Non-Instructional Programs
2022-2023 Self-Study
Three-Year Program Review Template

Academic Computing Technologies

Statement of Collaboration

The department/office staff listed below collaborated in an open and forthright dialogue to prepare this Self Study. Statements included herein accurately reflect the conclusions and opinions by consensus of the department/office staff involved in the self-study.

Participants in the self-study

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Authorization

After the document is complete, it must be signed by the Principal Author, the Department Manager (when appropriate), and the Dean or appropriate Immediate Management Supervisor (IMS) prior to submission to the Program Review Committee.

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1.0 Mission and Goals

Mission, Vision, Core Values and College Goals drive all college activities. The Program Review committee would like to understand the connection of your department/office to the Mission, Vision, Core Values and College Goals. Summarize how your department/office supports each area.

Mission:

Fullerton College's mission statement is "*Fullerton College advances student learning and achievement by developing flexible pathways for students from our diverse communities who seek educational and career growth, certificates, associate degrees, and transfer. We foster a supportive and inclusive environment for students to be successful learners, responsible leaders, and engaged community members.*" Academic Computing Technologies (ACT) fosters a supportive and inclusive environment for students to be successful learners, responsible leaders, and engaged community members. ACT strives to be a leader for technologies and support of technologies that help students and employees be successful at Fullerton College.

Vision:

Fullerton College's vision is "*Fullerton College will transform lives and inspire positive change in the world.*" Academic Computing Technologies embraces this vision through teamwork, constant learning, and improving our services.

Core Values:

ACT aligns itself with the college's core values:

- Community – We promote a sense of community that enhances the well-being of our campus and surrounding areas. We are conscientious about safety, security, and ethics in our work.
- Diversity – We embrace and value the diversity of our community. We treat everyone with professionalism and dignity.
- Equity – We are committed to equity for all. We ensure fairness and respect to all our customers and clients.
- Excellence – We honor and build on the tradition of excellence. We measure our performance and constantly look to improve our quality of service.
- Growth – We expect continued professional and personal growth through learning. We keep up with technology trainings and trends in education.
- Inclusivity – We support the involvement of all in the decision-making process. We value and include the opinions of our stakeholders in our decision-making process.
- Innovation – We support innovations to improve education. We implement applicable technologies to help our users perform their work well.
- Integrity – We act in accordance with personal integrity and adhere to a high ethical standard. We are honest and transparent in our work processes.
- Partnership – We work together with our educational and community partners. We foster collaboration with other campuses in the district to solve problems.
- Respect – We support an environment of mutual respect and trust that embraces the individuality. We work to understand the beliefs and ideas of others.
- Responsibility – We accept our responsibility for the betterment of the world. We are cognizant of how our work practices affect others and look for ways to contribute to the betterment of society.

College Goals:

We enable the college to meet its three institutional goals to increase student success, reduce the achievement gap, and strengthen connections with the community by minimizing technology problems for the campus community. For example, when a student uses their mobile device to access the Internet in a safe and efficient manner, ACT ensures that multiple technologies are working together, from the correct supplicant on the client's device, to the authentication against the student database on Banner.
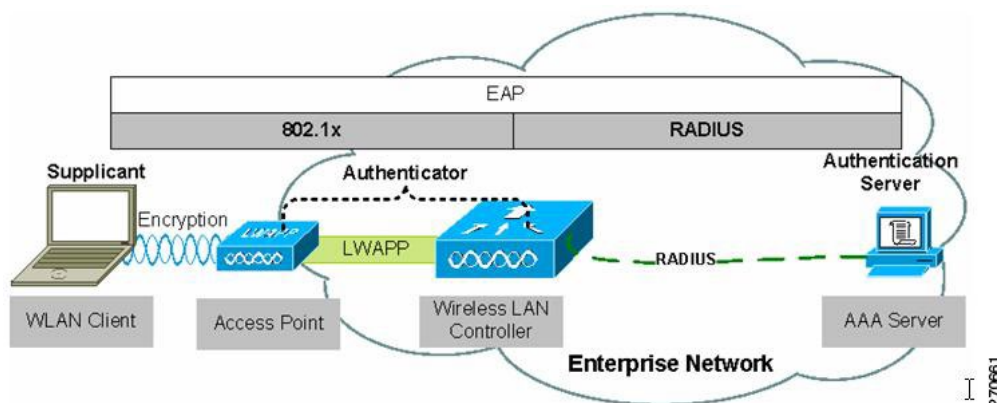
We provide the technical infrastructure for student success without the campus community needing to understand the complexity of what is happening. We strive to provide a user-friendly foundation for the college community.

2.0 Department/Office Description/Data & Trends Analysis

2.1 Describe the purpose, components, and staffing of this department/office.

Fullerton College's information technology services started in 1980 to support instruction using "new" microcomputers as the mainframe. These microcomputers were strictly used for administrative purposes only. Our responsiveness to the instructional needs of our campus elevated Fullerton College's Academic Computing Technologies as leaders in our district when it came to information technology services. Within NOCCCD, we were the first to utilize Local Area Network (LAN), first to connect to the Internet, first to employ Storage Area Network (SAN) technology, first to deploy wireless, and first to embrace VoIP telephone technology. Today we have roughly 3500 computers on our wired network, and about 9000 devices connected to our wireless network.

ACT is currently structured into three service areas: Customer Support, Technical Support, and Network/Application Services.

Customer Support:

Customer Support maintains and manages our Fullerton College accounts, also known as FCNet accounts. Customer Support also maintains and manages our Cisco VoIP phones and voicemail accounts, our shared network resources, and our campus email accounts. They ensure instructional software compliance by managing our software licenses and our installation requests. Customer Support coordinates the ACT Helpdesk team, provides employee technical consultations and trainings, monitors our electronic locking system, and manages our open computer labs. Customer Support personnel are the first-tier responders for technical assistance of ACT.

Technical Support:

Technical Support is responsible for the maintenance and management of our campus hardware and software. Technical Support manages all desktop computers, laptops, printers, fax machines, scanners, cameras, document cameras, and mobile devices. Technical Support builds all the computer images for the entire campus. This includes computer labs, classroom demonstration stations, and employee computers. Technical Support also manages software additions, implements software licenses, and delivers updates, including security updates, to all campus computers. Technical Support is also responsible for all classroom media. This includes legacy classroom technology, new smart controlled classroom technology, video conferencing (Zoom, MS Teams) enabled conference rooms, laptops, projectors, TV/DVD/VHS media carts, portable sound systems, and all other audio and video systems on campus that is not mentioned.

Network/Application Services:

Network/Application Services maintains and manages the campus infrastructure that includes our network infrastructure and data centers. Network/Application Services provides solutions that meet instructional and administrative requirements. They implement, maintain, manage, and operate Fullerton College's data centers' compute and storage, wired and wireless networks, on-premises server and storage clusters, virtual cloud services, VPNs, switches, routers, wireless access points, firewalls, uninterruptable power systems, and fiber optics and copper cabling. Their scope of responsibility extends to a set of core services running on top of this infrastructure to include the campus' routing, switching, monitoring, AD, DNS, and DHCP. Network/Application Services manages our Unified Communication System, that includes our VoIP phone system, voice messaging, and email system. Security surveillance and access control systems are also managed by Network/Application Services.

Network, server, and core services infrastructure provides a secure, reliable, and high-performance platform for various front-line-applications used at Fullerton College. Applications include Qless, VGo-Robotic-Telepresence, LanSchool, AppleTV, VirtualCD, TimeKeeper, Theatre Festival, Skype, Zoom Meeting, iCloud, YouTube, Netflix, public announcement, and the HVAC/Energy Management/Lighting Control systems.

2.2 Staffing – complete the table below. Please list the total number of personnel in each type of position in this department/office. Within each classification in the first column, please list the position titles. For confidentiality, **do not** include the names of any people in the positions.

CURRENT STAFF					
Classification (Include position titles)	**# of staff in each position title**	**Percent of employment**	**Months per year of employment**	**Source of funding (General / Categorical)**	**FTE**
Managers					
Director, Academic Computing Technologies	1	100	12	General	1
Classified					
IT Technician	5	100	12	General	5
Inst Asst/Computer Lab	1	100	12	General	1
Administrative Assistant III	1	100	12	General	1
IT Services Coordinator I	2	100	12	General	2

IT Specialist, Network	2	100	12	General	2
Systems Analyst, Applications	1	100	12	General	1
IT Helpdesk Coordinator	1	100	12	General	1
Hourly - Adult					
Lab Techs, Lab Aides, etc.	1	Varied	Varied	General	
Hourly - Student					
Lab Techs, Lab Aides, etc.	8	Varied	Varied	General	
Professional Experts					
None				**Total FTE**	14

2.3 Other Resources

OTHER RESOURCES				
Please list each position by classification in the department/program	**Services Provided**	**Number of Hours**	**Overall Cost**	**Source of funding (General / Categorical)**
Independent Contractors				
Volunteers				
Interns				
Total Hours & Costs				
			Total FTE	

2.4 Utilize the data provided in the tables above in a discussion of the appropriateness of the staffing levels of this department/office.

Comparing the full-time staffing structure above with the full-time staffing structure based on the Gartner Group's Total Cost of Ownership model published in the California Community College's Tech II Plan[1], our staffing level is inadequate:

Direct Labor Cost of Technology Support (p.54 of Tech II Plan)	Tech II ratio	Tech II standard	ACT staff	Short
Network/System Admin	1 staff/300 PCs	3,000/300=10	3	7
Technical Management	1/500 PCs	3,000/500=6	2	4
Web Administration	1staff/12,000FTES	19k/12k=1.6	0	1.6
Administrative support	1staff/12,000FTES	19k/12k=1.6	2	-0.4
Level 1 Support*	1 staff/150 PCs	3,000/150=20	25.5	-5.5
Application Development	2staff/12,000FTES	19k/6k=3.1	1	2.1
*Includes: Desktop's IT & Media Techs, Inst.Asst, User Support, Service Coordinator AND HOURLIES			33.5	8.8

- 2017, ACT had 21 employees
- 2019, ACT had 18 employees, -14% in 2 years
- Present, ACT has 14 employees, -22% in 3 years
- The position of Web Administrator has not been filled since Brad Rippe left in 2010. A Web Specialist is needed to address the technical management of the web server
- Critical operations have been added to full time positions
- Technology needs have increased over the years, and have dramatically increased after 2020
- A Security Specialist is needed to address hacking threats that were not needed before
- Technical campus operations are not sustainable at this rate of loss

ACT does not currently have the staffing resources it needs based on the State's IT standard or the campus' historical standard. The dependency on technologies for work has increased, the needed knowledge for modern technologies has increased; however, our IT professional staff has decreased.

2.5 How does this department/office serve the population of the college?

All technology-enabled activities on campus are supported by Academic Computing Technologies. We are responsible for all computers, printers, software, hardware, phone, network connectivity, projectors, classroom instructional technologies, office technologies, laboratory technologies. Since network connectivity became the main communication platform, we are responsible for the security surveillance access control system, the energy management system, and campus fire alarm system.

a. For the public: we provide access to our college websites, and courtesy public Wi-Fi network.

b. For students: Each student enrolled in the college is automatically provisioned a Fullerton account using a single-sign-on (SSO) credential system across the district. This facilitates access to our computer labs and software, a personal network storage system, charge-back printing, email account, Office365 download, and a private FC student wireless network. Students can also request web space to host their personal web pages. Students can also request technology equipment loaners to help with their learning. Loaners include laptops, wireless network hotspots, headphones, and webcams.

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[1] http://bit.ly/CCCtechIIPlan

c. For staff: Full-time employees are provided a computer and phone from their division/department. ACT provides the network account and similar network services as described for students, but with additional services for employees that includes access to projection/demonstration stations, Banner access, and software installations. All services can be requested online through the official ACT Fullerton College website.

d. For divisions, departments, clubs, organizations, and committees: Each entity can request a website, SharePoint site, and a shared network storage specific to the division, department, club, organization, and/or committee. ACT creates and manages all computer equipment purchases through our office to ensure compatibility. We work closely with the specialized vendors to provide departments with optimal solutions for work. For example, when Financial Aid purchased the QLess system to page students waiting for service, we programmed the wireless channel and configured the network to make it work. Many departments also take advantage of our application programming capability to develop solutions for their specific needs like TimeKeeper or EOPS's Online Application.

e. At the campus level: Academic Computing Technologies ensures stability and optimal performance for our technology infrastructure. We upgrade hardware and software regularly on a refresh cycle, deploy new operating systems after vetting, remediate security threats, furnish new facilities with state-of-the-art technologies, and explore new ways to improve services to the campus with limited resources. We strive to leverage technologies for maximum return-on-investment. For example, when the campus needed an emergency broadcast system, we deployed a solution using VoIP phone technologies that can announce through our existing speaker phones across the campus, rather than installing a public address system in every building.
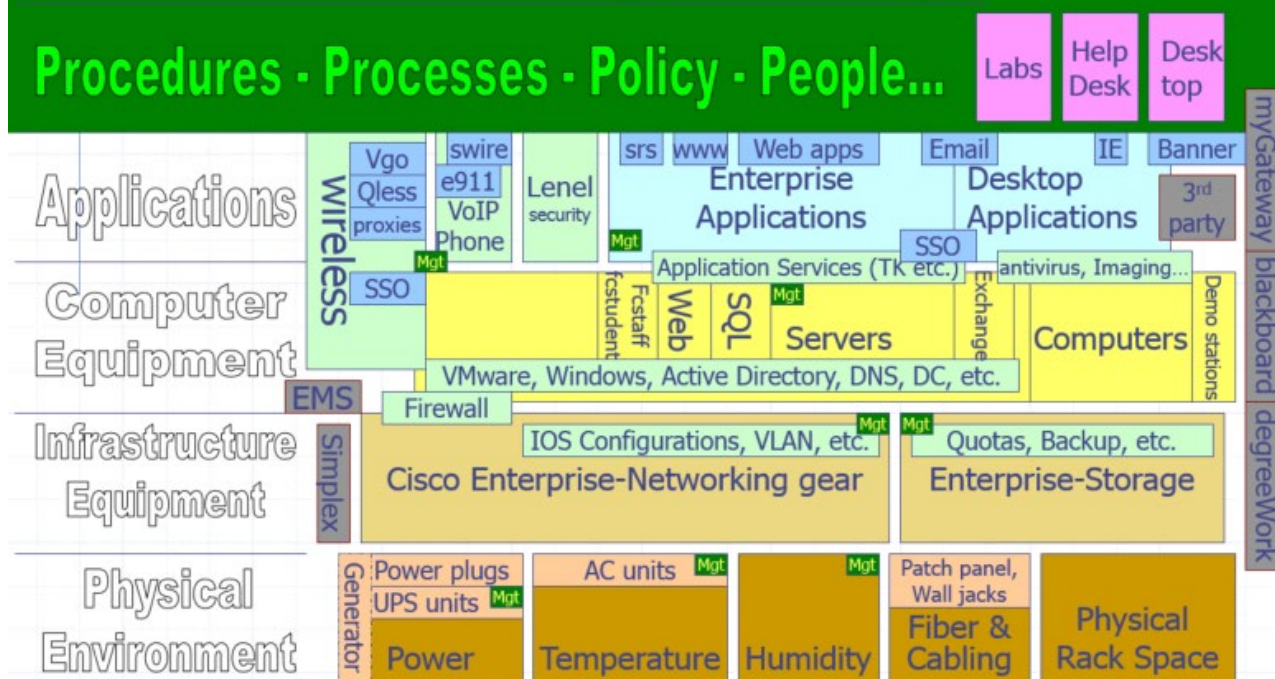
The chart below provides a screenshot of some examples of how ACT serves the campus. A detailed list of what ACT supports can be found in Appendix B.

2.6 Since the previous Program Review Self-Study what significant changes have occurred that impact the services of this department/office?

Among the many changes since the last program review, the following are the most significant:

- Added security measures have been implemented to make our systems more secure from digital threats, hackers, and ransomware.
- Half of the campus' desktop computers were upgraded.
- New network refresh technology to ensure faster and more reliable private network connections at Fullerton College.
- Our FC technology equity plan to loan out technologies for student success was implemented.
- All buildings are equipped with wireless access and most campus outdoor spaces are equipped with wireless access. We have 4 different tiers of wireless service for staff, students, and the public on campus.
- Network backbone is now running at 10GB.
- The campus purchased many more tablet computers than before.
- Multifactor authentication has been implemented for students and employees for added digital security
- All analog security cameras were replaced with digital IP cameras.
- New ACT office with the implementation of a walk-in technology support center for students and employees.
- The position of Director, Academic Computing Technologies has been filled.
- Measure J Bond is still active, ensuring $574 million for facilities and technologies in the next 15 years.

2.7 Describe any laws, regulations, trends, policies and procedures or other influences that have an impact on the effectiveness of your department/office.

There are many laws regulations and policies that affect Academic Computing Technologies, including intellectual property, privacy, and electronic commerce. For example, while PCI compliance for credit card transaction security is not a federal mandate, our district has taken a strict stance and will not allow any credit card information to travel through our Fullerton College network. Users needing card readers must go through a professional third-party provider.

Laws and regulations get more refined at the State level. Privacy requirements get more specific for FERPA regulations, for Financial Aid services, for HIPAA and Health Center services. They define what we must do and must not do, for example the California Security Breach Information Act (SB-1386) requires us to inform students if the security of their personal information has been breached or compromised.

At the local level, District policies refine these rules and regulations furthermore in our operations, such as the following:
- The District's Website Guidelines: http://www.nocccd.edu/Departments/IS/documents/Website_Guidelines.docx
- Board Policy BP 3720 Computer and Electronic Communication Systems: http://www.nocccd.edu/Policies/documents/BP3720_101606.pdf
- Board Policy BP 3740 Web Sites: http://www.nocccd.edu/Policies/PDFs/3740.BP.final_032904.pdf
- Administrative Procedure AP 3720 Computer and Electronic Communication Systems: http://www.nocccd.edu/Policies/documents/AP3720.revised.C-Cabinet4-28-08.pdf
- Administrative Procedure AP 3740 Web Sites: http://www.nocccd.edu/Policies/PDFs/3740.AP.final_032904.pdf
- Administrative Procedure AP 3750 Use of Copyrighted Material: http://www.nocccd.edu/Policies/PDFs/3750.AP_072505.pdf

There are various standards that we must follow. For example, when a department requests to install new security cameras on campus, we must use a separate vendor for cabling even if the security vendor could furnish the service in their scope of work. This is because the district requires SYSTIMAX-certified vendors to keep warranty on buildings.

Academic Computing Technologies is committed to complying with all applicable laws regulations and policies as a part of our operations and services.
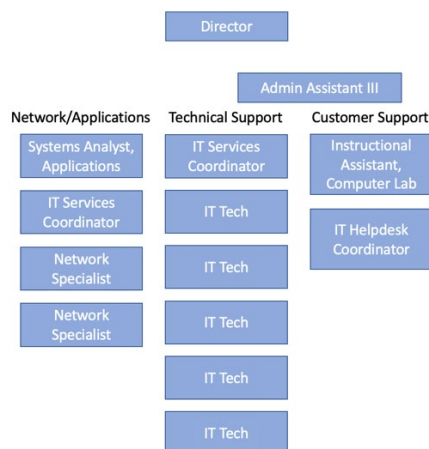
2.8 Provide any other data that is relevant to your self-study.
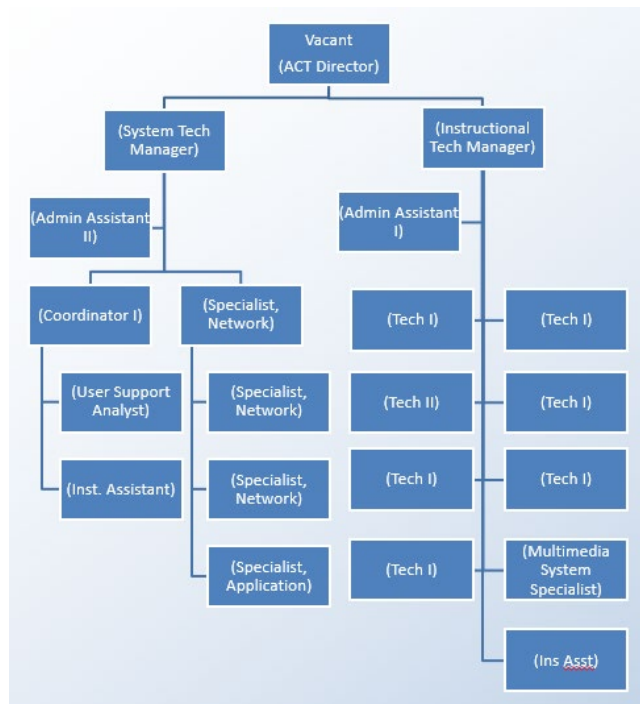
ACT Org Chart 2015-2017
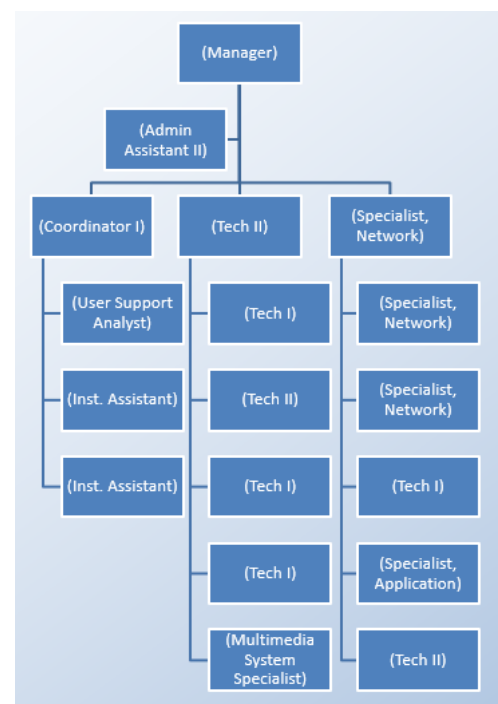
ACT Org Chart 2019

ACT Org Chart 2022

3.0 Strengths, Weaknesses, Opportunities, Challenges (SWOC)

3.1 Based on your analysis in 2.1 through 2.8, what are the strengths of your department/office?

a. Responsiveness to break-fixes: ACT has always been able to respond quickly to the needs of the campus. Most service requests received are assigned to a technician within 4 business hours. (Unfortunately, we are not able to resolve the service requests in the same 4-hour window since we do not have enough staff).

b. Responsiveness in implementing solutions: We are quick to implement solutions when the campus needs them. For example, when a professor reported that it took too long for a lab to boot up on a particular Friday, our team was able to remediate the issue by replacing 30 hard drives by the following Tuesday, and improved boot-up speed by 500%.

c. Responsiveness in innovation: ACT adopts new technologies as it emerges. For example, we currently have automatic failover for our Webserver to the Azure Cloud should we experienced any power or network outage. We have a redundant 10GB state-of-the-art network backbone, next-generation firewall, hyperconverged servers, and VGO telepresence robots in classrooms to support students with writing disabilities.

d. High customers satisfaction: The campus community is generally satisfied with the services and responsiveness of ACT.

e. Accountable to the campus: We are accountable to the campus constituency. When there are issues, end-users can be expected to approach ACT staff directly on campus rather than going through a committee structure. For example, when the EOPS online application does not work as expected, the user is able to submit a service request to our programmer or call the help desk directly and the issues were addressed promptly.

f. Teamwork and effective work environment: As technology has increased in complexity over the years, everything has become interrelated and requires a multidisciplinary approach in troubleshooting. We share our technical knowledge, help each other, and maintain high morale with a cohesive group that truly works well and thrives together.

g. Service record keeping: All service calls/emails to the ACT Help desk are tracked to maintain a knowledge base and to report services rendered to the campus.

3.2. Based on your analysis in 2.1 through 2.8, what are the weaknesses of your department/office?

a. Lack of personnel: We have gaps in our support because we lack the human resources. Since 2017, ACT has been losing team members through retirement and those positions were never replaced. ACT declined personnel by 14% from 2017 to 2019 and declined again by 22% from 2019 to 2022. The positions have yet to be replaced. The lack of personnel really limits our ability to excel and plan. With limited resources, team members are asked to do more, potentially causing burnout.

b. Employee burnout: With limited staff and more demand and dependency on technologies, current staff members are asked to do more. ACT has a great group with can-do, team-first, attitudes, and will accept roles and responsibilities to keep operations going. However, this is not sustainable to deliver a leading-edge IT department.

c. Lack of consistency in service: The department is unable to manage campus expectations regarding service levels. The campus has an expectation of receiving a level of service impossible to maintain with understaffing. For example, the Help Desk is staffed by hourly employees. These hourly employees are the first immediate response to the employees. While every effort is made by the hourly to immediately resolve the issue, they are not technicians, and some issues cannot be resolved immediately without a technician.

d. Lack of training: Currently, in attempting to maintain the highest levels of functionality with limited personnel, our staff has put aside training opportunities, regular maintenance, scheduled upgrades, to fix broken technologies. Delayed training opportunities deprive the campus of the latest possible technologies and decreases department effectiveness across the campus. Delayed opportunities are also unfair to our students who deserve the best education possible from Fullerton College. ACT is unable to explore new technologies to help divisions and departments because of the

attention to our break-fix culture. Constituents are dissatisfied due to the lack of new features and fixes to existing systems that have resulted from the increased backlog of delayed maintenance and upgrades.

e. Cybersecurity: Cybersecurity is something that we address now as a part of our daily routine; however, we do not have a cybersecurity specialist. We are currently asking our applications and network team to skim through the needs of security for Fullerton College. Unfortunately, skimming through security takes away from other critical operational needs that need to be done. Also skimming through security holes is not a best practice to stop security threats. A full-time security professional in ACT is a needed professional in today's world that depends so much on technology.

3.3 Based on your analysis in 2.1 through 2.8, what opportunities exist for your department/office?

a. Bond-funded technologies: With Measure J, we expect more technologies through construction and remodeling of the campus.

b. Network refresh improvements: We will continue to improve our campus' network speed and reliability.

c. Increase personnel: We need to address the decrease in IT personnel and the increase in technology demand and dependency. Providing excellent response time and service is not sustainable with our current IT model. I believe the campus community feels the same way about our need for more operational support. The need for a security specialist is a topic that we will need to address.

3.4 Based on your analysis in 2.1 through 2.8, what challenges exist for your department/office?

a. Construction Management: Construction projects with technology integrations are often the after-thought addition to the construction plan. ACT would like to be a part of construction planning stages, renovations, and remodels, so we can help plan the technologies of the construction from the beginning.

b. Unknown security environment: As technology becomes more powerful and advanced, the complexity often increases vulnerabilities in software and hardware which leads to many more security exploits. This coupled with the academic bias toward freedom, privacy and public access makes it harder to secure a safe computing environment.

4.0 Service Area Outcomes (SAO) Assessment

4.1 List your SAOs and complete the expandable table below.

	Service Area Outcomes (SAOs)	Date Assessment Completed	Date(s) Data Analyzed	Date(s) Data Used For Improvement	Number of Cycles Completed
1.	Provide design, implementation, and support of infrastructure to support campus state-of-the-art computer and media technology	Annually		Ongoing	35 years

2.	Provide applications, services, and support to assist campus departments and organizations in achieving their technology goals which support SLOs	Weekly	Weekly	Ongoing	30 years
3.	Support student access by staffing and supporting open labs and classrooms	End of semester	Every semester	Following semester	35 years
4.	Aid faculty, staff, and students through both a staffed help desk and a self-help portal	Weekly	Weekly	Between semester	15 years
5.	Provide telecommunication services	Ongoing	Monthly	Each semester	10 years
6.	Support and service computer and media technology equipment	Weekly	Weekly	Ongoing	35 years
7.	Provide infrastructure to support a safe campus environment with appropriate security control and monitoring	Annually	Annually	30 days	15 years

4.2 Assessment: Complete the expandable table below.

Service Area Outcomes Assessment for the Department/Office			
Intended Outcomes	**Means of Assessment & Criteria for Success**	**Summary of Data Collected**	**Use of Results**
1. A stable, robust network	Outage reports with minimum 99.99% uptime	Data collected shows network uptime is about 99.87% over a 12-month period.	Determined the need to upgrade and replace network hardware and software
2. Complete campus wireless coverage	Wireless coverage heat map survey	Report of campus Wi-Fi coverage map shows approximately 100% coverage	Upgrade hardware and software in order to eliminate wireless dead spots
3. Adequate, robust, reliable, and secure computing platforms	Documented product requirements: Operating systems should be up to date and meet application requirements	Reports indicate that the operating systems and applications are not current and need to be upgraded to meet manufacturer's requirements. Our "out of support" server operating systems need to be upgraded	Defined a process and scheduled upgrade and migration to newer operating systems and applications
4. Faculty and students will have adequate technology for their instructional needs	Satisfactory scores on annual TechQual survey from the district	An on-line survey conducted annually by the district to all staff and students	Determine the perceived needs for wireless technology and funded the remaining buildings
5. Provide safe, reliable, efficient services for security monitoring	Daily system management, faculty	System scheduling & user errors, room security compromised	Determined need to minimize alarm and scheduling errors,

	and staff feedback and service requests		increase response and repair time
6. Reliable voice mail; more efficient call handling and switchboard capabilities	Ease of use for both FC staff and callers. Service requests. Interviews with customers	VoIP software was upgraded with additional call handling capabilities and an updated switchboard solution	Established need to upgrade the system to provide increased reliability and required functionalities
7. Provide adequate, safe, reliable, and efficient data storage	Monitor and report on availability, performance, and capacity; Read/Write latency measured at less than 10ms; maintain 15% available storage	Report indicates latency on data accessing; users are requesting additional space for email, file, multimedia and web space	Determined the need to upgrade storage hardware to decrease latency and add needed storage capacity
8. Provide safe, reliable, and efficient computing resources	Maintain an average CPU utilization less than 50% and an average memory utilization less than 65%	Results show steady growth in campus computing resources usage due to additional devices and services	Determined a need for more memory/CPUs to increase availability and performance to the campus servers

4.3 How has assessment of SAOs led to improvements in services provided to the consumer by this department/office?

Using these measurement reports, we can prioritize which area of service require what level of upgrade and maintenance. For example, using the wireless usage reports, we can determine areas in the library which were overloaded with too many users per access point and once the library obtained funding, we purchased and deployed additional equipment to alleviate the load.

4.4 What challenges remain to make your SAOs more effective?

These service measurements are collected through systems monitoring, service response times and customer feedback. Due to workloads, we often fail to communicate these measurements to our customers to manage their expectations, which results in frustration for both our customers and for us.

4.5 Describe how the SAOs are linked to the college's goals.

As previously stated, we enable the college to meet its goals of promote student success, reduce the achievement gap, and strengthen connections with the community by doing our job well to minimize any technical problems for the rest of the campus.

All our SAOs above for a reliable, safe, robust computing platforms and network will enable faculty and staff to serve our students well.

4.6 A. What methods are used to assess the department/office's effectiveness to the population that interacts with your department/office?

Every year District IS initiated an on-line survey called TechQual to all staff and students to collect users' satisfaction in regarding to technologies, especially wireless and internet access.

B. What do the results of the above methods of assessment indicate about the effectiveness of the department/office?

The TechQual survey measures three core commitments expected of IT organizations in higher education: 1) Faculty, students, and staff want great technology services, particularly online services; 2) they want to be able to access those services from anywhere, at any time, in a reliable and effective manner; and 3) they want consistent and timely support whenever necessary so that they can use technology as effectively as possible. Since this survey are used by many other colleges and universities, we can have a reliable baseline to compare our services against other similar institutions.

C. How were the assessment results used to make improvements to services provided by this department/office? Please provide examples.

According to the 2013 TechQual survey, there was a high level of dissatisfaction regarding wireless availability across the district. As a result, the President's Office allocated $450K to upgrade the network infrastructure and to equip every classroom on campus with a wireless access point. We are now 100% Wi-Fi, except for a few "dead" spots.

5.0 Evaluation of Progress Toward Previous Goals (Future program review templates for this section will identify "previous goals" as "previous strategic action plans".)

5.1 List the goals from your last self-study/program review.

In the last Program Review, the Instructional Technology Group listed these Short-Term Goals:
1. Bring the classroom demo stations to the district standard as approved by the Board
2. Move all campus PCs to Windows 7 and Office 2010

They also have these Long-Term Goals:
1. Have a campus Computer Replacement Plan (3 years for instruction, 5 years for staff)
2. Have a campus plan to replace classroom projectors on a 5-year cycle.

In the last Program Review, the System Technology Group listed these Short-Term Goals:
1. Replace 95 end-of-support switches
2. Upgrade SharePoint 2010
3. Upgrade the positive attendance tracking software
4. Upgrade Account Management and Provisioning systems to use SSO
5. Transition campus to new Service Request System
6. Merge the FCNet web site and myFC self-help portal into a SharePoint
7. Upgrade end-of-life call handling system
8. Increase user's storage quota (H: and I: drives/ email and web space)
9. Upgrade servers, acquire additional CPUs and memory
10. Fill the vacant position for Director, Academic Computing Technologies

They also have these Long-Term Goals:

1. Expand and enhance the wireless network
2. Upgrade the network backbone infrastructure
3. Implement end-to-end application performance monitoring
4. Re-establish perpetual funding mechanism commitment for network infrastructure
5. Create and implements SLAs and service catalog
6. Upgrade the capabilities for hosting organizational web sites and applications
7. Replace analog security surveillance camera with digital IP cameras

5.2 Describe the level of success and/or progress achieved in the goals listed above.

For the Short-Term Goals, the instructional technology progress is as follow:
1. Bring the classroom demo stations to the district standard: **DONE**
2. Move all campus PCs to Windows 7 and Office 2010: **DONE**

For the Long-Term Goals, the instructional technology progress is as follow:
1. Have a campus Computer Replacement Plan: **DONE**
2. Have a campus plan to replace classroom projectors: **DONE**

For the Short-Term Goals, the system technology progress is as follow:
1. Replace 95 end-of-support switches: **70% DONE**
2. Upgrade SharePoint 2010: **DONE**
3. Upgrade the positive attendance tracking software: **DONE, but maintenance needed**
4. Upgrade Account Management and Provisioning systems to use SSO: **DONE**
5. Upgrade the campus to new Service Request System: **DONE**
6. Merge the FCNet web site and myFC self-help portal into a SharePoint: **DONE**
7. Upgrade end-of-life call handling system: **DONE**
8. Increase user's storage quota (H: and I: drives/ email and web space): **Partially DONE**
9. Upgrade servers, acquire additional CPUs and memory: **DONE**
10. Fill the vacant position for Director, Academic Computing Technologies: **Not pursued by the college's administration.**

For the Long-Term Goals, the system technology progress is as follow:
1. Expand and enhance the wireless network: **DONE in all buildings**
2. Upgrade the network backbone infrastructure: **Partially DONE (10GB for the backbone, but not inter-building).**
3. Implement end-to-end application performance monitoring: **Not started**
4. Re-establish perpetual funding mechanism for network infrastructure: **Abandoned**
5. Create and implements SLAs and service catalog: **Not started**
6. Upgrade the capabilities for hosting organizational web sites and applications: **DONE**

Replace 50 analog security surveillance cameras with digital IP cameras: **DONE**

5.3 How did you measure the level of success and/or progress achieved in the goals listed above?

For service organizations such as Academic Computing, success of the goals above are easily measurable since the objectives were clearly defined. We also measure the level of user satisfaction by actively following up on completed service requests to provide quality assurance for our services.

5.4 Provide examples of how the goals in the last cycle contributed to the continuous quality improvement of your department/office.

The most notable accomplishments from the last cycle were the Long-Term Goals of expanding the wireless network and upgrading the campus backbone ten-fold to 10GB. Originally, we listed the goals as a pipedream, not knowing how to get the resources for the much-needed upgrades. Our initial effort of making a recommendation for a Core Upgrade a few years ago to PAC through the Facility and Safety Committee did not produce any results. But with the passage of Prop 30, we received one-time infrastructure funding. The network was upgraded and expanded in time to accommodate the increased demands from our users.

5.5 In cases where resources were allocated toward goals in the last cycle, how did the resources contribute to the improvement of the department/office?

In the last cycle we were funded to upgrade the Service Request system to the newest version, this contributed to the continuous quality improvement of ACT by allowing our technicians to have a web interface thus they can work from anywhere on campus as compared to the limitation of working from the windows application at their desk.

We also were funded for a new graphics design for SharePoint. With the supervision of our campus Public Information Officer, the new design is much more intuitive than the old one. The following screenshots convey the notable improvement.
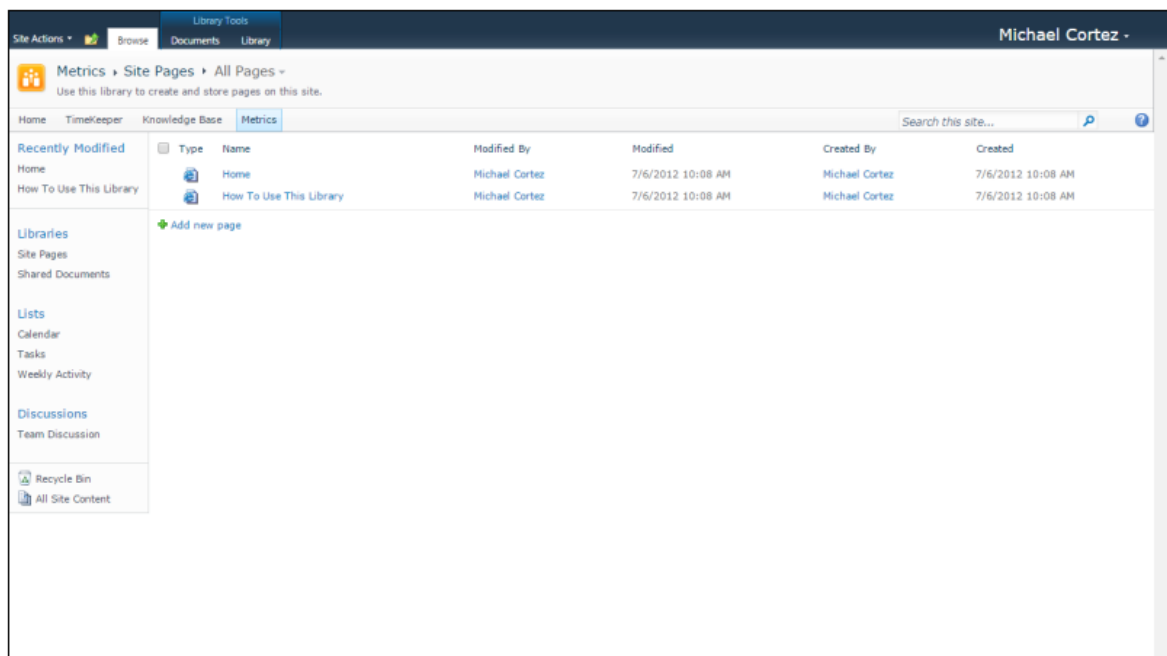
Old SharePoint Design
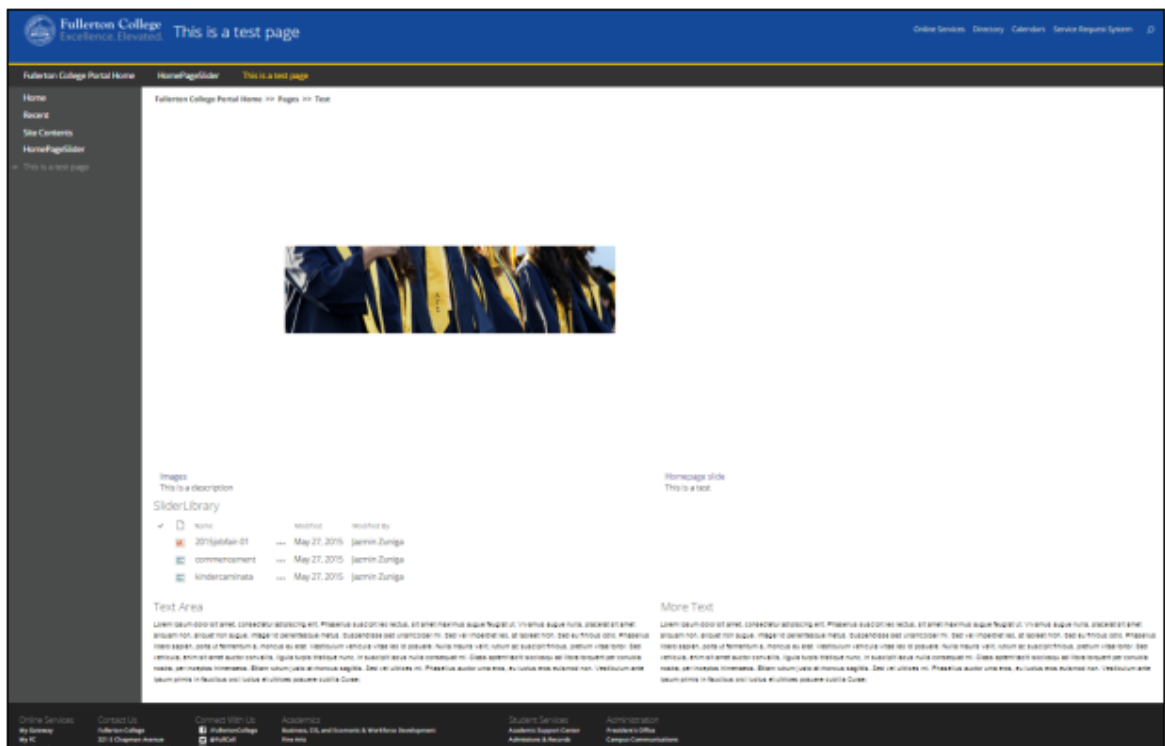
New SharePoint Design

5.6. If funds were not allocated in the last review cycle, how did it impact your department/office?

Critical vacant positions need to be filled. The campus would be benefit from having necessary ACT positions filled to improve response time and technical support satisfaction.

6.0 Strategic Action Plans (SAP) [formerly called Goals (6) and Requests for Resources (7)]
Using the tables below, list the strategic action plans (SAPs) for your department/office. These plans should follow logically from the information provided in the self-study. Use a separate table for each SAP.

SAPs for this three-year cycle:

STRATEGIC ACTION PLAN # 1	
Strategic Action Plan Name:	ACT Staffing Strategy
List College goal/objective the plan meets:	College Goal 4: Commit to Accountability and Continuous Quality Improvement Objective 1: Promote transparency in the shared governance structure and decision-making processes Objective 2: Ensure financial, physical, and technological resources are available to maintain necessary services and programs Objective 3: Provide professional and career development opportunities for students, faculty, and staff

Briefly describe the SAP, including title of person(s) responsible and timeframe, in 150 words or less.	The Director, Academic Computing Technologies, will lead the effort to staff ACT with the needed personnel to minimize gaps in support and services. The focus will be to hire 3 new positions and fill all vacant positions within 24 months: 1. Project Lead: FTE to coordinate with divisions/departments to organize projects and lead efforts to help divisions/departments utilize technology tools that adhere to campus and District standards. This person will work as a liaison across campus and go to meetings of divisions/departments that need technology tools to consult and support implementation. 2. Security Specialist: FTE to monitor and remediate security threats to the campus and District. 3. Multimedia Specialist: FTE to coordinate with construction planning and design of learning space technologies like Extron control systems, video conferencing, security cameras, special events planning, etc. 4. Fill all currently vacant positions: (1) IT User Support Specialist.
What *Measurable Outcome* is anticipated for this SAP?	Measurable customer satisfaction. Measurable security related remediations. Measurable increased response time. Measurable outcome of decreased reported problems because of preventative maintenance.
What specific aspects of this SAP can be accomplished without additional financial resources?	Fill all currently vacant positions: (1) IT User Support Specialist

If additional financial resources would be required to accomplish this SAP, please complete the section below. Keep in mind that requests for resources must follow logically from the information provided in this self-study.

Type of Resource	Requested Dollar Amount	Potential Funding Source
Personnel	240,000/annually	
Facilities		
Equipment		
Supplies		
Computer Hardware		
Computer Software		
Training		
Other		
Total Requested Amount	240,000/annually	ACT Budget and General Salary

STRATEGIC ACTION PLAN # 2	
Strategic Action Plan Name:	Campus Network Refresh
List College goal/objective the plan meets:	College Goal 2: Cultivate a Culture of Equity Objective 1: Remove institutional barriers to student equity and success College Goal 4: Commit to Accountability and Continuous Quality Improvement Objective 1: Promote transparency in the shared governance structure and decision-making processes Objective 2: Ensure financial, physical, and technological resources are available to maintain necessary services and programs Objective 3: Provide professional and career development opportunities for students, faculty, and staff
Briefly describe the SAP, including title of person(s) responsible and timeframe, in 150 words or less.	The Director, Academic Computing Technologies, will lead the effort to complete technology enhancements for a new network infrastructure by the end of 2023. 1. New wired private network for employees and students 2. New wireless private network for employees and students 3. New public network for guests of Fullerton College 4. New VoIP phone integration 5. New security infrastructure, physical and cyber for data centers
What *Measurable Outcome* is anticipated for this SAP?	Measurable network infrastructure testing for speed and reliability. Measurable customer satisfaction.
What specific aspects of this SAP can be accomplished without additional financial resources?	All aspects do not require additional financial resources.

If additional financial resources would be required to accomplish this SAP, please complete the section below. Keep in mind that requests for resources must follow logically from the information provided in this self-study.

Type of Resource	Requested Dollar Amount	Potential Funding Source
Personnel		
Facilities		
Equipment		
Supplies		
Computer Hardware		
Computer Software		
Training		
Other		
Total Requested Amount	0	N/A

STRATEGIC ACTION PLAN # 3

Strategic Action Plan Name:	ACT Improved Service Request System
List College goal/objective the plan meets:	College Goal 4: Commit to Accountability and Continuous Quality Improvement Objective 1: Promote transparency in the shared governance structure and decision-making processes Objective 2: Ensure financial, physical, and technological resources are available to maintain necessary services and programs Objective 3: Provide professional and career development opportunities for students, faculty, and staff
Briefly describe the SAP, including title of person(s) responsible and timeframe, in 150 words or less.	The Director, Academic Computing Technologies, will lead the effort to establish an improved service request system. 1. Research and identify a ticketing system that is secure, robust, and user friendly (6 months) 2. Integrate the ticketing system to Fullerton College infrastructure (6 months) 3. Communicate ticketing system to FC community (after integration and ongoing)
What *Measurable Outcome* is anticipated for this SAP?	Measurable data collection. Measurable customer satisfaction and user experience.
What specific aspects of this SAP can be accomplished without additional financial resources?	All aspects do not require additional financial resources.

If additional financial resources would be required to accomplish this SAP, please complete the section below. Keep in mind that requests for resources must follow logically from the information provided in this self-study.

Type of Resource	Requested Dollar Amount	Potential Funding Source
Personnel		
Facilities		
Equipment		
Supplies		
Computer Hardware		
Computer Software		
Training		
Other		
Total Requested Amount		

7.0 Long Term Plans

Describe the long-term plans (four-six years) for your department/office. Please consider future trends in your narrative. Identifying financial resources needed for these plans is optional.

Academic Computing Technologies want to be a campus leader in technology support and services. We are looking to improve user experiences across all aspects of technology at Fullerton College. This includes providing students with equitable technology access and support to ensure that we make it easier for students to succeed and graduate.

1. ACT Organizational Structure: We want to address technology service gaps by staffing specialized professionals instead of asking unspecialized professionals to perform duties as assigned and learn on the job.
2. Increased focus on security: We want to minimize the threats of cyberattacks, hackers, ransomware, malware, and viruses. We plan to work with the district to implement policies and procedures that will safeguard us from cybersecurity threats.
3. Increase network speed and reliability: We want to offer access to highspeed wired and wireless Internet for our campus community. This will begin with the completion of our network refresh project.
4. Students and Employees technology onboarding: We want to create a user-friendly experience for students to enroll in classes and succeed in their educational journey. We want to make jobs easier for employees to help students succeed by providing the needed support and services.
5. Shrink on-premises infrastructure equipment footprint: We want to move operations to hybrid approach where we utilize the cloud and on-premises equipment. Cloud usage means that we do not have to maintain equipment that will eventually reach end-of-life. However, keeping some services on-premises means we have immediate access to the critical applications needed for campus operations.

ACT's long-term goal is to leverage technology as high-quality technical professionals to help our staff promote student success

8.0 Self-Study Summary

This section provides the reader with an overview of the highlights, themes, and key segments of the self-study. It should not include new information that is not mentioned in other sections of this document.

Fullerton College continues to expand and upgrade its robust technology environment. ACT currently provides services to over 18,000 active student users, over 3000 campus computers, 169 physical and virtual servers, and a pervasive network infrastructure. ACT supports current classrooms and distance learning courses. More than 190 classrooms have been upgraded to smart classrooms with new technologies that include LCD projectors, professional sound capabilities, HD video, and instructor computers.

Our network infrastructure has grown to support wireless capabilities in all buildings, and outdoor areas. Network infrastructure will continue to grow and expand to new areas across the campus.

A survey of faculty, as well as feedback from other constituent groups indicates the need to plan and budget for technology in a more formal and comprehensive way. While technology has exploded, support staff has decreased. Areas of cybersecurity and technology implementation to make work easier for different divisions and departments have fallen behind because of gaps in ACT services. The

lack of specialized personnel to address these technology service gaps need to be addressed and are ACT's service level is not sustainable if ACT does not get more personnel resources.

Recommendations include:

- Budget for new ACT personnel to support and provide adequate service that is sustainable
- Additional staffing to fill current service gaps
  Technology Project Lead
  Security Specialist
  Multimedia Specialist

9.0 Publication Review

Fullerton College is committed to assuring integrity in all representations of its mission, programs, and services. As such, during the program review self-study process programs are required to document their publications (websites, brochures, pamphlets, etc.), when they were last reviewed, and denote the publication is accurate in all representations of the College and program missions and services. In the far-right column please provide the URL where the publication can be accessed. If it cannot be accessed via the Internet, please contact Lisa McPheron, Director of Campus Communications at lmcpheron@fullcoll.edu.

Information on the college's graphic standards is available here: http://news.fullcoll.edu/campus-communications/web-help/graphics/.

Please identify when the publication was last reviewed and confirm that it is accurate in how it represents the college. In the far-right column please provide the URL where the publication can be accessed. If it cannot be accessed via the Internet, please provide a sample of the publication with your program review self-study.

For publications that you have identified as inaccurate, please provide the action plan for implementing corrections below.

Publication	Date last reviewed	Is the information accurate?	URL of publication

Routing & Response Page
Originator → IMS → Program Review Chair → Appropriate President's Staff Member

Originator: *Electronically submit completed Program Review to Division Dean/IMS for review.*

Appropriate Immediate Management Supervisor (IMS): *Select one and provide response if necessary. Forward electronically to appropriate Vice President's Office.*

RESPONSE

Printed name of IMS	Title	Date

☐
> *I concur with the findings contained in this Program Review.*

☐
> *I concur with the findings contained in this Program Review with the following exceptions (include a narrative explaining the basis for each exception):*
>
> *Area of exception:*
>
> _____
>
> _____

☐
> *I do not concur with the findings contained in this Program Review (include a narrative explanation):*
>
> _____
>
> _____

Appropriate President's Staff Member: *Print Program Review, sign, and route both hard copy and electronic version to Program Review Chair.*

ACKNOWLEDGING RECEIPT

Printed Name	Signature	Title	Date

Fullerton College Mission Statement

MISSION

Fullerton College advances student learning and achievement by developing flexible pathways for students from our diverse communities who seek educational and career growth, certificates, associate degrees, and transfer. We foster a supportive and inclusive environment for students to be successful learners, responsible leaders, and engaged community members.

VISION

Fullerton College will transform lives and inspire positive change in the world.

Approved by Fullerton College President's Advisory Council and accepted by President Schulz May 2017.

VALUES

Community
We promote a sense of community that enhances the well-being of our campus and surrounding areas.

Diversity
We embrace and value the diversity of our entire community.

Equity
We commit to equity for all we serve.

Excellence
We honor and build upon our tradition of excellence.

Growth
We expect everyone to continue growing and learning.

Inclusivity
We support the involvement of all in the decision-making process.

Innovation
We support innovation in teaching and learning.

Integrity
We act in accordance with personal integrity and high ethical standards.

Partnership
We work together with our educational and community partners.

Respect
We support an environment of mutual respect and trust that embraces the individuality of all.

Responsibility
We accept our responsibility for the betterment of the world around us.