2019 Annual Program Review: Information Technology

1. Purpose of the Program
   a. State the purpose of program, area or unit and how the it supports the College Mission.

The Palo Verde College Information Technology Department will provide the quality technology and support our student's need for their personal and professional growth.

   b. How does the program, area or unit support the College Mission?

The Palo Verde College Information Technology Department is committed to provide the best technology possible for all students to be successful and achieve their personal and professional academic goals.

2. Population(s) Served
   a. Describe the populations served by the program, area or unit, identifying special populations, if any.

   - At three physical locations: Blythe Main Campus, Needles Center, Child Development Center.
   - Students, faculty, adjunct faculty, staff, outside agencies through system integrations, the public and community members making use of campus facilities/web resources/communication systems.
   - To a lesser but growing extent correspondence students, incarcerated students, online students, and off-site adjunct faculty members.
   - Disabled students through assistive technology
   - Public, and outside agencies via college website and communications services

   b. Describe other populations that should be served by the program, area or unit and identify plans to implement.
   - We would like to offer a better educational experience.

3. Accomplishments in Achieving Goals
   a.   List area related Strategic Planning Goals and program, area or unit specific goals, and describe progress in achieving each goal, strategy, objective, and appropriate task.

Strategic Planning Goals:

Task #	Task	Progress Report
7.1.1.1	Work with the Technology committee to assess our current technology and if we are meeting the district's needs. If we are not meeting needs, develop a plan and timeline to resolve the deficiency (2017-18)	The Technology committee is now inclusive of instructional and ERP components. The committee is meeting regularly to provide a forum to address these needs.
7.1.1.2	Work with the Technology committee and all constituent groups to assess the technology needed for the near future. If a future need is found, prepare a	The Program Review Committee has incorporated snapshot/addendums for all divisions and technology needs are hi-lighted for the current and future academic years.

	plan and budget to acquire the technology and training before the need arrives (2017-18 and ongoing).	
7.1.1.3	Annually evaluate the training and technical support IT provides for faculty and staff to ensure these services are appropriate and effective.	The snapshot/addendum provides a forum for equity analysis for the impact of the training that has been provided and if there are any disproportionate impacts then they will be singled out and addressed.
7.2.1.1	Send IT staff to training annually to ensure they can provide state of-the-art support for new technology and security.	IT staff regularly sent for state of the art training, provide in house IT-specific online training resources, and attend Microsoft Ignite annually as scheduling permits.
7.2.1.2	Develop optional and mandatory training for all staff and faculty to ensure they are knowledgeable of district technology and security needs, policies, and procedures (ongoing as needed).	This is being addressed through the BP and APs at the district level. In addition all staff have access to online training opportunities through Lynda.com, Keenan (insurance carrier), and Canvas.

Department Goals:

- Cluster/private cloud. With only one WAN connection to the internet, we cannot move to Azure or Amazon as much as we would like. An on-premise cluster of servers acting as one would afford the district many of the benefits of being "in the cloud."
- Network Access Control.
- Gain visibility and control of all the "Personal Identifiable Information" (PII) on all servers, desktops and Office 365.
- Deploy a security scanner to find vulnerabilities in desktop, servers and other devices.

b. Explain modifications, if any, of goals.

   None.

4. Strengths, Weaknesses & Accomplishments/Activities
   a. List and comment on the major strengths of the program, area or unit.
   - Better control of wireless access; employee's personal devices are now separate from the district network even if the employee logs in to our wireless network with their district username and password, if it is on a personal device. Students and other guests are also separate from the district's network.
   - New print Minolta print servers built, and employees can now use a token to login and print from any Minolta on campus.
   b. List and comment on the major weaknesses of the program, area or unit.
   - Better multimedia in the classrooms. The multimedia in the classrooms needs to be updated, simplified and made consistent across all classrooms.
   - We currently backup critical files and store them off site, but we do not have a "Disaster Recover Site" to maintain the continuity of business in the event of the total loss of the main server room or

Administration building. We will be building a "Cold" (normal stat is off) standby recovery site in Microsoft Azure. We plan on building a standby recovery site in Azure that would allow us to have business critical services up and running quickly.

c. List activities and discuss accomplishments during review period.

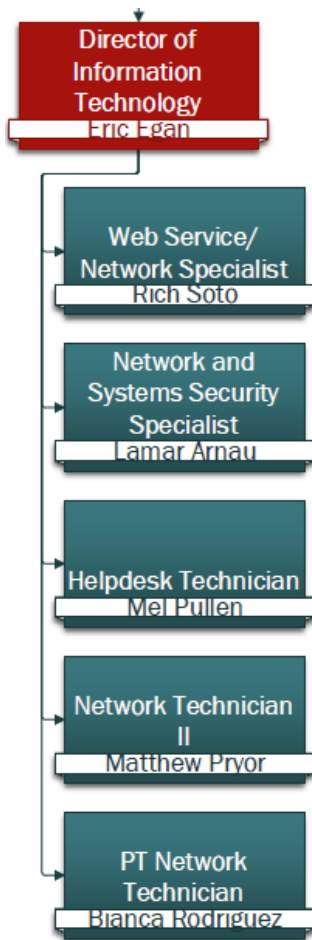See attached Information Technology Board Reports for details on activities.

5. Service Area Outcomes (SAO)

Appropriate Service Area Outcomes will be developed by each non-instructional area to reflect appropriate outcomes including Program Area Outcomes and/or Service Area Outcomes.

Service Area Outcome	Metric
Information Technology/SAO #1: The IT Department will provide ongoing support regarding the usage and proper functioning of the technology resources that support district and instructional operations.	The number of helpdesk support tickets serviced/events supported during the annual review period. *Due to transition in helpdesk ticketing systems this number is unavailable for the current review period but will be supplied in future program reviews.*
Information Technology/SAO #2: The IT Department will maintain appropriate and current technology resources for the district in accordance with a standardized replacement methodology.	The percentage/number of desktop computers, servers, network/infrastructure devices replaced or upgraded/refreshed within the annual review period. *See detail table provided in Section #8.*

6. Human Resources and Staff Development

a. Provide current organization chart of the program, area or unit, showing key functions and responsibilities.

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                 Director of
                 Information
                 Technology
                 Eric Egan

                 Web Service/
                 Network Specialist
                 Rich Soto

                 Network and
                 Systems Security
                 Specialist
                 Lamar Arnau

                 Helpdesk Technician
                 Mel Pullen

                 Network Technician
                 II
                 Matthew Pryor

                 PT Network
                 Technician
                 Bianca Rodriguez
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There is also a Help Desk Tech I located in Needles but organizationally this is listed in the Needles organizational chart.

- Director of IT
    - Plan, organize, control and direct the activities and operations of the Information Technology Department; evaluate, develop, modify and implement information systems standards and procedures; establish procedures for the maintenance of the District's database integrity.

- Web Service/Network Specialist
    - Website
    - Phone system
    - Disaster recovery
- Network and Systems Security Specialist
    - Network Admin
    - Security
- PT Helpdesk Technician
    - Helpdesk
- Network Technician II
    - Helpdesk
    - Network Technician
- Helpdesk Technician
    - Helpdesk
    - Purchasing

- Help Desk Technician, Needles Center
  - Helpdesk
  - Needles desktop management

b. Are current management and staff adequate to perform functions and responsibilities satisfactorily and to achieve program, area or unit goals? Explain.

The current management and staff are adequate, most of the time. Current IT staffing is strained; at the beginning of the semester, when there are a large number of college new hires, a large number of office and classroom changes and some events. Current staffing is not adequate to support the Performing Arts Complex or the new athletic program's events e.g., basketball games etc.

c. Describe specific professional development activities in which program, area or unit members participate and explain how such activities benefit or enhance the program and support and facilitate student learning.

- CISOA Conference and CISOA Advanced Seminar, Eric Egan – Networking with other CCC IT Directors, IT Security training, cooperative state technology projects, technology interaction with student success initiatives.
- We subscribe to an online training service that offers live online classes as well as self-paced recorded classes.
- Lamar Arnau recently earned Security+ certification.
- The goal is for each team member to spend 10% of the workweek in training.

d. Describe areas of unmet professional development needs among personnel in this program, area or unit, if applicable, and outline plans to address these needs.

- We have sufficient staffing to meet the day-to-day tasks, but current staffing levels makes it difficult to allocate time to training.
- More conference like Black Hat and RSA security conferences.
- Increase departmental cross training.

e. Describe organizational changes that would improve program, area or unit performance. Provide timelines for the achievement of such changes and describe measures that assess the effectiveness of such changes.

Changing current half-time Help Desk position at the main campus into full-time would help staff the needs of the Performing Arts Complex and athletic program's technical support needs. Making that position full time would also allow for more training time for the IT team members.

7. Facilities
a. Are current facilities adequate to support the program, area or unit? Explain.

The current IT staff workspace and equipment rooms are adequate for current needs. The current location is perfect for providing responsive support to students, faculty, and staff.

b. Describe plans for future changes to support facilities.

None

8. Technology and Equipment
a. Is the current technology and equipment adequate to support the program, area or unit? Explain.

Over the past several years the technology/equipment refresh cycle has been shortened to a 5/6-year period (it has gradually expanded to an 8/10-year cycle due to past budget constraints). Increased funding would allow refresh to be restored to the desired 4-5-year replacement cycle.

Annual Replacement Results:

Year	Area	Number	Notes
2018-19	Staff/Students	150	Desktops/Laptops
2017-18	Staff/Students	90	Thin Clients/Desktops/Laptops
2016-17	Staff/Students	80	Thin Clients/Desktops/Laptops

Year	Type	Percentage
2018-19	Desktops	20%
2018-18	Servers	15%
2017-18	desktops	20%
2017-18	Servers	20%

b. Describe plans for future changes to support technology or equipment.

- Natural gas-powered generator for longer data center runtime during power outage. Current run time on battery backup systems only provides time for system shutdowns. Many services require 24/7 availability such as email exchange, college website, online registration, Canvas online courses system. A generator would enable these systems to remain available even during extended outages at the main campus.
- Azure disaster recovery site – enabling rapid fail-over to cloud copy of critical systems. In the event of extensive damage to equipment or primary campus facility these cloud replicas could be quickly switched on for better business continuity.
- More security cameras.

9. Financial Resources

a. Provide an appropriate financial report for program, area or unit during reporting period.   Explain any significant deviations from previous reporting period.

Budget Code	MIS	
	Budgeted	**Expended**
2018-2019		
Supplies	$9,783.27	$9,783.27
Benefits	$174,274.43	$174,274.43
Computer Maintenance Argmt.	$2,387.52	$2,387.52
Conferences	$12,333.55	$12,333.55
Contracts	$274,796.77	$278,655.77
Copying/Printing	$132.68	$132.68
Equipment	$94,222.80	$94,222.80
Professional Growth	$3,289.64	$3,289.64
Repairs	$1,508.00	$1,508.00
Salaries	$318,504.58	$398,391.70
Student Workers	$7,716.31	$7,716.31
Tools	$193.94	$193.94

Travel	$1,219.07	$1,219.07
Utilities	$60.44	$60.44

b. Describe whether the current budget is adequate to carry out the responsibilities of the program, area or unit or operation.

The current budget is adequate to meet current ongoing needs aside from the need for a backup generator. The department will work toward determining cost and facility installation details this year in order to request the needed budget augmentation in the 2020-21 year.

As an ongoing priority it is important to maintain the technology/equipment refresh budget. During past time periods of budgetary restrictions these funds were cut for a number of years and the cumulative effect on the overall district technology was severe. It is important to maintain this moving forward.

c. Describe plans for future budget changes, if any.

Request for additional technology refresh funds.

10. Four year plan
a. Place future request for resources (human, financial, facilities, technology & equipment) in a four-year matrix to facilitate future planning.

			2019-20	2020-21	2021-22	2022-23
Future Area Needs	**Human Resources**				½ time helpdesk position to full-time	
	Fiscal Resources				Increase technology refresh budget by 50%	
	Physical Resources			Backup power generator		
	Technology Resources				Azure disaster recovery site	

Sent: Tuesday, May 1, 2018 5:39 AM

 Working with large updates so they can be deployed more reliably.

- Updating desktop firmware so we can better manage them during non-business hours.
- Deployed more hardware in preparation of deploying network access control systems.
- Continuing training.
- Replacing old UPS (Uninterruptible Power Supply) units district wide for desktops with "Smart" UPS. A a smart UPS not only protects the computer from power flections, if the user is not present during a power outage, a "Smart" UPS will save the users work before it shuts the computer down.
- Building our Azure disaster recovery site.
- Preparing for a phone system upgrade.
- Working with the county on the new Galaxy project.

Sent: Wednesday, October 31, 2018 11:47 AM

- Setup two large screen to monitor in the IT office for monitoring the network and servers.
- Created live maps to monitor network performance.
- Continued to build the new server array for the Ellucian systems.
- Fixed network wiring in CL101 for computer and polycom
- Installed new cameras in CL
- Nursing lab setup
- Worked with M$ to get DPM SQL fixed
- Received good training at MS Ignite
- Fixed issue with Desktop Central where computers managed by Bob kept coming back to our scope
- Configured several VPNs for users
- Configured backup VPN tunnel for Galaxy via Satellite link
- Rebuild Redirect Virtual Server
- Updated Website Staff Directory pictures
- Dell Hyper Switches (with Rich) – fixed dead switches, configured per hyper requirements, enabled 25G connections, configured them in OpManager
- Desktop Central – Create software deployments, configure self-service portal, PXE and OS Deployment
- Completed Security+ training
- Patch systems
- Support Board meetings
- Check and approve/block apps reported by Carbon
- Configure and Deploy VMs as needed
- Working with main Campus IT to get the Needles "Desktop Central" program configured to keep the Needles Computers from reverting back to the Main Campus "Desktop Central" domain.
- Arranged the Warrantee renewal on the Needles "Domain" Server "NE-DC"
- Arranged the purchase of a 750 Gb hard drive to replace a failed hard drive on the "NE-Host2-B" server. Replaced the failed drive.
- Updated the Idrac Console license for the "NE-Host3" Server.
- Arranged the purchase of a new hard drive for the "NE-DC" Server showing as pre-dicted failure.
- Updating all local Needles computers and servers managed by me on a daily basis to near100% Healthy as new Patches arrive..

- Arranged Quote with Robinson Electric to purchase and install power supplies for the Rooftop Cameras, Installation to begin in the next week or so. Patching the Camera's into the Camera Server will be done at that time.
- Created Flyers By fold and printed same for Welding and Automotive, C.T.E. Classes at Needles Campus.
- 70 out of 73 Desktop Computer have been updated to Windows 10 Version 1803.
- Created Flyers By fold and printed same for GED Program (English and Spanish).
- Changed out Smart Classroom Overhead projectors (2) when projectors failed.
- Troubleshoot and manage windows Update issues manually before moving to the Desktop Central System when that was fixed.
- Robert Van Dyne
- Palo Verde College - Needles Center

Sent: Thursday, January 10, 2019 9:57 AM

- eLumen app integration
- Lamar received his Security + Certificate
- Inventory all servers and switches
- Configure Desktop Central Proxy (we can now assist outside users the same way we do inside users)
- Theater sound and Blu-ray issue is resolved
- Lync fabric issue phones were down was resolved.
- DPM console crash issue was resolved (DPM is our backup server)
- Working on new foundation website for Stephanie.
- Working on athletics website
- Working on Camera System, Cabling and switches.
- Updating Computers and Servers on weekly bases.
- Maintaining Polycom Systems and troubleshooting problems.
- Replacing and / or repairing Printers and computers as needed.
- Training for all members, especially our newest member Bianca continues.

Sent: Wednesday, February 6, 2019 7:53 AM

- Foundation
- Umoja
- HR job descriptions
- Curriculum for eLumen
- Student Success Lab: The room for the Success lab only had two network ports. We rewired it to support the lab computers, printers and more.
- Checked Servers for bad hard drives. Found failed drive server R515 "Big-Bro"
- Requested Quote from CDW/G for replacement Hard Drive For Camera Server R515. Received Quote and sent to Mel to create a P.O. to be sent to Purchasing. Waiting on Hard Drive
- Worked with new teachers on password and related Office 365 Problems.
- Setup ITV Classes, checked projectors and logged Polycom's into Classrooms.
- Helped new students with PVC-Services and Bridge logins. Printed Class Syllabuses and homework for Distance Ed Students.
- Helped Teachers with uploading Syllabus to Bridge and converting documents to correct format
- Still Working on Needles Camera System.
- Physical inventory audit, entered in OpManager and configured for continuous monitoring of servers, network equipment and battery backups.

Sent: Friday, March 1, 2019 2:12 PM

- Spent a few days recovering from the damaged the flooding did directly and indirectly to equipment and systems in the main server room.
- Went to the CISOA conference and brought back a lot of good information.
- Worked with Teachers and Staff on Programs, Graphics Projects, and Media Conversions.
- Help Students present ITV Speech and PowerPoint Presentations during class.
- Spent days setting up CL122 for the Student Success Lab.
- Installed network ports in the new adjunct cubicle on the second floor or the CL building.
- Readying new PCs for deployment.
- Training and more training.
- Began "ClearPass" integration with switches (Network access control that nobody doing things right should notice).
- Finished configuring and monitoring for all Backup Batteries.
- Still working with CDWG and at getting a quote for replacing the patch panel that was drenched in the flooding.

Sent: Thursday, March 28, 2019 1:04 PM

- <u>Continued</u> deploying new desktops to employees.
- Implemented new guest WiFi process requiring the user to register with their email in order to use the district's free WiFi. This is accomplished with our ClearPass "Network Access Control" (NAC) system.
    - Started work on the next phase of ClearPass NAC: Staff WiFi and the internal network. Once NAC is complete we will not only be able to block any device that is not a district device from being on the district network, we will also be able to block a district device that does not meet minimum standards. Example: a laptop is gone for so long it is no longer patched to a minimum level, or if the antivirus is out of date, etc. If a device is noncompliant, it would be sent to a remediation server for updating or they need to bring it to IT.
- We are nearly finished with our new server cluster for our private cloud. This has been a yearlong project that will greatly increase our server capacity and reliability.
- CDC phone line/printing issues resolved.
- New Scantron system setup for faculty paper grading.
- New 2019 Backup server built.
- Replaced the unreliable Minolta "Follow Me Print" with the new "PaperCut" print management. We hope this will end our printer/copier pains.
- Distributed printer key tokens so people do not have to type in their username and password every time they want to use the copier.
- Went to Yavapai College in Prescott AZ to check out their classroom technology. They were very gracious and gave a tour of many classrooms, and shared a lot of information about the various classroom technology they have. This information will help us with our classroom technology refresh.
- New food pantry and athletics webpages.

Sent: Tuesday, May 14, 2019 11:01 AM

1. Building new Pearson Vue test Server in Needles.
2. Lots of web updates and new sites (Athletics, Food Pantry, Accreditation, Scholarships)
3. Deployed more assistive technology, large monitors, easy to read keyboards and more in several areas.
4. Provide services for the awards ceremony.
5. Replaced one of the side projectors in the auditorium in CL.
6. Preparing for the arrival of 50 desktops to replace old desktop at PVC.

7.   Installed a new fax machine in HR.
8.   ImageNow upgrade
9.   Resolved Survey Monkey issue.
10.   Worked with Microsoft to resolve phone issues.
11.   Continuing to work on a server that will look for unsecure Personal Identifiable Information across the network so we can secure or destroy it.
12.   Continued the work on the cluster of servers that will replace the current Ellucian servers.

Sent: Tuesday, June 4, 2019 8:34 AM

- The Network Access Control (NAC) project. We have been working on NAC for months and are over half finished.
  - Installed and configured a physical ClearPass server and a sister virtual failover server over the past year. (ClearPass is the main brain for our NAC)
  - Implemented new Guest Wifi security last month, phase I.
  - Went live on new Staff Wifi security this week, NAC phase II.
  - Working on Wired network security now, NAC phase III.
- Successfully upgraded one of our two backup servers (the servers that backup all the other servers and important desktops) to the 2019 version. The backup server in your building is next. The backup server in the CL building backups the CS building and vise versa.
- Resolved an ongoing and annoying phone issue with the reception's phone.
- In the process of upgrading ImageNow, new software on a new server.
- The Personal Identifiable Information (PII) management and control project using a program called "Spirion" is about 1/3 done with five Spirion servers online so far. When complete we well be able to scan the entire enterprise for PII and manage it better. Just finding outdated and useless PII and deleting it will significantly reduce our rusk.