

Program Review & Planning (PRP)

PART 1: BASIC UNIT INFORMATION

Program Review is a self-study of your unit. For non-instructional program review, the definition of what is a unit varies based upon your division. A unit may be a department (e.g., Information Services, Institutional Research and Planning, Financial Aid), a program (e.g., EOPS, TRIO), or a division (Human Resource Services). The Vice Presidents for each division have identified/defined the units that will complete the review cycle.

Regardless of whether your unit is a program, department, or division, program review is about documenting the plans you have for improving Institutional Effectiveness in your area and sharing that information with the college community. Through the review of and reflection on key elements, program review and planning identifies program strengths as well as strategies necessary to improve the operation of your area. With that in mind, please answer the following questions:

Unit Name:	Information Services
Department Name:	Information Services
Division Name:	Finance and Administrative Services

Please list all participants in this Program Review:

Name	Position
Connie Moise	Director, Information Services
Jose Vargas	Manager, Technical Services
Pajseu Lochungvu	Manager, Systems and Programming
Mike Dimmick	Manager, Network and Data Center
Mark Hopkins	Senior Programmer Analyst
Bob Fulmer	Audio Visual Technician
Elizabeth Schoneman	Administrative Specialist I
Robert Sedillo	Infrastructure Systems Administrator
Mike Marsh	Programmer Analyst
Art Reyes	Programmer Analyst
Herminio Arevalo	Senior Programmer Analyst
George Frederick	Technical Support Specialist
Elena Ibarra	Senior Infrastructure Systems Administrator
Bob Akers	Infrastructure Systems Engineer
Ryan Davis	Audio Visual Technician
Russell Thomas	Senior Network/Systems Technician
Dean Peterson	Infrastructure Systems Administrator

SECTION 1: Program/Unit Mission Statement

What is your Program/Unit's mission statement [\(click here for information on how to create a mission statement\)](#):

The Information Services department serves students, faculty, staff, administrators and our community through high quality technical support, information systems and services. We take pride in our role as a strategic partner with the District's academic divisions, administrative and service departments, and with individuals, to advance institutional goals through student-centered technology solutions.

Describe how your mission aligns with and contributes to the College's Vision and Mission.

Information Services works to advance the institution's Technology Master Plan goals. The goals described in the Technology Master Plan are formulated to support the institutional strategic goals and initiatives, as well as to provide sustaining support for College operations. The Technology Master Plan includes a table that defines the technology goal alignment with institutional strategic goals and operations.

SECTION 2: Program/Unit Description

Staffing

<u>Full-time Staff</u>		<u>Part-time Staff</u>	
Total Number of Full-time Staff	29	Total Number of Permanent Part-time Staff	0
Number of Classified Staff	25	FTE of Part-time Staff	0
Number of CAST Staff	0	FTEF of Part-time Faculty	0
Number of Administrators	4		
Number of Full-time Faculty	0		

As part of this PRP cycle, Human Resource Services has sent organizational charts to all non-instructional units. Please review the charts and make any needed changes. Attach a copy of the chart when you are submitting your review.

OR

If you cannot create an organizational chart, or did not receive one from Human Resource Services, list the positions in your unit showing reporting relationships (e.g., Manager Facilities with the following direct reports, Supervisor Position A, Supervisor Position B, Supervisor Position C; Supervisor Position A with direct reports, Position A, Position B, Position C)

Organizational Chart is found at: <https://www2.palomar.edu/pages/is/files/2018/05/IS-Org-Chart.pdf>

What additional temporary hourly or contract staff support this unit and/or department:

1-2 part-time hourly technical support assistants and/or switchboard and help desk support assistants;
1-2 part-time temporary consultants periodically contracted to complete discrete, well-defined projects or scopes of work requiring specialized technical expertise.

Program/Unit Description**Who utilizes your services?**

The Information Services department serves students, faculty, staff, administrators and our community across all District locations.

What services does your program/unit provide (Describe your program/unit)?

Information Services departments include the Help Desk, Technical Services, Systems and Programming Services, and Network and Data Center Services. In addition to the specialized services provided by these departments, IS implements and maintains the District's identity management, access control and data privacy and protection systems.

Help Desk

The Help Desk serves as the first point of contact for students, faculty, staff and administrators requiring technical services or support for computers, audio-visual and peripheral equipment, network services, software applications and access to District technology resources. This team receives technical requests either by phone, by email or in person; diagnoses technical problems and applies a full range of corrective actions, initiates work orders to the appropriate Information Services staff members or contacts vendors to resolve issues, and keeps requesters and constituent groups informed on problem-resolution status.

The Help Desk is responsible for system account security administration and offers password assistance to individuals. This team also facilitates general information announcements to various District groups. In addition, the Help Desk provides institution switchboard operation services, greeting callers and addressing their questions or connecting them with appropriate District service areas.

Technical Services

Technical Services provides District-wide computer, audio-visual, printer, mobile device, tablet and other technology planning, acquisition, replacement, configuration, installation and repair. The Technical Services team configures and supports instructional and conference room audio-visual systems, public address systems, instructional technologies such as classroom and laboratory computers, enterprise applications and specialized software and peripherals, as well as operational, service center and office equipment and workstation software.

Technical Services staff are skilled in working with both MAC and PC platforms and work to provide solutions, guidance, configuration planning and cost information compatible with District technology standards and infrastructure. This team works closely and relies on collaboration with the Network and Data Center Services and the Systems and Programming teams to install, configure, and support software and hardware.

Systems and Programming

The Systems and Programming department provides development, programming, database administration and technical support for the College's administrative Student/Human Resources/Financial software applications and related systems. This team works closely with Business Analysts in various departments across the institution to advance business processes and address the reporting requirements in those service areas.

Network and Data Center Services

Network and Data Center Services provides, maintains, and supports the District's technology infrastructure for data, voice, mobile devices, and processing capabilities.

PART 2: PROGRAM/UNIT ASSESSMENT**SECTION 1: Service Area Outcomes**

List the Service Area Outcomes (SAOs) for your program/unit.

Information Technology Security SAO

Protect and secure the District's data and access to mission critical systems, measured through

- Threat Protection Services

Help Desk Services SAO

Facilitate effective use of the District's technology measured through

- Service Quality
- Service Satisfaction
- Switchboard Services
- Communications

Technical Services SAO

Provide District-wide computer, audio-visual, printer, mobile device, tablet and other technology planning, acquisition, replacement, configuration, installation and repair measured through

- Technical Support Service Quality
- Technical Support Service Satisfaction
- Quality of classroom, conference room and computer lab technology configuration and support
- Employee satisfaction with timely replacement of information technology equipment

Systems and Programming Services

Support the District's administrative Student/Human Resources/Financial software applications (PeopleSoft) and related systems measured through

- Quality programming, database administration and reporting
- Employee satisfaction with problem-solving and technical support

Network and Data Center Services

Provide technology infrastructure for data, voice, mobile devices, and processing capabilities measured through the quality and reliability of

- Network and Internet Service
- Telecommunications Service
- Email Service
- Wireless Access Service

For each SAO, describe when the SAO was last assessed and summarize what you learned from the assessment. (If you plan to assess the SAO this year, identify when you plan to assess it.)

Information Technology Security Threat Protection Services are assessed periodically throughout each year. Protective measures implemented or strengthened since 2017 include the following:

- Reduced access privileges on system accounts (accounts that are not assigned to users but are used by the system to run processes).
- Tightly restricted and monitored accounts for use by vendors/consultants.
- Reduced access privileges for District users whose access was initially unnecessarily broad, to meet only their business requirements.
- Implemented masking of the social security numbers and birthdates for users without a business requirement to access this data.
- Completed virtual private network (VPN) audit and removed VPN access for users without a business requirement.
- Forced password reset on user accounts that were flagged by an external watchdog agency as at risk of exposure.
- Reminded users to lock their computer when stepping away.
- Installed new firewalls and configured them to restrict unauthorized access.
- Physical access to the District's Data Center and network distribution facilities was tightly restricted in 2018, and video cameras were installed in critical areas to enable access monitoring.
- Multilayer email protections are provided through an email security appliance configured to block spam, malware, and phishing attacks.

An assessment of the SAOs referenced in the rest of this section will be conducted in 2021 as part of the Finance and Administrative Services Division Survey.

Help Desk Services showed improvement in the assessment in all categories from the 2008 to the 2018 survey.

- Service Quality (measured in 2008, 2013 and 2018 through survey categories: Courteousness, Helpfulness, Quality of Work,

Professionalism, and Responsiveness) was rated 8.9/10 across these combined categories in the 2018 survey. This represents a 5% improvement from the 2008 survey.

- Service Satisfaction (measured in 2008, 2013 and 2018 through survey categories: Knowledge, Problem Resolution, and Satisfaction) was rated 4% higher in both Knowledge and Problem Resolution, and 12% higher in the Satisfaction category of “extremely satisfied” from the 2008 to the 2018 survey.
- Switchboard Services (measured in 2008, 2013 and 2018 through survey category Operator Services) was rated 8.04/10 in the 2018 survey, representing a 5% improvement from the 2008 survey.
- Communications (measured in 2008, 2013 and 2018 through survey category Communications) was rated 8.65/10 in the 2018 survey, representing a 4% improvement from the 2008 survey.

Technical Services showed improvement in the assessment in most categories from the 2008 to the 2018 survey.

- Technical Support Service Quality (measured in 2008, 2013 and 2018 through survey categories: Courteousness, Helpfulness, Quality of Work, Professionalism, Responsiveness, and Communications) was rated 8.6/10 across these combined categories in the 2018 survey. This represents a 6% improvement from the 2008 survey.
- Technical Support Service Satisfaction (measured in 2008, 2013 and 2018 through survey categories: Knowledge and Problem Resolution) was rated 8.9/10 across these combined categories in the 2018 survey. This represents a 4% improvement from the 2008 survey.
- Quality of classroom, conference room and computer lab technology configuration and support (measured in 2008, 2013 and 2018 through survey categories: Computer Lab Set Up, Support Response Time, and Troubleshooting Problems,) declined by 10% since the 2008 survey, while the rating of Satisfaction with Classroom Technology (measured in 2013 and 2018) was 3.2% higher in 2018 than in the 2013 survey. The 10% decline is possibly based on fewer Technical Services employees in 2018 than in 2008, combined with a scarcity of training for the Technical Services team, along with aging technology, and increasing technological acumen among District employees (raising expectations for IS). The 3.2% improvement in Satisfaction with Classroom Technology may be a result of tighter adherence to standards in classroom technology, simplifying and improving the user experience when using lectern technology in different classrooms.
- Employee satisfaction with timely replacement of information technology equipment (measured in 2013 and 2018) was rated 7.1/10 in the 2018 survey, the same as in the 2013 survey. Replacing outdated technology must be emphasized across all areas of the District.

Systems and Programming Services

- Quality programming, database administration and reporting services were consistently rated highly in the 2008, 2013 and 2018 surveys, rating at or above 8/10 across all categories.
- Employee satisfaction with problem-solving and technical support service declined by 4% from 2008 to 2018, as measured by an aggregate of satisfaction with IS PeopleSoft Customer Support, IS PeopleSoft Problem Resolution, and the Systems and Programming Services Problem Resolution and Knowledge survey categories. This decline in satisfaction is likely due to the loss of Systems and Programming Services employees between 2008 and 2018, combined with a scarcity of training for the remaining team members, along with delays in upgrading PeopleSoft and an absence of implementing modernized PeopleSoft features and functions, resulting in poor user experiences with the technology.

Network and Data Center Services

- Network, internet, telecommunications and email service quality and reliability were consistently rated highly in the 2008, 2013 and 2018 surveys, rating above 8/10 across all categories.
- Assessment of wireless network access was added to the survey in 2013, and satisfaction with the quality and reliability of this service has declined 13% from 2013 to 2018. The decline in satisfaction with wireless access services is likely due to a surge in expectations for wireless access availability (coverage) and increased demand on the service (bandwidth).
- Of the 1,452 devices that comprise the network infrastructure, 21% are under warranty, 10% have warranties that expire in 90 days, and the remaining 68% (almost 1,000 infrastructure devices including switches and routers) are not covered by warranties at this time, leaving the institution very vulnerable to downtime and unplanned outages of mission critical systems.

What improvements have you implemented or plan to implement as a result of your SAO Assessments?

Information Technology Security

Upgrade or replace the District’s email threat protection system.

Fill vacant Information Technology Security Officer position to establish and maintain focused and consistent attention to institutional data and systems security, and threat protection services.

Conduct comprehensive data security and threat protection assessments with assistance from the CCC Tech Center, including Phishing tests (in process), a Center for Internet Security (CIS) Critical Controls Assessment (in process) and a Comprehensive Security Assessment.

Help Desk Services

Fill vacant Technical Support Specialist position (in process) to fully staff the Help Desk increasing availability of services to all constituents.
Fill vacant Technology Trainer position to enhance technology expertise among District employees.
Reconfigure the layout of the service area in A-110 to accommodate visitors to the Help Desk for more efficient service.

Technical Services

Allocate reliable and consistent operational funding to support timely technology replacements for classroom, lab, and conference room computers and audio-visual equipment, and for employee computer replacements.
Fill vacant Network/Systems technician positions (in progress).
Fill vacant Technical Services Systems Administrator and add an additional new Technical Services Systems Administrator position.

Systems and Programming Services

Develop and fund a Systems Administrator position for Systems and Programming to facilitate implementation and ongoing support for PeopleSoft and integrated third party systems. Or, alternatively, allocate funds for this support to a consulting agreement with a firm that provides these services.
Upgrade PeopleSoft Human Capital Management (in progress) to improve usability and maintain technical currency of this mission critical system, for which Oracle support ends in December 2018.
Upgrade PeopleSoft Campus Solutions, and plan, fund and schedule upgrades and maintenance to all pillars of PeopleSoft along with other third-party software on an ongoing basis, to improve usability and maintain technical currency of the District's mission critical systems.
License required institutional software (Cornerstone Performance, CRM System, Parking Pass System) to improve business processes, increase engagement with prospective and current students, facilitate employee performance evaluations, and student access to parking passes.

Network and Data Center Services

Expand Wireless Access Service by adding access points and controllers, along with analytical tools to aid the Network and Data Center team in maintaining and supporting this service.
Acquire Data Center and infrastructure components, and new phones, to replace end-of-life equipment.
Fill vacant Senior Infrastructure Systems Administrator and Infrastructure Systems Administrator positions.

SECTION 2: Other Assessment Data

List all other quantitative and/or qualitative measures you use to track, monitor, and/or evaluate the effectiveness of your program/Unit:

Quantitative Data

	Values				
Measure	2015	2016	2017	2018	Definition/Description of Measure
Total Work Orders Closed	7,403	7,254	6,886	7,366*	Number of logged and completed requests for technical support assistance.
Total Incoming Calls Handled by Help Desk	61,371	56,773	59,832	60,552*	Total annual phone calls answered and either addressed or forwarded for service.
Monthly Average Number of Incoming Calls Handled by Help Desk	5,120	4,749	4,995	5,046*	Average number of phone calls answered per month and addressed or forwarded.
Email Threat Messages Stopped by Threat Protection Service	82,261,719 (96%)	N/A	N/A	87,601,080* (90%)	Number (and percentage) of all incoming email that is identified as malicious/threat and thwarted by the District's Email Threat Protection Service, (not delivered to institutional email users).
Note: Peak months for numbers of service requests and numbers of phone calls are August, followed by January.				*projected (data available only through September)	

Qualitative Data:

Describe any qualitative measures you use and summarize the results.

N/A

What improvements have you implemented or plan to implement as a result of your assessment of quantitative and/or qualitative data described above.

Following an initial decline in call handling and service completion after 2015 (see Quantitative Data on work orders and calls above) we will continue to work on filling vacant positions so we can restore and surpass previous service levels.

SECTION 3: Achievements and Other Relevant Information

Describe your program's achievements or proudest moments this past year. Where possible, describe how these achievements are related to our students and their success!

Many of the following achievements were accomplished because we were successful in filling a number of vacant positions in the IS department.

- Launched Palomar College Mobile App (for iPhone and Android) focused on provided convenient access to enrollment and cashier services, and course-specific information, for students.
- Implemented CCCApply to facilitate applications for admission using the CCCCO-supported common application, thereby increasing the number of admission applications while easing the application process for our prospective students.
- Implemented single-sign-on identity management system to facilitate student and employee access to institutional software applications and CCC systems.
- Implemented ClockWork case management system for Disability Resource Services, to strengthen record-keeping and service management.
- Implemented Starfish Early Alert for student service referrals to facilitate student retention.
- Added Zero and Low Cost Textbook integration to online Class Schedule in support of the CCC Open Educational Resources initiative and in compliance with CA Senate Bill 1359.
- Implemented TouchNet payment processing in Fiscal Services to replace unreliable legacy system, and simplify and improve payment processes for students.
- Implemented student math, reading, and English placement recommendations based on Multiple Measures as opposed to a single assessment instrument, aligning District practice with Title 5 assessment requirements, while streamlining the admissions process for new students.
- Developed a combined Palomar Promise page to facilitate serving students at various stages of completion for participation in the Palomar Promise program, and enabling service staff in several offices to track receipt of student benefits awarded through this program.
- Expanded Wireless network, including new controllers and 300 Access Points, extending open wireless internet access on San Marcos campus and at the Escondido Center, particularly in outdoor areas where students congregate.
- Installed and configured new NAS 1.6PB storage system to support the data increases for security camera feeds, and to host PCTV video archives.
- Migrated student email to Microsoft Office 365, providing students with free internet-based access to MS Office applications.
- Implemented new vendor-supported Professional Development (PD) software platform (Cornerstone) and integrated it with PeopleSoft to facilitate institutional employee training and professional development activities, automate associated processes, and improve faculty PD contract hour management. Then, extended this platform to provide statewide California Community College access and service in support of the CCCCO Vision for Success.
- Implemented eBenefits integration on an extremely short timeline in time to support initial open enrollment period for employees.
- Replaced District firewalls to improve the District's network and infrastructure security.
- Established secondary institutional data center at Rancho Bernardo Education Center to mitigate network service outages.

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- Established site redundancy (ring) network between San Marcos Main Campus, Rancho Bernardo Center, Fallbrook Center, Rancho Santa Fe Site, and Escondido Center to mitigate network service outages.
- Planned, designed and implemented Software Defined Networking (SDN) at Rancho Bernardo and San Marcos data centers to improve network architecture agility in response to changing requirements based on software application utilization.
- Designed new network sub-netting and VLAN schemas to improve security and institutional data protection.
- Collaborated with Construction Management to ensure installation of District standard infrastructure and technology in support of construction and remodel projects, including successful openings of Rancho Bernardo Education Center, Fallbrook Education Center and other facilities. Included installation and configuration of all audio visual equipment, printers, computer equipment and mobile laptops in time to support summer term classes at both new Education Centers (Rancho Bernardo and Fallbrook).
- Took advantage of special discounting to acquire infrastructure equipment for the new educational centers and saved the district over \$500,000 on these purchases.
- Updated academic software in classrooms and computer labs across the District as required by Instructional Services in preparation for each major term.
- Updated audio visual equipment in the O building.
- Updated computer lab equipment in DA-2, MD-134 and facilitated student access to District laptops and mobile printing using GoPrint software.
- Expanded technical support service and college switchboard service to 8PM Monday – Thursday, improving access to technical support resources for students and in support of evening classes.
- Since the staffing decline due to the retirement incentive in 2015, Information Services has filled 12 vacant positions. Additional positions are in the process of being added to provide support for the new Education Centers.

Describe any recent changes in legislation, policies, procedures, processes, and/or technology (software and hardware) that have impacted or will impact your program/unit? What effect will these changes have on your program/unit?

The Student Centered Funding Formula, along with any change in legislation governing the CCCs, impacts and influences the District's data collection and mandated reporting practices, (e.g., SB 1359, AB 705, AB 19). Many changes to mandated MIS reporting data elements have been implemented by the CCCCO in the past year, requiring changes to long-standing programs and procedures.

The General Data Protection Regulation (GDPR) will require the District to review and strengthen data privacy practices to ensure compliance.

In addition to (or in response to) the changes listed above, what in-house policies, procedures, and processes need to be updated, created, or deleted?

Significant attention and commitment to improving data integrity and security must be made by the District through structured, comprehensive and consistent data collection and reporting methods and business practices.

Resources must be applied to improve protection of the District's data and mission critical operational systems from cyber-attacks, and ensure compliance with new data privacy regulations.

Change management procedures are needed in the IS department to maintain institutional mission critical systems, and for managing changes to key infrastructure components.

Email and file retention policy is needed for working documents that are not already covered by the BP/AP 3310 Records Retention and Destruction policy and procedure.

PART 3: PROGRAM/UNIT EVALUATION AND THREE YEAR PLANNING

Program Evaluation and Planning is completed in two steps.

Section 1: Overall Evaluation of Program

Reflect on your program/unit, the results of your assessments in Part 2 above, and your vision for the future. Then, working together answer the following questions. Summarize your answers in the grid below.

1. What are our greatest strengths?

2. What are our best opportunities?
3. What is our preferred future, what do we aspire to do?
4. What are the measurable results that will tell us we've achieved that vision of the future?

Section 2: Establish Goals and Strategies for the Next Three Years

Once you have completed your overall evaluation, identify a set of goals and strategies for accomplishing your goals for this upcoming three year planning cycle. Use the template in Section 2 below to document your goals, strategies, and timelines for completion.

SECTION 1: Overall Evaluation of Program

1. Discuss your Program's/Unit's Strengths, Opportunities, Aspirations, and Results (SOAR) and summarize your discussion below.

Strengths:	Courtesy and Professionalism Developing collegial relationships through attentive interactions when problems are reported or specifications are developed. Forward-thinking when recommending and implementing new technology. (No silo mentality!) Commitment Ability to prioritize instructional issues (anything that prevents the delivery of instruction and services to our students) and dedicate the time required to resolve them - minimizing downtime for services to students. Strong commitment to meet deadlines (e.g. new Education Center openings). Integrity and Stewardship Desire to do the job right (and thinking for the long-term) rather than rush to a solution before requirements are clear. Identify ways to maximize our available funding in serving the District.
Opportunities:	Communication Follow a collegial process in our decision-making on institutional technology initiatives. Educate our constituents regarding data protection and access security. Communicate accomplishments and share information with our constituents about resources and services. Provide our users with more transparency regarding IS work priorities and projects. Development Strengthen the skillsets of our team through researching and learning, and sharing best practices; providing opportunities to grow expertise within the institution.
Aspirations:	Standardization Establish a reliable and consistent hardware, software and infrastructure total cost of ownership budget to enable IS to keep the District's technology up to date. Standardize institutional technology. Consistently apply industry standards for security, control and governance. Eliminate single points of failure for mission critical technologies. Creativity Strengthen our support of the District by training our staff and increasing in-house expertise for which consultants

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	or outside experts are currently used. Innovate.
Results:	A more modern, robust, resilient and consistent user experience. Increased satisfaction with Information Services as a whole. Improved security practices and increased data protection. Sufficient funds and staffing, and service levels, to maintain up-to-date technology to serve the District's IS needs. Reduced/eliminated downtime and unplanned outages.

SECTION 2: Progress on Prior Goals

List current or prior goals your program/unit has been working on and provide an update by placing an "X" in the appropriate status box.

Goal	Completed	Ongoing	No longer a goal
1. Ensure operational data integrity and reliable technology infrastructure.		X	
2. Facilitate student services, and enhance teaching and learning objectives, through smart campus, classroom and online technologies.		X	
3. Ensure sustainable technology by using current vendor-supported software, by reducing local customizations, and by participating in statewide technology initiatives.		X	
4. Optimize business processes and facilitate decision-making through automated workflows, dashboards and targeted reports.		X	
5. Train and support users for effective use of technology.		X	
6. Maximize efficiency through planned resource stewardship; clarify technology replacement plan and stabilize associated operational funding.		X	

Add any comments related to your work on prior goals, if needed (e.g., successes, challenges, reasons for eliminating a goal).

N/A

SECTION 3: Establish Goals and Strategies for the Next Three Years

1. New Goals: Please list all goals for this three-year planning cycle:

Goal #1	
Goal - Ongoing	Ensure operational data integrity and reliable technology infrastructure.
Strategies for implementation	1. Replace/upgrade aging infrastructure in Data Center, including the Email Threat Protection system. 2. Improve wireless infrastructure, including the addition of analytical tools to improve our support capability. 3. Replace old phones and integrate VOIP functions. 4. Implement/apply common reporting/querying tools. 5. Expand port security to all buildings. 6. Migrate user data to new storage system. 7. Adjust focus of the MIS Task Force to emphasize Data Governance. 8. Establish change management system, particularly for institutional mission critical systems, and for key infrastructure components. 9. Implement data retention policies that cover user data (email and user files). 10. Reduce/eliminate shadow systems and duplicate data repositories. 11. Complete self-assessment against industry best practices, such as Security Technical Implementation Guides (STIG) checklists from DISA, NIST, Oracle, CISCO, or other industry sources. 12. Implement stronger security protections such as 2-factor authentication for access to sensitive data and administrative systems. 13. Maintain current software licensing and versions to support instructional and institutional requirements. - ongoing
Timeline for implementation	Strategies 1 – 4 require new funding so completion timelines are dependent upon funding allocations. Complete strategies 5 – 12 by June 30, 2021. Strategy 13 is ongoing.
Outcome(s) expected (qualitative/quantitative)	No mission critical system outages. No data or system security breaches. Multiple data sources consolidated to one authoritative source for key institutional data.
Describe the resources (human, technology, equipment, etc) you will need or will assign to implement this goal.	Fill vacant Information Technology Security Officer and Senior Infrastructure Systems Administrator positions. Acquire tools to enable thorough testing and eliminate impact to production environments when new technologies are being explored/implemented. Acquire Data Center and infrastructure components to replace those at end-of-life, including the Email Threat Protection system.

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	Acquire additional Wireless Access Points and Controllers, along with analytical tools. Acquire new phones to replace those at end-of-life, and update IP phone software. Most strategies identified for this goal will be completed using existing resources and staff.
Of the resources described above, which ones are reallocated and which ones are new or needed?	NEW: Fill vacant Information Technology Security Officer and Senior Infrastructure Systems Administrator positions. NEW: Acquire tools to enable thorough testing and eliminate impact to production environments when new technologies are being explored/implemented. NEW: Acquire Data Center and infrastructure components to replace those at end-of-life. NEW: Acquire additional Wireless Access Points and Controllers, along with analytical tools. NEW: Acquire new phones to replace those at end-of-life, and update IP phone software.
Goal #2	
Goal - Ongoing	Facilitate student services, and enhance teaching and learning objectives, through smart campus, classroom and online technologies.
Strategies for implementation	1. Implement District-wide Digital Signage management system. 2. Replace 2 large outside Digital Displays at SU. 3. Facilitate licensing and implement a Parking Pass management system. 4. Improve wireless infrastructure, including the addition of analytical tools to improve our support capability. 5. Upgrade audio visual systems in classrooms and conference rooms to replace outdated/non-functioning equipment. 6. Implement a single-sign-on identity management system to facilitate access to institutional systems and services. 7. Upgrade Exchange for Student Email Accounts from 2007 physical to Office 365/2013 virtual. 8. Implement cccApply. 9. Implement ClockWork for Disability Resource Center case management. 10. Upgrade Global Viewer to maximize efficiency of Extron devices (used in classrooms). 11. Maintain current software licensing and versions to support instructional and institutional requirements. -ongoing
Timeline for implementation	Strategies 1 – 5 require new funding so completion timelines are dependent upon funding allocations.

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	Complete strategies 6 – 10 by June 30, 2021. Strategy 11 is ongoing.
Outcome(s) expected (qualitative/quantitative)	Updated and current classroom technology, and other technologies used to facilitate student engagement and support. Increased quality information to District constituents through signage improvements. Easier parking access for District constituents, along with easier parking enforcement and oversight.
Describe the resources (human, technology, equipment, etc) you will need or will assign to implement this goal.	Strategy 1 will require a staffing commitment in one or more departments other than IS – for staff to manage signage content and quality/consistency of messaging. Most strategies identified for this goal will be completed using existing resources and staff. Acquire Digital Displays, software and controllers to manage sign operation. Acquire software and equipment (as applicable) to manage Parking Pass sales and management for students, employees and campus visitors. Fill vacant Technical Services Systems Administrator and add an additional new Technical Services Systems Administrator position. Acquire additional Wireless Access Points and Controllers, along with analytical tools. Acquire audio visual systems.
Of the resources described above, which ones are reallocated and which ones are new or needed?	NEW: Strategy 1 will require a staffing commitment in one or more departments other than IS – for staff to manage signage content and quality/consistency of messaging. NEW: Acquire Digital Displays, software and controllers to manage sign operation. NEW: Acquire software and equipment (as applicable) to manage Parking Pass sales and management for students, employees and campus visitors. NEW: Fill vacant Technical Services Systems Administrator and add an additional new Technical Services Systems Administrator position. NEW: Acquire additional Wireless Access Points and Controllers, along with analytical tools. NEW: Acquire audio visual systems.
Goal #3	
Goal - Ongoing	Ensure sustainable technology by using current vendor-supported software, by reducing local customizations, and by participating in statewide technology initiatives.
Strategies for implementation	1. Implement cccApply. 2. Implement Early Alert system using Starfish Early Alert software.

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	3. Implement new Professional Development platform (Cornerstone on Demand). 4. Implement ClockWork for Disability Resource Center case management. 5. Implement Comprehensive Education Plan using Starfish Degree Planner. 6. Upgrade Global Viewer to maximize efficiency of Extron devices (used in classrooms). 7. Upgrade PeopleSoft Human Resources from 9.1 to 9.2 and implement functionality. 8. Implement Cornerstone Performance software system to manage and facilitate employee performance evaluations. 9. Upgrade Oracle PeopleSoft Campus Solutions 9.0 to 9.2. 10. Facilitate licensing and implement a Customer Relationship Management (CRM) System. 11. Facilitate licensing and implement a Parking Pass management system. 12. Implement and adhere to standardized hardware and software. 13. Establish change management system, particularly for institutional mission critical systems, and for key infrastructure components. 14. Implement state sponsored systems and take advantage of CCC Technology Center services where feasible for the District. -ongoing 15. Maintain current software licensing and versions to support instructional and institutional requirements. -ongoing
Timeline for implementation	Complete strategies 1 - 9 by December 31, 2019. Strategies 10 - 11 require new funding so completion timelines are dependent upon funding allocations. Complete strategies 12 and 13 by June 30, 2020. Strategies 14 and 15 are ongoing.
Outcome(s) expected (qualitative/quantitative)	Potential to lower Total Cost of Ownership (TCO). Quicker time to resolution of software/system problems through vendor support. Improved user experience and service to students through modernized interfaces and clearer procedures. Reduce confusion by consolidating multiple data sources to one authoritative source for key institutional data. More complete and accurate data leading to better information-driven decision management.
Describe the resources (human, technology, equipment, etc) you will need or will assign to implement this goal.	Develop a Systems Administrator position for Systems and Programming to facilitate implementation support for PeopleSoft and integrated third party systems. Or, alternatively, allocate funds for these services to a consulting agreement with a firm that provides these services.

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	Funds are needed to license software and implement strategies 8 – 11. Most strategies identified for this goal will be completed using existing resources and staff.
Of the resources described above, which ones are reallocated and which ones are new or needed?	NEW: Develop and fund a Systems Administrator position for Systems and Programming to facilitate implementation and ongoing support for PeopleSoft and integrated third party systems. Or, alternatively, allocate funds for this support to a consulting agreement with a firm that provides these services. NEW: Funds are needed to license software and implement strategies 8 – 11.
Goal #4	
Goal - Ongoing	Optimize business processes and facilitate decision-making through automated workflows, dashboards and targeted reports.
Strategies for implementation	1. Implement a single-sign-on identity management system to facilitate access to institutional systems and services. 2. Implement attendance accounting system to support regional as well as state reporting requirements. 3. Implement Astra Schedule and Astra Platinum Analytics to facilitate class schedule optimization, room scheduling and student centered scheduling. 4. Implement Cornerstone Performance software system to manage and facilitate employee performance evaluations. 5. Facilitate licensing and implement a Customer Relationship Management (CRM) System. 6. Fully implement and configure features for District standard products and systems. -ongoing
Timeline for implementation	Complete strategies 1 - 4 by December 31, 2019. Strategy 5 requires new funding so completion timeline is dependent upon funding allocation. Strategy 6 is ongoing.
Outcome(s) expected (qualitative/quantitative)	Reduce/eliminate paper processes or cumbersome data collection/reporting processes. Increase transparency and ease-of-access to data. Improve communications with prospective and current students, thereby improving enrollment and retention.
Describe the resources (human, technology, equipment, etc) you will need or will assign to implement this goal.	Fill vacant Senior Programmer Analyst and Infrastructure Systems Administrator positions. Funds are needed to license software and implement strategy 5.
Of the resources described above, which ones are reallocated and which ones are new or needed?	NEW: Fill vacant Senior Programmer Analyst and Infrastructure Systems Administrator positions. NEW: Funds are needed to license software and implement strategy 5.

Goal #5	
Goal - Ongoing	Train and support users for effective use of technology.
Strategies for implementation	1. Implement new Professional Development platform (Cornerstone on Demand). 2. Educate users regarding best practices in data protection, account/access and security practices. -ongoing 3. Train technical staff in configuration implementation, system administration, support procedures, and hardware and software system capabilities for mission critical systems. -ongoing
Timeline for implementation	Complete strategy 1 by December 31, 2018. Strategies 2 and 3 are ongoing.
Outcome(s) expected (qualitative/quantitative)	Increase in productivity. Improves institutional data protection, security and stewardship. Increases the District's self-reliance, reducing dependence on outside consultants for technical projects and technology support.
Describe the resources (human, technology, equipment, etc) you will need or will assign to implement this goal.	Fill vacant Technology Trainer position.
Of the resources described above, which ones are reallocated and which ones are new or needed?	NEW: Fill vacant Technology Trainer position.
Goal #6	
Goal - Ongoing	Maximize efficiency through planned resource stewardship; clarify technology replacement plan and stabilize associated operational funding.
Strategies for implementation	1. Upgrade or replace the Email Threat Protection system. 2. Replace old phones and integrate VOIP functions. 3. Replace 2 large outside Digital Displays at SU. 4. Replace/upgrade aging infrastructure in Data Center. -ongoing 5. Replace obsolete audio-visual equipment in classrooms and meeting spaces. -ongoing 6. Replace student, faculty and staff computers with expired warranties. -ongoing 7. Maintain current software licensing and versions to support instructional and institutional requirements. -ongoing
Timeline for implementation	Strategies 1 – 3 require new funding so completion timelines are dependent upon funding allocations, however, strategy 1 is a requirement to replace equipment that is at end of life in early 2019 so action on this strategy is urgent.

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	Strategies 4 – 7 also require funding but they are ongoing strategies.
Outcome(s) expected (qualitative/quantitative)	Improved security, reliability, speed, capacity and overall effectiveness of network infrastructure systems, Data Center equipment, audio-visual equipment, and student, faculty and staff computers. Improved technology user experience for students, faculty and staff.
Describe the resources (human, technology, equipment, etc) you will need or will assign to implement this goal.	Fill vacant Senior Infrastructure Systems Administrator position. Allocate reliable and consistent operational funding to support timely technology replacement for network infrastructure systems, Data Center equipment, audio-visual equipment, and student, faculty and staff computers. Acquire Data Center and infrastructure components to replace those at end-of-life. Acquire audio-visual equipment to replace at components end-of-life. Fill vacant Information Technology Security Officer position.
Of the resources described above, which ones are reallocated and which ones are new or needed?	NEW: Fill vacant Senior Infrastructure Systems Administrator position. NEW: Allocate reliable and consistent operational funding to support timely technology replacement for network infrastructure systems, Data Center equipment, audio-visual equipment, and student, faculty and staff computers. NEW: Acquire Data Center and infrastructure components to replace those at end-of-life. NEW: Acquire audio-visual equipment to replace at components end-of-life. NEW: Fill vacant Information Technology Security Officer position.

2. How do your goals align with your unit's mission statement?

The Information Services department goals enable our department to best serve our constituents by ensuring operational data integrity, providing reliable infrastructure, classroom and online technologies, applying sustainable and vendor-supported technologies, optimizing business processes, training users and practicing effective technology stewardship. These goals align directly with the department mission to serve students, faculty, staff, administrators and our community through high quality technical support, information systems and services. In addition, our goals align with and support our role as a strategic partner with the District's academic divisions, administrative and service departments, and with individuals, to advance institutional goals through student-centered technology solutions.

3. How do your goals align with the College's Strategic Plan Goals & Values? [Click here for 2019 Strategic Plan](#)

Goal 1: Ensure operational data integrity and reliable technology infrastructure

- Supports Institutional Operations (across all areas of the institution to provide an engaging teaching and learning environment)
- Supports Facilities Master Plan

Goal 2: Facilitate student services, and enhance teaching and learning objectives, through smart campus, classroom and online technologies

- Supports Institutional Strategic Goal 1: Implement Instructional Strategies that Strengthen and Connect Teaching and Learning across the College
- Supports Institutional Strategic Goal 2: Strengthen efforts to improve Outreach, Persistence, and Student Success

Goal 3: Ensure sustainable technology by using current vendor-supported software, by reducing local customizations, and by

participating in statewide technology initiatives

- Supports Institutional Operations
- Supports Institutional Strategic Goal 2: Strengthen efforts to improve Outreach, Persistence, and Student Success
- Supports Institutional Strategic Goal 5: Ensure the Fiscal Stability of the College and Increase Enrollments

Goal 4: Optimize business processes and facilitate decision-making through automated workflows, dashboards and targeted reports

- Supports Institutional Strategic Goal 2: Strengthen efforts to improve Outreach, Persistence, and Student Success
- Supports Institutional Strategic Goal 3: Strengthen the College's Message to our Community
- Supports Institutional Strategic Goal 5: Ensure the Fiscal Stability of the College and Increase Enrollments

Goal 5: Train and support users for effective use of technology

- Supports Institutional Strategic Goal 4: Maintain and Support a Diverse Workforce

Goal 6: Maximize efficiency through planned resource stewardship; clarify technology replacement plan and stabilize associated operational funding

- Supports Institutional Operations
- Supports Institutional Strategic Goal 1: Implement Instructional Strategies that Strengthen and Connect Teaching and Learning across the College
- Supports Institutional Strategic Goal 5: Ensure the Fiscal Stability of the College and Increase Enrollments

4. How do your goals align with the College's value of diversity?

The IS department goals advance institutional goals through student-centered technology solutions, and lead to opportunity for all constituents, thereby aligning with the College's value of "diversity in learning environments". A variety of technology resources are available to our students, including for example, accessible open computer labs, specialized technological resources for students with disabilities, internet-based software resources through Office 365, provided to all enrolled students at no cost, to ensure that access to technology is not a barrier for any student in achieving their educational goal(s).

PART 4: RESOURCES

Reflect upon the three year plan you created above, your current operations, and any upcoming factors (retirements, changes in legislation, changes in policies or procedures). How will you allocate resources to implement your plan? Describe additional resources needed to improve the effectiveness of your unit/program

SECTION 1: Reallocation or Reassignment of Resources

Summarize any reallocation of resources you are making based upon your three-year plan, your current operations, and any upcoming factors in legislation. Describe the impact of the reallocation of resources to your unit.

Progress on many of the strategies applied to support the department's goals will be made using current staff and other resources, however vacant positions need to be filled and most importantly, a consistent operational budget is needed to ensure responsible stewardship of the District's threat protection systems, network infrastructure systems, Data Center equipment, audio-visual equipment, mission critical software, and student, faculty and staff computers. Historically, we have only been partially successful in addressing this critical ongoing institutional need.

SECTION 2: Need for Additional Resources

As a result of this program review and planning process, describe any additional resources you need to improve the effectiveness of your unit/program.

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Resource	Which goal/strategy in your three-year plan does this resource request support?	Which goal/objectives in the college's Strategic Plan does this resource request support?	Brief description of the need for this resource / Impact on other areas of the college (see technology, equipment, other needs)
Staffing Needs - If you have a staffing need, Identify if the staffing need is to replace a position or if the need represents a new position. Further explanation /prioritize. How does it align with North and South Centers/ Define what it is you need staff to do.			
NEW: Fill vacant Information Technology Security Officer position.	Goal 1	Institutional Operations and Facilities Master Plan, and Strategic Plan Goal 1	Required to establish and maintain focused and consistent attention to institutional data and systems security.
NEW: Fill vacant Technical Services Systems Administrator and add an additional new Technical Services Systems Administrator position.	Goal 2	Strategic Plan Goals 1 and 2	Given increasing numbers and complexity of computer lab and employee computer software and configurations, along with management of software license keys and access, it is critical to fill the vacant Technical Services Systems Administrator position and to add a third Technical Services Systems Administrator position to handle the expanded workload.
NEW: Fill vacant Technology Trainer position.	Goal 5	Strategic Plan Goal 4	Filling the Technical Trainer position will enable us to develop and deliver training that is specific to Palomar's business processes and systems, thereby increasing efficient and appropriate use of the variety of technologies available to District employees.
NEW: Develop and fund a Systems Administrator position for Systems and Programming to facilitate implementation and ongoing support for PeopleSoft and integrated third party systems. Or, alternatively, allocate funds for this support to a consulting agreement with a firm that provides these services.	Goal 3	Institutional Operations and Strategic Plan Goals 2 and 5	Systems and Programming does not have a position in place to provide PeopleSoft System Administration. This is a specialized skillset that should be separated from programming, management or database administration duties. This is an area of deficiency in attending to the 'health' of the PeopleSoft applications across all pillars.
NEW: Fill vacant Senior Infrastructure Systems Administrator position.	Goal 1 and 6	Institutional Operations and Facilities Master Plan, and Strategic Plan Goals 1 and 5	With the network infrastructure expanded to additional locations, and infrastructure components added (e.g., wireless access, new buildings), and network configuration complexity increased, filling the vacant positions in the Network and Data Center is critical to ensure reliable operations and support.
NEW: Fill vacant Infrastructure Systems Administrator position.	Goal 4	Strategic Plan Goals 2, 3 and 5	With the network infrastructure expanded to additional locations, and infrastructure components added (e.g., wireless access, new buildings), and network configuration complexity increased, filling the vacant positions in the Network and Data Center is

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			critical to ensure reliable operations and support.
NEW: Fill vacant Senior Programmer Analyst position.	Goal 4	Strategic Plan Goals 2, 3 and 5	Workloads of the current Senior Programmer Analysts are beyond maximum, which has resulted in other departments paying for consulting support to accomplish their objectives. Filling this senior position will enable Systems and programming to address requirements that have been deferred, or will require costly consulting support to implement.
SPECIAL NOTE: NEW: Goal 2's strategy 1 (Digital Signage) will require a staffing commitment in one or more departments other than IS – for staff to manage signage content and quality/consistency of messaging.	Goal 2	Strategic Plan Goals 1 and 2	Staffing is needed in other District departments to support and manage signage content on the digital signs used both inside and outside District facilities.
Technology Needs - If you have a technology need, use the last column to describe both the need for the resource AND identify if the technology need may require any of the following: 1) Extra wireless access 2) Integration with existing technology (hardware and software, such as PeopleSoft) 3) Operational maintenance and support			
NEW: Allocate reliable and consistent operational funding to support timely technology replacement for network infrastructure systems, Data Center equipment, audio-visual equipment, and student, faculty and staff computers.	Goal 6	Institutional Operations and Strategic Plan Goals 1 and 5	A consistent operational budget is needed to ensure responsible stewardship of the District's network infrastructure systems, Data Center equipment, audio-visual equipment, mission critical software, and student, faculty and staff computers.
NEW: Acquire tools to enable thorough testing and eliminate impact to production environments when new technologies are being explored/implemented.	Goal 1	Institutional Operations and Facilities Master Plan, and Strategic Plan Goal 1	Both hardware and software testing tools are needed to enable IS to perform testing on new/upgraded technologies without impacting production systems required by District operations.
NEW: Acquire Data Center and infrastructure components, including email threat protection system, to replace those at end-of-life.	Goal 1 and 6	Institutional Operations and Facilities Master Plan, and Strategic Plan Goals 1 and 5	A consistent operational budget is needed to ensure responsible stewardship of the District's threat protection and network infrastructure systems and Data Center equipment.
NEW: Acquire additional Wireless Access Points and Controllers, along with analytical tools.	Goal 1	Institutional Operations and Facilities Master Plan, and Strategic Plan Goal 1	Funds are needed to expand wireless access for students (and for other constituents), as identified in the framework for the Facilities Master Plan.
NEW: Acquire new phones to replace those at end-of-life, and update IP phone software.	Goal 1	Institutional Operations and Facilities Master Plan, and Strategic Plan Goal 1	A consistent operational budget is needed to ensure responsible stewardship of the District's telephone equipment and software.
NEW: Acquire Digital Displays, software and controllers to manage sign operation.	Goal 2	Strategic Plan Goals 1 and 2	Digital displays (signs) are needed in many areas at all District locations, both inside facilities and outside, to facilitate wayfinding

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			as well as to provide informational, marketing, and crisis communication messages. Coordination with the Facilities department is needed for location of any planned new digital displays, to ensure that required power and data infrastructure, as well as any needed structural reinforcement, is in place prior to installation.
NEW: Acquire software and equipment (as applicable) to manage Parking Pass sales and management for students, employees and campus visitors.	Goal 2	Strategic Plan Goals 1 and 2	Funds are needed to acquire equipment and license software needed to implement a vendor-supported Parking Pass system.
NEW: Acquire audio visual systems.	Goal 2 and 6	Institutional Operations and Strategic Plan Goals 1, 2 and 5	A consistent operational budget is needed to ensure responsible stewardship of the District's audio-visual equipment.
NEW: Funds are needed to license software and implement Goal 3's strategies 8 – 11 (Cornerstone Performance, PeopleSoft Campus Solutions Upgrade, CRM System, Parking Pass System).	Goals 3 and 4	Institutional Operations and Strategic Plan Goals 2, 3 and 5	Increased operational budget is needed to maintain new software systems for the District. In addition, funds are needed for PeopleSoft consulting partners to facilitate the implementation of major software systems that are beyond the scope of the IS department's current staff workload (capacity) and skillset.
NEW: Funds are needed to license software and implement Goal 4's strategy 5 (CRM System).	Goal 4	Strategic Plan Goals 2, 3 and 5	Increased operational budget is needed to maintain any new software systems for the District.
Equipment Needs (other than technology) - If you have equipment needs, use the last column to describe both the need for the resource and any possible impact to facilities.			
Other Needs - If you have identified other needs, use the last column to describe both the need for the resource any any possible impact to facilities or other units on campus.			

Once your Program/Unit PRP is completed, your division or planning council should review and discuss based on your Vice President’s planning process. This area is intended for summary feedback and recommendations from the divisional review.

Confirmation of Review by Division / Planning Council	
Person/Group/Council Who Reviewed PRP	
Date	

Feedback
1. Strengths and successes of the program/unit as evidenced by the data, analysis, and assessments:
2. Areas of Concern, if any:
3. Recommendations for improvement: