Resolution Addressing Planning and Other Technology Challenges at Miramar College

Whereas, faculty members at San Diego Miramar College have expressed a number of concerns regarding campus technology services through both the Academic Senate and the Technology Committee (see Appendix A, "Academic Senate Items of Concern" and Appendix B, "Resolution 2022.9.4 – Information Technology Updates Needed for SDCCD");

Whereas, according to a survey conducted by Miramar's Office of Planning, Research, and Institutional Effectiveness in Spring 2023 (see Appendix C), 49% of employees are either dissatisfied or very dissatisfied with the quality and currency of hardware at Miramar, and 85% of employees encounter technology on campus that needs repair or support of some kind occasionally to very frequently (see Appendix B); as outlined in the ITS Assessment Report conducted by SDI Presence LLC (see Appendix D) in Winter 2024, satisfaction "with the support you receive in the classroom from Instruction IT Services" received the worst possible rating: "immediate focus and improvement may be warranted;" and these results and more are reflected in the "Technology Survey for Miramar Employees" distributed by the Academic Senate in Spring 2023 (see Appendix E);

~~Whereas, a number of employees have been discouraged from and/or reprimanded for sharing honest and well-informed input regarding justifiable technology needs and concerns (see Appendix F);~~

Whereas, faculty members have consistently reported a lack of involvement in and transparency of the technology planning processes in the traditional and non-traditional classroom, leading to critical decisions being made without meaningful consultation with faculty about how best to serve our students, in violation of California Education Code;

Be it therefore resolved, that the Academic Senate urges the Administration to conduct a comprehensive review of campus technology planning processes, incorporating faculty input at all stages and including documented, independent input from non-traditional faculty, Multimedia Specialists, and other technology personnel to ensure the college's technology services are equitable, efficient, and responsive to the needs of faculty, staff, and students alike;

Resolved, the Senate calls for the Administration to provide a transparent plan for addressing the aging and absent technology infrastructure on campus, with a clear

history, timelines, and metrics for improvement that include but are not limited to upgrading classroom equipment, technology for non-standard classrooms, and resolving technology accessibility issues;

Resolved, that the Academic Senate work with the Administration to ensure that Technology Services provides regular updates regarding the aforementioned aspects of this resolution.

Appendix A:

Academic Senate Items of Concern
(Technology Requests and Goals SDMC 050123)

The following, annotated list, also linked above, was presented to the San Diego Miramar College Academic Senate on May 16, 2023. An abbreviated list, excluding annotations, was subsequently presented to the Technology Committee at a meeting in Spring 2023. The Academic Senate Items of Concern is based on faculty feedback as well as the results from a survey conducted in Spring 2023 (by what was then known as the Office of Planning, Research, and Institutional Effectiveness–see Appendix B). Committee Minutes reflect that Committee Co-Chair and IT Director Kurt Hill was tasked with addressing these concerns. Although efforts were made to address item 1, subsequent minutes show that the Technology Committee has neither discussed nor referenced this list since the beginning of Fall 2023.

Technology Requests and Goals
to Address Concerns at Miramar College
May 1st, 2023

1. Address misuse and loss of technology[1].
2. Conduct a third-party audit of inventory, spending, budget request processes, and grant requests and disbursements to prevent mismanagement and misuse from reoccurring.[2]
3. Establish and communicate a clear technology support process.[3]
4. Establish better communication about what has been replaced and what resources we have to offer faculty, staff, students (also see pie chart below, Technology Survey).[4]
5. Have better clarity and transparency of budget allocations and how decisions are made.[5]
6. Establish a central inventory mechanism, as the current, unorganized method almost certainly has a negative impact on budget due to missing, lost, redundant, misused technology, not to mention impacts on faculty and students whose outdated technology is not on anyone's radar[6]
7. Ensure compliance with our Collective Bargaining Agreement (6.2.8) and the District's own security requirements by providing routine technology updates and replacements in our offices and at our class podiums.[7]
8. Provide proper tools to support measurements in our evaluations on the Appraisal Form and outlined in our Performance Review File on Innovation/Resourcefulness.[8]
9. Broadly, in preparation for future Accreditation, we must ensure we are fulfilling the following standards according to the "Draft 2024 Accreditation Standards with Draft Review Criteria and Suggestions for Evidence."[9]

* Faculty would also like to schedule a meeting with President Lundburg, AFT President, Jim Mahler, Director of Information Technology Services, Peter Maharaj, Pablo Martin, and Lisa Muñoz to review these specific requests.

According to President Lundburg via email on 4/19/23:

> "… we need to be intentional and outcomes oriented with all this. **The situation as it stands is not acceptable, and we're committed to seeing real improvements that alleviate these issues."**

Here's where we are, after President Lundburg's email (4/19) and our meetings (3/22):

- I shared with him thoughts I have on what may be backdrop information **(no real mechanisms in place for communication between faculty and IT… in particular, IT planning and operation in terms of instructional hardware and software)**
- Brett is going to work on the possibility that we don't have adequate (or

existing at all) mechanisms for faculty getting their needs known to the IT/instructional tech folks. We spent some time exploring possible obstacles to getting effective mechanisms in place as well, and he's in agreement with how to approach that.

- Brett will be working with Kurt Hill on how things can be changed to **improve meeting instructional needs in the classroom and in faculty offices**
- Brett will be working with District IT (Peter) and Miramar IT (Kurt) to address the concerns raised by Lisa and you, but also to dig deeper into the **systemic issues** behind them.

Endnotes

1. We request immediate replacements of 35 of the original 60 missing laptops secured through a Basic Skills Student Outcomes and Transformation BSSOT grant.
   - These laptops were taken from the School of Liberal Arts some time during 2020.
   - In November of 2020, Kurt Hill requested and received **100 laptops to replace lab-laptops used by personnel for remote operations** ($129,600) via HEERF funding: "When the pandemic hit, lab-laptops were checked-out to personnel for remote operations support. New laptops are needed to replace existing depleted lab-laptops and build back the inventory."
   - We also request the immediate return of the **6 tablets** purchased for COMS students with HEERF funding but withheld by IT–faculty do not have a full class set without these additional 6.

2. Importantly, there have been questions raised about Cares/HEERF Grant funding decisions: how they were made, why certain requests were denied, and the amount that was awarded disproportionately, with roughly 70% of the $1,073,918.63 awarded to administrative requests.

It also appears that the District is receiving **incomplete or inaccurate information** about the state of technology based on recent emails and communication from the District in contrast to what the four colleges in the District are experiencing:

- Refer to Greg Smith's Information Technology Services Spring Updates, 4/29/23, via district email.
- Refer to recording and/or slides presented by Peter Maharaj during Academic Senate meeting, 4/19/23.
- Refer to "Resolution 2022.9.4 - Information Technology Updates Needed for San Diego Community College District (SDCCD) Classrooms and Faculty Offices and

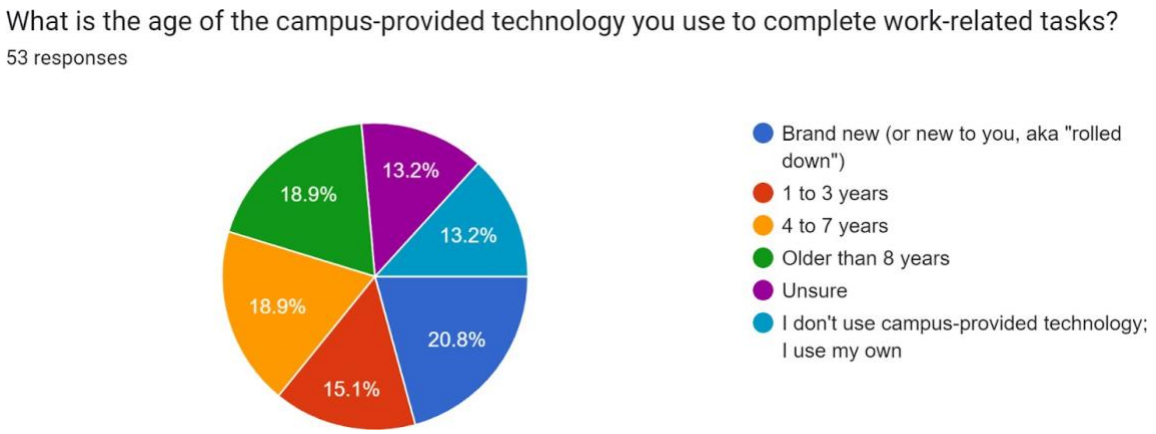
Adherence to the Collective Bargaining Agreement (CBA) Requirements, "by Academic Senate Presidents, SDCCD: *Whereas, many classroom podium arrays are no longer current or in need of repair, thereby impairing effecting classroom instruction, while many tenure/tenure-track faculty offices and adjunct workplaces have computers and software/applications that are no longer current, thereby impairing preparation for teaching, remote synchronous teaching and participation in committee meetings;*

3. List **clear and accessible contact information** with parties responsible on our school webpages. Establish **clearer protocols** for timely tech support.

- Refer to the Instructional Computing Services webpage, which does not offer communication protocols, technology support ticket links, or specific employees to contact depending on the device: **https://sdmiramar.edu/node/35148**
- Provide **adequate training, onboarding, and support** to properly use campus technology: (46% of respondents on the Technology Survey for Miramar Employees answered "rarely or never" and 30% "occasionally" to "How frequently are training opportunities provided to properly use campus technology?", totaling 76%).

4. These encounters with outdated technology and the subsequent lack of awareness of updated technology has a tremendous effect on campus culture, and future enrollment.

- Further, we MUST provide equity: **during the recent, 4/21/23, Black Student Success Summit, SDCCD,** participants noted that their second biggest hurdle is outdated technology on the Miramar College campus. Participants shared stories of computers being unusable in the LRC. They emphasized that for those from low-socioeconomic households, working technology on campus is absolutely essential to their success.
- While SOME computers have been replaced in the LRC, this has not been advertised AT ALL (even my embedded tutor doesn't know about the state of the computers that he works near in the ASC) Meanwhile, in L-208, that Library computer lab, per Bill Stamos during 10/22: We determined the computers are not able to effectively run the software needed to use the internet or Canvas. Has L-208 been updated? It's unclear to faculty, and students certainly do not know if it has been.



5. To ensure transparency, we need access to all **budget-related and allocation documents**, which are currently not linked:

- Please refer to **Budget, Resources, and Development** (https://sdmiramar.edu/brds). The following links have no documents or additional information: **Resource Re-allocation, CCampus Allocation Model, Tentative Budget, Adopted Budget, New Resources, Classified & Academic Hiring Priority, One time Allocations (Innovation).**
- Since **six recent meetings for BRDS** have been canceled since **12/14/2022**, we do not have **up-to-date or accurate information about Miramar College's budget, specifically.**
- The Technology Committee has canceled most of their meetings for the 2022-23 academic year as well. (https://sdmiramar.edu/governance/committees/technology-committee)

6. When asked about the technology inventory process during the **Technology Committee on Tuesday, 4/25, Kurt Hill asserted the following:**
   - **Hill, our Miramar IT Director does not have access to the District tech inventory (and wishes he did).**
   - He and Brett Bell went on to say that there are a variety of methods used to catalog inventory: various departments do it manually (AV, ICS, Administrative Computing, various schools, departments) Then, these lists SHOULD go into PeopleSoft, but PeopleSoft is not user-friendly friendly, meaning that, according to Bell, the lists "are not 100% accurate."

7. The District itself states that "current technology" is no more than five years old: As stated in "CANVAS TECHNICAL REQUIREMENTS, SDCCD: Technical Requirements for Online Learning:, our district expects that current students will use computers that are 5 years old or newer when possible, which informs **"current District standards"** referenced in our Collective Bargaining Agreement.
   - We need current, working technology in order to most effectively teach both online and face-to-face classes. Go to: https://www.sdccd.edu/about/departments-and-offices/instructional-services-divisio n/online-learning-pathways-1/students/technical%20requirements%20for%20online %20learning.aspx

In the 4/25 Technology Committee meeting, V.C. Maharaj referenced the severe security risk that systems running Windows 7 present.
   - **Refer to:** "FBI issues warning over Windows 7 end-of-life": https://www.documentcloud.org/documents/7013778-FBI-PIN-alert-on-Windows-7-E nd-of-Life.html and https://www.zdnet.com/article/fbi-issues-warning-over-windows-7-end-of-life/

8. Refer to San Diego Community College District College Faculty Appraisal Form. https://drive.google.com/file/d/1Yh8Zu4jRzHEjVOL8QJi5SxGbGLt9d2c9/view

9. Concerns have been raised about section Standard III: Resources, C. Technology draft of the **San Diego Miramar College Accreditation Institutional Self-Evaluation Report, 2023** https://sdccd0.sharepoint.com/:w:/r/sites/AccreditationSteeringCommittee/_layouts/15/doc 2.aspx?sourcedoc=%7B0797B6CA-4FBD-4213-9C70-EFF6284702B0%7D&file=ISER%20Dra ft%203%20April%2027%202023.docx&action=default&mobileredirect=true&DefaultItemOp en=1
   - Refer to "Draft 2024 Accreditation Standards with Draft Review Criteria and Suggestions for Evidence" Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges.

- 1.2 The institution establishes meaningful and ambitious goals for institutional improvement, innovation, and equitable student outcomes.
- 1.4 The institution's mission directs resource allocation, innovation, and continuous quality improvement through ongoing systematic planning and evaluation of programs and services.
- 2.6 The institution uses delivery modes and teaching methodologies that meet student and curricular needs and promote equitable student learning and achievement.

Appendix B:

Resolution 2022.9.4 – Information Technology Updates Needed for SDCCD

The following resolution, also linked above, was approved by the San Diego Miramar College Academic Senate on October 18, 2022. The resolution was approved by all four SDCCD Academic Senates and was presented to the SDCCD Board of Trustees in Fall 2022.

SAN DIEGO COMMUNITY COLLEGE DISTRICT

CITY COLLEGE • MESA COLLEGE • MIRAMAR COLLEGE • COLLEGE OF CONTINUING EDUCATION

Resolution 2022.9.4 – Information Technology Updates Needed for San Diego Community College District (SDCCD) Classrooms and Faculty Offices and Adherence to the Collective Bargaining Agreement (CBA) Requirements: Academic Senate Presidents John Crocitti, Maria-José Zeledon Perez, John Bromma, and Pablo Martin

Whereas, effective classroom instruction depends on fully functional computer podiums capable of using current software and reliably connected to peripheral devices such as but not limited to digital projectors and speakers, microphones, document cameras and laptop computers;

Whereas, to prepare for teaching face-top-face classes, to conduct remote synchronous teaching, to develop asynchronous online courses and to participate in remote committee meetings, tenured/tenure track faculty and adjunct instructors need office and workplace computers capable of using current software and applications;

Whereas, Articles 5.3 of the Collective Bargaining Agreement (CBA) stipulates that SDCCD provide adjunct faculty workplaces with computers with internet and District network access; Article 6.2.8 of the CBA stipulates that SDCCD provide tenure and tenure-track faculty members with a computer that meets current District standards for new equipment; and Article 6.5.2 of the CBA stipulates that SDCCD provide audio-visual equipment and media;

Whereas, many classroom podium arrays are no longer current or in need of repair, thereby impairing effecting classroom instruction, while many tenure/tenure-track faculty offices and adjunct workplaces have computers that are no longer current, thereby impairing preparation for teaching, remote synchronous teaching and participation in committee meetings;

Resolved, that the District and the four colleges audit classroom and office/workspace technology to determine which computers and associated peripheral devices are no longer current or in full operating condition;

Resolved, that SDCCD expedite replacement and/or repair of computers and associated peripheral devices that are no long current or in full operating condition according to the aforementioned audit.

Appendix C:

Miramar Employee A.S. Technology Survey Report

This Miramar Employee AS Technology Survey and subsequent report was conducted by what was then known as S.D. Miramar College's Office of Planning, Research, and Institutional Effectiveness in Spring 2023

Miramar Employee AS Technology Survey Report

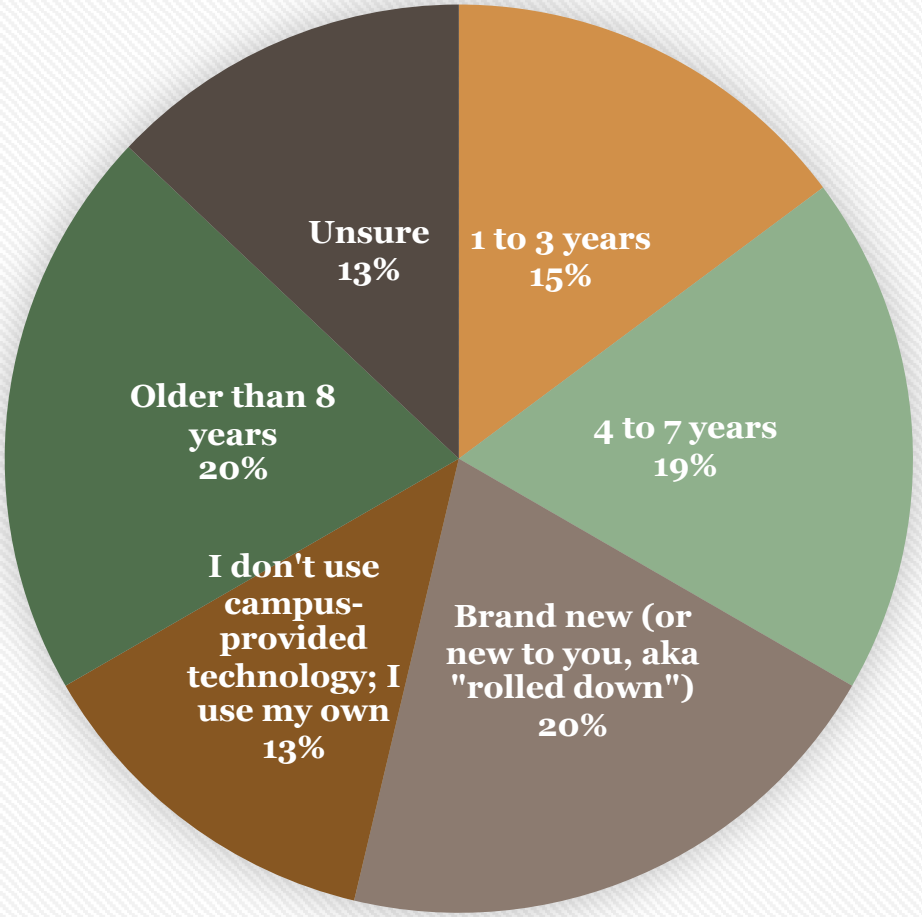
Spring 2023

SAN DIEGO MIRAMAR COLLEGE

OFFICE OF PLANNING, RESEARCH, AND INSTITUTIONAL EFFECTIVENESS

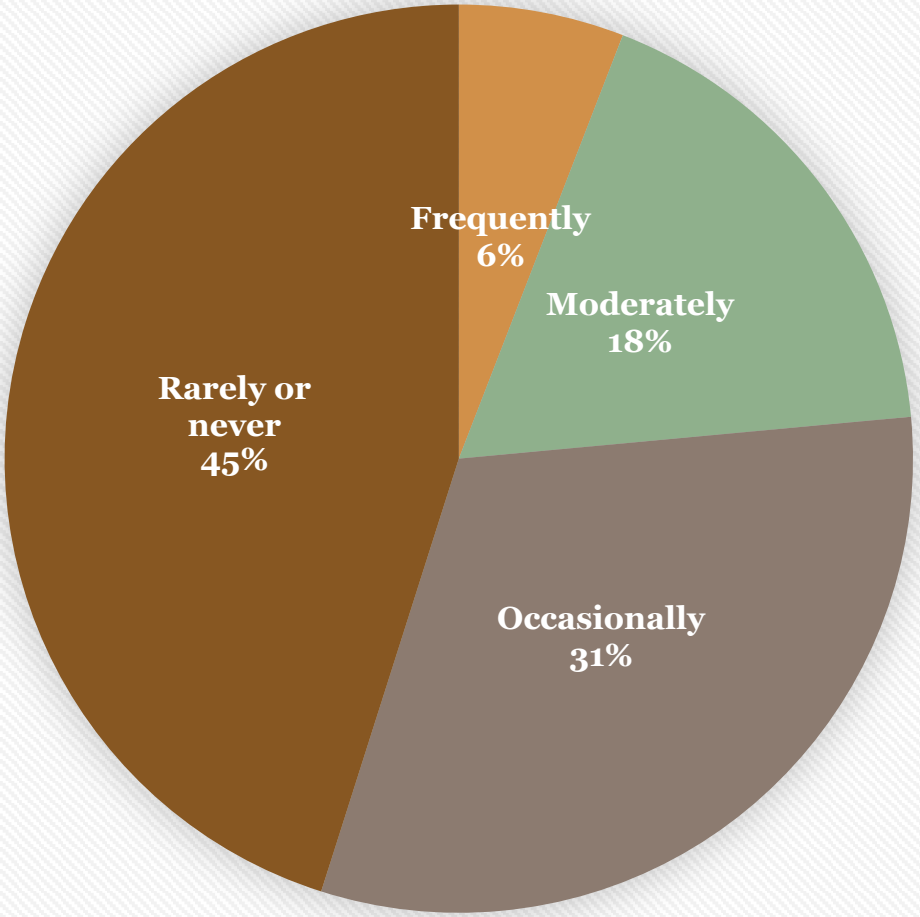
What is the age of the campus-provided technology you use to complete work-related tasks?

Total Response: 54



How frequently are training opportunities provided to properly use campus technology?

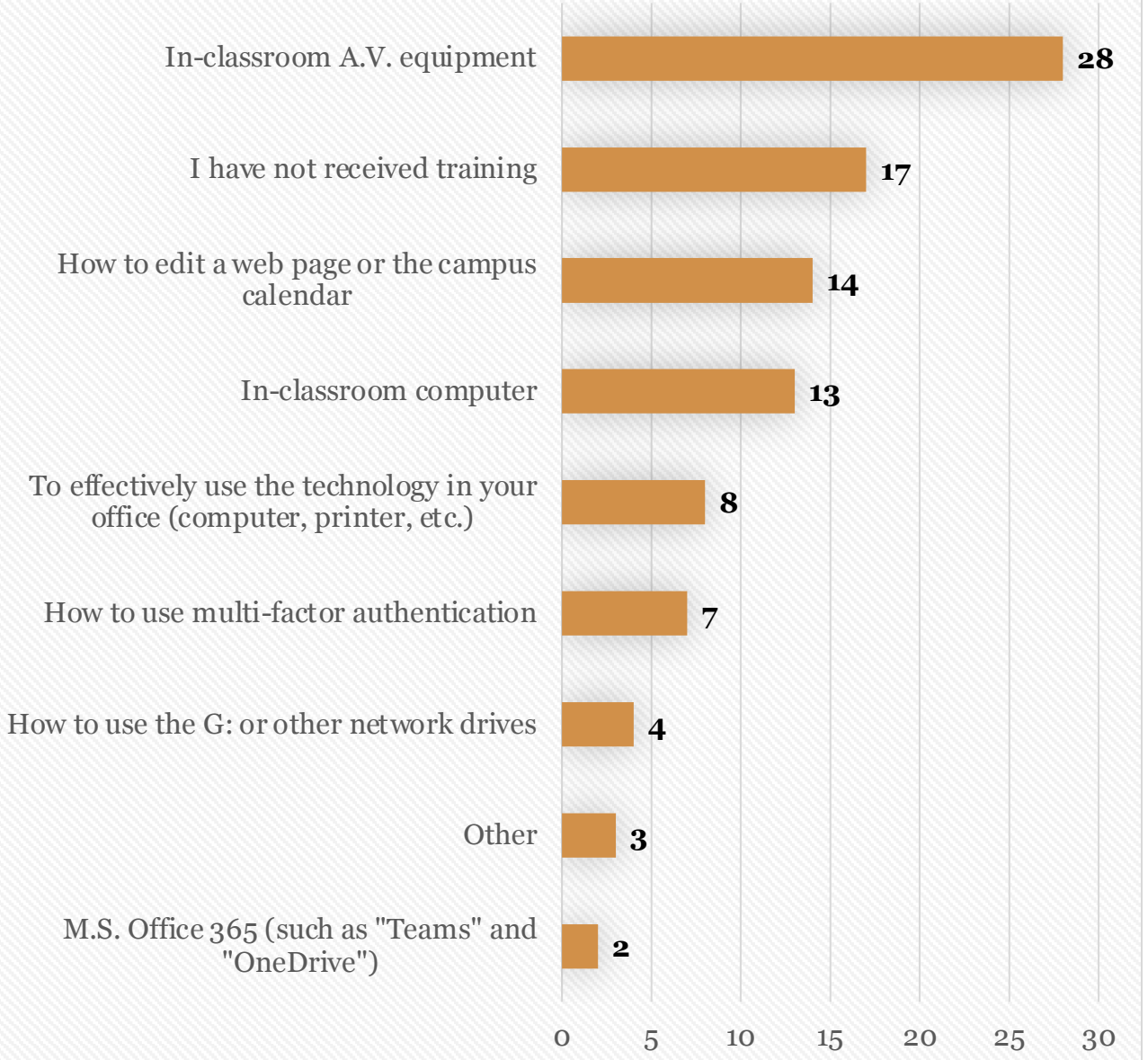
Total Response: 51



Please check off all of the training you received:

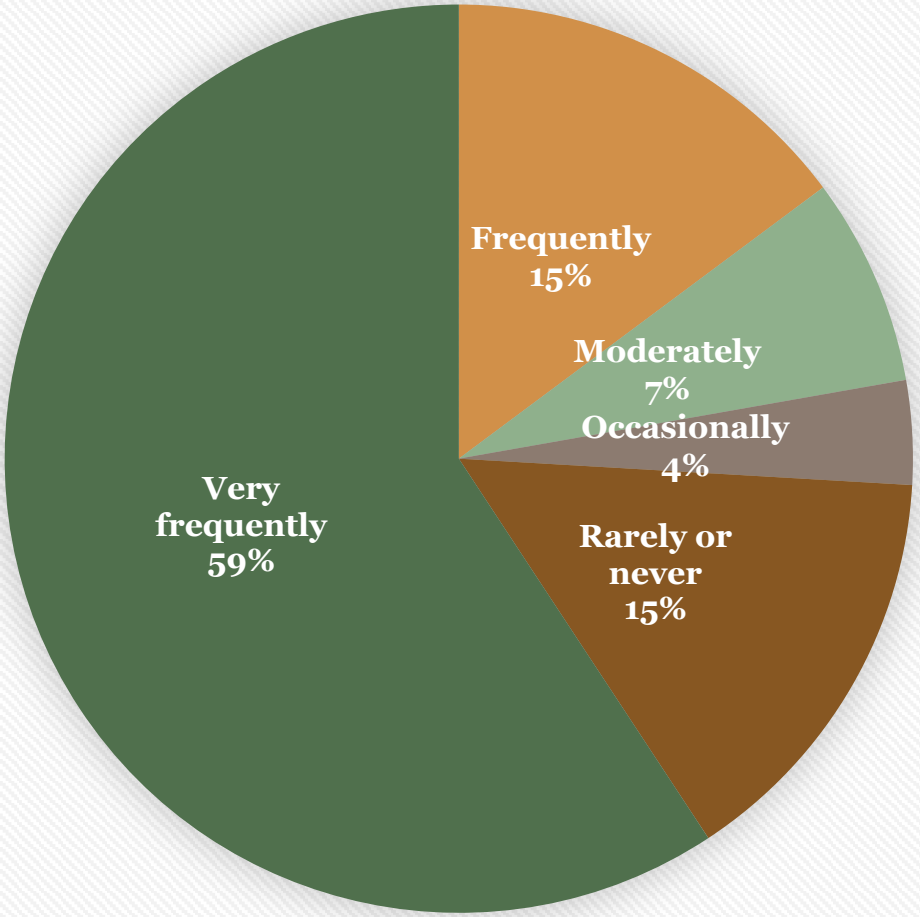
Total Response: 54

Note: This question allows multiple selections



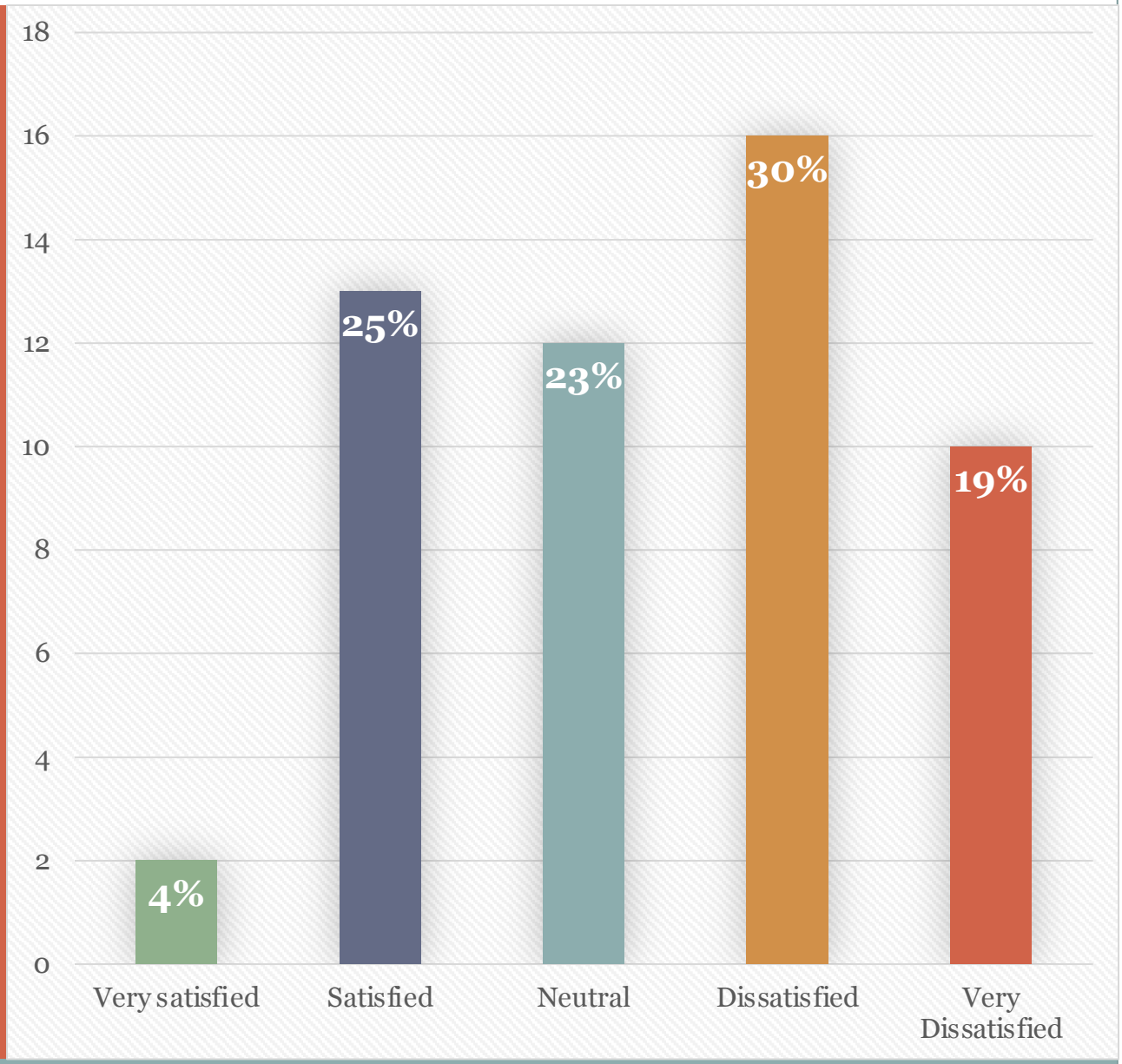
How frequently do you use campus-provided technology to complete work-related tasks while on campus?

Total Response: 54



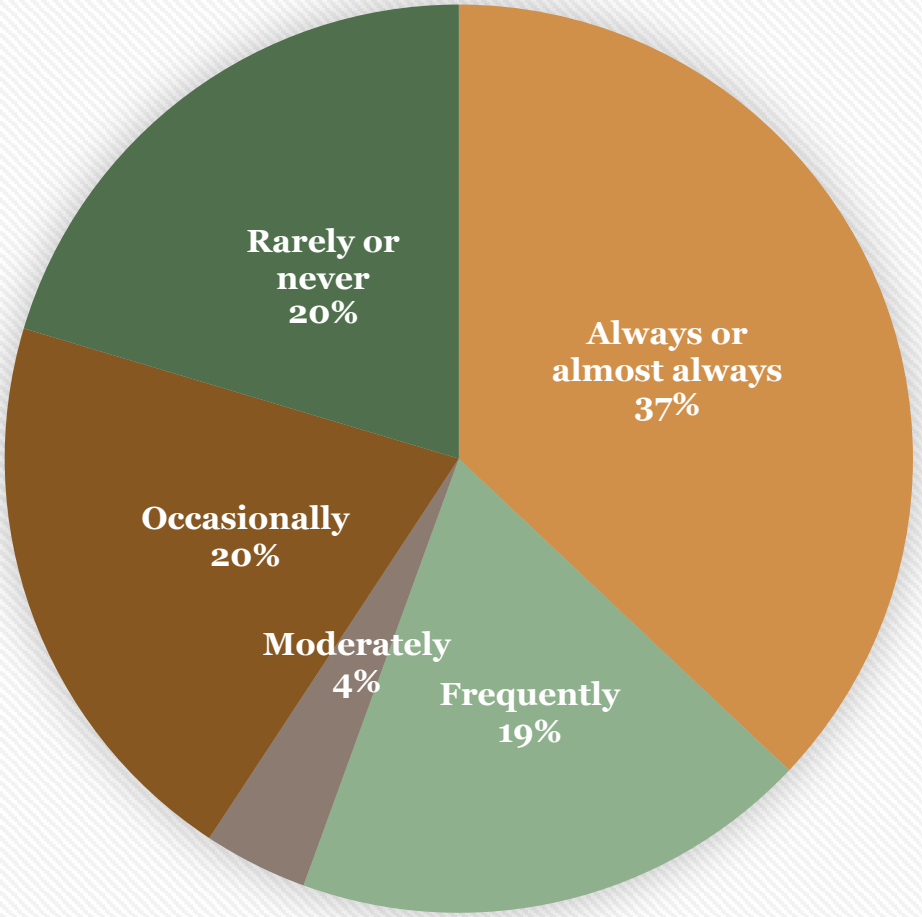
When you do use campus-provided technology, how satisfied are you with the quality and currency of hardware (computer, screen, camera, plugs/adapters, etc.)?

Total Response: 53



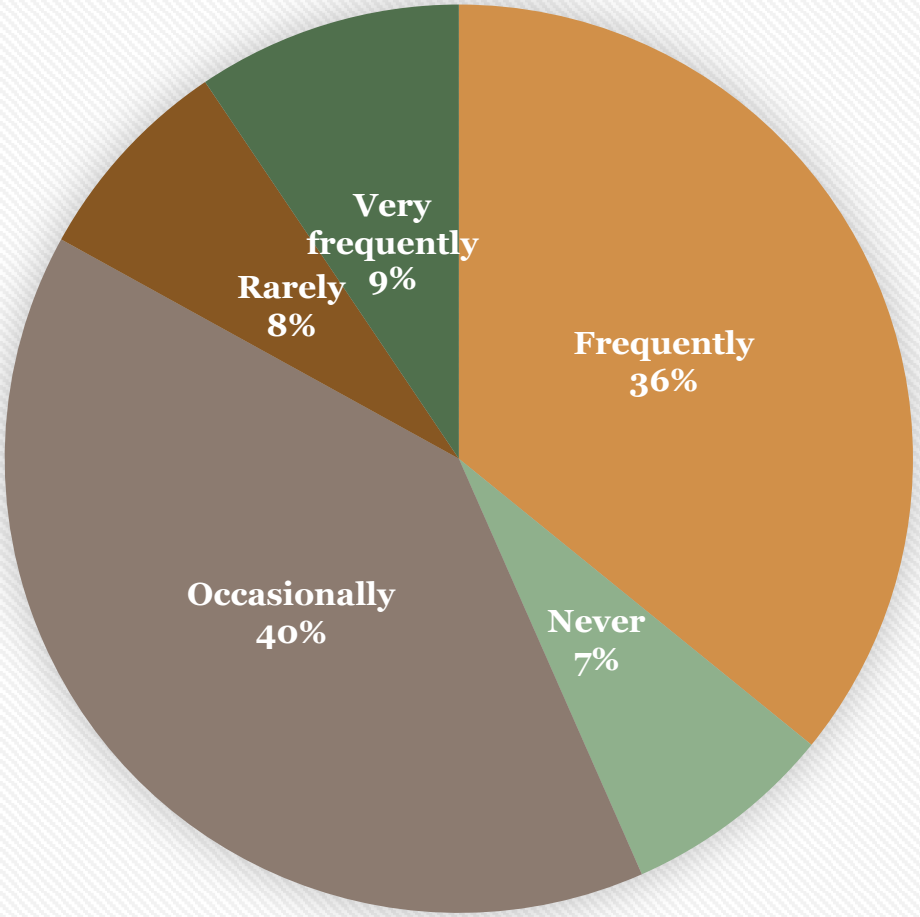
How frequently do you use your own personal technology to complete work-related tasks while on campus?

Total Response: 54



How often do you encounter technology on campus that needs repair or support of some kind (i.e. challenges with a classroom computer or A.V., challenges in a computer lab, etc.)?

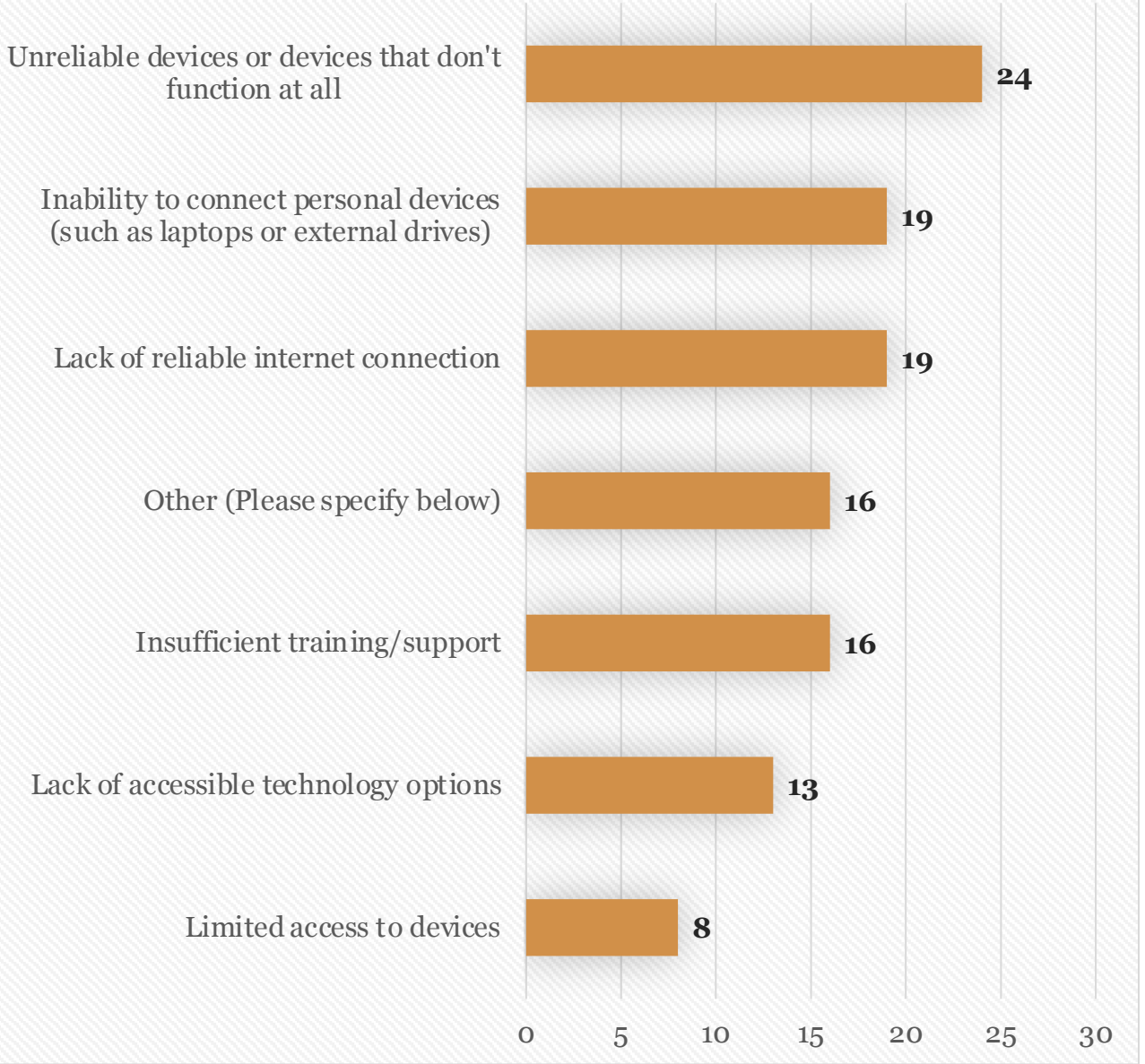
Total Response: 54



What specific challenges do you face in accessing and utilizing technology services in your classroom, lab, office, etc? (Select all that apply)

Total Response: 50

Note: This question allows multiple selections



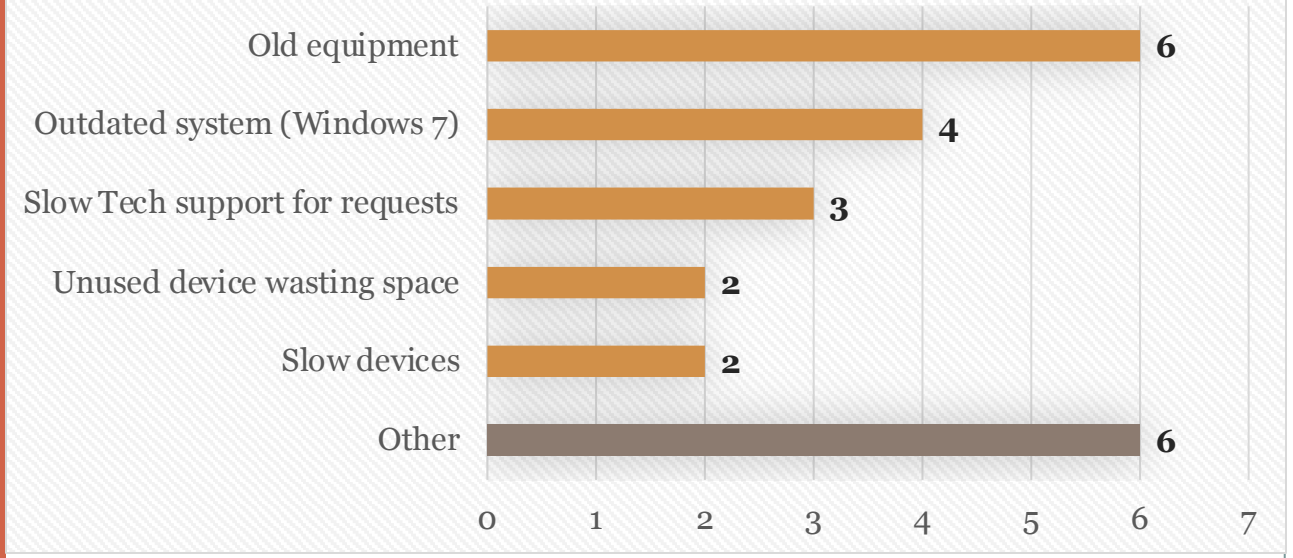
If you answered "Other" above, please list those specific challenges here:

Total Response: 19

Note:

Some responses are summarized with more than one key features

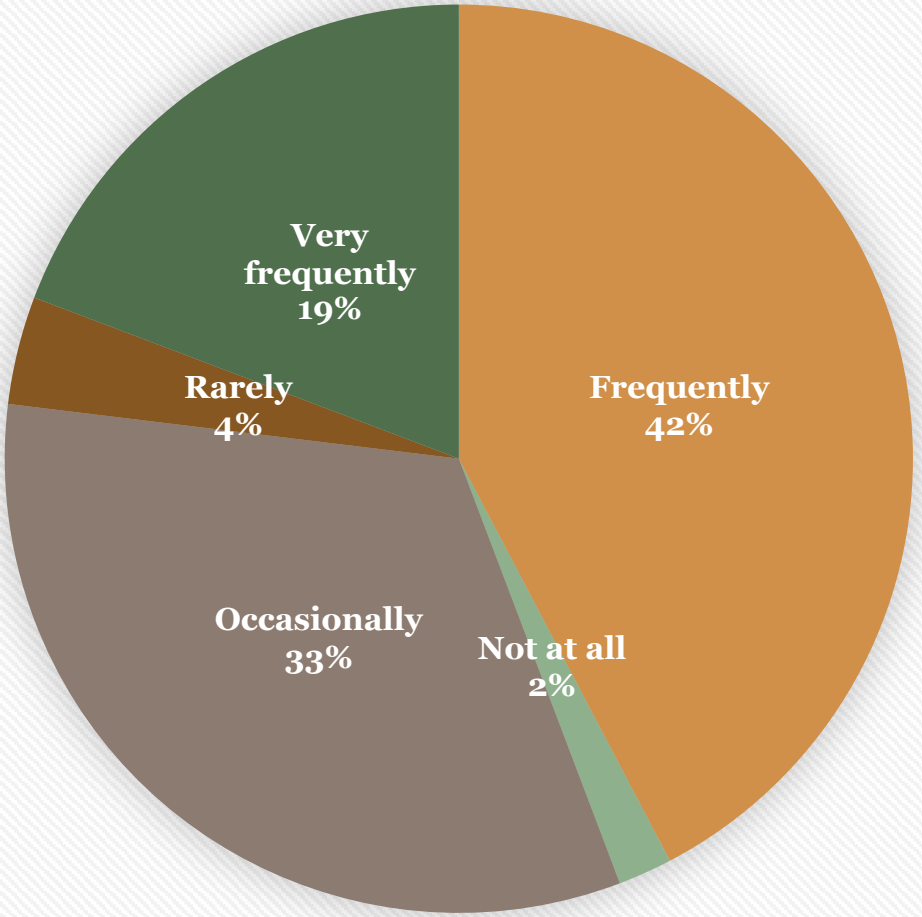
Only select quotes are displayed here to represent the consensus



- "In 2018, I asked for support to install equation editor to PowerPoint. Four years later, it *still has not been installed*." "The office PC is still on Windows 7."
- "I am a full time faculty member and my office computer is extremely *slow* so I have resorted to using my laptop for all my work. The desktop computer in the office just *takes up space* at this point. "
- "Extremely *slow* computers in classrooms using *outdated* technology and operating systems that are no longer supported by Microsoft."
- "The laptop connectors in the classrooms are not only *outdated*, they are completely *obsolete*."

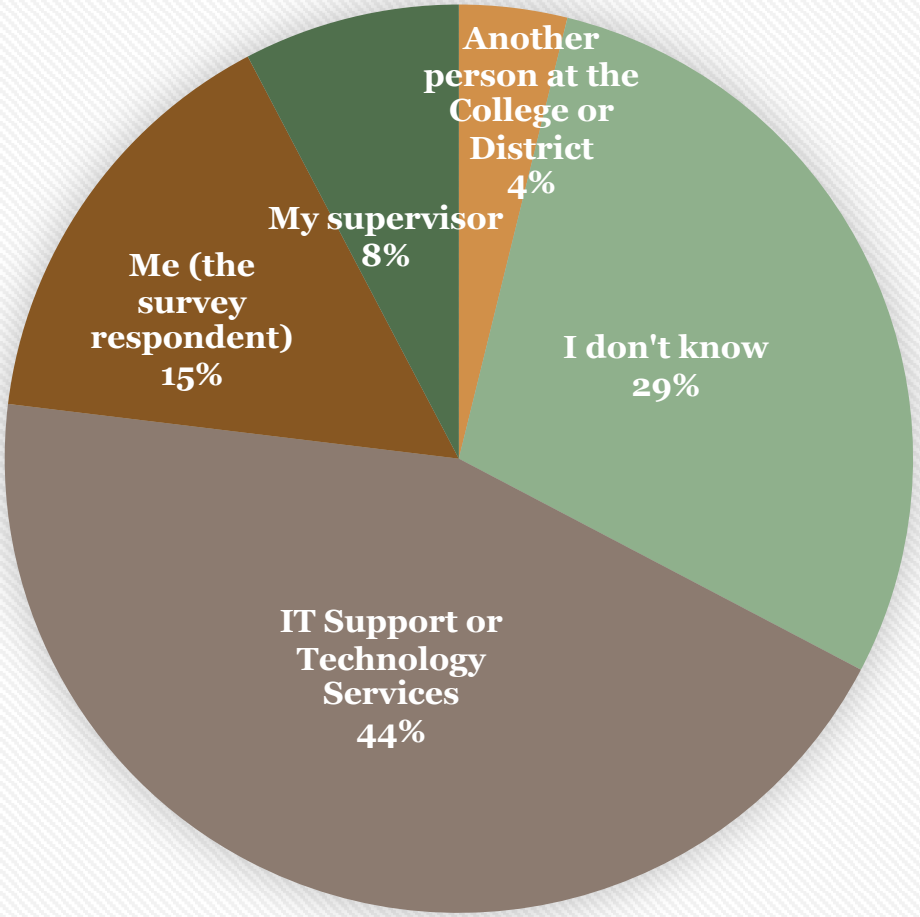
To what extent do you believe students have been impacted by challenges related to using the technology on campus (computer labs, Wi-Fi, etc.)?

Total Response: 52



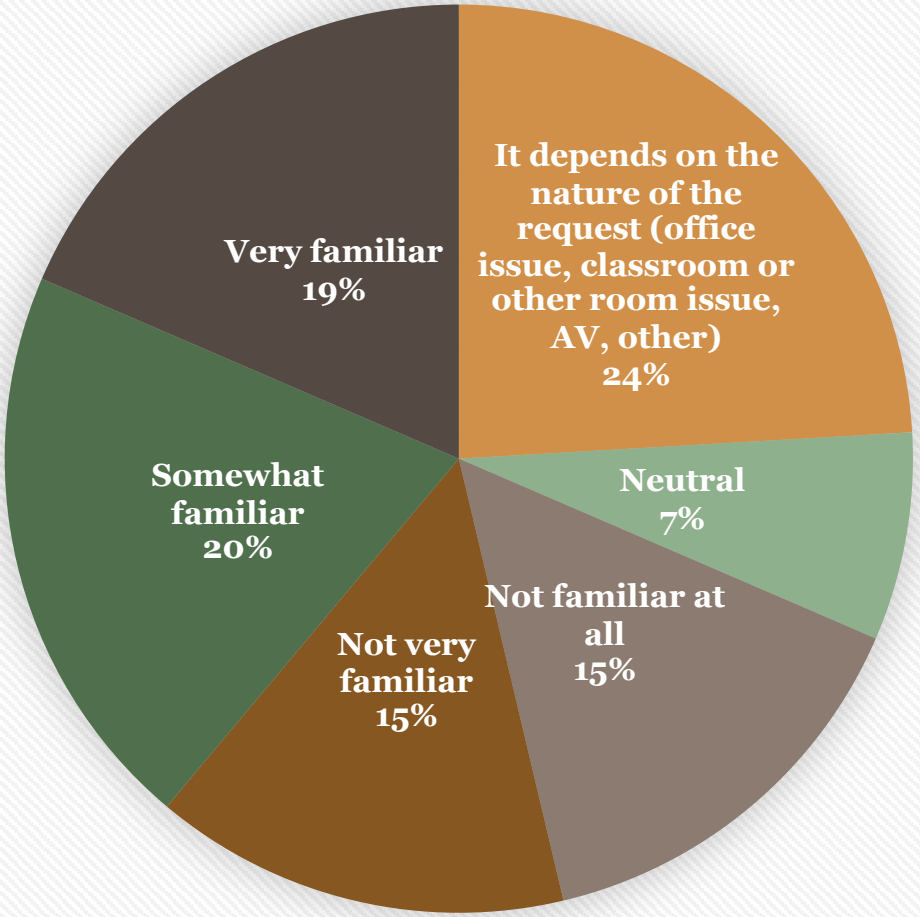
Who is responsible for making sure the technology you need to do your job is in good working order?

Total Response: 52



How familiar are you with the process to request and receive technology support (office issue, classroom or other room issue, AV, other)?

Total Response: 54

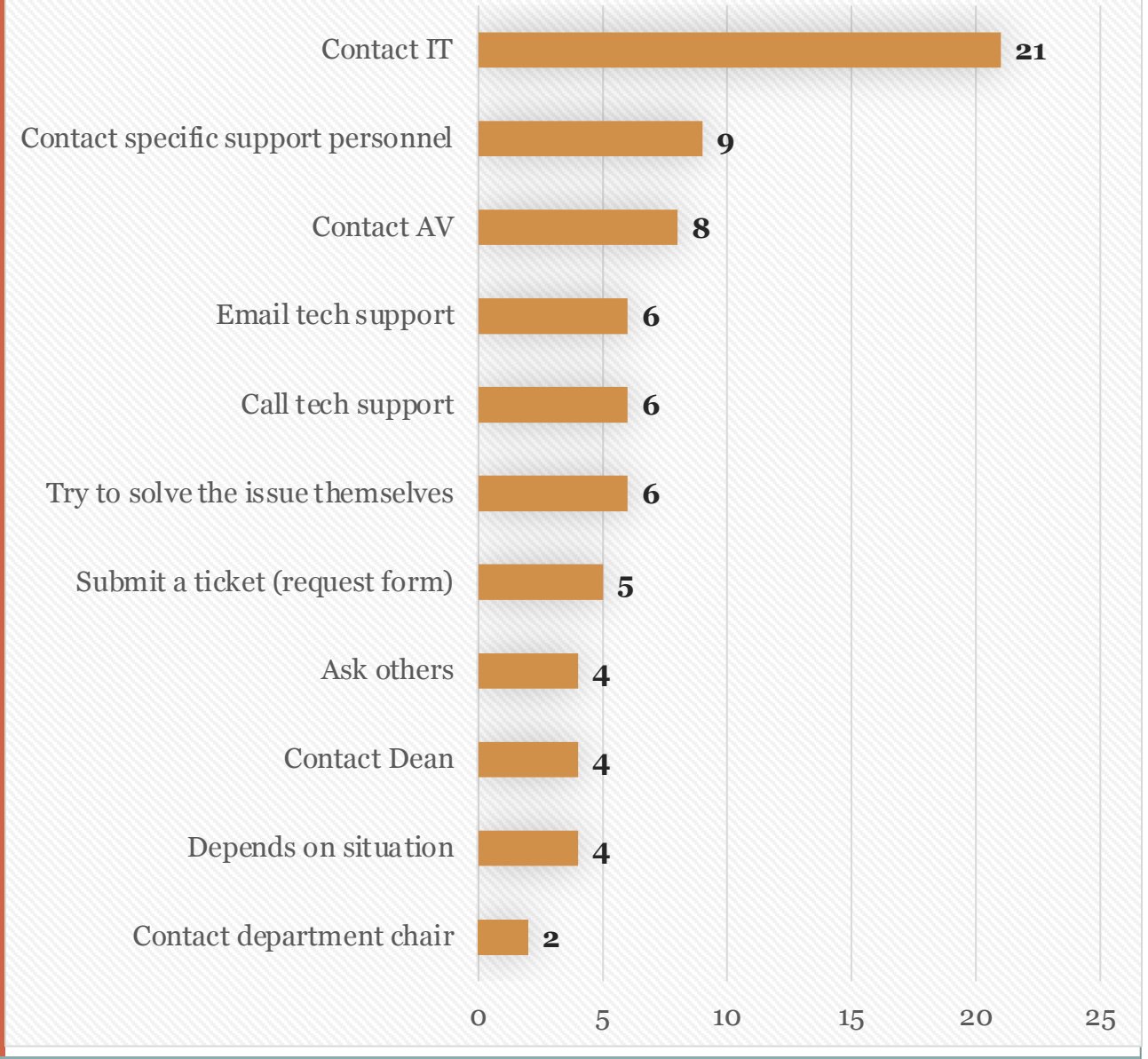


What do you do when you need tech support of any kind (call someone, complete a form, other)? Please try to be specific in your answer.

Total Response: 49

Note:

Some responses are summarized with more than one key features

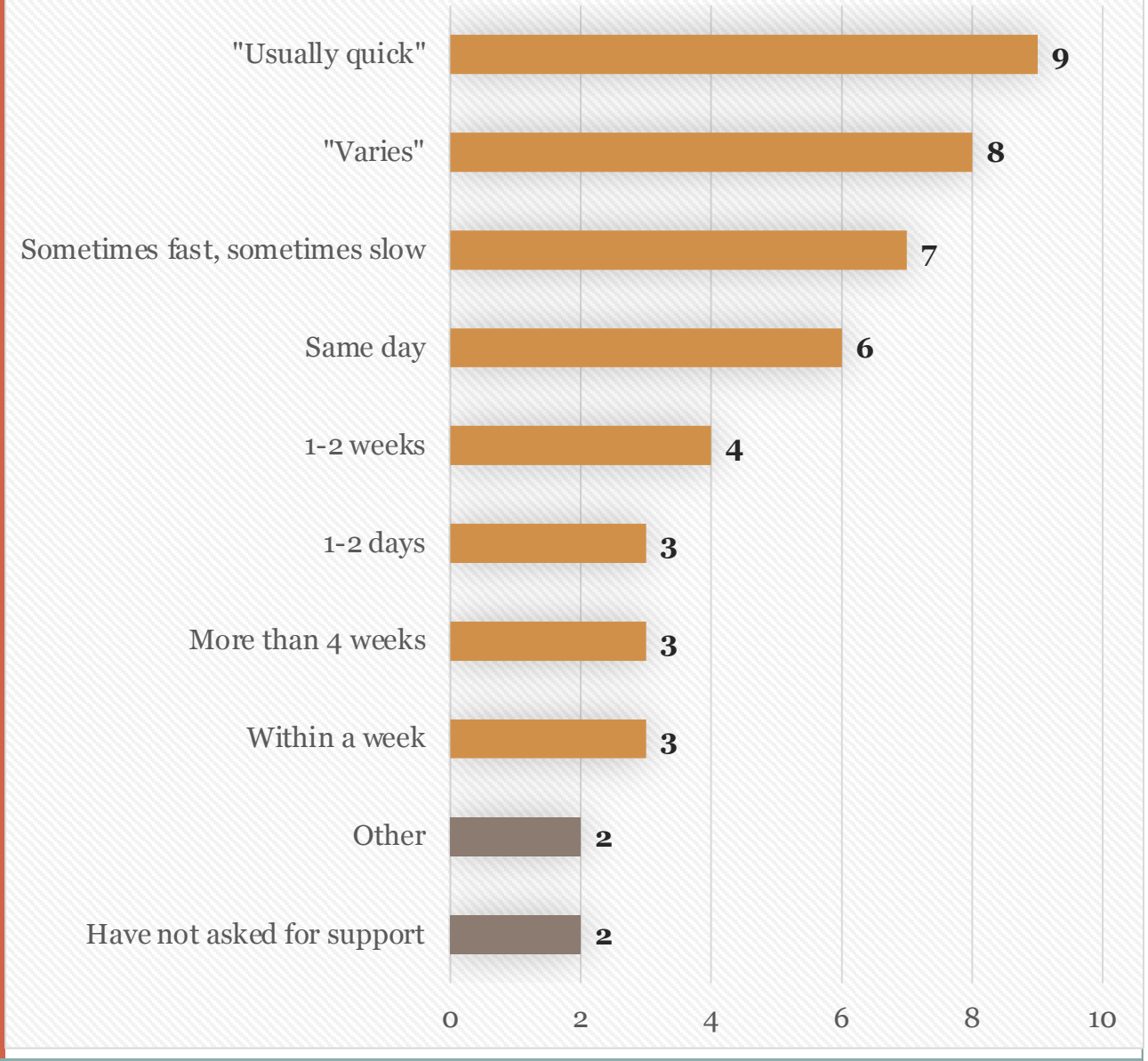


What is the response timeline when you have a question or repair need?

Total Response: 47

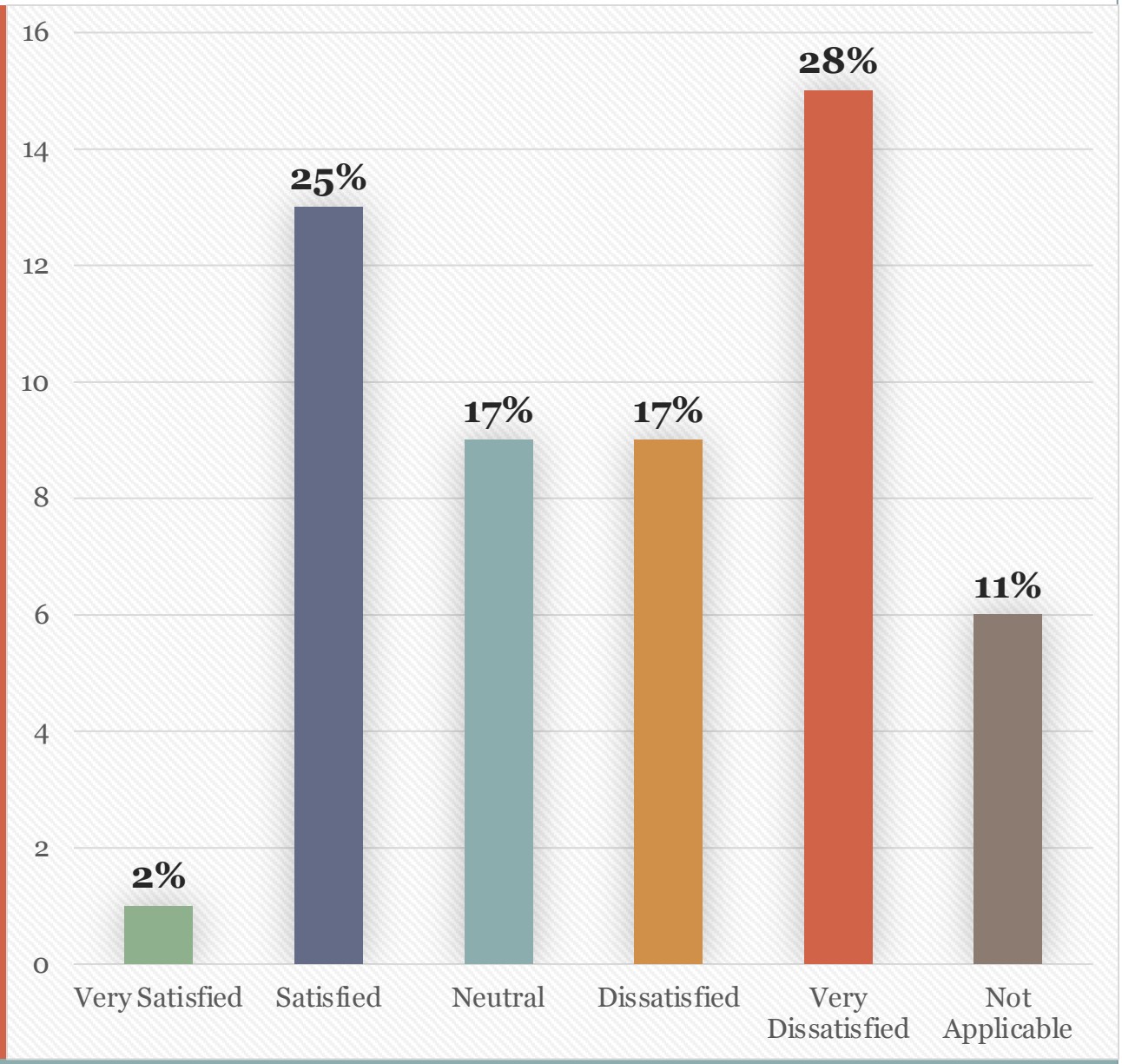
Note:

Some responses are summarized with more than one key features



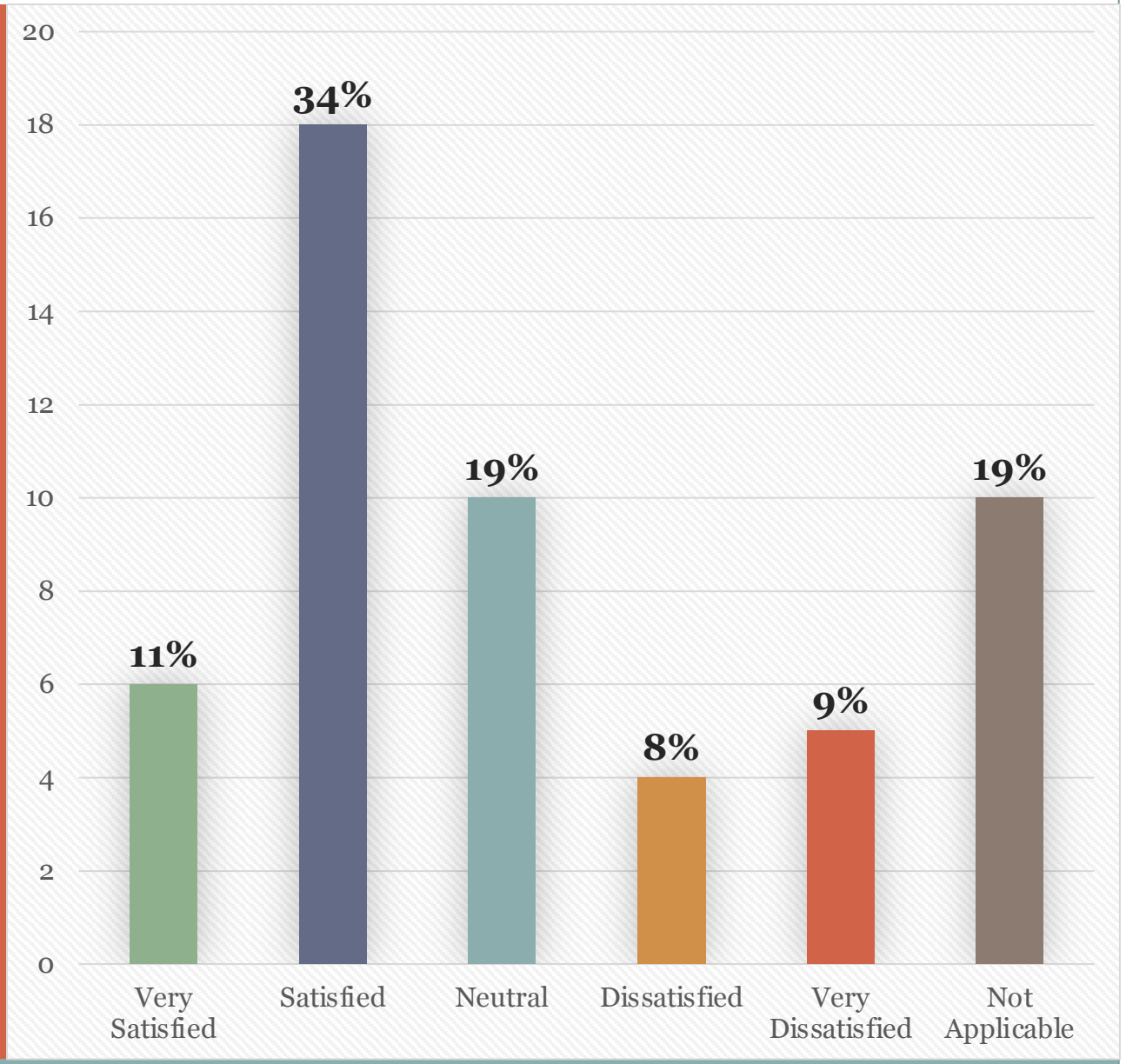
How satisfied have you been with solutions to your technology needs in your office?

Total Response: 53



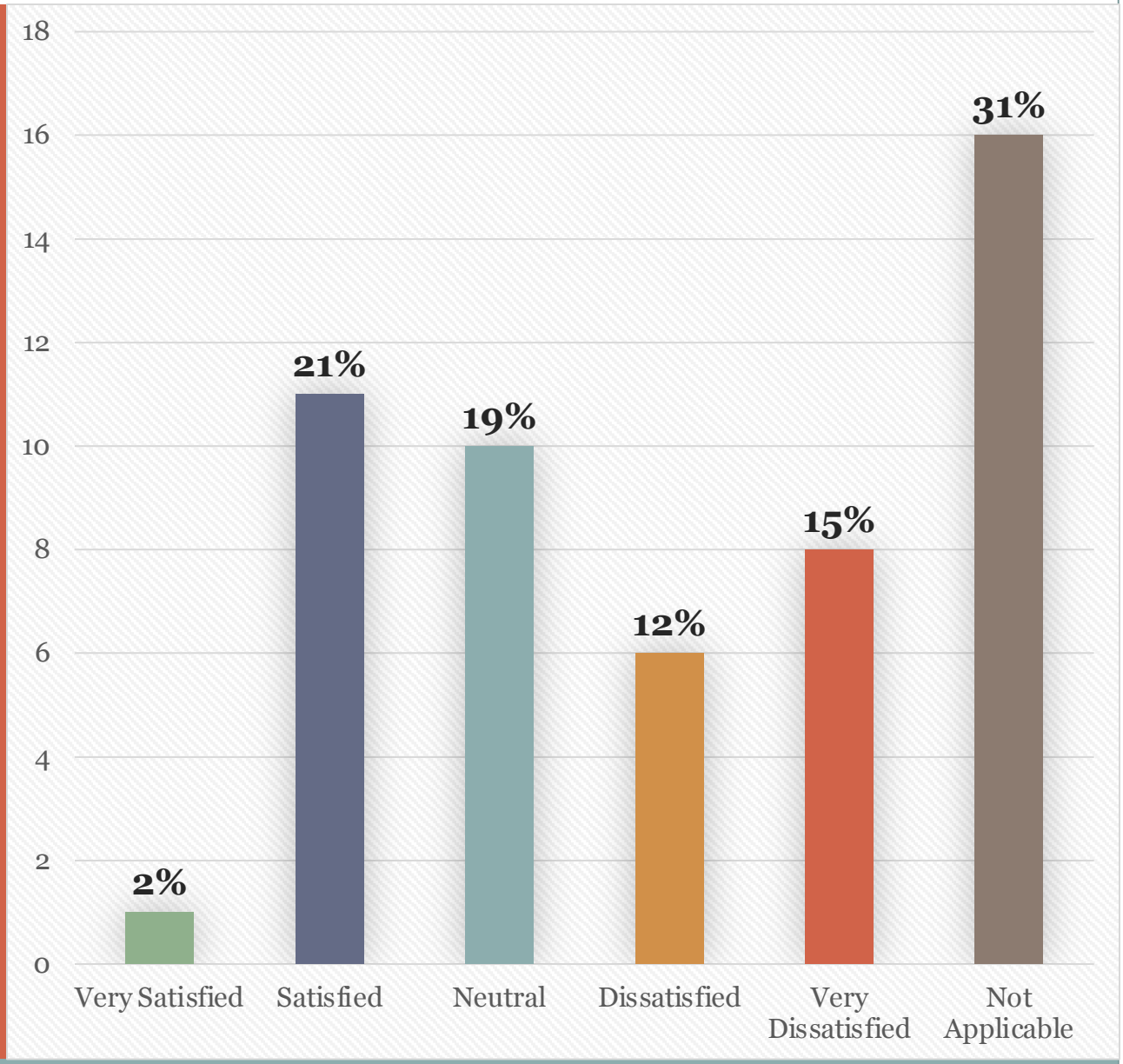
How satisfied have you been with solutions to your A.V. tech needs?

Total Response: 53



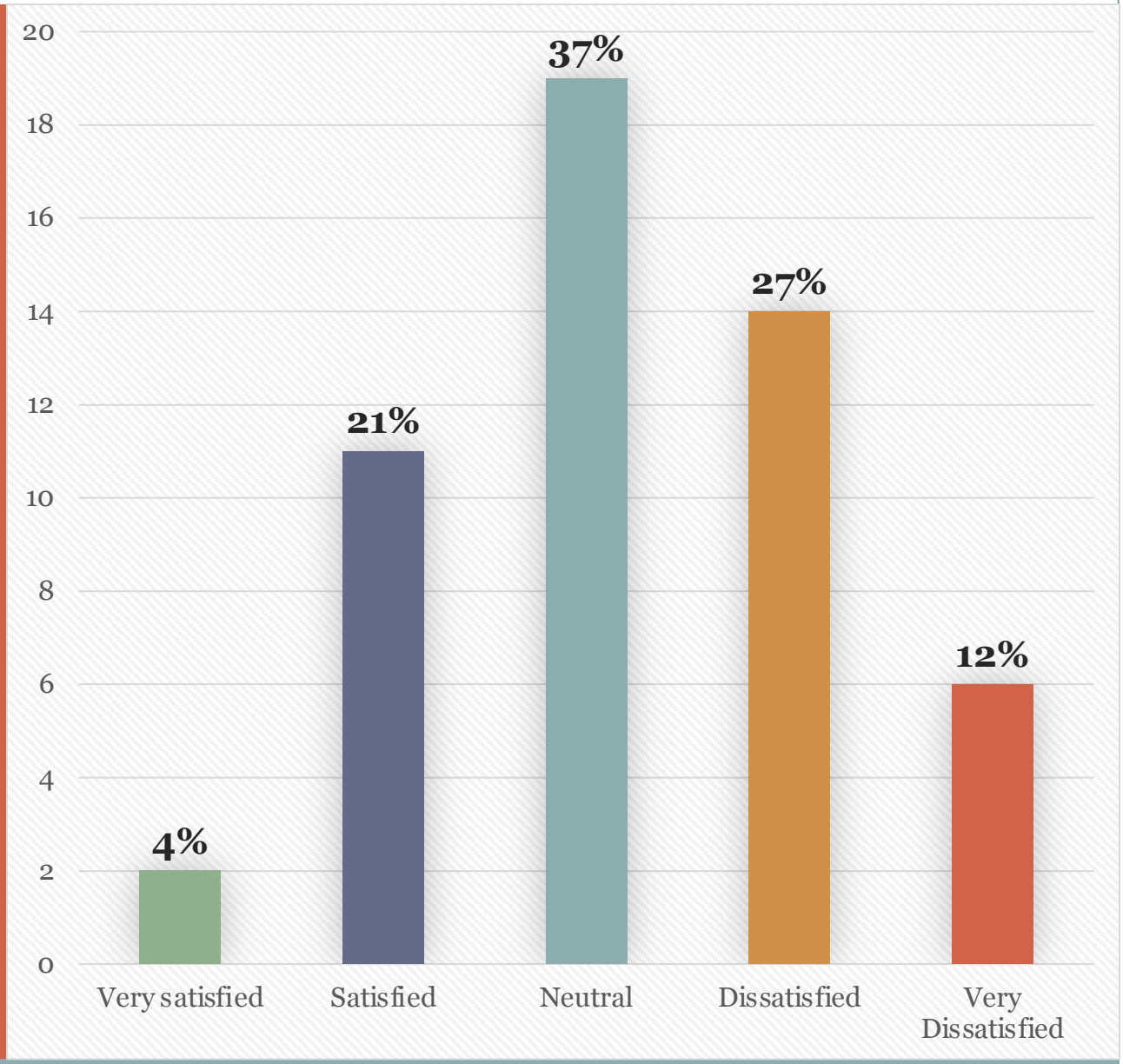
How satisfied have you been with solutions to your computer needs in the classroom or lab?

Total Response: 52



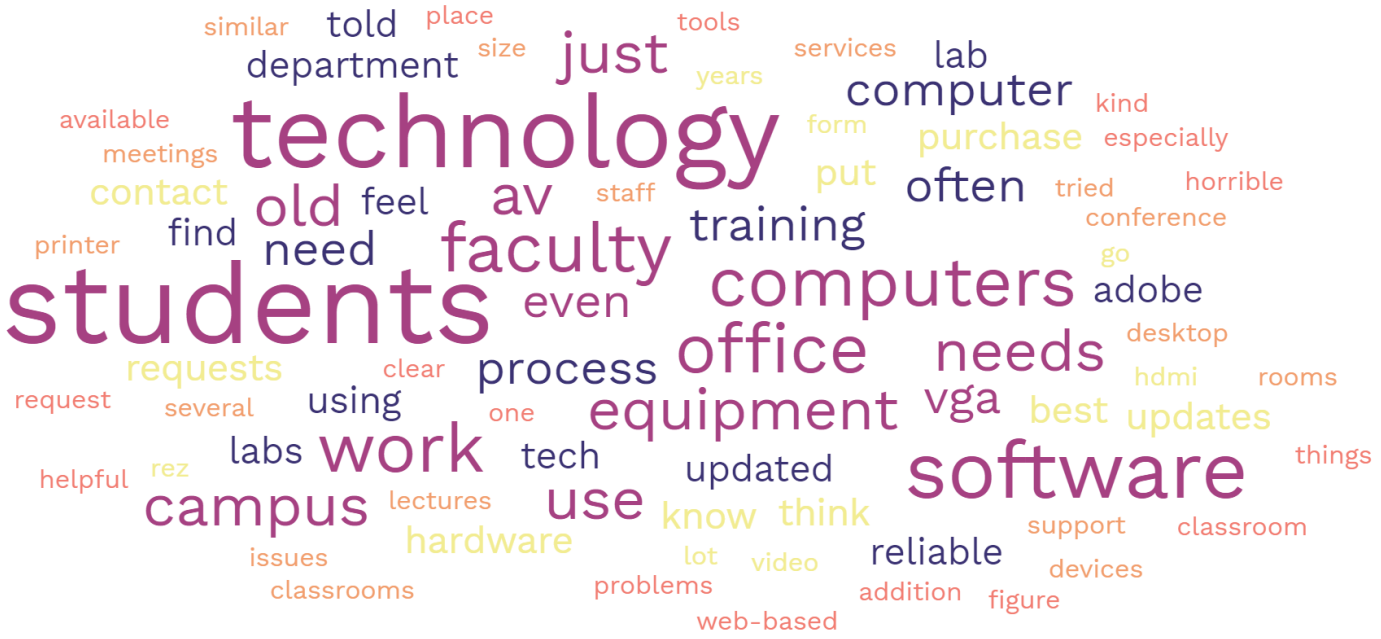
Overall, how satisfied are you with the accessibility and usability of the technology the college provides to you?

Total Response: 52



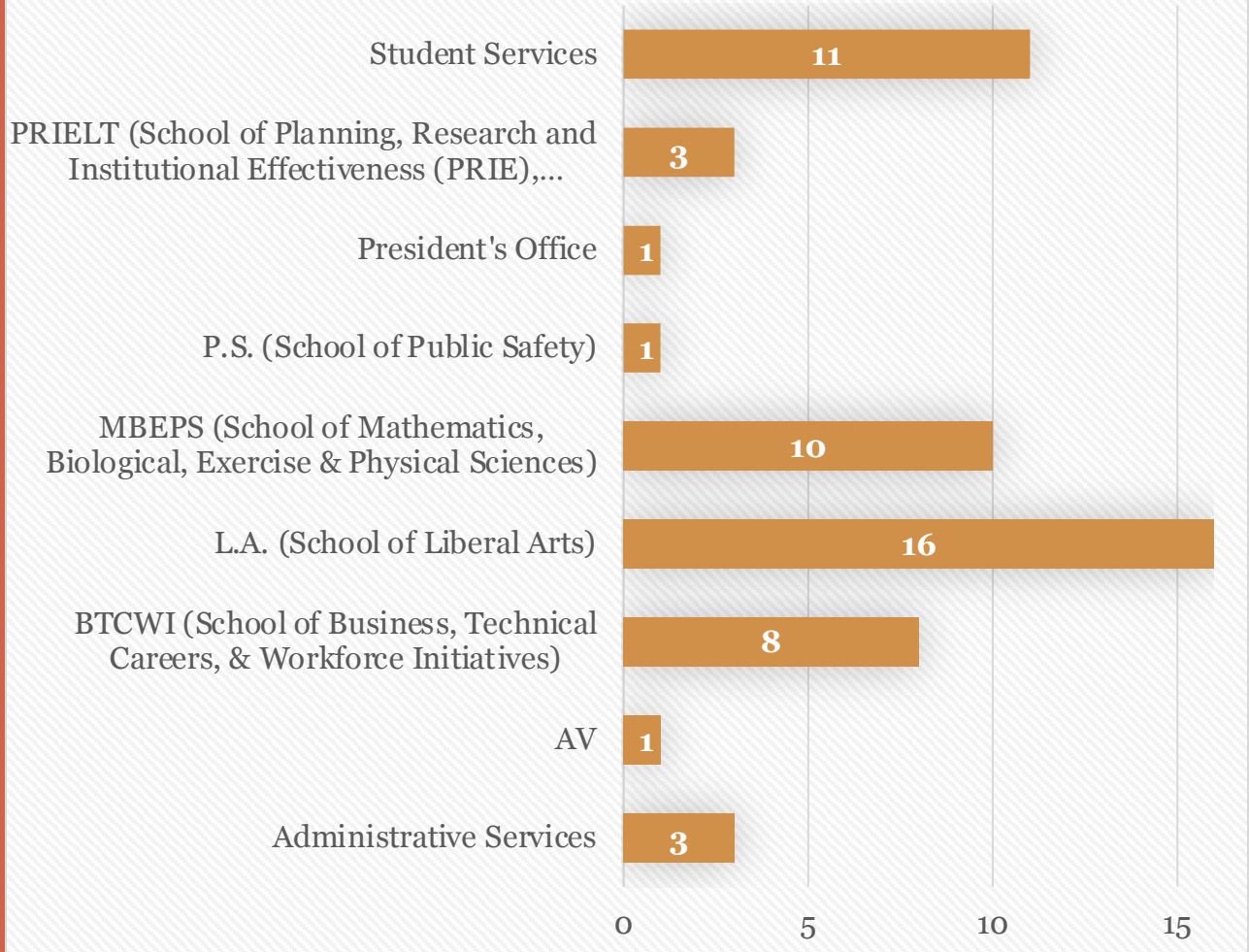
Do you have anything else to share regarding technology at Miramar College (hardware, software, support, etc.)?

Total response: 29



What School or Division do you work in?

Total Response: 54



Appendix D:

San Diego Community College District ITS Assessment Report

San Diego Community College District

ITS Assessment Report

Client Working Draft

Prepared by:

SDI PRESENCE LLC

advisory services, technology implementation, managed services

February 12, 2024

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Table of Contents

Section 1 – Introduction

1.1 – Scope and Objectives

This document, entitled ITS Assessment Report, was prepared for the San Diego Community College District (SDCCD or 'District') by SDI Presence LLC (SDI) to document the information gathered along with findings and recommendations created during the initial phases of the development of an Information Technology Strategic Plan (IT Strategic Plan) for the District.

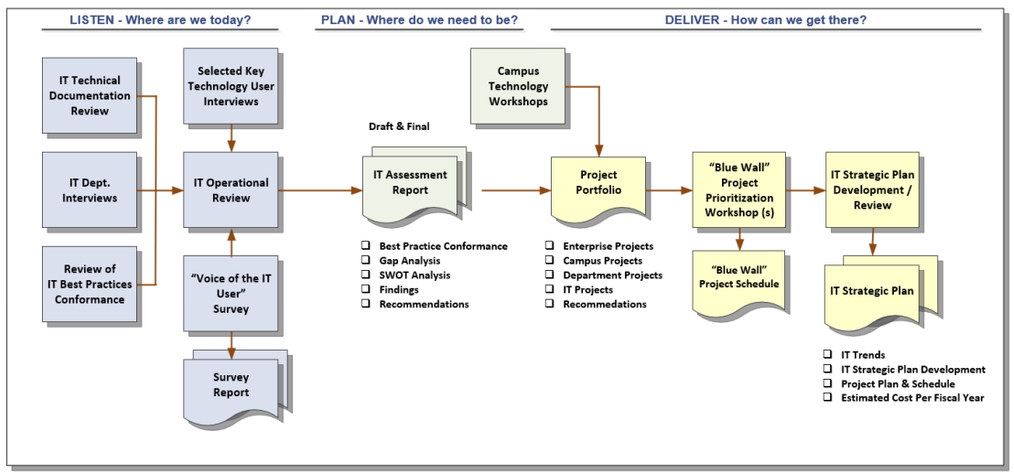

Figure 1.1 – SDI's IT Strategic Planning Methodology (Source: SDI)

Figure 1.1, SDI's IT Strategic Planning Methodology, depicts the overall process for this engagement, which consists of three phases:

- LISTEN - Where are we today? SDI's team prepared a holistic assessment of the District's current use of information technology and the services provided by Information Technology Services (ITS) in support of the District's use of IT including the challenges SDCCD is experiencing and opportunities to improve the delivery of IT services to the District's employees and to the student body.
- PLAN - Where do we need to be? In this phase of the project, SDI's team determined where the District needs to go in its use of information technology. The ITS Assessment Report (this document) provides information for SDCCD including:
  - Opportunities for the District to better utilize its existing portfolio of enterprise and departmental applications.
  - Opportunities for the District to better provide information technology services.
  - Realistic and actionable recommendations.
- DELIVER - How can we get there? SDI's team will work with the District to identify how SDCCD can progress from its current state to the target state: Based on the information provided in the ITS Assessment, the SDI team will:
  - Conduct a series of Campus Focus Workshops to gather information relative to the use and support of technology within the academic environment and establish a vision for the future deployment of technology District-wide.
  - Develop a portfolio of proposed projects to be considered in the IT Strategic Plan. The portfolio will provide key metrics for each project including descriptive information about the project, range of cost, estimated organizational value, estimated level of risk, and estimated level of effort. The portfolio will be reviewed with the District's key stakeholders and revised as needed.
  - Facilitate a "Blue Wall" Prioritization Workshop in which the District's key stakeholders will prioritize and schedule the projects from the Project Portfolio over the timeline of the IT Strategic Plan. Projects may be added to the portfolio during the workshop, changed, and deleted by the stakeholders.

Scope of the ITS Assessment Report

Per the District's statement of work for this engagement, the ITS Assessment Report is focused primarily on the services and applications supported by SDCCD's Information Technology Services organization (ITS), which "Provides support for the District's administrative computing environment, the network and telecommunications infrastructure, and core network and Internet services". The major subsystems supported by ITS are:

- Administrative PeopleSoft ERP Systems (Campus Solutions, Finance, HRMS), and various web applications.
- Telecommunications Infrastructure (Voice, Data, Video).

- Network and Internet Services including Security.
- Email System, including the Anti-SPAM, Anti-Virus systems.
- Administrative Desktop PC support.
- Telephony System and the voice mail messaging systems.
- Ex Libris Alma Library Services Platform.
- Canvas Course Management System.[1]

The ITS Assessment Report provides SDCCD with an independent and objective review of ITS's ability to effectively deliver IT services to the District's employees, campuses, and the student body. Key factors that were considered included:

- SDCCD's conformance to a set of IT Best Practices developed by SDI.
- The readiness of the user community to modify business / operational processes in order to make more effective use of core business applications.
- Recommendations to enable the ITD organization to continuously improve service delivery and to meet new challenges.

1.2 – Document Organization and Contents

Figure 1.2 – Document Organization (Source: SDI)

As depicted in Figure 1.2, Document Organization, the ITS Assessment contains the following sections:

- Section 1 - Introduction: Information about the scope and objectives of the ITS Assessment Report for the District, the organization of the report, and appropriate background material.
- Section 2 - User Experience: Provides information regarding the District's use of information technology, internal user and community satisfaction with the services provided by ITS, and projects in progress and planned.
- Section 3 - Current IT Environment: Provides an overview of the District's current information technology environment including the IT infrastructure, the IT applications being used, the organization and staffing of ITS, and key takeaways from the interviews conducted with ITS' Director, managers, and staff.
- Section 4 - Conformance to IT Best Practices: Provides a review of ITS' conformance with a set of information technology best practices developed by SDI based on accepted industry standards and the experience of SDI's consultants in conducting a wide-range of similar engagements.
- Section 5 - Findings and Recommendations: Provides an overview of the findings, including an assessment of the District's strengths, weaknesses, opportunities, and threats, which resulted from SDI's review of SDCCD's current IT environment, the resulting recommendations to remediate the findings, and the potential business / operational impact for the District.

[1] Source: Information Technology | San Diego Community College District (sdccd.edu)

- Section 6 – Conclusion: Provides general observations concerning IT service delivery and the challenges that the District may face in remediating the assessment findings.
- Appendices: Additional information including the IT Assessment Checklist that was used as a key input to the Best Practice conformance scoring process.

Terminology and Numbering

This document has been written for a wide audience that includes individuals who are not information technology professionals therefore SDI has limited the use of IT acronyms as much as possible. To avoid confusion, references to information technology in general will either be spelled out in full or abbreviated as "IT" while Information Technology Services will be referred to as "ITS". Figures, tables, and charts within the document have been numbered consecutively within each section, leading with the number of the section, i.e., 2.1.

Section 2 – User Experience

2.1 – Overview of ITS User Survey

Between November 28, 2023, and December 15, 2023, SDI conducted an anonymous on-line survey of the SDCCD employees to assess their satisfaction with the support they receive from Information Technology Services. SDCCD employees (faculty and staff) were invited to take the survey with 373 employees responding. Responses were received from Miramar College (57), College of Continuing Education (67), City College (75), District Office (80), and Mesa College (94).

- Summary of Positive Comments
  - The level of satisfaction with ITS support is high.
  - Complimentary of ITS personnel (Friendly, helpful, professional).
  - ITS resolves problems.
  - Keeps systems running.
  - Wi-Fi network is improving.
  - Appreciate new initiatives and improvements.
- Summary of Areas Identified for Improvement
  - Application training.
  - Additional technical staff and campus technology support.
  - Communications (status of tickets, projects, upcoming activities).
  - Customer service (politeness, follow-through, consistency).
  - Connection between District IT staff and Campus Technology Services personnel.
  - Equipment upgrades (pcs, a/v, classroom).

2.2 – Summary of ITS User Satisfaction

Question	SDCCD	Target	Acceptable	Caution	Remediation
How satisfied are you with the method used to report issues to the ITS Service Desk or request services from ITS?	82	85	✓		
How satisfied are you with the time it takes the ITS Service Desk to resolve or correct your problem?	78	85	✓		
How satisfied are you with the IT Service Deck's communication through the troubleshooting process?	80	85	✓		
How satisfied are you with the timeliness and completeness of the ITS Service Desk follow-up/check back on the service provided?	73	85		✓	
How satisfied are you with the support you receive in the classroom from Instruction IT Services?	60	85			✓
How satisfied with the District's network availability?	80	85	✓		
How satisfied are you with the speed of the District's Internet?	80	85	✓		
How satisfied are you with ITS' control of spam and unwanted e-mail?	87	90	✓		
How satisfied are you with ITS' control of malware and prevention of viruses?	94	90	✓		
How satisfied are you with ITS' communications on service outages and upcoming maintenance?	92	85	✓		
How satisfied are you with the use of mobile, wireless, and/or remote access services throughout the District?	78	80	✓		
How satisfied are you with the District's on-line capability for faculty, staff, and student use?	83	80	✓		
How satisfied are you with the availability of software applications training within your campus or department?	55	75			✓
How satisfied are you with the District's technology planning efforts?	71	80		✓	
How satisfied are you with the overall support you receive from ITS?	85	85	✓		

Figure 2.1 – Summary of Users' Responses to Key Survey Questions (Source: SDI)

Table 2.1, Summary of Users' Responses to Key Survey Questions, depicts the results of the survey for a representative series of survey questions that have been included in prior surveys conducted by SDI. For each question the table depicts:

- SDCCD: The total level of satisfaction (Very satisfied and Satisfied) reported by the District's respondents.
- Target: SDI's target level of satisfaction (Based on SDI's consulting team's cumulative experience and survey results from clients who have IT organizations that are highly compliant with IT best practices).
- Acceptable, Caution, Remediation: SDI's analysis of the gap between the respondent's level of satisfaction and SDI's target levels, where:
  - Green indicates an acceptable level of satisfaction.
  - Yellow indicates a caution or area where further evaluation/practices may be necessary.
  - Red suggests immediate focus and improvement may be warranted.

2.3 – Highlights from User Responses to the Survey

This section of the IT Assessment Report provides a snapshot of responses to key survey questions.

Reasons for contacting the ITS Service Desk? (Top 5 responses)

- Business Software/Applications
- Desktop Computer
- Email
- Network Connections/Performance
- Software Installation

Which applications do you contact ITS for assistance?

- Office 365
- PeopleSoft
- Adobe PDF

Level of Application Satisfaction:

- Adobe PDF - 88%
- Clockwork - 55%
- Enterprise Data Warehouse - 67%
- Faculty Evaluations - 66%
- Hyperion - 63%
- Microsoft 365 - 86%
- Peoplesoft - 69%
- SARS Grid - 80%

Level of training provided:

- At the time of hire
  - No training - 74%
  - Training was provided - 26%
- When new programs are implemented
  - No training - 59%
  - Training was provided - 41%
- With software upgrades and updates
  - No training - 71%
  - Training was provided - 29%

IT project success:

- Successful and delivered on time - 42%
- Successful but not delivered on time - 24%
- Not successful - 33%
- Never completed - 1%

2.4 – Key User Experience Takeaways

In addition to the information derived from the user survey, the SDI team met with a number of users of the District's administrative systems including PeopleSoft Financials, Human Resources, and Campus Solutions. Table 2.2, Key User Experience Takeaways, provides a summary of the key user experience takeaways resulting from the survey and the interviews. For each takeaway, Table 2.2 provides a description of the concern / challenge identified and an assessment of its potential impact on the District's agility, responsiveness, performance, sustainability, and value that could be obtained by the District for its investments in information technology.

Table 2.2 – Key User Experience Takeaways

Key Takeaway	Description	Impact on Users				
		Limits Agility	Limits Responsiveness	Impedes Performance	Reduces Sustainability	Reduces Value on Investment
Application Support	ITS has considerable staff resources allocated to the support of PeopleSoft, PeopleSoft Campus Solutions, and Hyperion/ECM for financial processing, HR, and instruction, but even so, resources for the support of HR are limited to a single developer at this time, and the resources allocated to support of Campus Solutions are less productive than they could be due to decisions made by prior administrations in the implementation of the product. HR noted that they have modules such as absence management, open enrollment, and eForms that have not been implemented even though they are eight years into the implementation of HCM.	☐	☒	☒	☒	☒
Communication and Collaboration	Users expressed the opinion that while they appreciate that ITS is very busy, they are also somewhat frustrated by the lack of communication from ITS. One user noted that "there is a lack of regular, on-the-ground, campus-based field-testing and interaction with the end user including students, faculty, and employees and this complicates the implementation of new IT initiatives". A faculty member noted that "IT needs to communicate effectively and promptly. As a faculty member, we cannot do our job if we don't have adequate and up to date software and technology".	☒	☒	☒	☐	☐
Information Sharing	HR noted that they use a number of applications other than PeopleSoft HRMS and they have to manually enter information into each of the separate applications.	☒	☐	☒	☒	☒
Management of Email and Office365 Services	Comments in this area include the need for "Better guidance from ITS about how to publish email addresses". "District websites have clear addresses published which leads to a lot of unwanted email", and "Since moving to cloud-based services, programs such as Outlook have constant issues. From calendar invitations not saving correctly to synchronizing issues, it has caused disruption in daily activities. Many times, the issue is affecting multiple users or departments, and they are not communicated District wide".	☐	☐	☒	☐	☒
Off-Hours Support	Although instructional services continue into the evening, a number of users expressed the concern that Help Desk staffing during these hours is insufficient and that it is difficult to get problems resolved.	☐	☒	☒	☐	☒
Reports and Queries	Users reported that it is a challenge to create reports in PeopleSoft HRMS and that they have to extract data from PeopleSoft and then use other applications, such as Excel, etc., to create reports. It was noted that is also challenging for users to understand raw information as extracted from PeopleSoft.	☒	☒	☒	☒	☒

Key Takeaway	Description	Impact on Users				
		Limits Agility	Limits Responsiveness	Impedes Performance	Reduces Sustainability	Reduces Value on Investment
Responsiveness to User Requests	Users noted that that are experiencing issues in using the new ticketing system from ITS (Freshdesk). They are experiencing some issues in completing and submitting tickets and need some Job Aids to support them in the use of the District's business applications. One user noted that "The lack of staffing in this area is really palpable. I know everyone is doing the absolute best that they can, but work is sometimes completed without me ever being contacted ahead of time or scheduled with. When this happens, tickets are then closed without ever getting to speak to someone about remaining questions or needs." Freshdesk was reportedly rolled out by ITS without any training for the end-user community.	☐	☐	☒	☐	☒
Service Delivery	There were comments in the User Survey from students and faculty members regarding the deployment of the new campus wireless networks and problems that were encountered in connecting devices to them, as well as with the age and serviceability of the equipment installed in classrooms.	☐	☐	☒	☐	☒
Support for Remote Workers	The number of users working remotely and the number of days that they worked remotely greatly increased during the COVID-19 Pandemic. Prior to the Pandemic, workers on "9/80" and other modified schedules worked primarily from their offices and only rarely from other locations. During the Pandemic this was completely reversed, necessitating the increased deployment of mobile devices and software to enable remote workers to connect to secure networks such as VPNs to obtain access to District applications and information. Although the private sector firms are working to reduce (if not eliminate) remote work, it is persisting in the public sector. Common concerns from remote workers included, "I wish there were more support for remote applications" as well as some dissatisfaction with the LogMeIn application. User comments included that "Need a true VPN for remote network access," and "LogMeIn is very cumbersome to use."	☐	☒	☒	☐	☒
Training	It was noted that the District does not provide continuing training and/or knowledge bases, etc. for the user community in the use of core business applications (PeopleSoft, PeopleSoft Campus Solutions, and Hyperion/ECM) and this impacts the ability of the users to make effective use of them. Similar concerns were voiced on the instructional side with regard to the lack of training and documentation when new devices are rolled out.	☐	☒	☒	☒	☒

Section 3 – Current IT Environment

3.1 – Section Overview

This section of the ITS Assessment Report provides an overview of the District's current information technology environment including the IT infrastructure, the administrative applications being used, the organization and staffing of ITS, and key takeaways from the interviews conducted with ITS managers and staff.

3.2 – IT Network Infrastructure

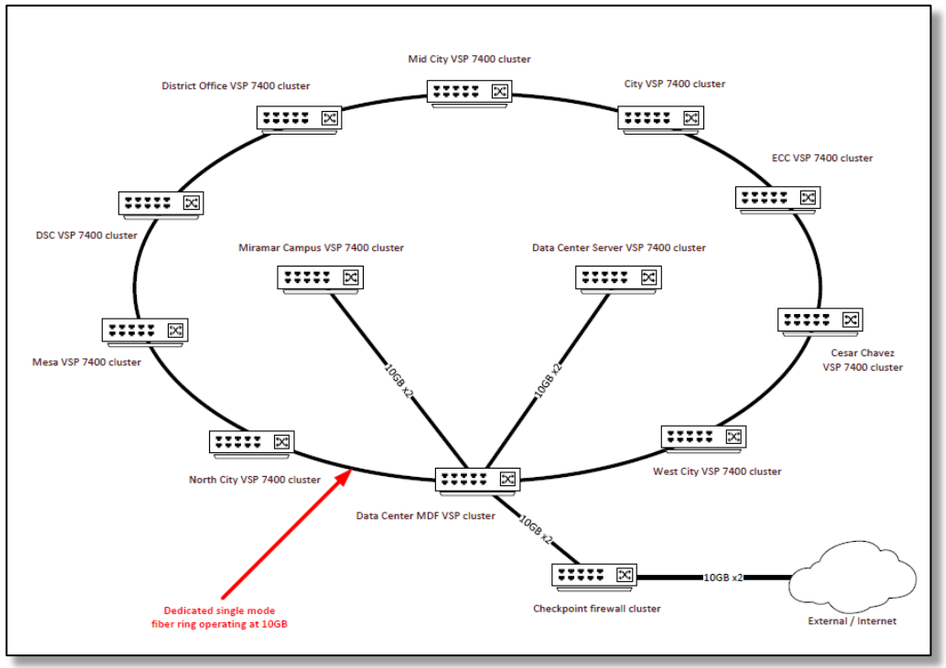

Figure 3.1 – District's Network Fabric Infrastructure (Source: SDCCD ITS)

Figure 3.1, District's Network Fabric Infrastructure, provides a high-level view of the network connecting the District's data center, located on the Miramar Campus, with other District locations including City College, Mesa College, Miramar College, the locations of the College of Continuing Education, and the District Office. All of these locations are connected through a dedicated 10GB fiber ring. Connection to the Internet from campus locations and the District Office are through a redundant firewall cluster located in the data center and two 10GB lines. This infrastructure is highly stable; however, ITS is concerned that all connectivity to the internet would be lost if the data center were disabled. To reduce the probability of the data center being disabled, it has been equipped with an uninterruptable, standby power supply (UPS) and a backup generator.

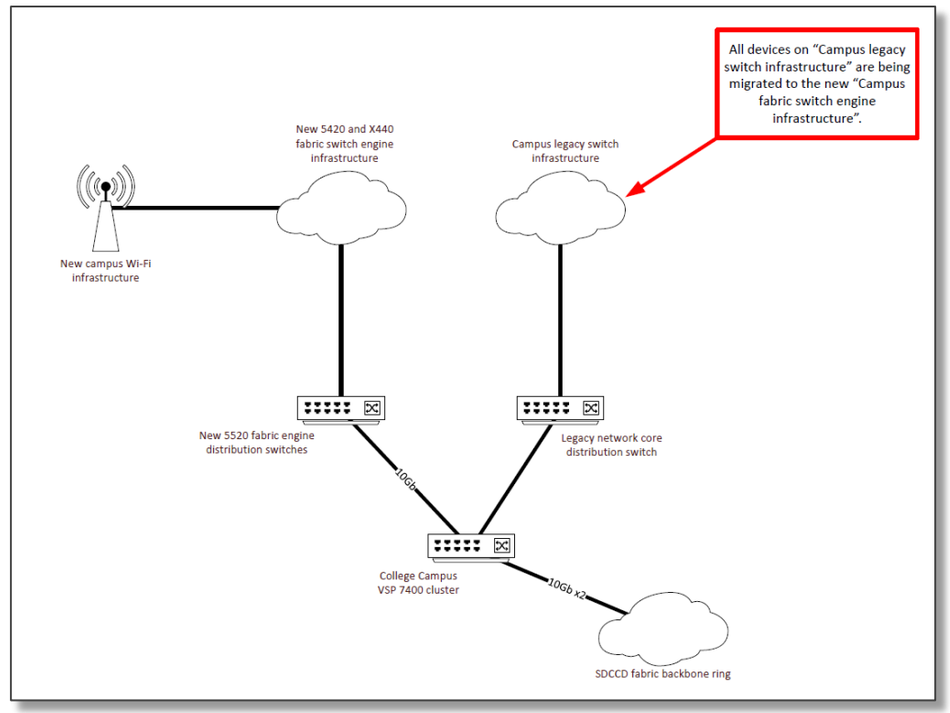

Figure 3.2 – District's Campus Network Infrastructure (Source: SDCCD ITS)

Figure 3.2, District's Campus Network Infrastructure, depicts the network architecture for campus locations. As shown in Figure 3.2, ITS is working on a multi-year project to transition

the campuses from the legacy switch infrastructure to a fabric switch engine infrastructure to better accommodate the increased demands for instructional connectivity. The fabric switch engine infrastructure is complete and the new wireless network infrastructure for each campus is being connected to the fabric switch engine infrastructure to better accommodate the ubiquity of mobile devices.

The completion of the migration from the legacy campus switch infrastructure is a high priority for ITS; however, the connection of every port at a campus to the new fabric switch engine infrastructure is a highly disruptive (for the campus users) and labor-intensive process. ITS estimates that this is less than 10% complete and that it would take three to four dedicated staff members approximately five months to complete (including preparation for the migration, and then testing to make sure that all devices on the campus have been successfully connected.

Network Infrastructure Priorities

Priorities for ITS network staff include:

- Cross-training staff members to improve their capability to support the network infrastructure and to prevent the loss of institutional knowledge in the event of attrition.
- Obtaining additional staff members and/or external resources to handle the workload. This could include bringing in external resources to support the existing network infrastructure to free up District resources to focus on completion of critical network projects.
- Completing the migration of the campuses to the fabric switch engine infrastructure.
- Improving the resilience of the network by establishing a second connection to the Internet (potentially from the District Office) so that internet connectivity can be maintained in the event that the data center is not available. This is becoming increasingly critical as the District moves to MS Teams Phones and as core business applications are migrated to the Cloud.

3.3 – IT Applications

Figure 3.3, SDCCD Application Portfolio, identifies the applications identified in the course of the ITS Assessment including the District's core business applications, other business applications, document management solutions, and issue reporting / tracking solutions.

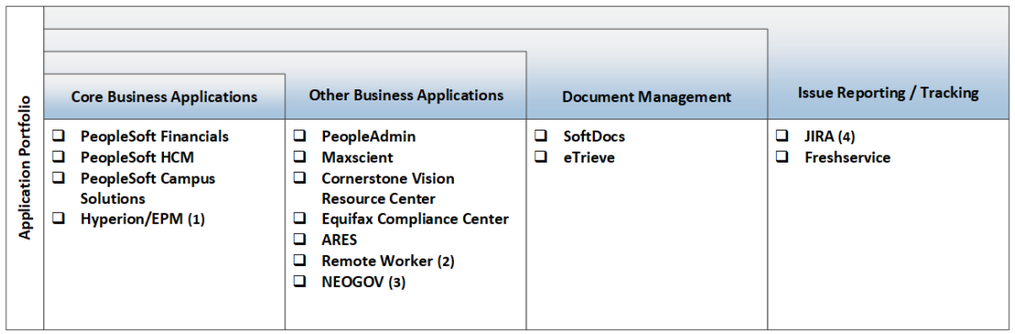

Figure 3.3 – SDCCD Application Portfolio (Source: SDI)

Notes:

(1) The District is migrating from Hyperion to EPM which is Cloud-based. Acceptance testing is currently in progress.

(2) Implementation of Remote Worker was reported by HR as being in progress.

(3) HR is evaluating NEOGOV as a potential replacement for PeopleAdmin for tracking applicants. HR estimates that they are probably looking at an 18-month implementation and have about three more years on the PeopleAdmin contract. HR believes that NEOGOV should be able to interface with PeopleSoft HCM [NEOGOV does not indicate that they have an interface with HCM but do indicate that they have an API which would facilitate the exchange of information with HCM].

(4) JIRA is being used by Educational Services for tracking issues related to Campus Solutions and HR is using JIRA to track requirements for the implementation of Remote Worker.

Table 3.4, Recommended Actions for Core Business Applications, provides SDI's assessment of the actions that the District should consider taking for each of these core business applications based on the usability of the application, how effectively it has been implemented, and the position of the product in its lifecycle. The range of actions include:

- **Re-evaluate**: The District should re-evaluate the use of the business application since it may have other business applications that provide similar functionality.
- **Remediate:** The District is not realizing the fullest possible value from the business application due to issues with how it was implemented or how it is being used. The District should take steps to remediate the issues that are preventing the business application from being used effectively.
- **Retain**: The business application is functioning as intended and should be kept current with new releases.
- **Replace:** The business application does not meet the District's business requirements and should be replaced by a new application.
- **Review:** The business application is meeting the District's business requirements but has reached a point in its lifecycle where the District may not be able to retain it long enough to obtain a reasonable return on its investment. The District should review its use of the business application to determine whether to continue to invest in its enhancement or to 'fast track' its replacement.

Table 3.4 – Recommended Actions for Core Business Applications

Core Business Application	Action(s)	Note
PeopleSoft Financials	Review	(1)
PeopleSoft HCM	Review	(1)
PeopleSoft Campus Solutions	Review	(1)
Hyperion	Being Replaced	
EPM	Implementation in progress	
PeopleAdmin	Being Replaced	
SoftDocs	Review	(2)

The recommended action for any of the applications not listed in Table 3.4, should be considered as 'Retain'.

Notes:

(1) SDI recommends that the District conduct a review of its implementation of PeopleSoft with the objective of determining whether it should minimize its investment in PeopleSoft pending a potential replacement of it 2027/28 or expedite the replacement.

(2) The District should consider whether the implementation of SoftDocs should also include the development of a plan for enterprise document and content management which would enable the District to obtain greater value from SoftDocs.

3.4 – ITS Organization and Staffing

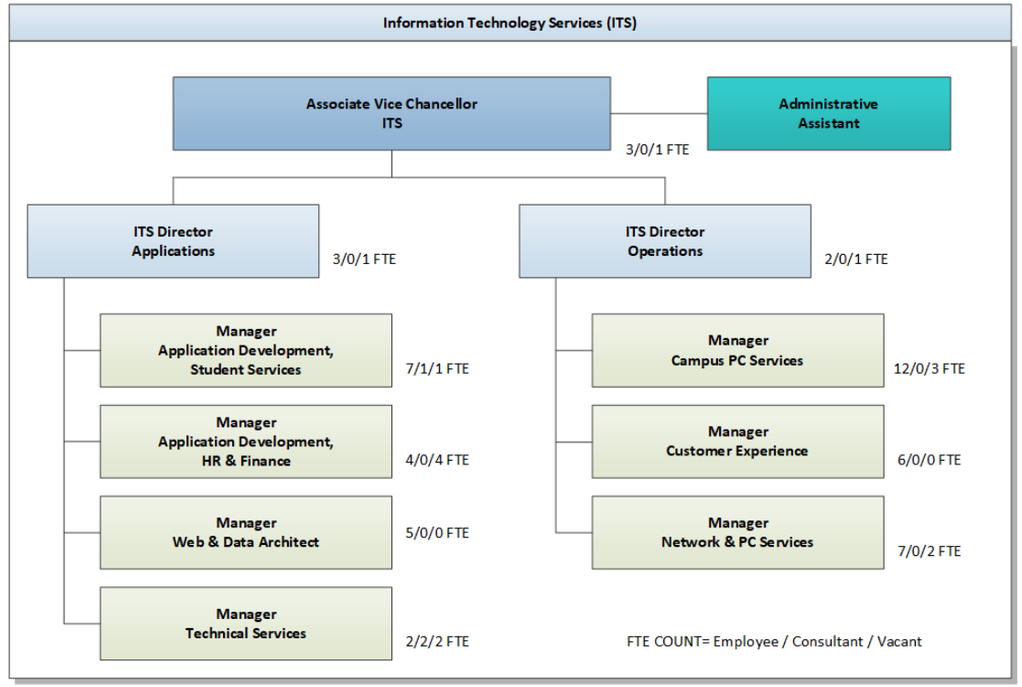

Figure 3.5 – ITS Organization and Staffing (Source: SDCCD)

Figure 3.5, ITS Organization and Staffing, depicts ITS' current organization and staffing levels. As shown, ITS is primarily comprised of three divisions, administration, applications, and operations. These are staffed as shown in Table 3.6, Current ITS Staffing. Please note that these totals do not include external service providers providing consulting services for the District.

Table 3.6, Current ITS Staffing

Center	Employees	Consultants	Vacant	Total
Administration	3	0	1	**4**
Applications	18	3	5	**26**
Operations	25	0	5	**30**
Total:	**46**	**3**	**11**	**60**

At the time this information was provided to SDI, nearly 20% of the positions in ITS were vacant, including key developer positions on the HR & Finance teams in Applications (half of the positions on this team are vacant), the Manager of Technical Services in Applications, and the Database Administrator (DBA) in Technical Services (which has since been filled).

Several factors need to be considered in order to assess the effectiveness of this organization and the sufficiency of its staffing including:

- The key challenges facing ITS.
- The shift from on-premises services to Cloud-based services.
- ITS' future role in the District.

Each of these is briefly discussed below.

The Key Challenges Facing ITS

ITS' organization and staffing are primarily related to application development and operations, notably absent are the resources to support:

- Project management and project quality, including a Project Management Office (PMO) service to support project managers.
- Resource management, including business analysis.
- The exchange of information between the District's core business applications.
- Vendor management (including the ability to ensure that external service providers fulfill their obligations regarding delivery and service levels.
- A fuller commitment to security / information protection.

The inability to fill key staff positions (particularly within Applications Development), has impacted the workload within ITS as well as impacted the productivity of Administrative users as well as the ability of the District to obtain greater value from its investments in the PeopleSoft application.

The Shift from On-Premises Services to the Cloud

This shift is occurring by intention as organizations seek to reduce their expenditures for on-premises infrastructure, increase sustainability, and possibly reduce IT staffing needs, and by default as existing commercial-off-the-shelf (COTS) applications that are hosted on-premises are moved to the Cloud. SDI sees this shift impacting IT organizations as they transform from being Service providers to Service Brokers. The characteristics of modern IT support organizations are as follows:

- Service providers primarily support on-premises services with a small number of Cloud-based services. The focus of these organizations is typically more toward managing total cost of ownership than to optimizing return on investment.
- Transitional organizations support both on-premises services and a larger number of Cloud-based services than in the past. Due to the requirements to support legacy applications / services and their supporting infrastructures while supporting the implementation of new services, transitional organizations typically experience a higher total cost of ownership for information technology.
- Service brokers that primarily support Cloud-based services with a decreasing number of on-premises services. Service brokers are typically more focused on optimizing return on investment by evaluating and selecting services that provide a balance between cost, features / functionality, sustainability, and performance.

SDI has found this has less of an impact on the number of IT staff members required than it has on the type of IT professionals needed and that a transitional organization could, in the short-term, require more staff members (whether in-house or from managed service providers) than either a service provider or a service broker.

ITS' Future Role in the District

With the transition of on-premises services to the Cloud, ITS' role as a service broker will include some elements of its present role as a service provider while increasingly becoming more focused on enabling members of the administrative user community to make better use of existing information technology assets and to agilely meet new and/or changed requirements through services such as planning and assessments, organizational change management, business process analysis and re-engineering, information sharing, information security, network operations, and providing training to ensure that user competencies can be sustained over time.

3.5 – Key Takeaways from ITS Interviews

Table 3.6, Key Takeaways from the ITS Interviews, provides a list of the major discussion points raised during SDI's interviews with a wide range of ITS staff members including the Associate Vice Chancellor, the Directors for Applications and Operations, managers, and other key staff members. A description for each key takeaway is provided based on SDI's understanding of the discussion points along with an assessment as to how the takeaway potentially impacts ITS' agility, responsiveness, performance, ability to sustainably deliver services, and the ability of the District to realize value for its investments in information technology.

Table 3.6 – Key Takeaways from the ITS Interviews

Key Takeaway	Description	Impact on ITS				
		Limits Agility	Limits Responsiveness	Impedes Performance	Reduces Sustainability	Reduces Value on Investment
Business Continuity	The District's offices are connected to the data center by a 10GB Fabric ring network and all Internet access (other than wireless) passes through the datacenter and to the Internet through redundant firewalls and 10GB pipes; however, it is still possible that an event impacting the data center could result in the District's users losing connectivity to the Internet including connectivity to Cloud-based administrative applications, Office 365, and telephone service (once the migration of from the current VoIP phones to MS Teams has been completed). To mitigate this risk, ITS would like to establish a second redundant gateway to the Internet, potentially from the District Office.	☐	☐	☐	☒	☒
Campus IT	IT services, primarily directed toward instructional support, are being provided by staff in IT-classified and non-IT-classified positions at each of the campuses. It is also possible that administrative processes at campus locations are being provided by local staff members, sometimes in coordination with ITS staff members, and sometimes independently of ITS.	☒	☒	☐	☒	☒

Key Takeaway	Description	Impact on ITS				
		Limits Agility	Limits Responsiveness	Impedes Performance	Reduces Sustainability	Reduces Value on Investment
Campus Solutions customization	A prior administration decided that the PeopleSoft Campus Solutions product should be customized by the District to mimic the look and feel of the legacy application. Oracle releases updates for Campus Solutions three times per year, and when the District installs the upgrade, the customizations must be re-installed. This process is labor-intensive for ITS which must apply and test the custom modifications (which can be difficult if the underlying code has changed), and for the users who must test the product to ensure that no existing baseline functionality was broken in the upgrade, that new functionality performs as expected in the District's environment, and that the custom modifications are working as expected.	☒	☒	☒	☐	☒
Change Management	The District does not have formal processes for change management. Change management in this context refers to having the resources and procedures available to manage changes to the District's IT infrastructure (hardware, systems software, administrative applications, services, etc.) in a manner that is not disruptive to operations or instruction. This includes coordination of proposed changes across all of the units within ITS Operations and ITS Applications Development) and with members of the user community. This coordination should include procedures for ensuring that changes are formally tested and verified before being placed into production. Additionally, the change management processes for Application Development should include the development of use cases and the implementation of automated software testing as part of a comprehensive testing program.	☒	☒	☒	☒	☒
Data Warehousing / Governance	This project has been in-progress for over 15 months and is slowly moving forward with the implementation of Microsoft Azure / Power BI. It was noted; however, that many of the artifacts of a successful data governance program are absent including the development of a formal charter for data governance, the development of a formal strategy and plan for the implementation of data governance and the creation of a data warehouse, and the development of a portfolio that identifies what digital information the District has, the repositories in which the data is stored, and the owners of the repositories.	☒	☐	☒	☐	☒
Information Sharing	It was noted that the District does not have a formal plan for information sharing. In part, this is due to the fact that a considerable amount of the District's administrative information is contained within the pillars of the PeopleSoft implementation (Financials, HRM, and Campus Solutions), although HR in particular makes use of a number of applications external to PeopleSoft for managing applicants, investigations, and conformance with Federal and State reporting requirements.	☒	☒	☒	☐	☒
IT Asset Management	The District does not have a complete, current, and accurate inventory of its IT Assets nor does it have resources and procedures for the management of the IT assets including the definition of refreshment cycles.	☐	☐	☒	☒	☒

Key Takeaway	Description	Impact on ITS				
		Limits Agility	Limits Responsiveness	Impedes Performance	Reduces Sustainability	Reduces Value on Investment
IT Governance process	SDCCD has an extensive process for IT governance involving multiple committees and campus organizations; however, there is no formal process in place to ensure that the allocation of IT and user resources are aligned with SDCCD's overall strategic objectives and priorities.	☐	☐	☐	☐	☐
ITS staffing and workload	The decision of a prior District administration to acquire and implement Oracle's PeopleSoft solutions for Finance, HCM, Budget, and Campus Solutions has been problematic. The PeopleSoft solution can be labor-intensive, making the District reliant on (1) recruiting and retaining technical professionals for whom the demand exceeds the supply including private sector firms that can provide higher compensation vs. the District who cannot match the compensation but provides a better benefits package, and (2) external consultants. It was noted in the user interviews, that eight years into the implementation of PeopleSoft the District is paying for HCM modules that have not been implemented and possibly paying for third-party applications to perform functions that are in the PeopleSoft product but not implemented in the District.	☒	☒	☒	☒	☒
PeopleSoft strategy	The District should begin planning for the potential replacement of PeopleSoft in 2027/28 and determine how much should be spent today on the applications that may be replaced within five to six years, considering that HR noted that they have modules such as absence management, open enrollment, and eForms that have not been implemented even though they are eight years into the implementation of HCM.	☐	☐	☐	☐	☐
Persistence of legacy applications	Several legacy applications have been preserved as archives for reporting purposes including information from Experion (formerly Colleague) that is accessed through Oracle Business Objects. Although HR would like to have this information migrated to PeopleSoft there is no formal plan to do so at present. The preservation of these applications, even in an inactive form, represents a drain on resources. The information should either be migrated to current applications or moved to a data repository that is more accessible and usable.	☐	☐	☒	☐	☒
Project funding	The District has often been the recipient of grant funds to fund the acquisition and/or development of IT projects; however, the ongoing costs (such as maintenance) for these projects must be borne by the District and these costs need to be identified and programmed into future budgets at the time that the District accepts the grant, or finding funds later for maintenance, etc., can be problematic.	☐	☐	☐	☒	☒
Project Management / Project Management Office	Applications Development appears to take a very minimalist approach to project management. Key project management artifacts such as project charters, concept of operations documents, and project control documents do not appear to be in use. The use of project plans also seems to be very limited, particularly since time is tracked on an exception basis and not recorded by project, deliverable, or task. As a result, tasks simply take as much time as is needed to complete them without having the	☒	☒	☒	☐	☒

Key Takeaway	Description	Impact on ITS				
		Limits Agility	Limits Responsiveness	Impedes Performance	Reduces Sustainability	Reduces Value on Investment
	ability to support continuous improvement. Applications Development also does not appear to have access to project management resources to assist in the development of these artifacts.					

Section 4 – District's Conformance to IT Best Practices

4.1 – Overview

This section of the report provides an analysis of the District's conformance to a set of IT Best Practices developed by SDI based on industry standards (including the Information Technology Infrastructure Library [ITIL]) and the experience of SDI's consultants in working with a wide range of public sector organizations. The review and analysis of the District's conformance to the IT best practices supports the development of the findings and recommendations discussed in Section 5.

4.2 – SDI's Model for IT Best Practice Conformance

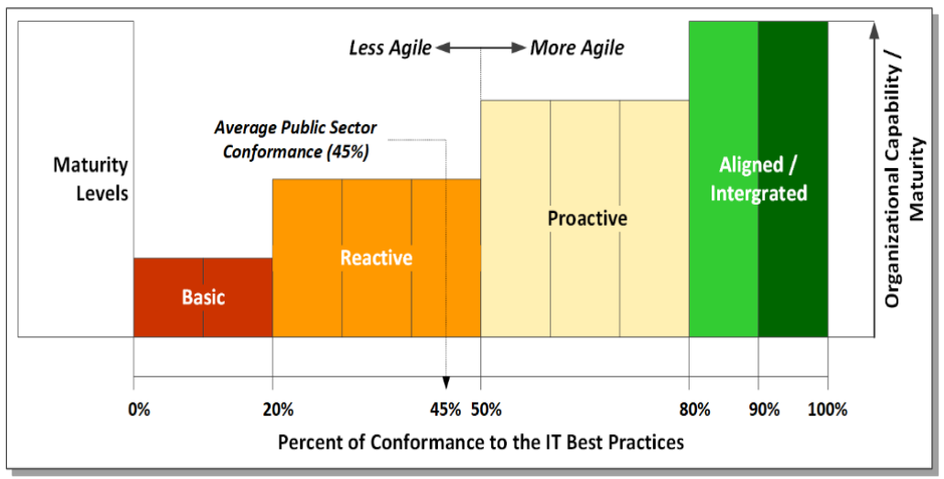

Figure 4.1 – Levels of Organizational Maturity and IT Best Practice Conformance (Source: SDI)

Figure 4.1, Levels of Organizational Maturity and IT Best Practice Conformance, provides a conceptual framework that SDI uses to depict how conformance to IT best practices impacts organizational maturity. The model is based on five levels of maturity ranging from "Basic" (where the IT organization is largely unstructured) to levels of progressively higher conformance to best practices as organizations adopt well-defined and repeatable processes. Each level in model is characterized by:

- Increased agility (defined as the ability of an organization to sense and effectively respond to change).
- Greater ability to sustain the delivery of IT services.
- Increased return on investment (ROI) for an organization's spending on information technology.

The characteristics of each of the levels in the maturity model are as follows:

- **Basic:** Organizations at the Frontier Level have fewer than 20% of their processes in compliance with best practices. This level of maturity is characteristic of new and/or re-organized IT organizations.
- **Reactive:** Organizations at the Reactive Level generally have well developed procedures including formalized procures for incident reporting and tracking and are committed to customer service but spend a disproportionate amount of their time and resources "fighting fires." Organizations at this level of maturity tend to be primarily focused on managing (i.e., limiting) their investments in information technology rather than finding a balance between cost of ownership and the benefits obtained for their investments in IT (i.e., return on investment).
- **Proactive:** Organizations at the Proactive Level have many of the same attributes as organizations at the Reactive Level, but with the key difference that they continually seek to improve service delivery by finding long-term solutions to common problems such as improving user competency, self-reliance, and training so that they do not need to call IT for support as often. This is the "turning point" for many organizations since they are better able to use their IT resources for strategic purposes rather than reactively responding to the same problems. These organizations are often focused on the value that they obtain for their investments in information technology.
- **Aligned:** A general characteristic of organizations that have between 81% and 90% conformance to the IT Best Practices is that they align their information technology objectives and priorities with their operational objectives and priorities and are thus able to derive greater returns for their investments in IT.

- **Integrated:** A general characteristic of organizations that are more than 90% conformant to the IT best practices is that they have integrated information technology and operational planning. As a result, these organizations tend to be more agile and innovative than organizations with lower levels of conformance and maximize the return they obtain for their investments in IT.

The vertical dotted line between the Reactive and Proactive levels of the model illustrates a key metric regarding IT best practice conformance. Organizations with less than 50% conformance are generally reactive in responding to user needs, while those with better than 50% conformance are generally proactive and are better able to anticipate user needs. SDI has observed that many organizations achieve between 40% to 60% conformance to the IT best practices and, as a result, often have some of the characteristics of both the Reactive and Proactive levels of the model.

Caveat Regarding IT Best Practice Conformance

A caution about the impact of IT best practice conformance on the ability of an IT organization to effectively deliver services is appropriate. Although SDI attaches considerable importance to best practice conformance as an essential building block for the effective delivery of IT services, an IT organization need not meet or exceed every best practice in order to provide effective customer service. A higher degree of conformity to best practices, however, generally enables an IT organization to better sustain service delivery levels over time and to more successfully cope with external and internal factors that have the potential to disrupt the ability to effectively deliver IT services.

4.3 – District's Conformance to the IT Best Practices

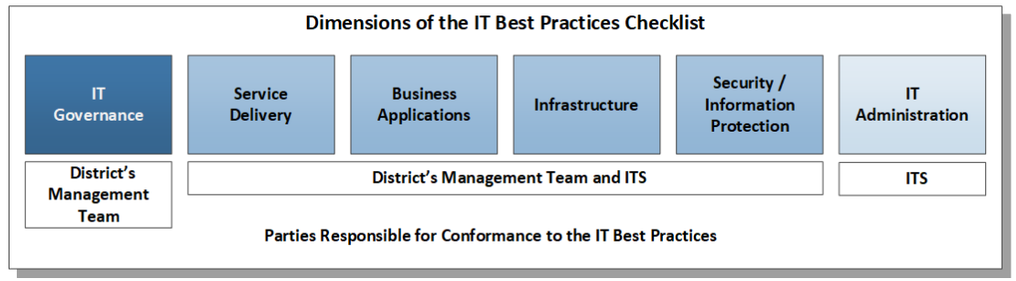

Figure 4.2 – Dimensions of the IT Best Practices (Source: SDI)

As depicted in Figure 4.2, Dimensions of the IT Best Practices, SDI's divides the IT best practices into six separate dimensions, and the responsibility for conformance to the IT best practices in each of these dimensions is owned by the District's Management Team, ITS, or shared between them. The dimensions include:

- **IT Governance:** Includes practices related to the governance of the District's information technology environment.
- **Service Delivery:** Includes practices related to providing user support such as training, help desk, service delivery management, and the establishment of service level agreements (SLAs) and tracking conformance to them.
- **Business Applications:** Includes practices related to the management and support of the application software supporting business operations.
- **Infrastructure:** Includes practices related to the acquisition, utilization, and maintenance of the District's IT assets.
- **Security / Information Protection:** Includes practices related to the effective use of policies and standards, user conduct, software tools (filtering, monitoring, etc.), and audits to validate that information, material and software resources are used only by authorized individuals and for their intended purposes.

- **IT Administration:** Includes practices related to the management of technology budgets, maintenance agreements, software licenses, and the development and maintenance of current and accurate documentation on all technology activities.

Figure 4.3, Results of Assessment of IT Best Practices Conformance, depicts the results of SDI's review of the District's conformance to the IT Best Practices. This was developed in cooperation with ITS, with ITS performing an initial assessment, and SDI then reviewing ITS' responses. The completed IT Best Practices Checklist is provided as Appendix A.

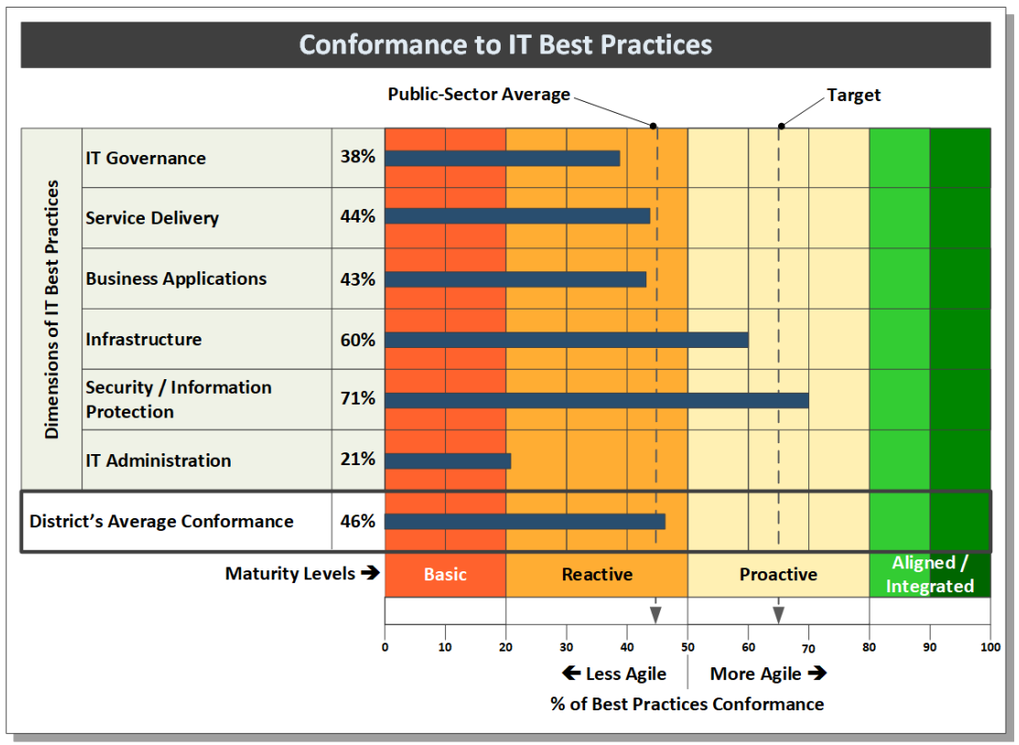

Figure 4.3 – Results of Assessment of IT Best Practices Conformance (Source: SDI)

As depicted in Figure 4.3, the District's overall conformance to the IT Best Practices is at 46% which is slightly greater than the average for prior assessments of this type conducted by SDI since 2014. Within the dimensions of the IT Best Practices model, conformance varies from a low of 21% for IT Administration (which is generally reflective of ITS' lack of documented procedures) to a high of 71% for Security / Information Protection. In between these, Infrastructure is at 60% (above average) while Service Delivery (44%) and Business Applications (43%) are just below the average. Please note though, that ability of ITS to sustain these levels of conformance for Security / Information Protection and Infrastructure are dependent on staffing levels and the loss of key staff members and their institutional knowledge through attrition could limit ITS's ability to translate IT Best Practice conformance into the effective delivery of IT services to the user community.

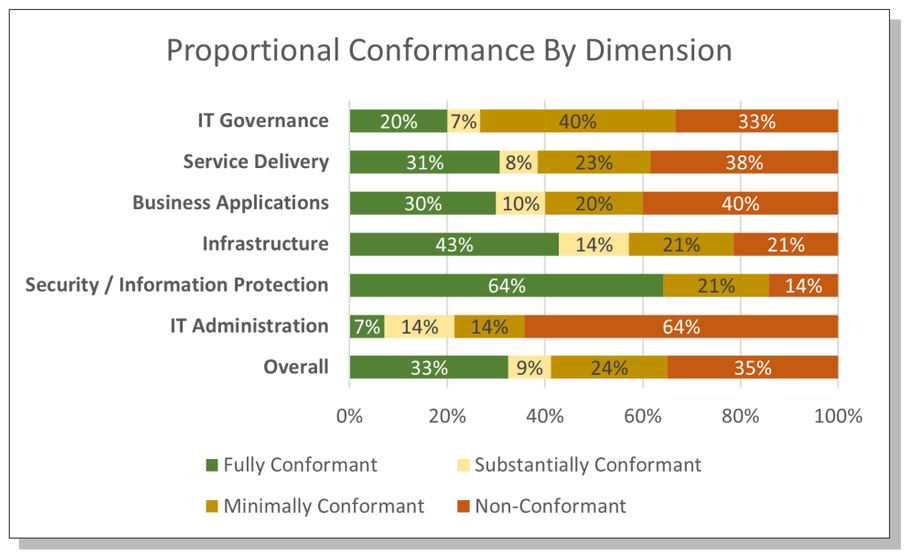

Figure 4.4 – Proportional Conformance By Dimension (Source: SDI)

Figure 4.4, Proportional Conformance by Dimension, drills down within each of the dimensions to show the percentage of the IT best practice factors within each dimension to which the District is fully conformant, substantially conformant, minimally conformant, and

non-conformant. Please note that due to rounding, the total conformance to any one of the dimensions may exceed 100%.

The IT Best Practices Self-Assessment Checklist asks clients to indicate whether they are:

- Fully Conformant with a best practice (i.e., that they have a formal policy / procedure to meet the best practice, that it is documented and periodically reviewed, and that they have processes in place to ensure that staff members are aware of the process / procedure and follow it).
- Substantially Conformant with a best practice (i.e., that they have a formal policy procedure, that it is documented, but the documentation is not necessarily current and not routinely followed by staff).
- Minimally Conformant with a best practice (i.e., that they have a policy / procedure that is not supported by written documentation, i.e., word of mouth, etc.)
- Non-Conformant with a best practice (i.e., they do not perform it at all).

The key take-aways from this analysis include:

- Although the District's overall conformance to the IT Best Practices (46%) is just above the average (45%) for prior assessments of this type performed by SDI; the District is nonetheless only fully or substantially conformant to 42% of the IT Best Practices and either minimally or non-conformant to the rest.
- Security / Information Protection is the only dimension of the IT Best Practices model in which the District's conformance exceeds the average for prior studies.
- The District is only fully or substantially conformant to 21% of the IT Best Practices for IT Administration.

4.4 – Gap Analysis

Figure 4.5, Gap Analysis, depicts the gap between the District's current, overall level of conformance to the IT Best Practices (46%) and a recommended target of 65% which is the mid-point of the Proactive Level of SDI's model and that represents an ideal balance of sustainability, effectiveness, total cost of ownership, and return / value on investment.

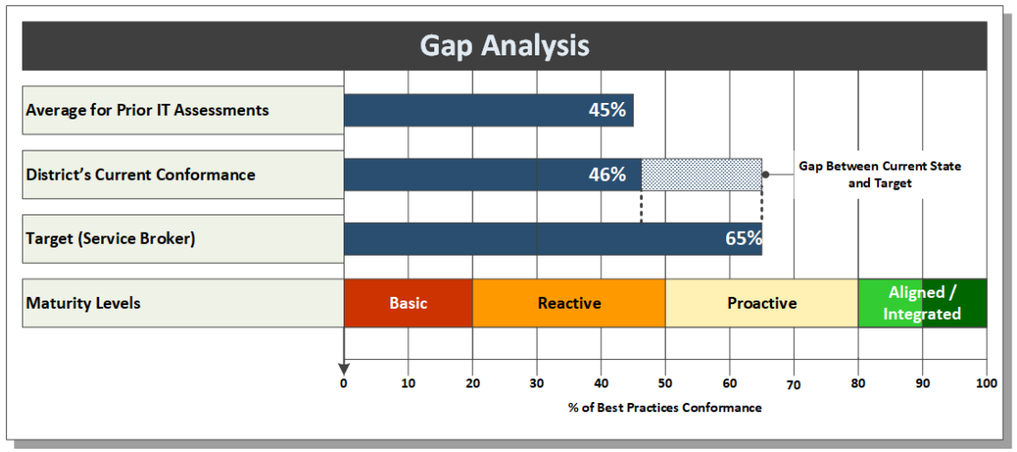

Figure 4.5 – Gap Analysis (Source: SDI)

A critical part of this analysis is the assessment of the gap between where the District is today and where it needs to be in the future. Figure 3.7, Gap Analysis, provides a holistic view of the District's current conformance to best practices and a goal recommended by SDI.

The GAP Analysis provides a comparison of:

- The District's current level of conformance to the IT Best Practices (46%).
- SDI's recommended goal for the District of 65%, which would place it within the middle of the Proactive Level of SD's Maturity Model and which SDI believes should be achievable by the District within the scope of this IT Strategic Plan with the objectives of improving the sustainability of the IT services provided by the ITS and providing a foundation for continuous improvement.

Strategies to Close the Gap

The recommendations provided in this document are intended to help the District begin to close the gap between its current conformance to the IT Best Practices and the recommended goal. The implementation of these recommendations, however, should be based on finding a balance between short-term and long-term objectives, priorities, and resources. Approaches to closing the gap include:

- Achieving quick results by identifying those IT Best Practices to which the District is substantially conformant, leveraging them in the short-term, and working to improve them to full conformance. Often this can be achieved through the development of documentation to support the implementation of the best practice and the adoption of processes to continually review both the procedures and the supporting documentation.
- Achieving long-term results improves the ability of the organization to sustainably provide IT services by remediating the issues related to IT Best Practices where the organization has either minimal conformance or is non-conformant. Often this involves a more significant effort compared to moving from substantial conformance to full conformance and this can be daunting. As a result, SDI generally recommends a phased approach, i.e., moving from non-conformance to minimal conformance or substantial conformance rather than attempting to close the gap between non-conformance and full conformance at once.

The findings and recommendations discussed in Section 5 are intended to enable the District to progressively increase its level of best practice conformance.

Section 5 – Findings and Recommendations

5.1 – Section Overview

This section of the ITS Assessment Report provides information regarding the findings and recommendations developed by SDI including a high-level review of the District's strengths, weaknesses, opportunities, and threats (SWOT).

5.2 – SWOT Analysis

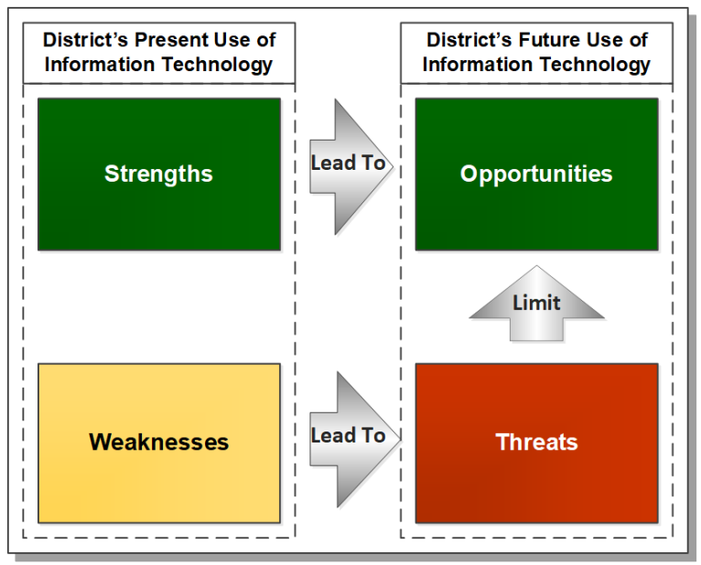

Figure 5.1 - Overview of SWOT Methodology (Source: SDI)

Figure 5.1, Overview of SWOT Methodology, depicts SDI's conceptual model for the interaction between an organization's strengths, weaknesses, opportunities, and threats. In this model, an organization's strengths lead to opportunities, while its weaknesses lead to potential threats which can limit the ability of the organization to realize the opportunities. Table 5.2, District's Strengths, Weaknesses, Opportunities, and Threats summarizes this analysis.

Table 5.2 - District's Strengths, Weaknesses, Opportunities, and Threats

Strengths:	▪ ITS has strong leadership. ▪ The District is committed to using information technology to provide access to information and services to staff members and the student body. ▪ ITS has a dedicated, capable technical staff. ▪ The IT infrastructure is reliable.
Weaknesses:	▪ Limited ITS staff to support labor-intensive software products (PeopleSoft). ▪ Inconsistent implementation practices, including the decision of a prior administration to customize the configuration of Oracle's Campus Solutions product. ▪ ITS lacks tactical work plans. ▪ SDCCD does not have business continuity and disaster recovery plans. ▪ SDCCD does not have a formal IT Governance structure. ▪ Limited communication and collaboration with campuses and staff. ▪ Lack of continuing training in the use of the PeopleSoft enterprise software products.
Opportunities:	▪ Improve IT service delivery by adding staff or using outside services. ▪ Utilize IT Governance to align District goals with IT service delivery. ▪ Evaluate Peoplesoft (ERP and Student) to ensure effective deployment. ▪ Establish a District-wide equipment replacement strategy.
Threats:	▪ Inability to sustain operations due to limited planning for business resilience (cybersecurity and business continuity) ▪ Loss of institutional knowledge and continuity due to staff turnover. ▪ ITS ability to sustain IT service levels is limited by insufficient resources and funding. ▪ Higher costs as a result of not leveraging applications.

5.3 – Findings and Recommendations

This section of the ITS Assessment Report details the findings and recommendations developed by SDI's team. Figure 5.3, Relationship of Findings, Recommendations, and Projects, illustrates that although a finding usually results in a single recommendation to remediate the finding, and a single project to implement the recommendation, it is possible that a single finding might result in the identification of multiple recommendations to remediate the finding, and potentially multiple projects to implement the recommendations.

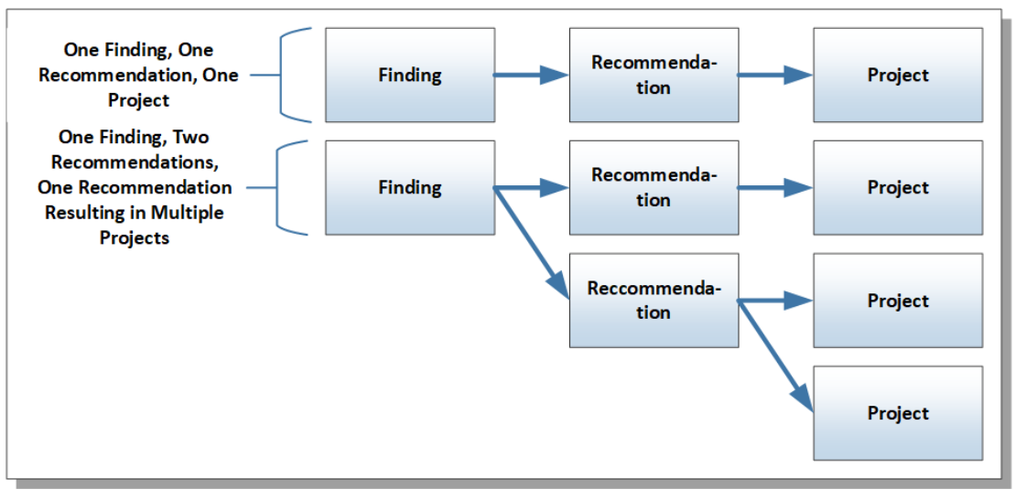

Figure 5.3 – Relationships Between Findings, Recommendations, and Projects (Source: SDI)

Please note that:

- A Finding is a statement regarding the District's present ("as is") environment.
- A Recommendation is an action the District should take to remediate the finding. Some findings may result in the identification of more than one recommendation.

The findings and recommendations are detailed below in Table 5.4, Findings and Recommendations. Each finding has been categorized based on the degree to which it has the potential to impact District operations based on whether it promotes:

- Agility: The ability to sense change and to proactively respond to new and/or changed requirements.
- Responsiveness: The ability to respond to user requirements.
- Performance: The ability to meet expectations.
- Sustainability: The ability to maintain service levels over time.
- Value on Investment: The ability to obtain value for investments in information technology (e.g., return on investment).

Additionally, each finding has been prioritized on a scale of 1 to 5 (with 5 being the highest priority for the District) based on the potential impact of the finding on District operations.

Table 5.4 – Findings and Recommendations

Identification	Finding	Recommendation	Impacts					Priority
			Agility	Responsiveness	Performance	Sustainability	Value on Investment	
Application Portfolio	SDCCD does not have a complete and current inventory of all the business and instructional applications or a portfolio to help ensure that the District receives the highest possible value for its investment in them.	The development and continuing maintenance of an application portfolio will allow the District to effectively manage its software applications to ensure that limited resources are used as effectively as possible and confirm that new applications are considered with regard to their impact on the capacity of the District's IT infrastructure, cloud-migration strategy, and its requirements for information exchange, security, business continuity, and disaster recovery.	☒	☐	☐	☒	☒	3
Cyber Security Plan	SDCCD does not have a formal, documented Cybersecurity plan for the prevention, detection and resolution of cyber-threats potentially leaving the District vulnerable to hacking, malware (including ransomware), and computer viruses.	SDCCD can be inadvertently exposed to viruses and malware through e-mail, by employees and students visiting websites that have been contaminated, or by staff bringing media from outside sources that are contaminated. Cybersecurity plans include provisions to protect the District's information from unauthorized access, modification, and destruction. Therefore, in conjunction the State Chancellor's Office, ITS should develop a plan that is generally conformant with the requirements of NIST (National Institute of Standards and Technology), or the International Organization for Standardization (IOS), or the SANS Institute (officially the Escal Institute of Advanced Technologies) that identifies the steps to be taken to prepare for a cyber-security attack.	☐	☐	☒	☒	☐	2
Business Continuity Plan	SDCCD has not developed and implemented a District-wide Business Continuity Plan that would help to minimize the risk of disruptions to District operations in the event of an unplanned outage to network, infrastructure, and applications to ensure that they can be recovered in a timely manner should an outage occur.	SDCCD should create a Business Continuity Plan to include all hardware, software, off-site services, and training required to meet business, instructional, and operational recovery requirements. The District should perform a business impact analysis to identify mission critical applications and the potential impact if they are not available, the steps that can be taken to sustain operations without automation, and the maximum amount of time that the District can sustain operations without the application(s) being available.	☒	☒	☒	☒	☐	4

Identification	Finding	Recommendation	Impacts					Priority
			Agility	Responsiveness	Performance	Sustainability	Value on Investment	
PeopleAdmin Review	HR is presently using PeopleAdmin for applicant processing and is not entirely satisfied with the functionality provided by the product and is looking at potentially procuring NEOGOV's applicant processing module as a replacement for PeopleAdmin.	The District should conduct a formal and through review of the respective merits of PeopleAdmin and NEOGOV with the objectives of objectively determining: • HR's functional requirements and to identify opportunities to improve the processes for applicant tracking. • Which product provides the best fit for the District's functional needs. • Whether PeopleAdmin has been configured and implemented effectively and if not, whether the product could be re-implemented to better meet HR's functional requirements. • Whether the District has the resources (both user and ITS) to support the replacement of PeopleAdmin for HR. • Whether information can be effectively exchanged between PeopleSoft HCM and NEOGOV (NEOGOV has a programmable application program interface [API] but does not specifically support information exchange with PeopleSoft. • The costs related to the implementation and continued use of NEOGOV.	☐	☐	☒	☒	☒	3
Application Training	The District does not have a formal, enterprise-wide program to provide continuing training for business applications such as Peoplesoft. Some units, such as the Human Resources Division, have created internal teams to serve as the liaison between the user community and ITS and to triage user requests. Without effective training, employees can find that they are less able to make use of business applications and may adopt various "work around" solutions that further reduce the effectiveness of the business applications. In the absence of a plan for providing continuing training, employee competence in the use of business and operational applications can also decline as a result of staff turnover and attrition.	On-going training for applications such as Peoplesoft and productivity software such as Office 365 should be provided to staff through a mixture of training methodologies including a "train-the-trainer" approach that allows for the completion of periodic re-fresher classes to ensure minimum competency levels are maintained for core business applications, traditional instructor-led sessions (vendor supplied), "e-learning" courses that employees can take from their desks, and the deployment of self-help tools for common problems within a knowledge base so that users can access data and user experiences to either resolve a problem or answer operational questions.	☐	☐	☒	☐	☒	2

Identification	Finding	Recommendation	Impacts					Priority
			Agility	Responsiveness	Performance	Sustainability	Value on Investment	
IT Asset Management Plan	The District does not have a formal program to manage its investment in IT assets including hardware, systems software, servers, storage devices, desktops and peripheral devices, mobile devices, and software licenses.	ITS should develop a detailed inventory of its hardware environment by utilizing an inventory tool such as Lansweeper to gather, in a central location, key attributes of the District's technology assets including software licenses. Once the initial list has been created, ITS will need to physically inventory all other devices not attached to the network and record those attributes manually. Once established, ITS should develop a policy and practice to continuously update the inventory as changes in the environment occur. Furthermore, ITS should plan to link the inventory with Freshdesk to coordinate ticket resolution more effectively.	☐	☐	☒	☒	☒	3
IT Asset Refreshment Budget	The District has not established an annual budget allocation for the systematic refreshment of information technology assets including servers, desktops, laptops, and network infrastructure devices.	The District should create an annual budget allocation for the replacement of servers, desktops, laptops, and network infrastructure devices. This proactive strategy will keep the maintenance on equipment to a minimum, provide equipment that will operate effectively with new software, and ensure upgrades to the communications network, access points, Wi-Fi coverage, and other necessary telecommunication devices are performed on a routine basis. The replacement of aging hardware and software is critical to maintaining the security and reliability of the IT infrastructure, network, and user department hardware.	☐	☐	☒	☒	☒	3
IT Governance	SDCCD does not have a formal, unified, process for IT governance to ensure the continuing alignment of the District's IT directions and priorities with its business and academic priorities, nor is there a process to ensure that resources are appropriately allocated based on these needs.	The District should define and create a formal IT governance structure which will assist in aligning the business and academic needs with the technology support organizations. Activities include the creation of a charter for an IT Governance Committee and any needed sub-committees, member selection, meeting agendas and schedule. SDCCD should establish this oversight structure for the acquisition and implementation of technology, to improve communication about technology projects, provide for organization-wide input into technology decisions, and establish the process for prioritization of technology needs. A properly executed IT Governance structure will: • Enable the District to better manage its total cost of ownership for information technology by better leveraging existing IT assets and ensuring that ad-hoc projects are justified. • Improve communication and transparency among campus and District departments utilizing technology. • Provide a forum for structured technology implementation.	☒	☒	☒	☒	☒	5

Identification	Finding	Recommendation	Impacts					Priority
			Agility	Responsiveness	Performance	Sustainability	Value on Investment	
Data Governance and Data Warehousing Review	SDCCD has been working on the development and implementation of procedures for the District-wide governance of data and the creation of a data warehouse to support research, and the development of reports (mandated and discretionary) that would otherwise draw information from multiple repositories; however, the project has been protracted and appears to be stymied.	SDCCD should conduct a review of the current program to ensure that the scope and objectives of the project are well-defined and consistent with current trends in data governance and enterprise data architecture, that the project has a well-defined and documented charter, and appropriate sponsorship. SDI recommends that this project should be under the direction of ITS, and that the District obtain the services of an experienced and qualified Data Architect to head up the project. The scope of the project should include the objectives to: • Improve and manage data quality within the District. • Identify data owners. • Build a data catalog. • Identify and define data issues and the steps required to remediate them, including the identification of ad-hoc data repositories and databases. • Ensure that the District can protect data privacy and secure data from unauthorized access, modification, and destruction. • Develop and enforce data security policies. • Build and maintain a data warehouse to deliver data to the users who need it. • Drive data literacy to enable end-users to access data.	☒	☒	☒	☒	☒	5
Service Desk	ITS maintains a formal Service Desk to provide technical support to the District's departments, faculty, and students; however, it was noted that ITS's approach to the management and operation of the service desk is not as thorough as it should be.	ITS should implement the following practices to improve service to its user community: • ITS should develop and publish a service catalog that describes what ITS does and does not support, the respective responsibilities of ITS and the user, and what the user should expect (i.e., time to respond to the request for service, time to resolve the request for service, etc.). • ITS should develop and implement formal procedures for the Service Desk that define how user requests should be handled, prioritized, and escalated, tracked, and reported, including ensuring that: - The information in the Freshdesk database is complete, accurate, and all user requests for assistance are entered into Freshdesk as soon as possible (even if they contain minimal information).	☒	☐	☒	☒	☒	4

Identification	Finding	Recommendation	Impacts					Priority
			Agility	Responsiveness	Performance	Sustainability	Value on Investment	
		- Before staff members close a ticket that the resolution is documented, and the user confirms that their request has been satisfactorily resolved. • ITS should ensure that all personnel assigned to the Service Desk are provided with sufficient initial and on-going training to enable them to work effectively with members of the user community and other organizations within ITS. • ITS should provide the ability for users and ITS staff members to collaborate on the resolution of tickets or for users to monitor the status of their requests. • ITS should consider the development and implementation of AI-based self-service tools and knowledge bases for the user community. • ITS should consolidate and/or integrate separate solutions that have been implemented. The Educational Services (ES) team is using JIRA for functional requests and bug fixes and tickets need to be moved between JIRA and Freshdesk. If it is not feasible to consolidate to a single solution then a real-time, two-way interface between Freshdesk and JIRA should be implemented.						
Policies and Procedures	SDCCD has limited documented technology policies and procedures which should form the backbone for technology security, consistency, communication, and support. Policies and procedures guide the use of technology to ensure a secure, reliable, and supportable environment.	It is important that SDCCD adopt technology policies and enforce their consistent use. An initial set of policies should address the following: • Acceptable Use of Technology: Guidelines for the use of computers, telephones, cell phones, portable storage devices, Internet, email, and voicemail. • Security: Guidelines for passwords, levels of access to the network, virus/spyware protection, confidentiality, usage of data and data encryption. • Technology Standards: Guidelines to determine the type of software, hardware, and systems that will be purchased and used within District, including those that are prohibited. As time permits, the District should develop additional technology policies such as: Document Retention, Equipment Sanitation/Disposal, Software Licensing Administrative Rights, Change Control, Remote Access, etc.	☐	☒	☒	☒	☐	3

Identification	Finding	Recommendation	Impacts					Priority
			Agility	Responsiveness	Performance	Sustainability	Value on Investment	
Network Testing	ITS has not contracted with an outside security firm to conduct regular comprehensive network assessments, vulnerability scans, and penetration tests of the District's local area and Wi-Fi networks.	SDCCD should contract with an independent, certified, firm to conduct a network vulnerability and penetration test. The network vulnerability and penetration test should include, physical security, vulnerability assessment to identify and validate configuration and/or technical flaws within a given system or network (e.g. firewalls, routers, servers, operating systems, applications, databases, etc.), penetration testing to determine compromises on the network, information security program assessment, and data loss prevention.	☐	☐	☒	☒	☐	2
Technical Documentation	ITS does not have complete documentation for components of the District's IT infrastructure including wired and wireless networks, servers, storage devices, and business applications and the procedures required to maintain them	SDI recognizes that maintaining a current and accurate document repository for an organization with limited IT resources is a significant challenge. However, SDI has found that technology organizations are best served by ensuring appropriate focus is placed on documentation. Much of the knowledge and expertise within ITS regarding the server room, applications, databases, and network configurations may be held by staff using informal documentation processes and only formally recorded as time permits.	☐	☐	☒	☒	☐	2
PeopleSoft Post-Implementation Review	SDCCD has conducted several formal post-implementation reviews (PIRs) of its implementations of the PeopleSoft applications, but these have been limited. ITS should conduct a more thorough and strategic review in order to document "lessons learned", training issues, reporting issues, successes, failures, areas to improve, etc. Issues and obstacles that were encountered during and after the implementation may not have been adequately identified, defined, addressed, and resolved.	ITS should conduct a more comprehensive post-implementation review (PIR) for the PeopleSoft applications in use (Finance, HRMS, Campus Solutions, and ECM/Hyperion). The PIR should: • Validate system usage and determine if additional features and functionality can be leveraged to receive a higher return on investment (ROI) or whether the District should consider whether alternative solutions might be a better fit for its functional needs and support resources. • Provide the basis for conducting a cost/benefit analysis. • Identify opportunities to improve business processes. • Identify opportunities for advanced training. • Identify benefits through increased integration with other systems. The District may want to contract with an independent, well-qualified consultant to assist in the review to ensure an unbiased evaluation of the application configuration, best processes, and module functionality.	☐	☒	☒	☒	☒	4

ITS Staffing	ITS has been in a state of change over the past 2-3 years with changes in executive leadership, new technical staff, and the implementation of key operations improvements (Wi-Fi, telephony, etc.). The demand for ITS services, even for the maintenance of the existing applications environment, exceeds the resources presently available to ITS, including both full-time staff members and external resources. In this environment, ITS does not have the depth of resources to handle new IT initiatives without impacting support and maintenance activities.	Recent organizational changes have been necessary but also reveal the need for an increased focus on specific operational components with ITS in order to improve and sustain effective service delivery. These include: • ITS FTE: ITS is operating with less than an optimum number of staff. At the time this document was written ITS had 11 vacant positions. Needless to say, filling these positions, even with temporary staff, would dramatically improve service to the user community. In the future, SDCCD should consider adding additional FTE in the area of security, project management, and business analysis. • ITS and Campus Technology Services Consolidation: SDI recommends the District consider consolidating the technology support organization under a single organization umbrella. Technical staff would physically reside at the individual campuses and District office but would report directly to the ITS managers. This structure would allow for better deployment of resources, opportunities for cross-training, and career advancement. In addition, a single source for technology asset acquisition and management would be more efficient and provide better accountability, budgeting, and refreshment planning. • Resource Allocation Plan: ITS should create a plan that leverages both internal and external, as well as on-site and remote resources, to support critical applications and services. In this environment, ITS may find it more effective to establish a pool of technical resources that Project Managers can draw from rather than having scarce and expensive resources allocated to specific teams. • Tactical Planning: There is a need for tactical (annual) operational plans within ITS such as project charters, project schedules, and work plans. These plans are critical guides to ensure ITS staff continue to work on the SDCCD's highest priority projects, that new service requests don't interfere with scheduled implementations, and work is performed in an orderly, effectively communicated manner. • Succession Planning: The lack of a comprehensive succession plan for ITS staff has the potential to be a significant issue for the District. Much of the technical knowledge and expertise is held by staff with only informal documentation relative to the server/storage environment, application interfaces, databases, and network configurations. Cross-training can mitigate the impact of attrition, but without sufficient resources to maintain service, the time and effort required for cross-training will impact the ability of ITS to maintain service levels.	☒	☒	☒	☒	☒	5
Cloud Migration Plan and Sourcing Management	ITS is in the process of migrating key applications from the District's on-premises data center to Oracle's Cloud Infrastructure (OCI) environment. This included migrating from Hyperion (which was hosted on-premises) to ECM which is based in OCI. However, SDI found that planning for this migration including the	ITS should develop and implement processes for managing its increasing reliance on OCI, including ensuring that appropriate controls are in place to protect SDCCD's data, as well as that the District's requirements for application availability and performance are defined, contractually confirmed, and monitored. This should include provisions for periodically downloading SDCCD's data from OCI to secure, independent premises.	☐	☐	☒	☒	☒	3

Identification	Finding	Recommendation	Impacts					Priority
			Agility	Responsiveness	Performance	Sustainability	Value on Investment	
	establishment of requirements for reliability and performance has been limited. It was also noted that ITS does not have staff and procedures allocated to monitor and manage the performance of external service providers.							
SIS Application Customization	The PeopleSoft Campus Solution software (SIS) was highly customized for the District to make the new application mimic the look and feel of the legacy application it replaced. This impacts the ability of ITS to support the application since the customizations must be reapplied to SIS whenever a new version is installed (approximately three times per year) and likely also impacts the ability of the Campuses to make effective use of new features and functionality in the product. The net impact is that the customization increases the District's total cost of ownership for the application while limiting the value / return that the District receives for its spending on this application.	The District should conduct a post-implementation review of SIS with the objectives of determining whether the application can be made to work without the need for custom modifications or whether an alternative solution may be a better fit for the District's requirements without the need for custom modifications.	☒	☒	☒	☒	☒	5
Project Management Oversight	ITS does not have an internal project management office to assist program and project managers in the preparation and maintenance of critical project management artifacts including Project Charters and Project Control Documents. The absence of these documents impedes the ability of ITS to set, and then to manage to, user expectations and to effectively allocate resources.	ITS should create a Project Management Office (PMO) to provide expertise and oversight to help ensure that projects are completed successfully and on-schedule and to assist ITS in working with District-wide IT Governance. This could be done using internal resources, external resources (through an agreement with an external PMO service, such as the California Community Colleges Technology Center), or a combination of both internal and external resources. The use of an external service could enable the District to quickly stand-up a PMO while recruiting for permanent staff.	☒	☒	☒	☒	☒	4

Identification	Finding	Recommendation	Impacts					Priority
			Agility	Responsiveness	Performance	Sustainability	Value on Investment	
Enterprise Document Management Strategy	The District does not have a formal enterprise document strategy. SoftDocs has been procured and implemented and users have been converting documents to PDF so that they can be uploaded into SoftDocs and indexed. In the absence of a formal document management, the District will not be able to fully realize the benefits of a near-paperless environment.	ITD should work with an external, authoritative resource, to develop an enterprise document management plan that: • Provides the foundation for the District to migrate to a near-paperless environment. • Identifies opportunities to better leverage digital documents, such as using automated workflows to control document distribution and processing. • Identifies the entity within the District that is responsible for managing documents. • Identifies the documents being used in the District, the owners of the documents, the entities that either retrieve or update the documents, and identifies documents that are either duplicative and can be consolidated or are no longer needed and can be purged per records keeping guidelines. • Identifies the requirements for integration between the document management system and the District's PeopleSoft applications as well as other applications. • Identifies the costs and benefits related to the implementation of a District-wide approach to document management.	☐	☐	☒	☐	☒	2

Section 6 – Conclusion

6.1 – Overview

This section of the ITS Assessment Report provides SDI's thoughts regarding the actions that the District should take with the completion of this phase of the IT Strategic Plan. As depicted in Figure 6.1, Overall Project Methodology, with the completion of the ITS Assessment Report the District will have assessments of:

- Where the District is today with regard to the use of information technology in support of its administrative processes (the "as is" state).
- Where it needs to be in the future (the "to be" state).

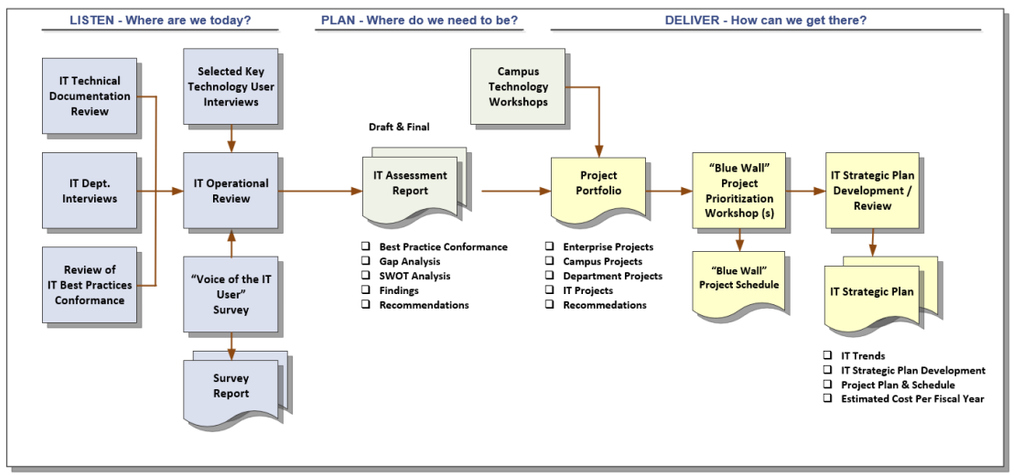

Figure 6.1 – Overall Project Methodology (Source: SDI)

The next phase of the project will include the development of the IT Strategic Plan, which will define the process by which the District can transition from the "as-is" state to the "to-be" state; however, there are actions that the District can take today to realize some of the benefits of this process, while also enabling it to better take on the implementation of the IT Strategic Plan.

6.2 – Delivering "Short Term" Wins

There are a number of reasons to consider the accomplishment of "short-term" wins with existing resources even while the development of the IT Strategic Plan is still in progress. In addition to creating confidence in the user community that ITS can more effectively respond to user requirements and building momentum for the adoption and implementation of the IT Strategic Plan, steps that District management and ITS can take to better utilize SDCCD's information technology resources include:

- Rationalizing the District's approach to the governance of information technology by creating a holistic process to ensure that the allocation of ITS and user resources is aligned with the District's objectives and priorities.
- Improving the delivery of IT services to the District's administrative users as well as to instructional users. For example, ITS cannot effectively support the user community unless it is committed to communicating and collaborating with them. Irrespective of the technical issues involved, a user request or problem is not really resolved until the user believes that it is. Steps to improve communication and collaboration can usually be accomplished with existing resources. ITS is not necessarily the only (or even the best) place for innovation in the use of information technology. Innovations or suggestions for new uses of information technology that originate from faculty and staff may be frustrating at times, even impractical, but are almost always tightly tied to improved services and organizational requirements.
- Creating increased value for the District's investments in information technology by forging a stronger partnership between ITS, the District's administrative departments, and campuses that will enable the implementation of change within the District, its culture and work processes that will drive both productivity and value.
- Creating detailed work plans for Applications Development and Operations staff to more effectively allocate resources and to develop a model to justify the addition of internal and/or resources.

6.3 – Closing Thoughts

Finally, although IT best practices continue to change as information technology trends, products, and services emerge and mature (and are then replaced by other developments), IT organizations that are already reasonably conformant to IT best practices are generally more agile and better able to adapt to new circumstances than those that are not. For this reason, ITS should regard the Information Technology Assessment as a process rather than a fixed deliverable.

Appendix A – IT Best Practices Checklist

IT Best Practice Conformance						
No.	**Dimension / Category**	**Best Practice Factor**	**Yes, No, Other, N/A**	**Score (3,2,1,0)**	**Doc Avail-able?**	**Comments (SDI = Comment from SDI Consultants)**
Information Technology Governance						
1	Strategic Business Plan	Does the District have a strategic business plan?	Y	3		SDI: The District has a 2023-2030 Strategic Plan. "The Districtwide Strategic Plan 2023-2030 serves as a living document for sustained, continuous quality improvement initiatives that facilitate the District's efficiency and effectiveness in achieving its mission, improving service delivery and operations, and promoting better-informed decisions for resource management."
2	Strategic Business Plan	Is the District's strategic business plan updated on a regular basis?	Y	3		SDI: The Strategic Planning Committee meets on a regular basis and agenda and minutes are published on the District's website with the last meeting being October 26, 2023.
3	IT Oversight	Does the District have a defined IT Governance process?	O	1		SDI: The District has a number of IT governance committees, but there is no single enter-wide process for IT governance.
4	IT Oversight	Does the IT governance process provide oversight for all District applications and IT services?	N	0		
5	IT Oversight	Are the District's policy makers and senior executives involved in IT Governance?	O	1		
6	IT Oversight	Does the District ensure that all IT and user resources are allocated in accordance with the District's business objectives and priorities?	N	0		
7	Digital Government	Does the District ensure that the website is conformant with applicable standards including PCI and ADA?	Y	3		
8	Enterprise Project Management	Does ITS have a separate Project Management Office (PMO) function to ensure project quality and conformance with standards?	N	0		

IT Best Practice Conformance						
No.	**Dimension / Category**	**Best Practice Factor**	**Yes, No, Other, N/A**	**Score (3,2,1,0)**	**Doc Avail-able?**	**Comments (SDI = Comment from SDI Consultants)**
9	Project Management	Are project charters developed for each major IT project?	N	0		SDI: Per ITS interviews, Project Charters are not created. SDI requested that Applications Development provide an example of a Project Charter and the document produced was a functional specification.
10	Project Management	Does ITS have formal procedures for reporting project status to users?	O	1		SDI: Per ITS interviews, this is not done routinely,
11	Project Management	Does ITS maintain a list of enterprise IT projects in progress and planned?	O	2		SDI: Per ITS interviews, this document is not disseminated with ITS. Some of this information may exist in Freshdesk and JIRA.
12	Project Management	Does ITS have adequate funding and staffing to handle current and future application projects?	O	1		SDI: Per ITS interviews, Applications Development has a significant number of vacant positions and an extensive backlog of projects. The District is eight years into the implementation of PeopleSoft, and it is still not complete.
13	Application Support	Does ITS maintain a formal application portfolio?	N	0		
14	Application Support	Does the District have an enterprise IT architecture and supporting standards?	O	1		SDI: The District makes use of the PeopleSoft suite of products for Finance, HR, and Campus Solutions.
15	Document and Content Management	Does the District have an enterprise strategy and supporting standards for the management of content and documents?	O	1		SDI: The District is implementing SoftDocs.
Service Delivery						
16	Help Desk	Does ITS have a dedicated Help Desk?	Y	3		
17	Help Desk	Does Help Desk staffing include subject matter experts who can assist users with both application usage and technology issues?	O	1		User requests and problems are escalated as needed.
18	Help Desk	Does the Help Desk use an issue tracking system? If so, please identify the name of the tracking system, the version number, and the date it was last updated.	Y	3		SDI: Freshdesk (Freshserver).
19	Help Desk	Does ITS have procedures in place to ensure that all user requests are entered into the Help Desk system in a timely manner?	N	0		
20	Help Desk	Do administrative and academic users have access to the Help Desk tracking system to check the status of	O	2		SDI: Educational Services uses JIRA instead of Freshdesk and there is no integration between them.

IT Best Practice Conformance						
No.	**Dimension / Category**	**Best Practice Factor**	**Yes, No, Other, N/A**	**Score (3,2,1,0)**	**Doc Avail-able?**	**Comments (SDI = Comment from SDI Consultants)**
		their tickets and to collaborate with ITS staff members on ticket resolution?				
21	Help Desk	Does ITS routinely analyze ticket data for trends, volume, and escalation?	O	1		SDI: There is no formal procedure supporting this process.
22	Help Desk	Do ITS staff members routinely record the time worked on tickets in the Help Desk tracking system?	N/A			Time reporting is performed on an exception basis only.
23	Help Desk	Are Help Desk service levels formally defined in Service Level Agreements with the user community?	N	0		SDI: Per User interviews, no SLAs were identified.
24	Help Desk	Does ITS provide and support remote access tools to take over user desktops to diagnose and correct problems? If so, what tools are used?	Y	3		
25	Help Desk	Does ITS maintain a centralized knowledge base (wiki or other repository) that is available to users for self-help?	O	1		SDI: Per User interviews, this is not generally available.
26	Hours of Service	Does ITS provide Help Desk services on a regularly scheduled basis and, minimally, during prime shift / normal business hours?	Y	3		
27	Hours of Service	Does the Help Desk provide support for users who may need extended support?	N	0		
28	Service Delivery Management - Change Management	Does ITS have well-defined change management procedures?	N	0		
29	Service Delivery Management - Change Management	Are procedures in place to ensure conformance with the change management procedures?	N/A			
30	Service Delivery Management - Root Cause Analysis	Does ITS have a formal process for identifying, analyzing, and correcting the root cause of incidents?	N	0		
Administrative Applications						

IT Best Practice Conformance						
No.	**Dimension / Category**	**Best Practice Factor**	**Yes, No, Other, N/A**	**Score (3,2,1,0)**	**Doc Avail-able?**	**Comments (SDI = Comment from SDI Consultants)**
31	Cloud / External Solutions	Does the District have standards for the use of web-based ("cloud") services such as software as a service (SaaS), cloud-based IT infrastructure (IaaS), etc.?	O	1		SDI: The District is gradually migrating to the Oracle cloud environment.
32	Cloud / External Solutions	Does the District or ITS have a formal process for evaluating and approving the use of cloud-based services?	N/A			
33	Cloud / External Solutions	Does the District regularly conduct evaluations to ensure that Cloud service and/or external IT service providers are compliant with contractual conditions and service levels?	N/A			
34	Application Standards	Does ITS regularly apply new vendor releases and upgrades (production vs. current release)?	Y	3		
35	Application Standards	Are test environments provided for each application and are application updates formally and routinely tested by the user community?	Y	3		
36	Application Standards	Does the District have formal enterprise standards for administrative systems?	O	2		SDI: PeopleSoft.
37	Application Standards	Does the District periodically review administrative systems for conformance to standards?	N/A			
38	Application Standards	Does the District have formal standards for instructional systems?	N/A			
39	Application Standards	Does the District periodically review instructional systems for conformance to standards?	N/A			
40	Application Support	Does the District have procedures to control the user development of ad-hoc applications and spreadsheets?	N	0		
41	Application Testing	Does ITS have formal procedures for the testing and acceptance (by the user community) of changes to the District's applications?	N	0		
42	Application Effectiveness	Does ITS work with the user community to measure and track their satisfaction with the application(s) they use?	O	1		

IT Best Practice Conformance						
No.	**Dimension / Category**	**Best Practice Factor**	**Yes, No, Other, N/A**	**Score (3,2,1,0)**	**Doc Avail-able?**	**Comments (SDI = Comment from SDI Consultants)**
43	Application Effectiveness	Does ITS routinely plan for the functional enhancement, technical renovation, or replacement of applications?	Y	3		
44	Data Dictionary	Does the District maintain a formal data dictionary for its administrative systems?	N	0		
45	Information Sharing	Does the District have formal standards for the sharing of information between administrative systems?	N	0		
Infrastructure						
46	Network	Does ITS have network management tools (CiscoWorks, Openview, etc.) and use them to routinely assess network usage, performance, and track trends?	Y	3		
47	Network	Does ITS routinely review all network services to ensure the adequacy of the service as well as a documented plan for expansion?	O	2		SDI: There is no formal documented plan or procedures to support the planning process.
48	Remote Access	Does the District provide remote access for employees? If so, is remote access provided using a structured and secured method (i.e., VPN)?	Y	3		
49	Remote Access	Does the District have a formal policy governing which users are eligible for remote access and that defines the procedures for granting and revoking remote access?	O	1		This is performed by each campus on an ad-hoc basis in consultation with the HR and ITS.
50	Servers / Data Storage	Does ITS have well-defined hardware and software standards?	O	2		
51	Servers / Data Storage	Does ITS have formal policies for the granting of administrative rights for physical and virtual servers?	N	0		
52	Servers / Data Storage	Does ITS perform routine performance monitoring to ensure that servers can support business applications (memory, processor speed, disk space, etc.)?	N	0		

IT Best Practice Conformance						
No.	**Dimension / Category**	**Best Practice Factor**	**Yes, No, Other, N/A**	**Score (3,2,1,0)**	**Doc Avail-able?**	**Comments (SDI = Comment from SDI Consultants)**
53	Servers / Data Storage	Does ITS perform routine performance monitoring to ensure that that all servers (virtualized or not) are being used effectively and that sufficient capacity is on-hand to meet current and future requirements?	O	1		
54	Servers / Data Storage	Does ITS perform routine performance monitoring to ensure that that centralized storage (NAS, SAN) is being used effectively and that sufficient capacity is on-hand to meet current and future requirements?	O	1		
55	Servers / Data Storage	Has ITS deployed file servers and storage devices in other campus locations? If so, are they located in appropriate and secure facilities?	Y	3		
56	Desktops, Laptops and Printers	Does ITS control the granting of Administrator rights on desktops?	Y	3		
57	IT Facilities Management	Are all server rooms, wiring closets, etc., either managed by ITS or periodically inspected by ITS to ensure conformance with District standards?	Y	3		SDI: SDI did not tour Campus network closets and related facilities.
58	IT Facilities Access	Does ITS control and monitor access to facilities such as server rooms and wiring closets?	Y	3		SDI: Building is secured, and visitors must be escorted.
59	Mobility	Does ITS have procedures and software (Mobile Device Management) to manage mobile devices (i.e., tablets, smart phones, etc.)	N	0		
60	Mobile Devices	Does ITS have formal standards for the use of mobile devices?	N/A			
Security / Information Protection						
61	Cybersecurity, Intrusion Detection and Management	Has ITS implemented a formal Information Security Program (InfoSec) that is in conformance with the requirements of NIST SP 800-100 (Information Security Handbook: A Guide for Managers) or other professional standards (such as CIS)?	O	1		Limited security training is provided.

IT Best Practice Conformance						
No.	**Dimension / Category**	**Best Practice Factor**	**Yes, No, Other, N/A**	**Score (3,2,1,0)**	**Doc Avail-able?**	**Comments (SDI = Comment from SDI Consultants)**
62	Cybersecurity, Intrusion Detection and Management	Has ITS implemented an intrusion detection and prevention solution that that can alert IT to critical events for immediate response and that records unauthorized access attempts?	Y	3		
63	Cybersecurity, Intrusion Detection and Management	Does ITS routinely perform perimeter of other testing to ensure that intrusions are blocked and reported? If so, please provide the last time that this testing was performed.	Y	3		SDI: SDI did not conduct an in-depth assessment of the District's cybersecurity program.
64	Security Management	Does the District have a dedicated security manager who is responsible for the administration of the District's cybersecurity program?	O	1		This is in progress. Funding allocation from the State will allow ITS to fill this position.
65	User-ID and Password Security	Does ITS have procedures in place to manage user passwords (such as requiring strong passwords and periodic changing of passwords)?	N	0		
66	User-ID and Password Security	Does the District have a formal process to notify ITS when employees are terminated or out on extended leave?	O	1		
67	Desktop Security	Does the District have formal procedures in place to ensure that all users are familiar with, and conform to, District security policies?	Y	3		The District has an acceptable use policy
68	Desktop Security	Does the District have formal procedures to ensure the security of information on mobile and portable systems (such as encryption) and biometric controls?	N/A			SDI: The District does not a mobile devoice management (MDM) capability.
69	Virus/Spam Protection	Does ITS deploy software to control viruses, spyware, other malware, and e-mail spam on user desktops? If so, please identify the software products that are deployed.	Y	3		
70	Internet Access	Does the District have an acceptable use policy that is signed by all employees with internet access?	Y	3		
71	Internet Access	Does ITS actively monitor and manage internet access including intrusion attempts?	Y	3		

IT Best Practice Conformance						
No.	**Dimension / Category**	**Best Practice Factor**	**Yes, No, Other, N/A**	**Score (3,2,1,0)**	**Doc Avail-able?**	**Comments (SDI = Comment from SDI Consultants)**
72	Network	Does ITS ensure that the network is protected from intrusions by firewalls, DMZ, et al?	Y	3		
73	Network	If the District provides wireless access for "guests" is this provided on a separate wireless network or to segregate "guest" traffic?	Y	3		
74	Business Continuity	Does the District have a formal IT business continuity plan that identifies mission critical applications, their availability requirements, and the maximum duration that an application can be down?	N	0		
75	Data Backups	Does ITS perform backups on a regularly scheduled basis?	Y	3		SDI: SDI did not verify that the data backups have been tested. The District does not have a formal Business Continuity Plan.
IT Administration						
76	IT Organization	Does ITS have a formal service catalog that is available to the user community?	N	0		SDI: Per user interviews, this not available to the user community.
77	IT Organization	Does ITS have a resource management plan to ensure that it can continue to meet user requirements in the future?	N	0		
78	IT Organization	Does ITS have a succession plan for each position?	N	0		
79	IT Organization	Are Service Level Agreements specified for ITS support to campuses?	O	1		
80	Procurement, Contracts and Vendor Management	Does ITS review all procurements of IT goods and services?	Y	3		
81	Software License Management	Does ITS have a formal license management/auditing process?	N	0		
82	Inventory Management	Does ITS have a current IT asset inventory?	N	0		
83	Policies and Procedures	Does ITS plan have a process for the periodic review and update of additional policies and procedures?	N	0		
84	IT Documentation	Does ITS maintain detailed and current technical documentation for the District's IT infrastructure?	N	0		

IT Best Practice Conformance						
No.	**Dimension / Category**	**Best Practice Factor**	**Yes, No, Other, N/A**	**Score (3,2,1,0)**	**Doc Avail-able?**	**Comments (SDI = Comment from SDI Consultants)**
85	IT Documentation	Is technical documentation related to the District's IT infrastructure readily available to authorized ITS staff members through a central repository?	N/A			
86	Procurement, Contracts and Vendor Management	Does ITS rely on contractors, or outside vendors to assist with support? If so, does it have procedures to ensure that their work is documented and that it conforms to ITS standards?	O	2		SDI: ITS uses contractors but does not have formal processes in place to ensure that their work is conformant with District standards and the requirements of the statements of work in vendor contracts.
87	Hardware Refreshment	Does the District have a dedicated fund for the refreshment of applications?	N	0		
88	Hardware Refreshment	Does the ITS budget provide dedicated funds for the refreshment / renovation of IT assets per year?	N	0		
89	Tactical Workplan	Does ITS maintain a tactical work plan that details the tasks assigned to each staff member, the duration of the tasks, and the start and completion dates?	O	1		In process.
90	Campus Collaboration	Does ITS have a formal communications plan with campus IT organizations to coordinate technical projects?	O	2		Conducted at the monthly Technology Strategic Planning meetings.

Appendix E:

Technology Survey for Miramar Employees

The "Technology Survey for Miramar Employees," linked above, was distributed by the Academic Senate in Spring 2023. NOTE: this faculty-generated survey wasn't formally approved by the College in any way. (The survey results are expressed in a spreadsheet, which does not lend itself to a page layout for display here.)