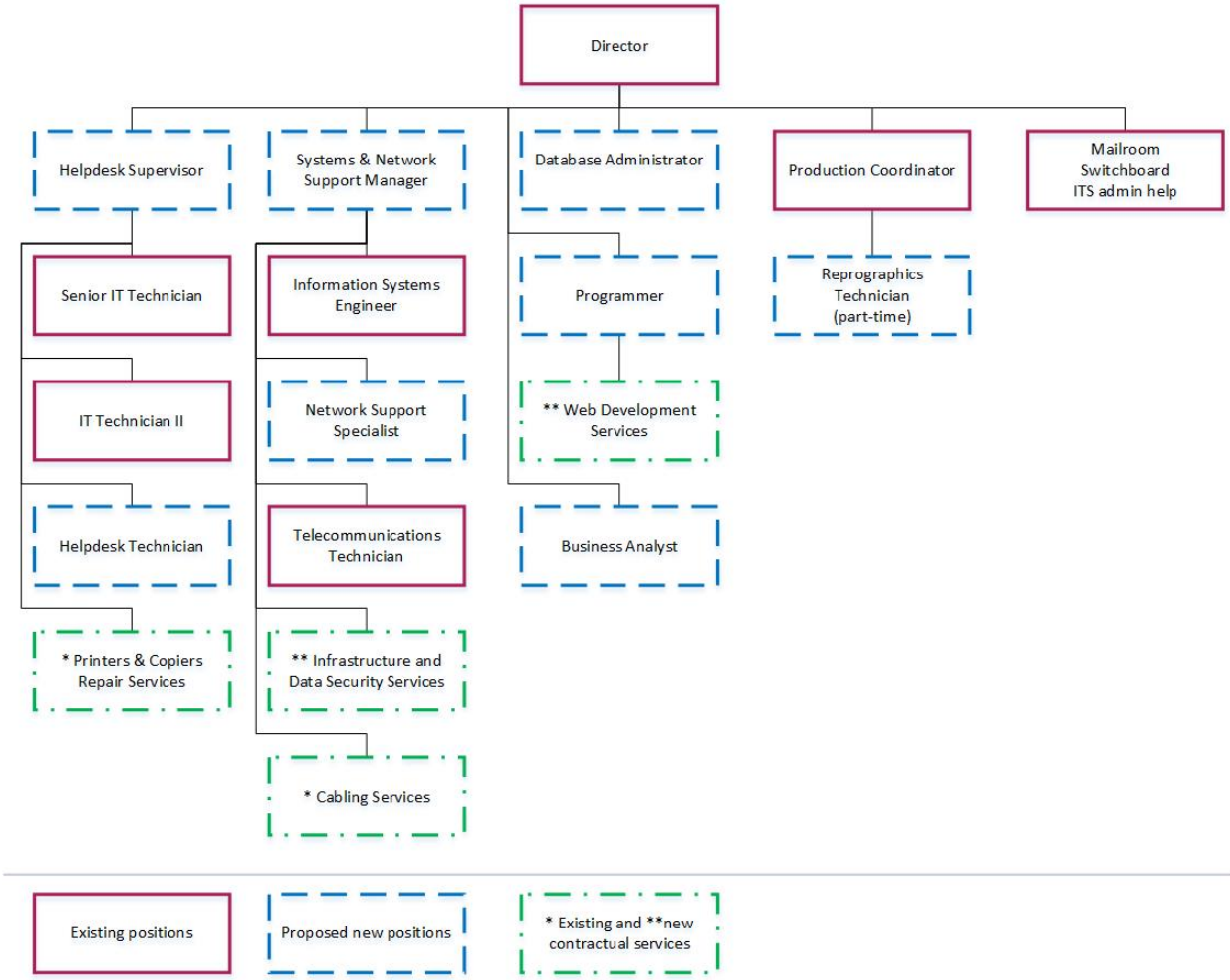
Database Administrator: maintain all databases, including ERP and SIS systems; responsible for database administration, backups, and security; create custom reports using SQL reporting services; prepare all state-required reports.

Programmer: build and support custom applications; create systems customizations and interconnections; write scripts for custom data extract; oversee web development services.

Business Analyst: ERP and SIS systems administration; assistance with research and gathering requirements for various projects; follow up on the new releases, features, and requirements for core applications; conduct staff and faculty training and orientations for all software used by the District; perform general training for staff, faculty, and students on usage of Mircosoft Office suite and other applications; create step-by-step manuals; maintain version control and documentation.

Information Security Services: partner with a market leader in managed security services; follow guidance on the best practices to provide a secure environment to store confidential and sensitive information; the vendor will monitor all systems logs for suspicious activities and will inform the District in case of attack; the consultants will assist the District in the event of data breach to comply with the state law and a proper incident response.

ITS Department Transitional Organizational Chart



Conclusion

"Success is a process, not an event."

- *Richie Norton Author*

The Technology Master Plan intended to be the "roadmap" for the next five years. The plan should be reviewed every year, and the changes must be presented to and approved by the Board of Trustees. The Plan complements the Comprehensive Master Plan, the Educational Plan, and works in conjunction with the Facilities Master Plan.

Rapidly changing technologies in higher education require organizations to embrace new methods of adopting new requirements. This plan intends to define a vision and set up priorities to respond to the College's evolving needs. However, the Plan may be amended during the five-year span to address immediate needs due to new security threats or non-interoperable collaborations systems or tools. Growing expectations and the explosive growth of personal devices may affect the institutional priorities. Therefore, funding technologies should be considered as an investment instead of a cost that would allow Compton College to offer a competitive educational environment oriented on student success.

The Technology Master Plan provides a framework for managing the College's technology assets from one year to the next as new computer hardware replaces old and new software technologies are introduced. Distance Learning continues its significant growth, the demands for networking increase, and staff productivity is enhanced with the implementation of new administrative applications. The purpose and scope of the Technology Master Plan are to allow more flexibility, broader input into prioritization, and the ability to adapt to the changes and breakthroughs in technology. Providing a framework for incorporating opportunities for innovation will keep the District current and poised for the future.