

VERSION 1.1

FEBRUARY 20, 2020

COLLEGE OF  

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MARIN

INFORMATION TECHNOLOGY  
OPERATIONAL GUIDELINES

CALENDAR YEAR 2020

PATRICK EKOUE-TOTOU, PH.D.

MARIN COMMUNITY COLLEGE DISTRICT

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## MESSAGE FROM THE CIO/IT DIRECTOR



During the 2019 calendar year, the Information Technology Department has continued its maturation process and transformed from an IT-centric team to a student-focused service organization. Our operational landscape has continued to shift with the emergence of powerful integrations and analytics tools but also adversely toward increasing cybersecurity threats and regulatory challenges.

With the backing of the College Community, we have significantly expanded our project portfolio. In support of Teaching & Learning, we have deployed more than 700 new desktops and laptops; provisioned a virtual remote desktop environment for our students and staff; trained and protected our staff against phishing. From an infrastructure perspective, we have continued to modernize; upgrade our Banner ERP; upgrade the telephone system; upgrade the irrigation system; upgrade network equipment; and design a data network infrastructure for construction projects. We have also developed internal guidelines in support of service delivery processes.

This calendar year 2020, we will be engaged in a steady upkeep period with clear operational goals and objectives. With our changing landscape, we will give particular attention to cybersecurity, student accessibility, and infrastructure modernization.

The entire IT Department and myself are looking forward to working in partnership with members of the College Community and delivering valued services.

Sincerely,

A handwritten signature in dark ink, appearing to read "Patrick". The signature is stylized with a large, sweeping initial "P" and a trailing flourish.

Patrick Ekoue-totou, Ph.D.  
CIO/IT Director  
Information Technology Department

## COLLEGE MISSION

College of Marin's commitment to educational excellence is rooted in our mission to provide excellent educational opportunities for all members of our diverse community by offering:

- Preparation for transfer to four-year schools and universities;
- Workforce education;
- Basic skills improvement/English as a Second Language;
- Intellectual and physical development and lifelong learning; and
- Cultural enrichment.

The College of Marin is committed to responding to community needs by offering student centered programs and services in a supportive, innovative learning environment with a strong foundation of sustainability, which will instill environmental sensitivity in our students.

## COLLEGE VISION

College of Marin will be a premier educational and cultural center that provides programs of the highest caliber to meet the needs of an increasingly interconnected global society. Our vision will be guided by our values.

## ABOUT THE INFORMATION TECHNOLOGY DEPARTMENT

### OUR DEPARTMENT

The IT Department is composed of 14 staff and managers working in the following areas: Instructional Computing, Applications, and Infrastructure. Project teams and service groups are often made up of technicians from various groups, sometimes augmented by outside consultants.

### OUR OPERATIONAL MISSION

This year, our focus will be on the following key assignments:

- To provide digital resource access to our community;
- To align with the Chancellor's Office Tech Center;
- To mitigate security threats;
- To engage with the College's educational leadership;
- To deliver a valued customer service;
- To engage in an information technology maturity process.

### OUR APPROACH

We integrated the following principles into our operations:

- Efficiency and effectiveness;
- Predictive risk management;
- Application integration;
- Cloud-first, mobile-first strategy;
- Fiscal responsibility.

## ENVIRONMENTAL SCAN

### SWOT ANALYSIS

	POSITIVE	NEGATIVE
INTERNAL	<b>Strengths</b> <ul style="list-style-type: none"> <li>• Bond funding</li> <li>• Following industry standard roadmaps</li> <li>• Centralized devices management</li> <li>• Values-driven operating model</li> </ul>	<b>Weaknesses</b> <ul style="list-style-type: none"> <li>• Inadequate ServiceDesk coverage</li> <li>• BYOD Wifi challenges</li> <li>• Shrinking staffing</li> <li>• Lack of Compliance</li> </ul>
EXTERNAL	<b>Opportunities</b> <ul style="list-style-type: none"> <li>• training and learning opportunities</li> <li>• Available sample framework and guidelines</li> <li>• Chancellor's Office's support</li> <li>• Expanding Online Education</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>• Cybersecurity challenges</li> <li>• Compliance challenges</li> <li>• Physical security on campus</li> <li>• Increasing OPEX</li> </ul>

## CYBERSECURITY INITIATIVES

During this calendar year 2020, the IT leadership will continue to build up its internal capability and develop processes to address cybersecurity threats. We are planning to work on the following initiatives:

- Get institutional approval for the proposed *Cyber Incident Management Guidelines*;
- Review and improve our compliance with [CIS Critical Security Controls](#);
- Review and improve our compliance with [NIST 800-171](#);
- Improve system monitoring & detection;
- Develop a strategy for threat prevention;
- Contract with incident response retainer services;
- Perform a security audit if budget allows.

## KEY PROJECTS

In addition to routine tasks such as MSI reporting, year-end reports, rolling terms, server upgrades, software patches, system monitoring, etc., our technicians have a long list of projects we will be working on this year. The following table succinctly depicts the project list.

INFRASTRUCTURE				
ID	Name/Description	Estimate Start time (2020)	Estimate End	Status/Notes
	CENIC CCC-2449 between sites circuit upgrade to 10GB	April	August	
	CENIC CCC-1647 & CCC-1648 uplinks circuit upgrade to 10GB	December	December	
	Firewall upgrade	December	December	
	Fiber optics expansion and replacement	Ongoing	Ongoing	
	CAT6 data wiring projects	January	March	
	Wireless coverage expansion	Ongoing	Ongoing	
	Security Camera System deployment	April	August	
	Migration from HP to Ruckus switches	In progress	June	
	SecureAll routing Layer 3 conversion	January	March	
	Telephone hardware replacement	Ongoing	Ongoing	
	Continuous telephone core system upgrade	Ongoing	Ongoing	
	E911 Database update with AT&T and PTX	Ongoing	Ongoing	
	Elevator calls to be directed to PSAP	February	April	In collaboration with M&O
	Area of Refuge phone replacement	February	April	In collaboration with M&O

	Public phone replacement	January	July	
	Cold back up for data	In progress	March	
	Windows servers upgrade to 2016 version	In progress	February	
<b>INSTRUCTIONAL COMPUTING</b>				
	JAMF Apple device administration deployment	In progress	May	
	ServiceDesk rotation and scheduling (IVC & KTD)	February	May	
	Lab equipment upgrades and replacements	Ongoing	Ongoing	
	New library printing system – Paper Cut	Ongoing	April	
	Staff training	Ongoing	Ongoing	
<b>APPLICATION INTEGRATION &amp; DEPLOYMENT</b>				
	Oracle 19C upgrade	Ongoing	June	
	SQL server upgrade	Ongoing	January	
	DegreeWorks server upgrade	January	July	
	Banner 9 server operations	Ongoing	Ongoing	
	ESM App server upgrade	Ongoing	Ongoing	
	Communication Manager – Banner 9 SSB	Ongoing	June	
	Employee Profile/Electronic Timesheets – Banner 9 SSB	Ongoing	June	
	Faculty, Finance, General, Student and Student Registration – Banner 9 SSB	Ongoing	June	
	Banner 9 customization platform	April	August	

	MyCOM portal upgrade	Ongoing	June	Start testing in March
	Campus mobile apps	Ongoing	June	Start testing in March
	knowledge transfer due to a retirement	January	April	
	Visual Source Safe to Team Foundation Server upgrade (Phase 1)	February	March	
	Drupal 8 platform	Ongoing	May	
	Drupal 8 – International Students site	May	June	
	Drupal 8 – Interest Clusters site	May	June	
	Old web server deprecation	Ongoing	June	
	LaserFiche Digital Archiving	February	Ongoing	Unknown scope
	Accessibility Information Management (AIM)	April	June	In collaboration with SAS (Go live in August)
<b>FUTURE PROJECTS - 2021</b>				
	Unified Sync Tool deployment			
	Ellucian Ethos implementation			



## BUDGET ALLOCATIONS

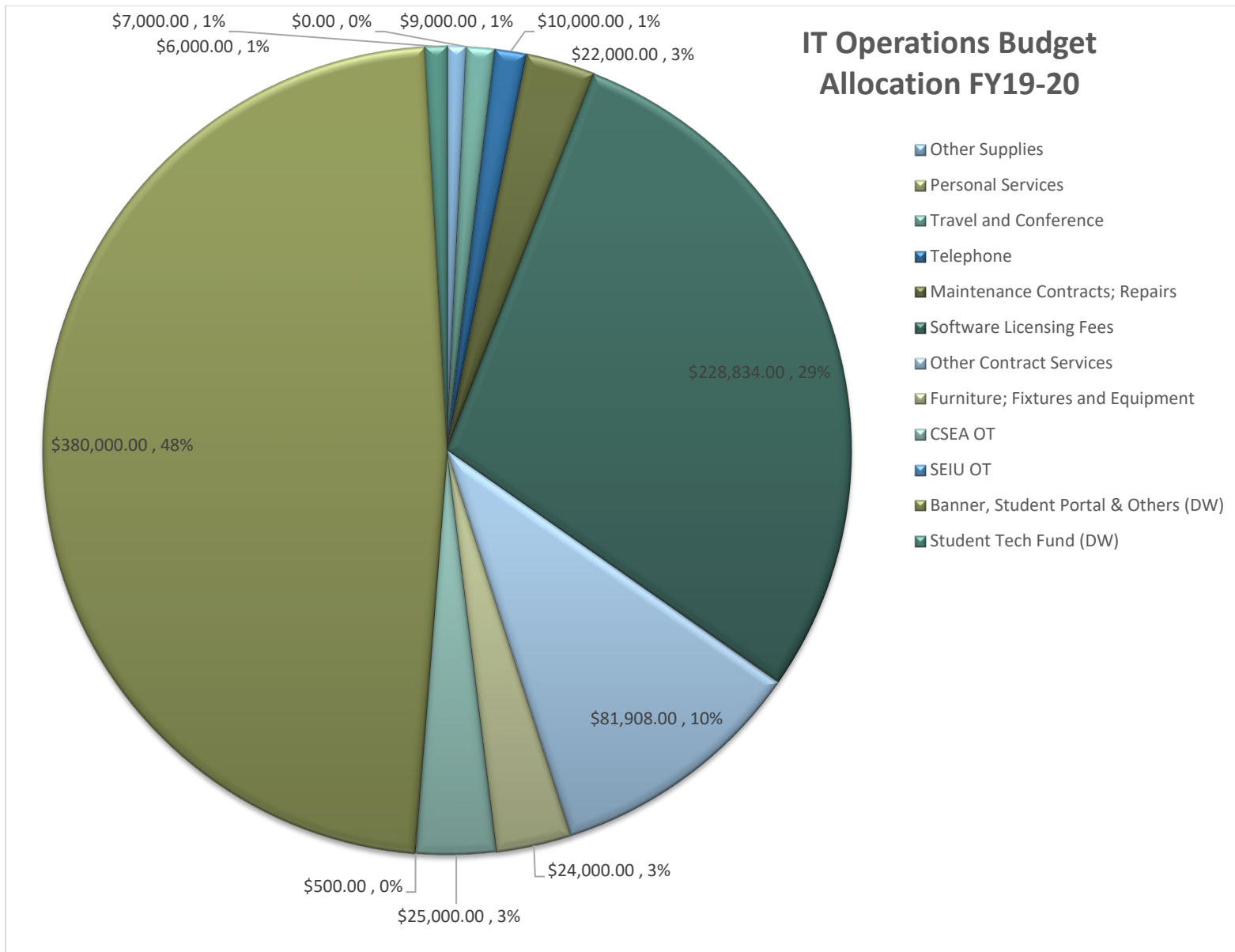
### OPEX

The operational spending during the calendar year 2020 will span across two fiscal years 2019-2021. Below is the FY19-20 allocations chart.

OPEX	FY19-20	Percentage
Other Supplies	\$6,000.00	1%
Personal Services	\$0.00	0%
Travel and Conference	\$9,000.00	1%
Telephone	\$10,000.00	1%
Maintenance Contracts; Repairs	\$22,000.00	3%
Software Licensing Fees	\$228,834.00	29%
Other Contract Services	\$81,908.00	10%
Furniture; Fixtures and Equipment	\$24,000.00	3%
CSEA OT	\$25,000.00	3%
SEIU OT	\$500.00	0%
Banner, Student Portal & Others (DW)	\$380,000.00	48%
Student Tech Fund (DW)	\$7,000.00	1%
<b>Total OPEX</b>	<b><u>\$794,242.00</u></b>	100%

### REMARKS

More of our operations are shifting from CAPEX toward OPEX spending, because of the benefits of cloud computing. Integrating *IT as a Service* allows us to focus more on delivering our own services rather than on keeping our equipment running. Such a transformation presents many benefits for us but requires changes in our funding formulas.



## APPENDIXES

### APPENDIX 1: 2018-19 IT SURVEYS

#### Student Highlights

- Appointment reminders are best delivered by SMS; although, most respondents still prefer overall communicating through email;
- A number of respondents are dissatisfied with campus wireless as well as the Banner registration system;
- A significant number of respondents (26%) prefer blended courses (online & face-to-face);
- Technology-challenged faculty was an issue for a number of students;
- Overall technology experience at COM is good.

#### Faculty Highlights

- Faculty rated technology-enabled learning/working spaces (classroom, lab/library, & online) fairly well;
- Faculty encourage the use of technology for learning but NOT in the classroom;
- Only 18% of faculty are comfortable with online teaching environment; compared 26% of students;
- Overall technology experience at COM is good.

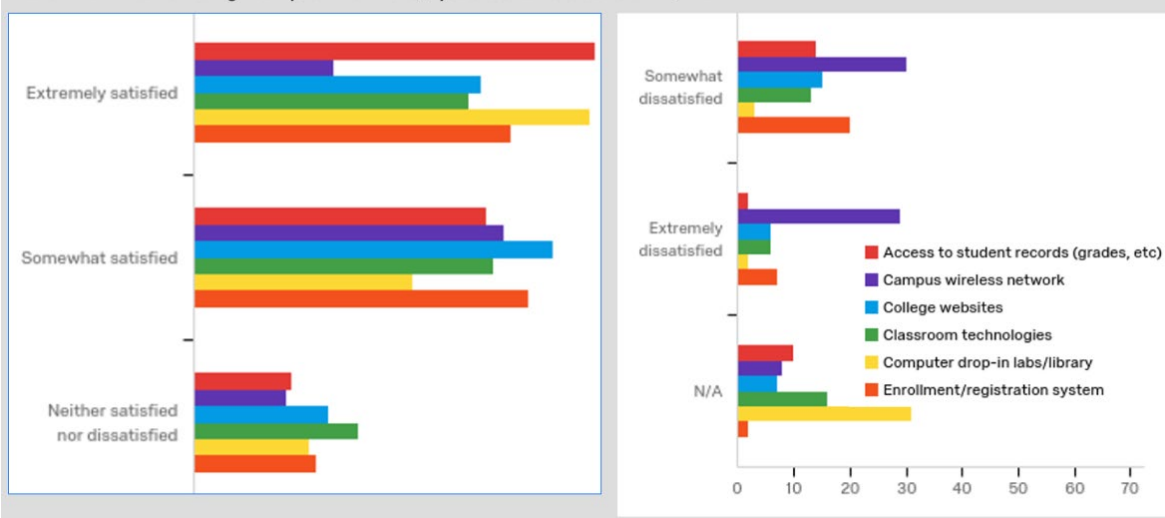
#### Staff Highlights

- IT ServiceDesk has room for improvement;
- Staff is dissatisfied with Wifi;
- Staff felt we should be doing more with technology training;
- Overall technology experience at COM is good.

#### Wifi Highlights

### Student IT Survey (December 2018 - 210 respondents)

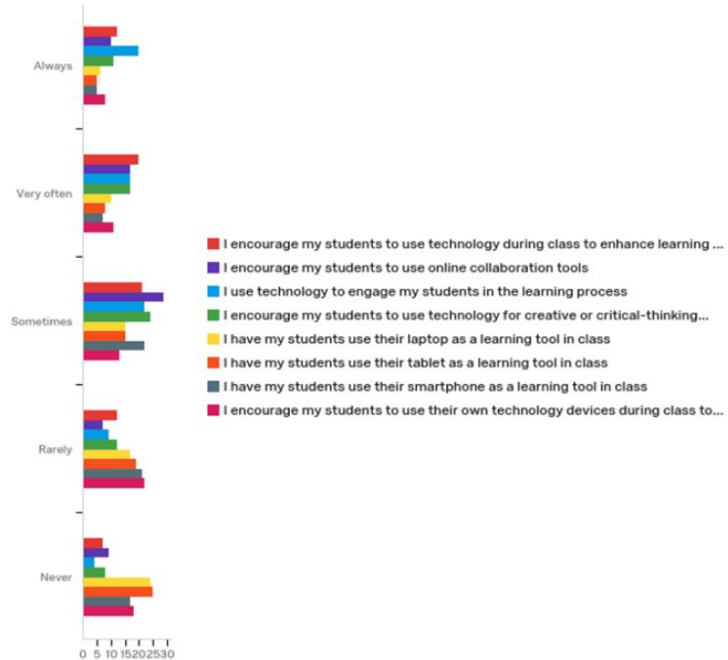
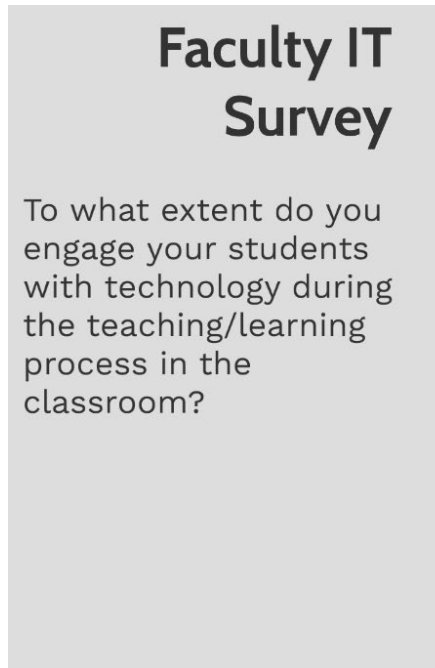
Please rate your satisfaction with the following College IT services? If you don't have any experience, please select N/A.



### Wifi Facts

- **4,002 Users** have registered through the Wifi portal;
- **10,478 devices** connected over the last 2 years;
- **10,358 devices** are currently identified with active certificates.

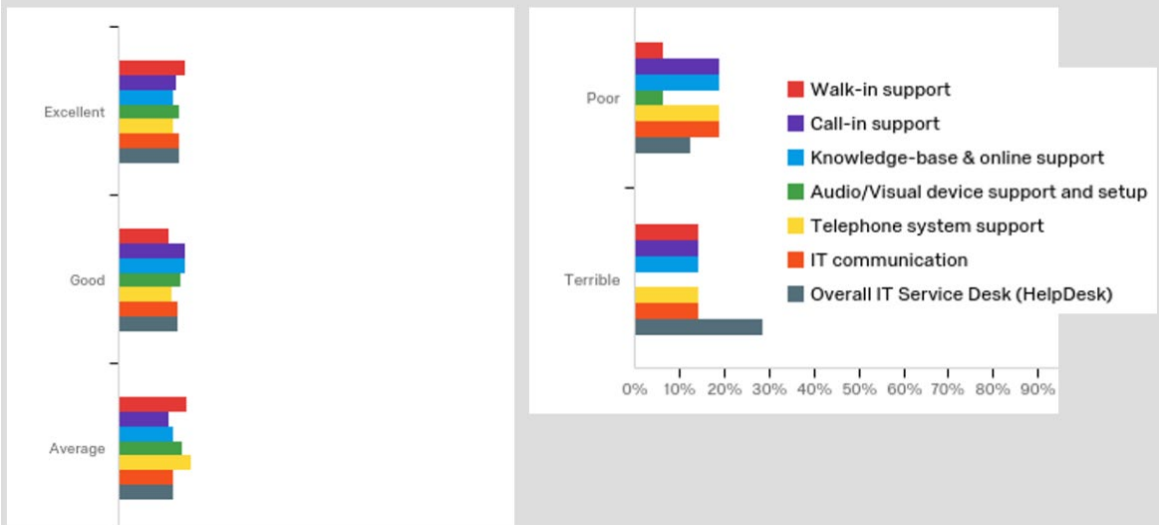
### Technology Usage Highlights



### IT ServiceDesk Highlights

## Staff IT Survey (December 2018 - 67 respondents)

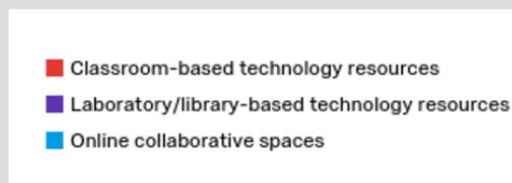
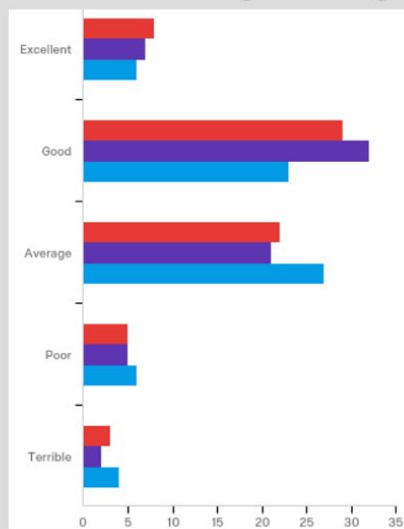
Please rate your satisfaction level with the following IT help desk services.



**Overall Rating Highlights**

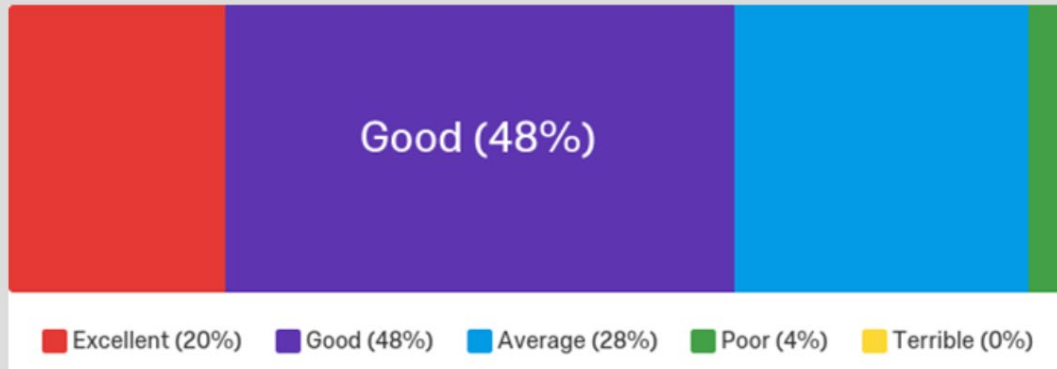
## Faculty IT Survey (December 2018 - 88 respondents)

Please rate your satisfaction level with the following COM technology-enabled learning/working spaces.



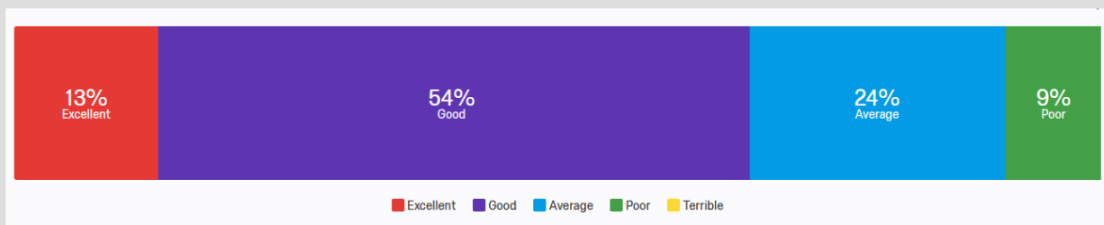
## Staff IT Survey (December 2018 - 67 respondents)

How would you describe your overall technology experience at COM?



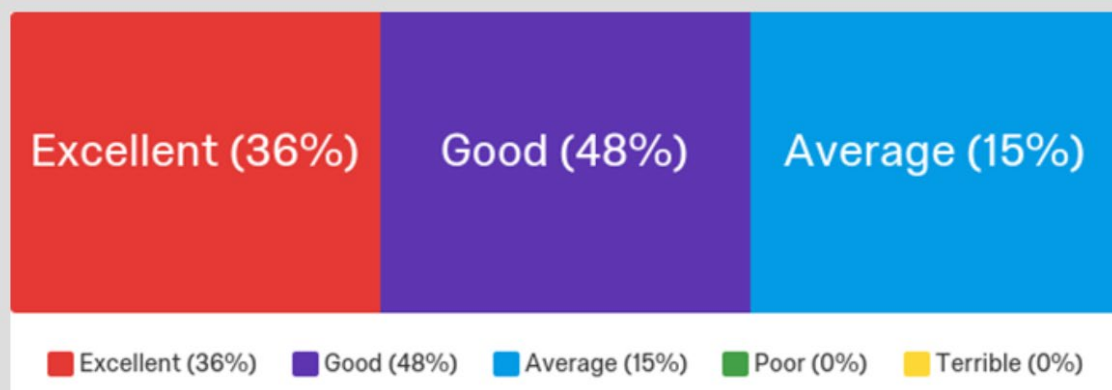
## Faculty IT Survey (December 2018 - 88 respondents)

How would you describe your overall technology experience at COM?



## Managers IT Survey (December 2018 - 49 respondents)

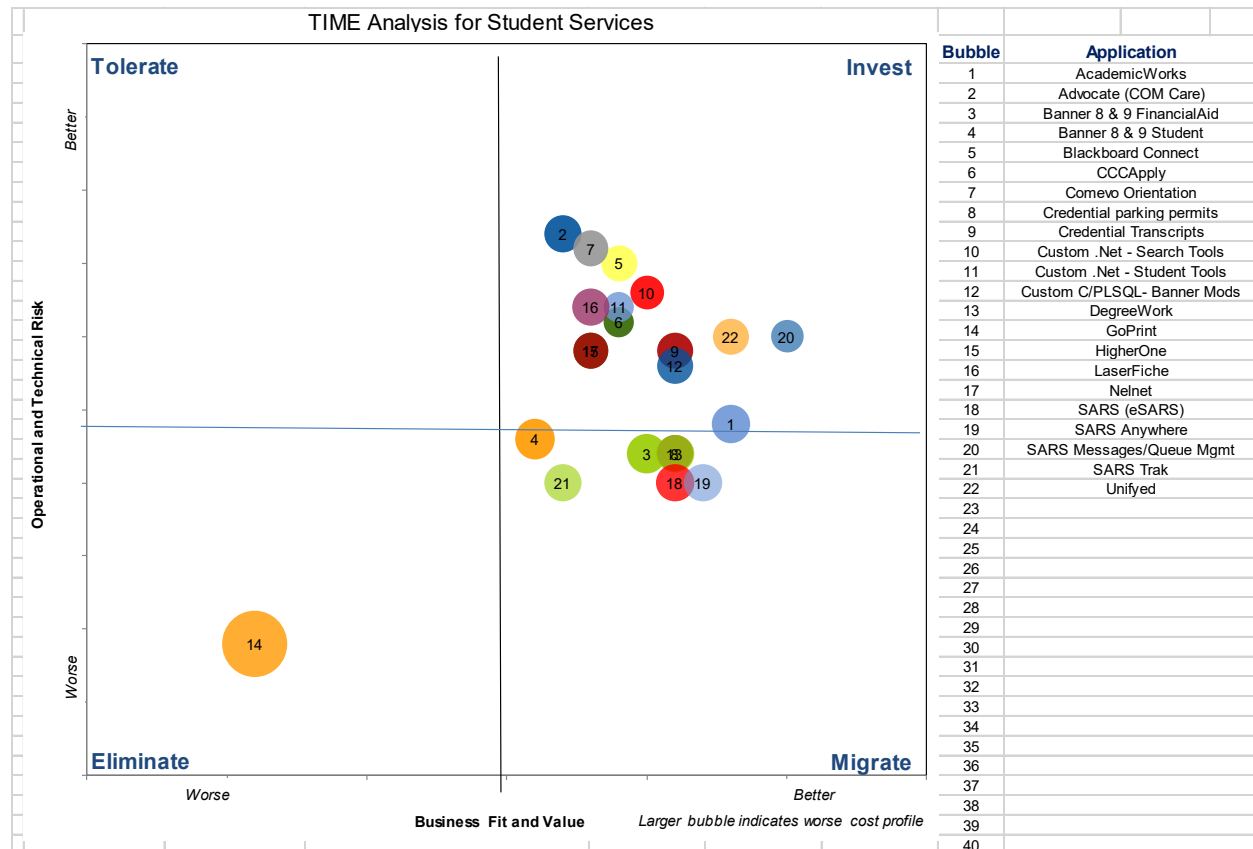
How would you describe your overall technology experience at COM?



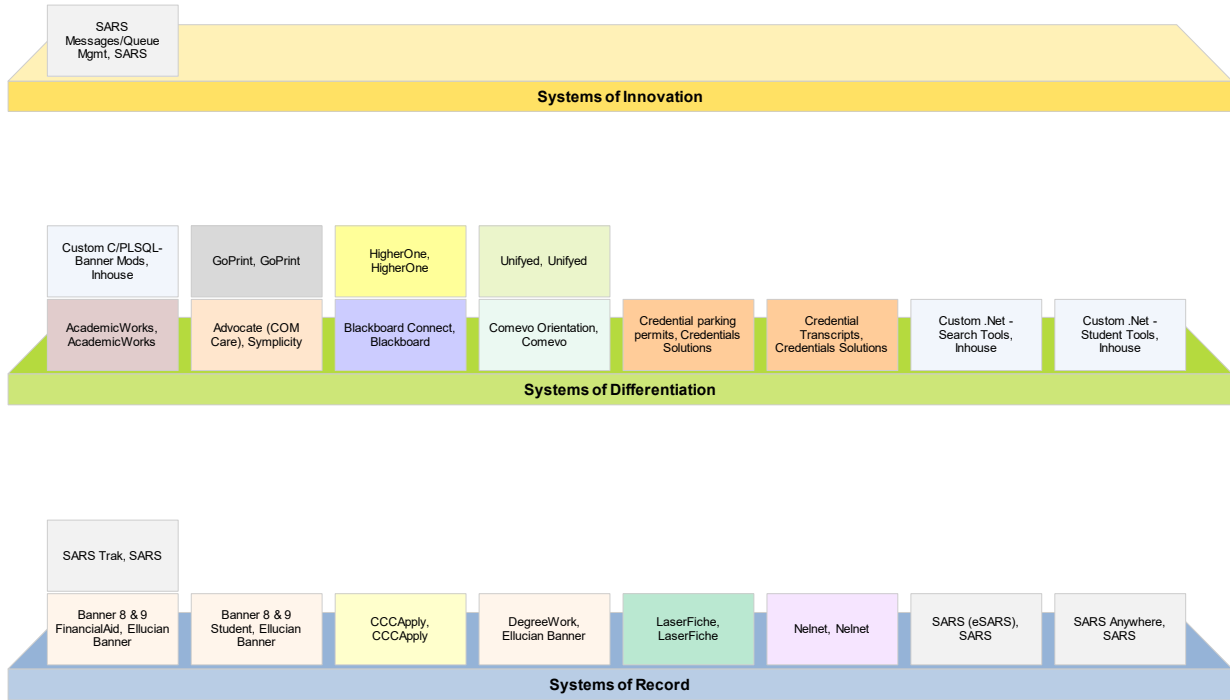
## APPENDIX 2: APPLICATION PORTFOLIO ANALYSIS – 2019

The Application Portfolio Analysis (APA) is a tool that categorizes our applications based on the “degree to which they contribute to the enterprise’s performance.” Our portfolio is divided in the following domains: Academic Affairs, Fiscal and Financial Services, Human Resources, Information Technology, College Operations, and Student Services. We evaluated each domain with both TIME and PACE methods. The following samples show the three most significant domains.

### STUDENT SERVICES

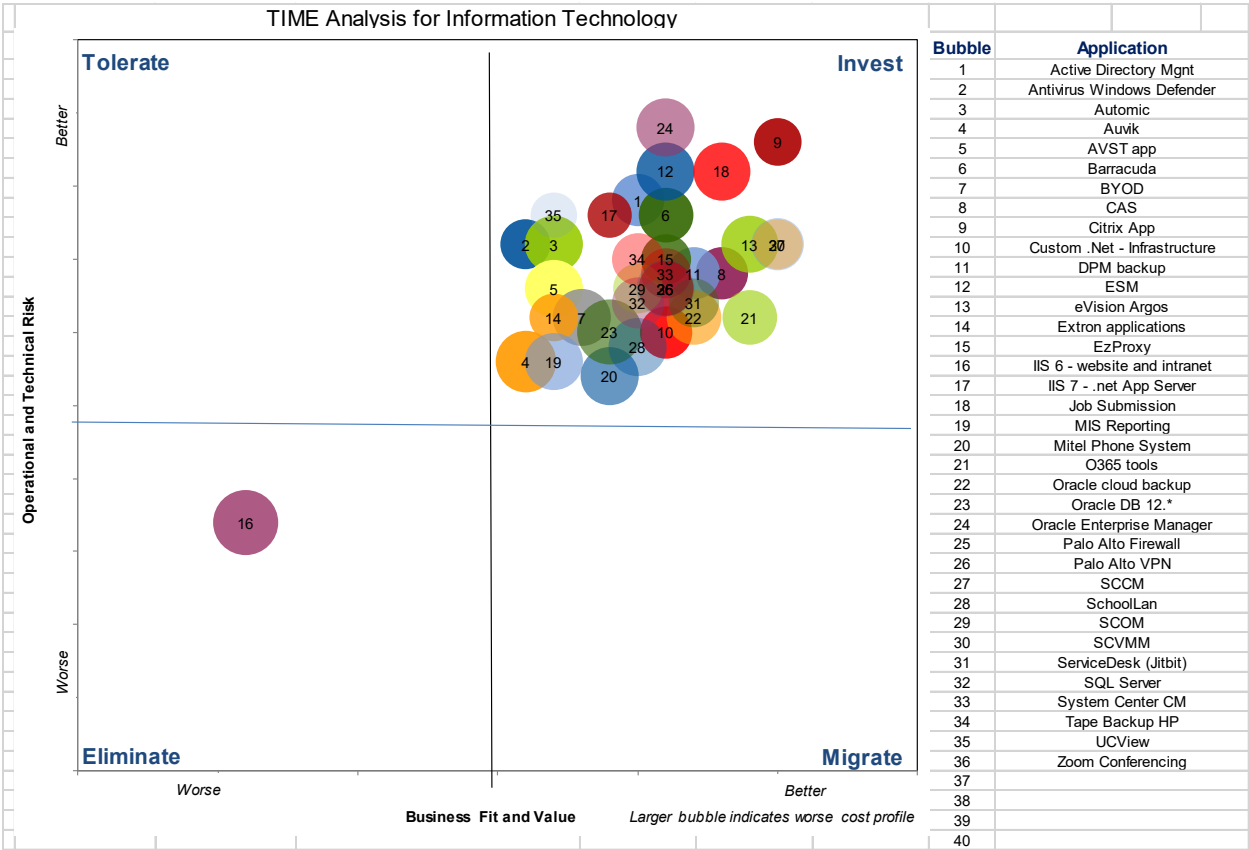


**Pace Layer Application Strategy Chart for Student Services**

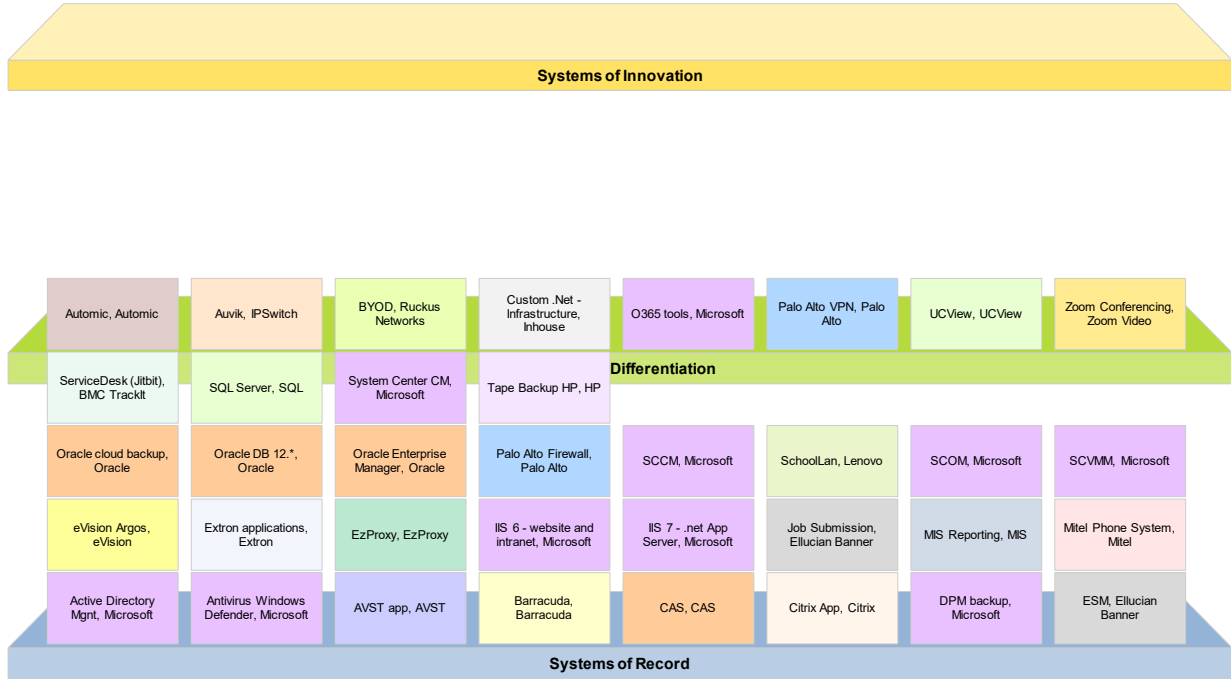




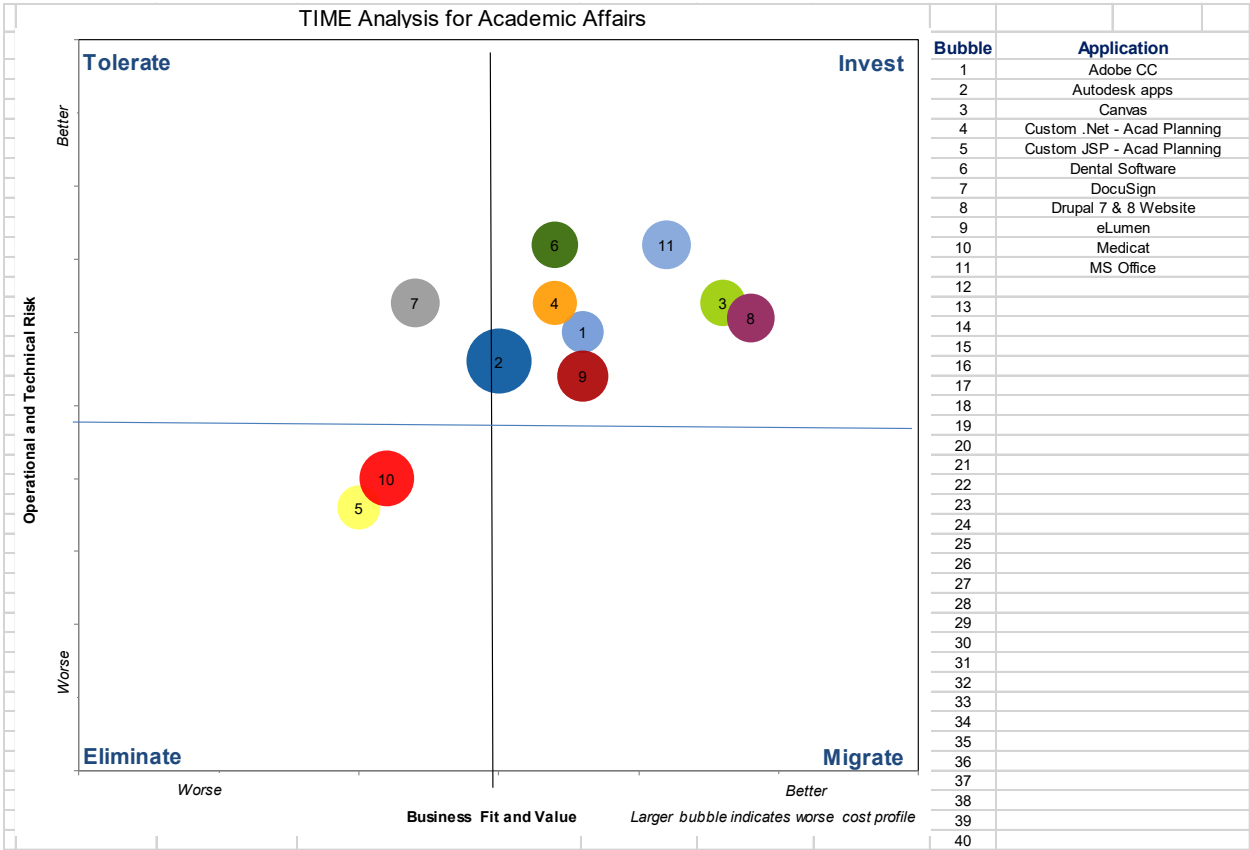
INFORMATION TECHNOLOGY



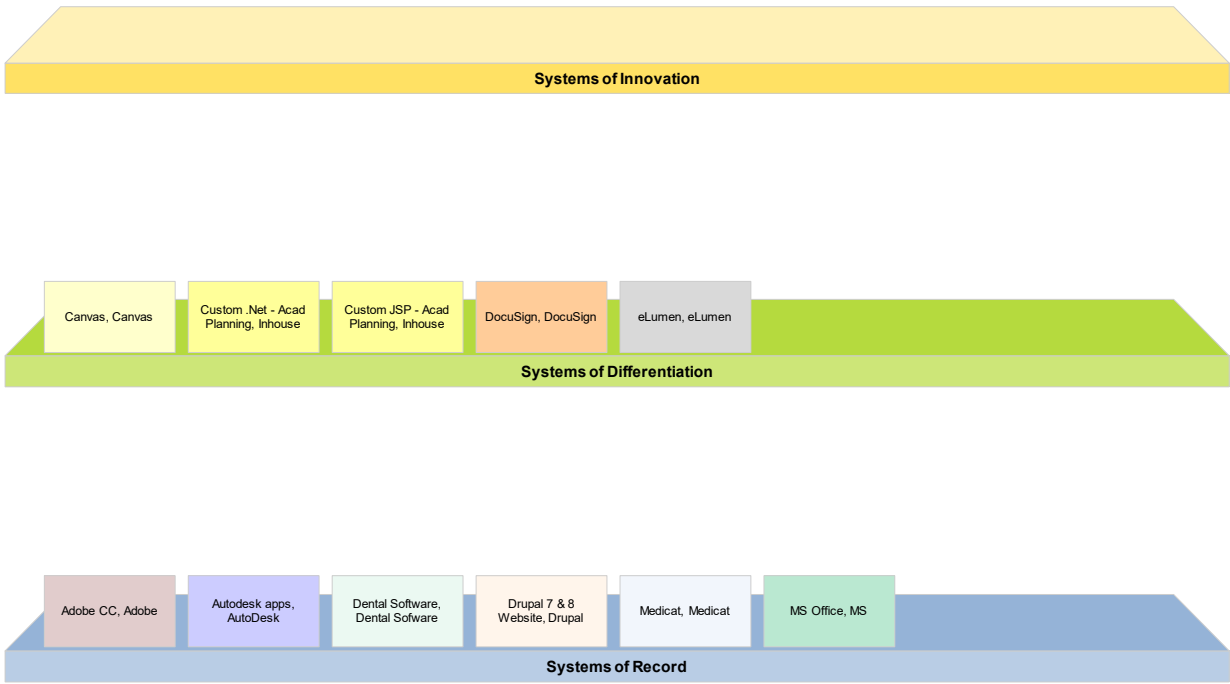
Pace Layer Application Strategy Chart for Information Technology



ACADEMIC AFFAIRS



Pace Layer Application Strategy Chart for Academic Affairs



### APPENDIX 3: CURRENT-FUTURE STATE - 2020

The Current State - Future State analysis indicates the internal rating of areas, activities, services, products, and processes related to our maturity process. This chart indicates our improvement tracks, based on the following four criteria: internal expertise, technology, budget, and processes. Please reach out to the IT management if you want to see more data about this analysis.

#### IT MATURITY: SAMPLE CHART

College of Marin IT Maturity Roadmap

1

Current State is good and needs to be sustained

2

Current State has opportunities to simplify and CI - Within 1 year

3

Current State needs strategic improvements - Long Term Needs needed

IT Systems Sub	IT Systems Components	Current State - December 2019						Future State - December 2020				
		People	Process	Technology	Budget	Total	Overall State	People	Process	Technology	Budget	Overall State
Internal Business Intelligence Services	Learning analytics, big data, Data visualization, Ellucian Ethos	2	3	3	3	11	3	2	2	2	3	3
External Business Intelligence Services	Nudging, texting, queue management, engagement	2	3	2	3	10	3	2	2	1	2	2
electronic messaging support	O365, exchange online, Azure AD Hybrid server, Barracuda (filter, secure, & Archiver),	2	2	1	2	7	2	2	1	1	2	1
Network Support services	Firewall, switches, Citrix Workspace, VPN, Netscaler, DNS, DHCP, BYOD, wireless	2	2	1	1	6	1	2	1	1	1	1
Security Services	Firewall management, MFA, IDAM, Antivirus, GPOs, scripts, SCCM, privacy and password policy management, compliance (PCI-DDS, FERPA, HIPAA, DOJ)	2	2	1	2	7	2	1	2	1	1	1
Server and Storage Support	HP3PAR, HP blades, physical servers, OSS,	1	2	2	2	7	2	1	1	2	2	1
backup & Recovery Services	DPM, Oracle cloud, replication, offsite storage, cluster server	1	2	2	2	7	2	1	2	1	2	1
Database Support Services	Oracle, SQL server, MySQL,	1	2	2	2	7	2	1	2	1	2	1
Assets management	Printers, fax, PCs, Macs, laptops, desktops, mobile devices, ServiceDesk, SCCM, Service catalog	2	2	2	2	8	2	2	2	2	2	2
Cloud application support services	AD Sync tool / O365 powershell scripts,	1	2	1	2	6	1	1	3	1	2	2
Multimedia application support	Zoom hardware, UCView, VuView, Extron system, projectors, screens, TVs, document camera,	3	3	2	2	10	3	2	2	2	2	2
Disaster Recovery & Business continuity												

- 1 Current State is good and needs to be sustained
- 2 Current State has opportunities to simplify and CI - Within 1 year
- 3 Current State needs strategic improvements - Long Term Needs needs

## SECURITY MATURITY: SAMPLE CHART

			Past State - May 2017					Current State - December 2019				
Family	Control	Short Name	People	Policy	Technology	Budget	Over all State	People	Process	Technology	Budget	Over all State
0	1	Inventory Devices	0	1	3	3	1.75					0
System	1.1	Automated inventory	2	3	0	3	2	3	1	3	3	2.5
System	1.2	Deploy DHCP server logging	2	3	2	3	2.5	2	1	2	3	2
System	1.3	Update the inventory	1	3	1	3	2	2	1	1	0	0
System	1.4	Maintain inventory	0	1	2	3	1.5	3	2	2	3	2.5
System	1.5	Deploy network authentication	2	2	1	0	1.25	3	3	3	3	3
System	1.6	Auth sys prior to con to network	3	2	3	3	2.75	3	3	3	3	3