Doctums ✷

Imperial Valley College

Portfolio Rationalization Assessment and Staffing Review

December 21, 2023

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Overview and Objectives

Imperial Valley College (IVC) leaders participated in the Portfolio Rationalization Assessment and Staffing Review project sponsored by Information Technology Services (ITS) over the summer and fall of 2023.

The findings, analysis, and recommendations outlined in this Portfolio Rationalization Assessment and Staffing Review Report serve as a complement to the delivered IVC spreadsheet and PowerPoint resources, including:
- ITS Cabinet Presentation Powerpoint
- ITS Summary Deck Powerpoint
- IVC Software Inventory spreadsheet
- IVC Portfolio Matrix spreadsheet
- IVC Interview Summary PowerPoint
- IVC Questionnaire Results PowerPoint
- IVC ITS Organizational Charts PowerPoint
- Doctums Technology Governance Resource PowerPoint

The objective of this project are to:
- Rationalize identified administrative solution portfolio; assessing completeness of deployment, level of adoption and user satisfaction, identifying overlaps/duplications and gaps/unmet business needs, and documenting opportunities for improving processes and providing savings
- Develop a decision framework and technology portfolio management practices to support future operations and acquisitions
- Assess information technology staffing and structure; assessing resource levels v. service expectations, skillsets related to supported systems
- Assess and rationalize identified administrative solutions and systems portfolio
- Develop a decision framework and technology portfolio management practices to support future operations and acquisitions
- Assess information technology staffing and structure
- Review technology governance practices

The scope of this project is to:
- Conduct the technology portfolio rationalization
- Complete the staffing review based on required core services
- Assess under-utilized systems and inefficient processes
- Define future state with planned strategy for rationalizing portfolio
- Develop guiding principles for managing solutions and organizing staffing
- Advise on long term technology governance best practices

Methodology

- Complete an iterative discovery and information gathering process
- Engage with multiple personas:
  - Conduct 1:1 interviews and small group sessions with hands-on users
  - Conduct 1:1 interviews with mid-level managers
  - Facilitate alignment discussions with cabinet leaders
  - Administer surveys or questionnaires regarding user satisfaction and technology utilization
  - Administer surveys or questionnaires regarding staffing patterns
- Prepare analysis and recommendations based on industry best practices and benchmarks

Over the course of this project, we conducted 32 interview sessions with users, ITS staff, teaching faculty, and students. The breakdown of participants is as follows:
- 20 interviews with functional user groups
- 5 interviews with IT staff teams
- 5 interviews with teaching faculty group
- 1 interviews with student group

We facilitated the survey process with questionnaires completed by 34 users and 12 ITS staff.

The offices, departments, and teams participating in the inerviews and questionnaires included:
- Academic Deans, with teaching faculty
- Academic Senate, with teaching faculty
- Administrative Services and Business Office
- Admissions
- Associated Student Government, with students
- CalWorks
- Child Development, with teaching faculty
- Counseling
- Disability Support Programs and Services
- Distanace Education
- Dual Enrollment
- Extended Opportunity Program and Services
- Financial Aid
- Foundation
- Health Center
- Human Resources
- Information Technology Services
  - Application Services
  - Enterprise Systems
  - Leadership
- Institutional Research

- Health and Public Safety, with teaching faculty
- Learning Services
- Maintenance and Operations
- Nursing and Allied Health, with teaching faculty
- Public Information Office
- Student Affairs
- Student Equity and Achievement
- Student Services
- Superintendent / Chancellor

The technology portfolio rationalization consists of:
- Reviewing technology systems and solutions
- Applying a framework of factors for rating, generally along a capability or fitness scale
- Recommending the forward path, or disposition, for the systems and solutions

Technology Portfolio Assessment and Rationalization (TPAR)

To better understand IVC's software environment, a software portfolio rationalization audit was conducted. The goal of this TPAR is to discover ways to improve efficiencies, reduce complexity, minimize technology risks, and lower the total cost of ownership (TCO). This application rationalization process provides the basis for several cost-saving initiatives, including:

- Software license optimization
- End-of-life sunsetting
- Project rationalization
- Retiring obsolete and low-value applications
- Eliminating redundancies
- Standardizing common technology platforms

IVC's current software portfolio is $2,039,948.61. At the time of this report's creation, twelve software costs were still unaccounted for.

Conducting the TPAR

Doctums conducted 32 interviews with key IVC stakeholders. Each group was asked a series of questions; below is a sample of some of the questions asked:

- *Which software was used in their areas?*
- *What were some of the challenges with the software?*
- *What software(s) would help with their job functions that were currently not in place?*
- *How does the software integrate with other systems?*
- *Is the application easy to use?*

All software was noted in both the IVC Software Inventory spreadsheet and in the IT Portfolio Matrix spreadsheet.

The IVC Software Inventory List is a complete alphabetical list of all IVC software currently in use with the costs associated for that software (current annual maintenance and/or support license costs).

The IT Software Portfolio Rationalization spreadsheet scores the software by four categories:

- Business Fitness
- Technical Fitness
- End User Perspective
- Total Cost of Ownership

Each of these 4 categories has its own criteria, scored between 1 and 5. Depending on the total score of the 4 categories, a total score is derived providing IVC with a disposition of the software. The "Six R's" model from InfoTech Research Group was applied and is represented in the table below.

Disposition	Description
Reward	Prioritize new features or enhancement requests and openly welcome the expansion of these applications as new requests are presented.
Refresh	Address the poor end-user satisfaction with a prioritized project. Consult with users to determine if UX issues require improvement to address satisfaction.
Refocus	Determine the root cause of the low value. Refocus, retrain, or refresh the UX to improve value. If there is no value found, aim to "keep the lights on" until the app can be decommissioned.
Replace	Replace or rebuild the application as technical and user issues are putting important business capabilities at risk. Decommission application alongside replacement.
Remediate	Address the poor technical health or risk with a prioritized project. Further consult with development and technical teams to determine if migration or refactoring is suited to address the technical issue.
Retire	Cancel any requested features and enhancements. Schedule the proper decommission and transfer end users to a new or alternative system if necessary.

In some cases, like the Banner enterprise system, the score may indicate to 'Replace' it. This score was derived based on low comments from the end user base due to either lack of knowledge in the software or being a recent new hire to the IVC campus. Consideration should be taken when reviewing critical applications that are considered 'primary' use and a low disposition score.

Findings - Overview

On the TPAR spreadsheet, IVC's software was categorized into the following:
- *Ellucian Eco-System:* Comprised of the Ellucian software stack
- *Academic and/or Instructional Software Solutions:* Comprised of software specifically used for instruction or academic purposes
- *Reporting and Analytics*: Comprised of reporting software and/or analytics software
- *End-User Facing Software:* Comprised of software consumed by the end user (i.e., no data entry)

- *Partner Solutions*: Comprised of software as either state of California provided software or third-party solutions
- *Office Management and Productivity Software*: Comprised of software used for office productivity
- *Print Management Software*: Comprised of software used for managing the carbon footprint of print pieces
- *Communication Solutions*: Comprised of software used for either texting, mass email and/or phone systems
- *Video Conferencing Solutions*: Comprised of software used for video calls
- *Form Solutions:* Comprised of software used for form building generation
- *Online Applications*: Comprised of the IVC urls that make up the various online applications used by students
- *In House Applications*: Comprised of software that was created by internal IVC IT former or present employees
- *Specialized Software*: Comprised of software that is used by less than five offices (not an enterprise application)
- *Infrastructure/Systems Software*: Comprised of software that is primarily used for the IT infrastructure or used by the programming staff

Ellucian Eco System – Findings and Disposition

The *Ellucian Eco System* is comprised of the
- Ellucian enterprise software, Banner
- the degree planning tool, DegreeWorks
- the Self-Service Portal, WebStar
- a document imaging system, XTender
- and a partner system Campus Logic

Significant investments in both fiscal, human resources capital and time have been made by the IVC IT team to the Ellucian eco system. The chart below shows that three of the modules, Finance, Financial Aid, and Human Resources should be replaced based on the scores. In this case, this is not an initiative that should be undertaken as the Finance module received a low score due to staff not trained in all aspects of the Banner Finance module, the Financial Aid module score low due to a much needed upgrade that would enhance the module's functionality and while the Human Resources module is not actively used as the College uses the County payroll system, this module must stay in place due to contingent software relying on this module.

DegreeWorks should be refocused with a plan of action to determine why some of the data in DegreeWorks does not match what is in Banner. If the goal of the college is to begin using the Starfish platform, then a project plan outlining that initiative should be created and shared with the campus community for buy-in and support as this would involve the entire campus community and should be led by a non-IT champion (i.e., Dean of Student Success). Information

Technology's role should be to provide back-end technical support in the form of integrations and other configuration settings.

A replacement software, Ellucian Experience, should be considered for the aging WebStar portal. This will drive customer satisfaction ratings to increase as many are dissatisfied with WebStar citing it as 'antiquated.' The IVC team should consider partnering with either Ellucian or other contracting company to help them initiate this project and adoption of Experience (including the companion application). This would be a 'quick win' for the IVC team as this is a low lift from an IT perspective. IT can initiate meetings and discuss what the changes will be like, create the test platform and show the areas affected by this change (Student Life, Business Office, Financial Aid, Registrar). The Experience platform is a 'fluid' project meaning changes can be made constantly keeping the application 'fresh' and appealing to the user base. A partnership with Marketing should be considered to 'brand' the Ellucian Experience with the College's school colors and the consideration of a student focus group should be given to help 'name' the platform.

Ellucian Eco System	Disposition
Banner - Student	REFRESH
Banner - Finance	REPLACE
Banner - Financial Aid	REPLACE
Banner - Accounts Receivable	REMEDIATE
Banner - Human Resources	REPLACE
DegreeWorks - Degree Planning Software	REFOCUS
WebStar --Self Service Portal	REPLACE
XTender -- Document Imaging System	REFRESH
Campus Logic	REFOCUS

Academic/Instructional Software Solutions – Findings and Disposition

The Academic/Instructional Software Solutions totaled seventeen applications in use by academics. Seven of these applications were omitted from scoring as no comments and/or complaints were made on these.

The Learning Management system, Canvas, would benefit from a 'Refresh' of the software. Partnering with the Distance Education Department would help increase satisfaction rates with both faculty and students. Students interviewed cited that while they were satisfied with Canvas, there was a desire to see more faculty use the Canvas functionality such as Grading. A focused approach to training faculty led by the DE (Distance Education) team would increase customer satisfaction. The SPSS software also scored with a 'Refresh' disposition; however, this would depend on the course material being offered as well as the instructor teaching on this software.

Several software scored a 'Refocus' disposition: Class, Ex Libris, and LanSchool. Much of this software is driven by faculty and/or the Library personnel and is not in the purview of the IVC IT. Increasing satisfaction rates can be gained by the units collaborating with IVC IT and coming to an agreement on what can be done on each system to improve functionality and improve adoption rates.

Software that scored as a 'Replace' disposition needs to be reviewed. For example, the Duxbury software is a highly specialized software used by a small student population. It is needed for ADA purposes and must be reviewed annually to determine if licensing should continue. The same holds true for other specialized software such as JAWS and Kurzweil as these are also ADA compliant software. Mathpixs is used by the Math Department and should be reviewed annually. The Canva software also scored as a 'Replacement' software, however, this is new and training would drive adoption and increase user satisfaction.

Academic/Instructional Software Solutions	Disposition
Canva	**REPLACE**
Canvas - Learning Management System	**REFRESH**
Class	**REFOCUS**
eFollett	**N/A**
Ex Libris - Library Management System	**REFOCUS**

DuxBury	**REPLACE**
Exam View	**N/A**
Google-Drive/Jamboard	**N/A**
Grammerly	**N/A**
IBM SPSS	**REFRESH**
JAWS	**REPLACE**
Kurzweil	**REPLACE**
LanSchool	**REFOCUS**
Layered Earth	**N/A**
MathPix	**REPLACE**
Planetarium	**N/A**
ZoomText	**N/A**

Reporting and Analytics – Findings and Disposition

The College only has two reporting and analytics software and these can continue to be licensed as both scored a 'Refresh' disposition. Argos is integrated with the Ellucian Banner system and is heavily used by different areas. However, the IVC team should consider bringing an Argos Trainer onto the campus and train key personnel to build some of the less complex reports freeing up the IT personnel to concentrate on the more complex reports. This could be done over months, and an incentive could be given to those IVC personnel interested in learning how to create Argos reports. A large amount of time is consumed by IT on creating reports. Freeing up the IT team from basic report creation would allow them to concentrate on projects that they need to focus on such as building the TeamDynamix workflows for better routing of service requests.

The Tableau software is used by the IVC IR team, and this team has made noteworthy progress on using this system for the IVC community. Future funding should remain in the IVC budget lines to continue to use this reporting software. The creation of enrollment dashboards for specific areas should also be expanded to other areas of the campus community.

Reporting and Analytics	Disposition
Evisions - Argos	**REFRESH**
Tableau	**REFRESH**

End User Facing Software – Findings and Disposition

Sixteen software were identified as end user facing software which is software consumed by the user base in their day-to-day job roles. Three of this software were omitted from the scoring. Most of the software in this category scored as either a 'Refocus' or as a 'Refresh' disposition which means the user is satisfied with this software. Only one software scored as a 'Replace' disposition (Donorview); however, this is software used by external clients/customers for donating funds to the campus and feedback from this constituent group was not gathered. Further discussion would be needed to determine if it does need to be replaced.

End User Facing Software	Disposition
Bank Mobile	**REFOCUS**
CI Badge	**REFOCUS**
College Scheduler	**N/A**
CurriQnet	**REFOCUS**
HandShake	**N/A**
Modern Campus	**REFOCUS**
National Clearinghouse	**REFRESH**

NeoEd	**REFOCUS**
DonorView	**REPLACE**
Starfish	**REFOCUS**
Maxient	**REFOCUS**
Medicat	**REFOCUS**
ReadyEducation	**N/A**
TeamDynamix	**REFOCUS**
Touchnet	**REFOCUS**
Tracdat	**REFOCUS**

Partner Solutions – Findings and Disposition

This was a difficult grouping to score as many of these Partner Solutions are offered by the State of California at either reduced costs or are absorbed by the state. Some were scored so that the IVC IT team can provide feedback to the state at either quarterly meetings or other opportunities that come up for the College to provide feedback on this software.

Partner Solutions	Disposition
AI Portal - Military Student Tracking	**REFOCUS**
CALWorks - Dept of Social Services	**REFOCUS**
NOVA - CA Chancelor's Office	**REFRESH**
EdConnect	**REFRESH**

Escape (Imperial County of Education)	**N/A**
HMIS (regional software/homeless tracking)	**N/A**
MIS	**REFRESH**
Program Pathways Mapper (CA Community Colleges)	**N/A**
SEVIS	**REFRESH**
Transfer Equivalency System (TES)	**REFRESH**
Vision Resource Center (Cornerstone)	**N/A**
WebGrounds	**REFRESH**

Office Management and Productivity – Findings and Disposition

The Office Management and Productivity software scored well. The IVC IT team should consider providing training in these productivity software to help the user community get a better understanding of how to use them to enhance their jobs. Many tools such as the use of rules within Office 365 could benefit an employee in terms of how to improve their use of email. TeamUp should be considered for replacement or even retirement.

Office Management and Productivity	Disposition
Adobe	**REWARD**
Microsoft Suite	**REFRESH**
Microsoft Suite - Visio	**N/A**
QuickBooks	**REFOCUS**
TeamUP	**REPLACE**

Print Management – Findings and Disposition

The print management solution of PaperCut can remain as a software for the campus. It is used and it does the job well for the cost associated with it. Students use the allocation provided and most of the staff expressed satisfaction with printing in their offices. Few offices commented that they had issues but those were few.

Print Management Sofware	Disposition
PaperCut	**REFRESH**

Communication Solutions – Findings and Disposition

Six types of communication solutions are currently in use at IVC. One has been earmarked for 'retirement.' This software is currently in use by one office and plans should be made to train that office in either Ocelot or Constant Contact.

RingCentral is the campus's phone system. A 'Refresh' disposition should be considered as several users commented that calls would 'drop' or they were unfamiliar with some of the features. While the IT team has made several job aids, an area where these can be centrally located would benefit the campus community on where to easily locate them (i.e., Sharepoint Training Materials).

Communication Solutions	Disposition
Constant Contact	**REFRESH**
Ocelot	**REFRESH**
Pronto	**REFRESH**
Regroup	**REFRESH**
RingCentral	**REFRESH**
Signal Vine	**RETIRE**

Video Conferencing

Video Conferencing Solutions	Disposition
GoTo	REWARD
Intel Unite	N/A
MS Teams	REWARD
Zoom	REFRESH

Form Solutions – Findings and Disposition

While the disposition on this form solutions shows a 'Refresh' disposition, it must be noted that this is a low-cost software with no integration capabilities. IVC should retire this software and focus on building out the forms through the TeamDynamix platform which is a robust platform that can be integrated to the Banner platform using iPaas.

Form Solutions	Disposition
MachForms	REFRESH

Online Applications – Findings and Disposition

Two of these online applications are IVC built applications. These should be periodically reviewed (annually) and ensure that the data is current and up to date. The CCC Apply application is a state-supplied application and the IVC team does not have purview over this url.

Online Applications	Disposition
CCC Apply	REFRESH
Nursing Application	REFRESH

Student Equity	REFRESH

In-House Applications – Findings and Disposition

Both the BART and THOR systems use the Argos back end and should continue to be used; however, they do need a 'refocus' as many users indicated that not all users have access to BART. An education of which staff are allowed to use BART and who are allowed to use THOR should be considered. The Tracker system should be replaced with a TeamDynamix functionality.

In-house Applications	Disposition
Business Automated Reporting Tools (BART)	REFOCUS
Metabase	REFOCUS
Priority Registration Times	N/A
Schedule Site	N/A
Tailored Hub for Organizational Resources (THOR)	REFOCUS
Tracker	REPLACE

Specialized Software – Findings and Disposition

Specialized software used by one or two offices should be reviewed annually and determine if it is still needed. Some of these software scored low (PhotoShop, QuarkExpress, PosterMyWall, SmugMug) as these are primarily used by one office. IT should review this software for any security risks and offer recommendations and/or retire them from use. BoardDocs is used by the IVC Board of Trustees and should stay in place. Camtasia is used by various offices and is a low-cost software that can remain. The Wix Foundation site can remain even though the disposition states 'replace.' Funding is allocated externally by the Foundation and is no cost to IVC.

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Specialized Software	Disposition
BoardDocs	**REFOCUS**
Camtasia	**REFOCUS**
DSX	**REFOCUS**
NeoNed	**RETIRE**
Otter	**RETIRE**
QuarkExpress	**REPLACE**
PhotoShop	**REPLACE**
PosterMyWall	**REPLACE**
SmugMug	**REPLACE**
Wix - Foundation website	**REPLACE**

Infrastructure/Systems

Infrastructure/Systems Software	Disposition
Akamai	**RETIRE**
Amorpoint (includes Cyberreason)	**REWARD**
Azure Active Directory	**N/A**
DUO	**REFRESH**

Eclipse Temurin JRE	**N/A**
Enterprise Scheduler	**N/A**
Extron	**N/A**
EZProxy	**N/A**
FileZilla	**N/A**
FinStack	**RETIRE**
Forticlient	**REWARD**
Hyper-V	**N/A**
Ninjio	**REFOCUS**
Oracle	**REWARD**
PDQ	**REFRESH**
PortalGuard	**REFOCUS**
Ruckus-Smartzone	**N/A**
SmartDeploy	**REFRESH**
Splashtop	**N/A**
SQL Developer	**N/A**
Stealthbits	**REWARD**
Toad	**REMEDIATE**

Veeam	**REWARD**
Vmware	**REWARD**
Wasabi	**REWARD**
XLStat	**REMEDIATE**

Summary of Portfolio Priorities

Banner:
- Refresh modules with upgrade to latest version
- Provide ongoing user training
- Replacement is not viable due to investment and complexity

Degree Works:
- Provide ongoing updates with new course catalog information and curriculum requirements
- Provide ongoing user training

Starfish:
- Train staff to use as an early-alert, case management, and analytics solution
- Provide general training for faculty
- Improve integration with student data in Banner

TeamDynamix:
- Improve user interface
- Generate an automated response upon submission of request
- Provide ongoing user training

Interview Findings Summary

Over the course of this project, we conducted 32 interview sessions with users, ITS staff, teaching faculty, and students. The breakdown of participants is as follows:
- 20 interviews with functional user groups
- 5 interviews with IT staff teams
- 5 interviews with teaching faculty groups
- 1 interview with student group

User Themes – Solutions and Systems
- **Banner**: The general lack of training prevents optimization; passive approach from users; some departments use regularly and well
- **Canvas**: Used more for on-line courses; if SSO is down, cannot access, and no one is on call for after-hours support; so, need alternate log-in
- **Degree Works**: Lack of team to update new course catalog information leads to glitches; does not read curriculum requirements; unused functionality; credits not coming through
- **MachForms**: Grew in popularity during pandemic lockdown; described as easy to use
- **MIS Reporting**: Some do not trust Tracker data; process involves manual entry, for individual student
- **Reporting**: Many users are reliant on IR and not autonomous; past efforts to train selected users did not work out well; lack of user-friendly software
- **RingCentral**: Users are generally satisfied; however, calls can drop; some indicated they received new phones, but never were trained on them
- **Starfish**: Used more as a scheduling tool, than as an early-alert, case management, or analytics solution; Faculty need training; desire for data integration with Banner
- **TDX**: Many expressed dissatisfaction; let's get clearer understanding of pain point, is it timing, lack of automated response; some users ask for training

User Themes – Technology Services
- **IT service response**: Users are generally positive, once IT is engaged; IT staff is spread thin; on individual level, good interactions; on system level, can take a very long time to get resolution
- **Communication from IT**: Users report not receiving regular updates from IT
- **Onboarding new employees** with technology: This can take months to get going with phone, Microsoft Office, and other general tools
- **After-hours IT support**: Students and faculty expressed the need for evenings and weekend support
- **Training** to use our systems is not adequate:
  - "No one trained us on Banner, so we don't use it."
  - "For Degree Works, it was: 'Here's your manual, good luck.' "
- **Technology governance**:
  - Lack of high-level governance for giving input on big-picture decisions about technology

- No version of functional Banner User Group

IT Staff Themes

- **Cross-training**: Many areas do not have a backup for the primary support person
- **Banner**: Very time consuming and time intensive to support
- **Sunsetting Tracker and MachForms**: Determine training needs for new solutions
- **Help Desk**: This is a physical area, but not easily accessible
- **TDX**: This is confusing to some users; user interface needs to be improved; we get a lot of phone calls; challenge to provide service support in timely manner
- **Project planning**: This is lacking, due to workload and being stretched
- Our systems are **resource intensive** and require additional staff support: Banner, TeamDynamix, etc.
- Weekend coverage and **after-hours support** are needed
- **Technology governance** is needed for software/hardware acquisitions
- IT needs **administrative support**
- The **Help Desk** needs additional support

Student Themes

- Students are generally satisfied with the available software
- Students would like to see more robust use of Canvas; for example, posting of grades; consistent course shells and templates; also, consistency with online and in-person courses
- Students are not aware of all resources that are available; they indicate this is not communicated very well

Faculty Themes

- Faculty expressed general concerns about the user experience
- IVC has good systems, but each has a learning curve, and training is generally not provided
- Classroom technology: we conduct our own inspection of classrooms to test technology and equipment
- Distance education and online learning: "We're where we need to be, but not where we want to be."

Stakeholder Input

During each interview session with the key stakeholders, the question was asked to determine if there were other needs that would benefit their areas. Feedback ranged across a variety of issues, from training needs to after-hours support.

The request for training was the top request made from departments. Below is a list of the other needs that departments would like:

1. Refresher training: Provide refresher training on existing applications
   a. Argos

   b. Starfish
   c. Phone System
2. Improve the New Hire Onboarding process
3. Provide after-hour and weekend support for students and faculty
4. Streamline the IT Acquisition process
5. Create Data Standards to improve the quality of the student data
6. Create Service Level Agreements (SLAs) for tickets so that users would know the approximate turnaround time on requests
7. Provide a case management tool
8. Enhance the TeamDynamix categories to make it easier for the requestor to submit requests and have them routed to the appropriate ITS area
   a. Ensure that TDX can allow for more than one person to receive replies (I.e. ability to carbon copy another person on the request)
9. Provide the integration between Banner and Starfish
10. Improve student communication
11. Provide a student one stop shop for students to find all IT related resources
12. Purchase a caseload management software
13. Provide classroom access to those who need to verify classroom technology
   a. Perform preventive maintenance on classroom technology before each Fall and Spring term
14. Improve the current asset management process
15. Brand the external website and all subsequent pages
16. Create a social media presence for offices that interact with students (ie Financial Aid, Student Business Office)
17. Create a temporary page and place on website when key systems are not available and provide the external links so students and faculty can still access cloud-based systems
18. Provide Office-365 access to part-time faculty
19. Review the current employee termination process and ensure that all offices that need to be aware of an exiting employee are in the process
20. Broaden the current ITS Committee to include a cross-representation of areas
21. Provide area to store student information that is encrypted

Solution Gaps and Redundancies

Stakeholders did not discuss signifant gaps or needs for additional software solutions when asked in interview sessions. The priorities were for better **integration** between existing systems and more **training** opportuniites for current solutions.

The redundancies in software solutions were intentional and related to video conferencing platforms, communication systems for particular functions, and subject-related academic solutions. ITS is exceptional in avoiding the typical duplication of point solutions.

Questionnaire Findings Summary

The questionnaire for functional users included 34 participants (staff, teaching faculty, and students), addressing general themes of:

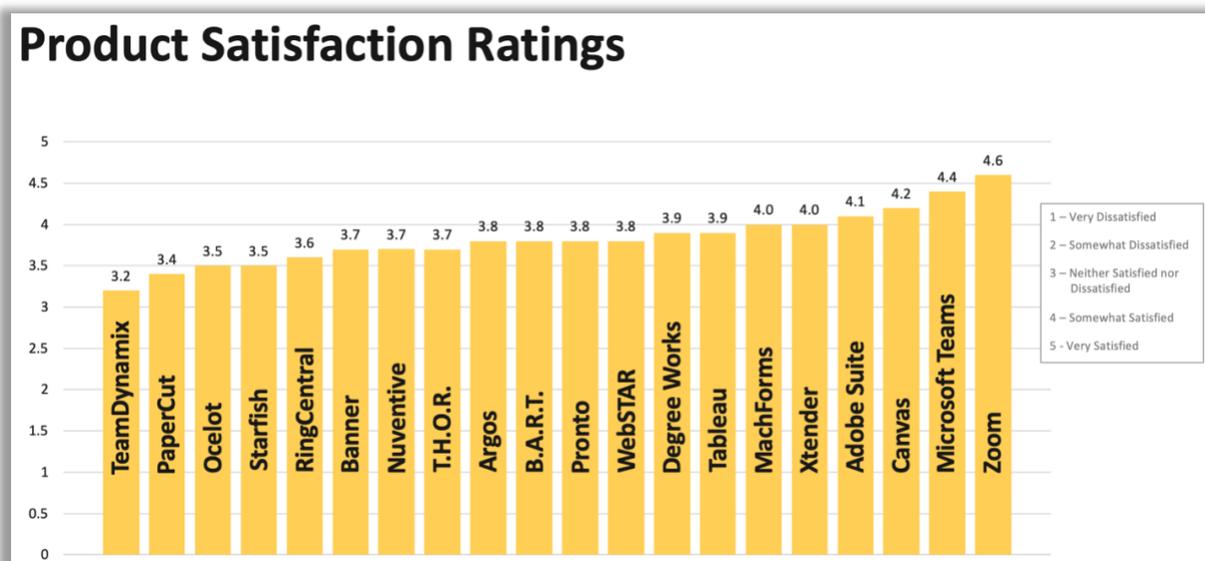- ITS Service
- Product Satisfaction
- Desired Software

The questionnaire for ITS staff included 12 participants, addressing general themes of:

- Level of Technical Knowledge
- Common Barriers to Services
- Training / Professional Development
- Support from Supervisor
- Ability to Provide Timely Services
- Solution-Specific Training

All the responses and comments from the questionnaires are contained in the IVC Questionnaire Results PowerPoint. The results that highlight some compelling are included here below.

A. General Satisfaction with Technology Solutions and Products
The users indicated moderate to high levels of satisfaction with commonly used solutions. None of the solutions were rated with a dissatisfactory rating of below an average of 3.0 on a 5-point scale.

Product Satisfaction Ratings

TeamDynamix 3.2, PaperCut 3.4, Ocelot 3.5, Starfish 3.5, RingCentral 3.6, Banner 3.7, Nuventive 3.7, T.H.O.R. 3.7, Argos 3.8, B.A.R.T. 3.8, Pronto 3.8, WebSTAR 3.8, Degree Works 3.9, Tableau 3.9, MachForms 4.0, Xtender 4.0, Adobe Suite 4.1, Canvas 4.2, Microsoft Teams 4.4, Zoom 4.6

1 – Very Dissatisfied
2 – Somewhat Dissatisfied
3 – Neither Satisfied nor Dissatisfied
4 – Somewhat Satisfied
5 – Very Satisfied

B. *Timeliness is Users' Dominant Concern*
The theme of timeliness in initiating and completing service requests was clearly expressed through users' responses. Over 80% of the users responding indicated this was an area for improvement.

How Would Users Like ITS to Improve Services?

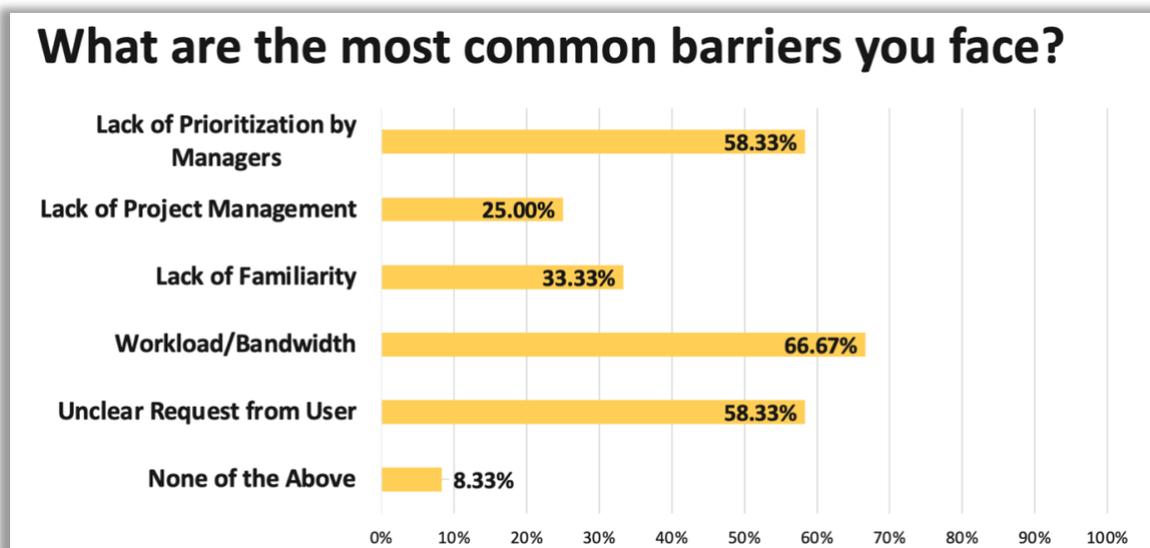| Category	Percentage
Timeliness: Initiating	67.86%
Timeliness: Completing	82.14%
Quality of Work	32.14%
Knowledge & Expertise	32.14%
Professionalism	21.43%
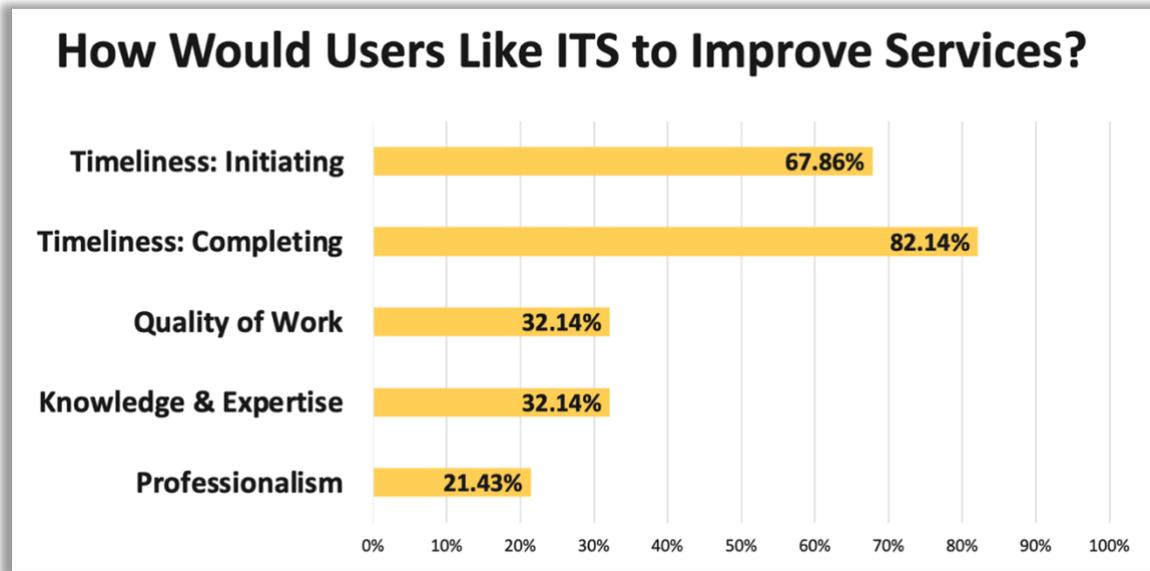
C. *ITS Staff Concerned with Bandwidth*
The most common barrier for ITS Staff was "Workload/Bandwidth," indicated by 2 out of every 3 staff members. This appears to be related to the number of staff members and contributes to the issue of timeliness in competing work requests expressed by users.

What are the most common barriers you face?

Category	Percentage
Lack of Prioritization by Managers	58.33%
Lack of Project Management	25.00%
Lack of Familiarity	33.33%
Workload/Bandwidth	66.67%
Unclear Request from User	58.33%
None of the Above	8.33%

D. *ITS Staff Confident with Technical Knowledge*
The ITS Staff indicated their confidence in their technical knowledge, with 75% rating their level of training and experience as "Excellent" or "Very Good."
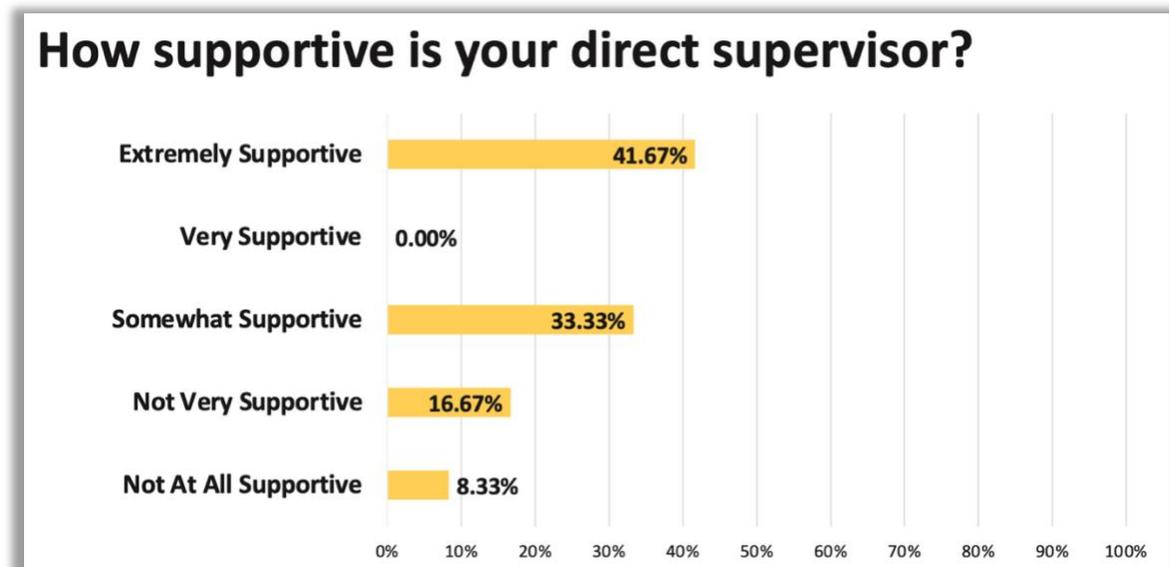

Rate your level of technical knowledge for the systems you focus on

Category	Percentage
Excellent/Exceptional Training & Experience	41.67%
Very Good/Substantial Training & Experience	33.33%
Good/Adequate Training & Experience	16.67%
Fair/Marginal Training & Experience	8.33%
Low/Minimal Training & Experience	0.00%
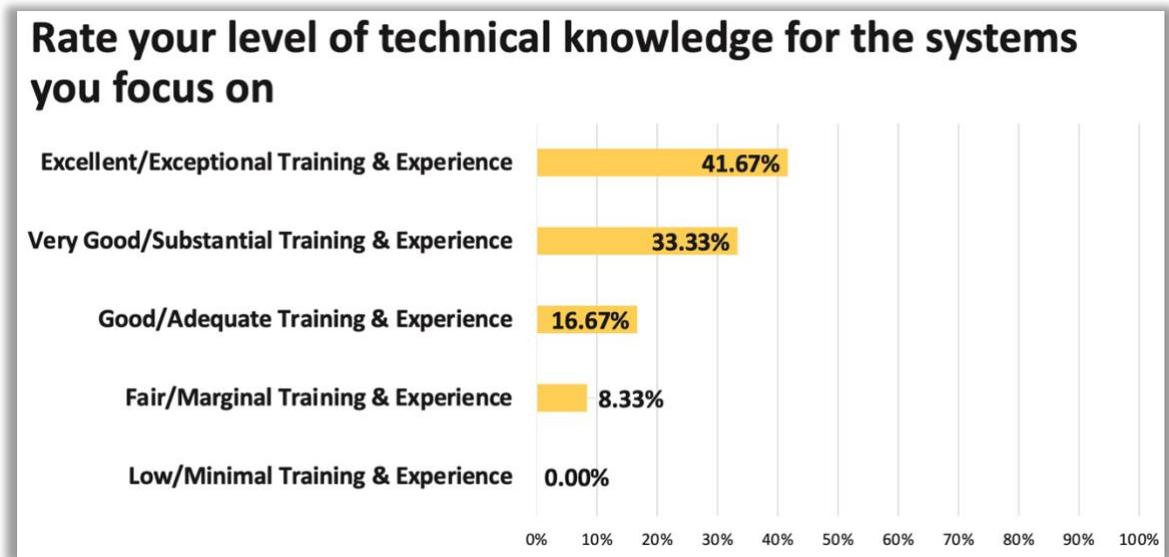
E. *ITS Staff Supported by Supervisors*
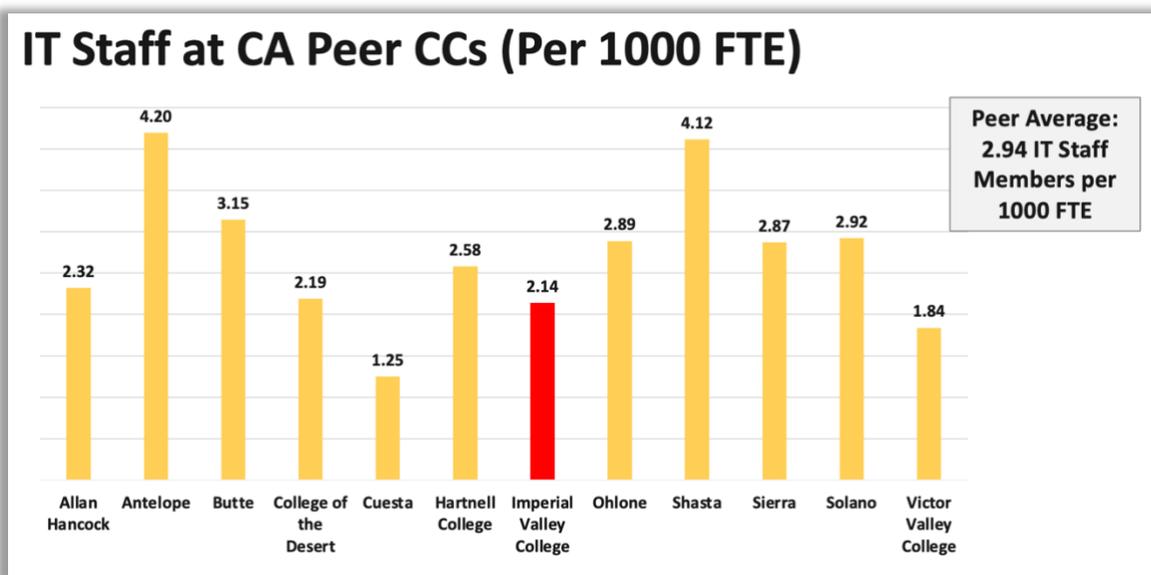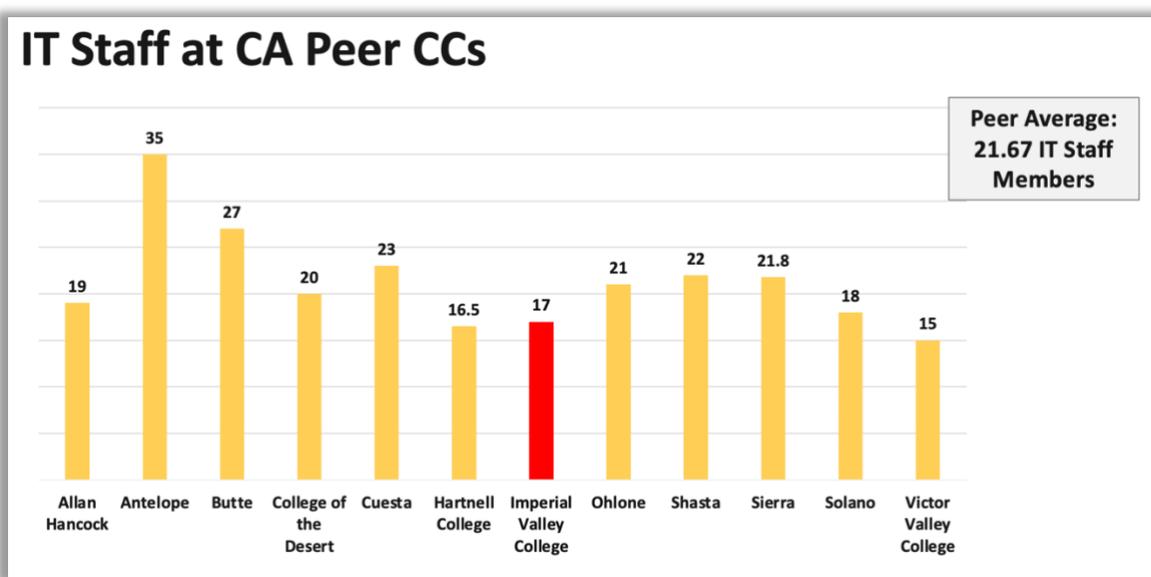The ITS Staff indicated their sense of being supported in their work by their supervisor, with 75% indicating their supervisor is "Extremely Supportive" or "Somewhat Supportive."

How supportive is your direct supervisor?

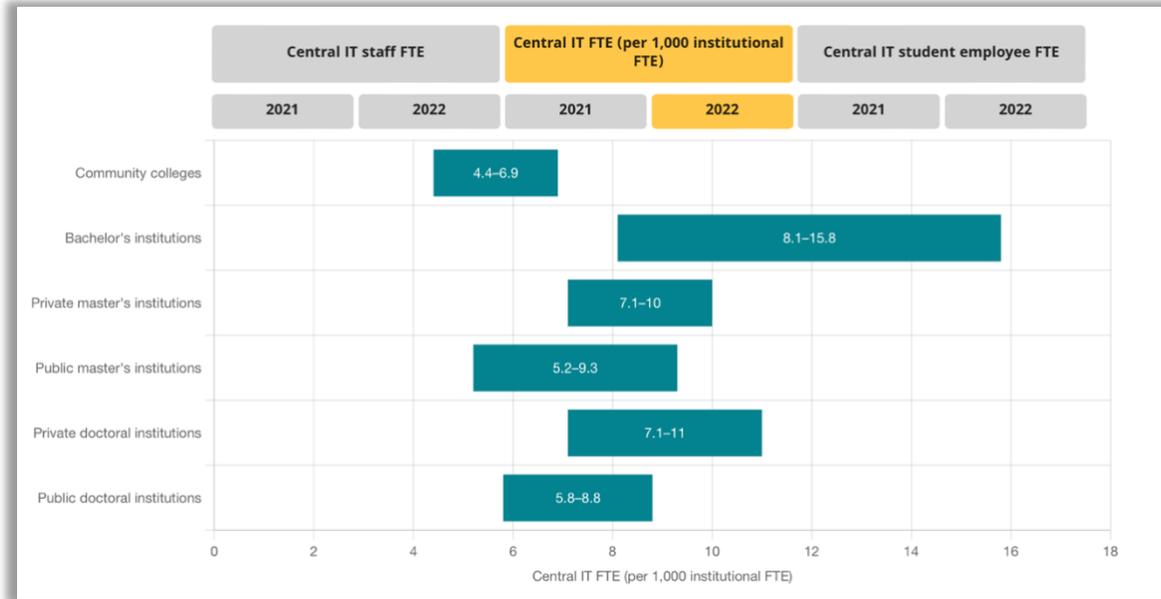| Category	Percentage
Extremely Supportive	41.67%
Very Supportive	0.00%
Somewhat Supportive	33.33%
Not Very Supportive	16.67%
Not At All Supportive	8.33%

ITS Staffing Review

An objective of this project is to assess ITS staffing and structure, considering resource levels, service expectations, and skillsets. Key customer concerns over timeliness along with ITS staff concerns over workload are relevant to the staff structure. There are also considerations for new construction on campus along with growth in student enrollment.

Part of the analysis included a benchmarking comparison with a peer group of California community colleges. The two tables below show that IVC has fewer IT staff members than the average of the peer group, for both the total number of staff as well as the number of full-time staff members per 1,000 FTE students.

IT Staff at CA Peer CCs

Peer Average: 21.67 IT Staff Members

Allan Hancock	Antelope	Butte	College of the Desert	Cuesta	Hartnell College	Imperial Valley College	Ohlone	Shasta	Sierra	Solano	Victor Valley College
19	35	27	20	23	16.5	17	21	22	21.8	18	15

IT Staff at CA Peer CCs (Per 1000 FTE)

Peer Average: 2.94 IT Staff Members per 1000 FTE

Allan Hancock	Antelope	Butte	College of the Desert	Cuesta	Hartnell College	Imperial Valley College	Ohlone	Shasta	Sierra	Solano	Victor Valley College
2.32	4.20	3.15	2.19	1.25	2.58	2.14	2.89	4.12	2.87	2.92	1.84

National data for IT staffing is curated by EDUCAUSE through an annual survey process. The EDUCAUSE data highlighted in the table below indicate the average number of full-time IT staff per 1,000 FTE at community colleges is within a range of 4.4 to 6.9, for which IVC (2.14, see previous table above) is considerably below.

	Central IT staff FTE		Central IT FTE (per 1,000 institutional FTE)		Central IT student employee FTE	
	2021	2022	2021	2022	2021	2022
Community colleges				4.4–6.9		
Bachelor's institutions				8.1–15.8		
Private master's institutions				7.1–10		
Public master's institutions				5.2–9.3		
Private doctoral institutions				7.1–11		
Public doctoral institutions				5.8–8.8		

Central IT FTE (per 1,000 institutional FTE)

Below is the analysis of staffing for the current state, followed by recommendations for the more immediate Phase 1 staffing model as well as the more long-term Phase 2 organizational model.

Findings and Analysis for Current State

Throughout the assessment, the findings indicated issues of ITS being under-staffed:
- A primary customer-service issue is timely completion of request
- The need for additional Help Desk support, with particular concern for lack of after-hours support
- The need for additional staff to provide additional dedicated cybersecurity support
- The need for additional administrative support

The ITS staff members indicated the major service barrier is workload/bandwidth. Additionally, Banner and other enterprise systems are time-consuming and labor-intensive to support.

Here below is the organizational chart of the current staffing structure, with two main branches of Enterprise Systems and Application Services.
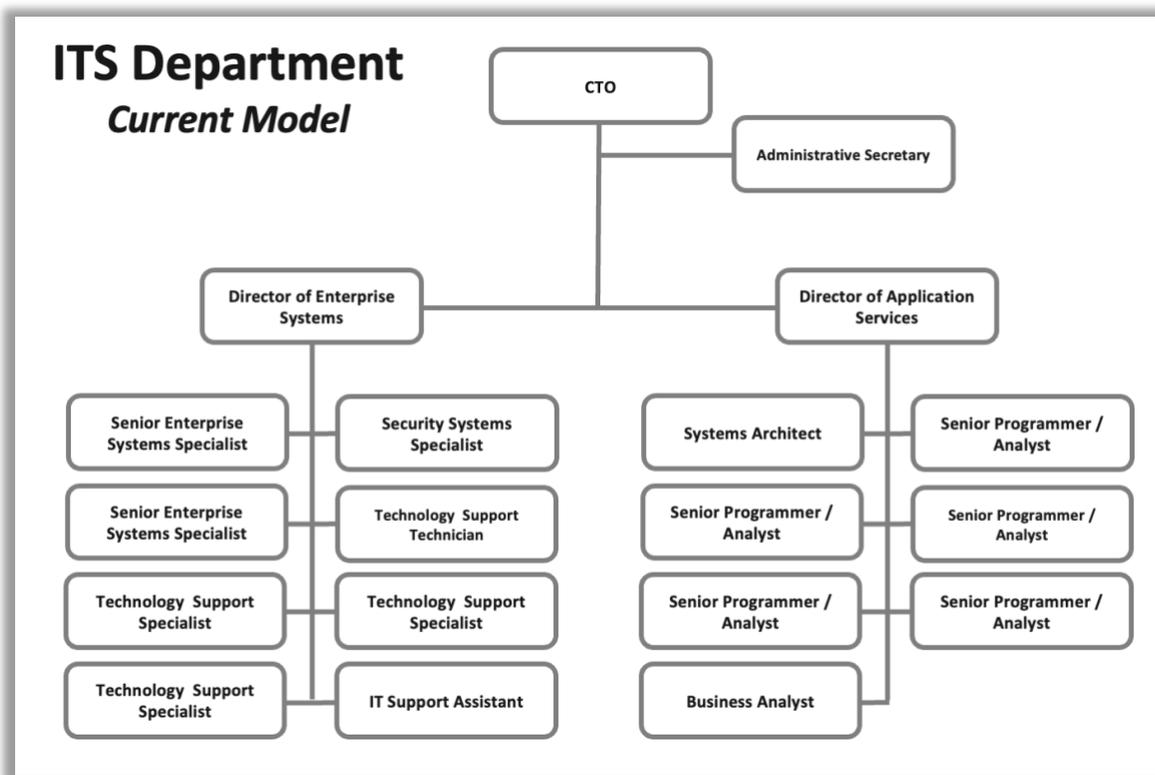
Recommendations for the Phase 1 Model

A key feature of this model is the introduction of a new branch, Client Experiences. This team is comprised of Technology Support Specialists from the Enterprise Systems team along with new positions. This departmentation addresses the pressing issues of serving and communicating with users.

A second feature is to change the name of the two heritage branches to clarify what their general priorities are:
- "Enterprise Systems" becomes "Infrastructure and Operations"
- "Applications Services" becomes "Applications and Development"

A third feature is to have the cybersecurity officer report directly to the CTO. This alignment is generally recommended as an effective line of authority and places the security officer to evenly provide guidance and accountability for all of the ITS department.

This model also calls for positions on the Applications and Development team to focus on cloud-based operations.

The Phase 1 model is designed to right-size the ITS staff to meet most of IVC's immediate technology needs. Additional staff positions (highlighted in yellow), changes in job titles (in blue text), and potential management roles (in purple text) are represented in the Phase 1 model below.
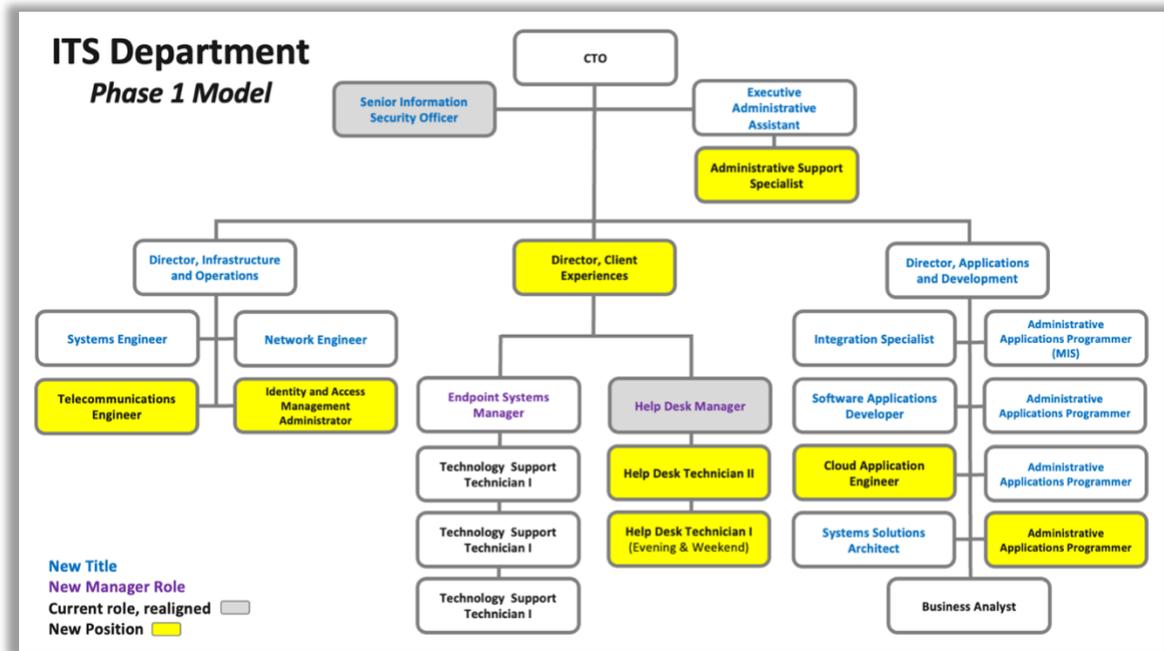
Recommendations for Phase 2 Model

The Phase 2 model recommends additional positions dedicated to training and project management, two important roles which need more support. The model also recommends increasing cybersecurity support. Additionally, the Cloud Infrastructure Engineer role provides more support for cloud-based operations.

The Phase 2 model is designed to serve IVC as student enrollment grows, although ITS would continue to operate with fewer IT staff members per 1,000 FTE than the EDUCAUSE community college benchmark discussed above.

This model, represented below, highlights additional new positions in orange.
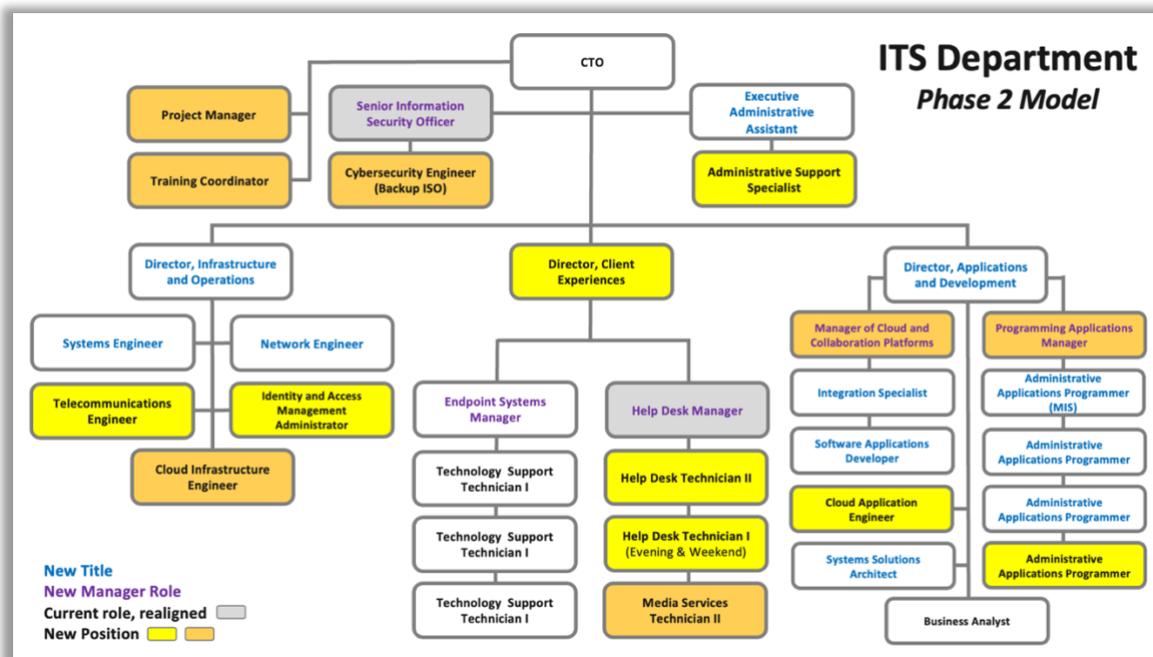
Technology Governance

An objective of this project is to review opportunities to strengthen technology governance.

There is currently an effective project request form, and an emerging model to prioritize proposals and requests; however, there is not a standing team to lead this process. We recommend the development and implementation of a project review team to review and prioritize technology proposals.

Currently there is not an advisory group to provide input for the direction of strategic growth for technology across the college. We recommend the development and implementation of this focused team to collaborate and provide this level of input to ITS leaders.

Currently there is not a Banner User Group to facilitate the sharing of user expertise and experience to optimize the use of Banner across the college. We recommend the development and implementation of this interdepartmental team to enhance the value of Banner.

This model for governance is represented in the organizational chart below.
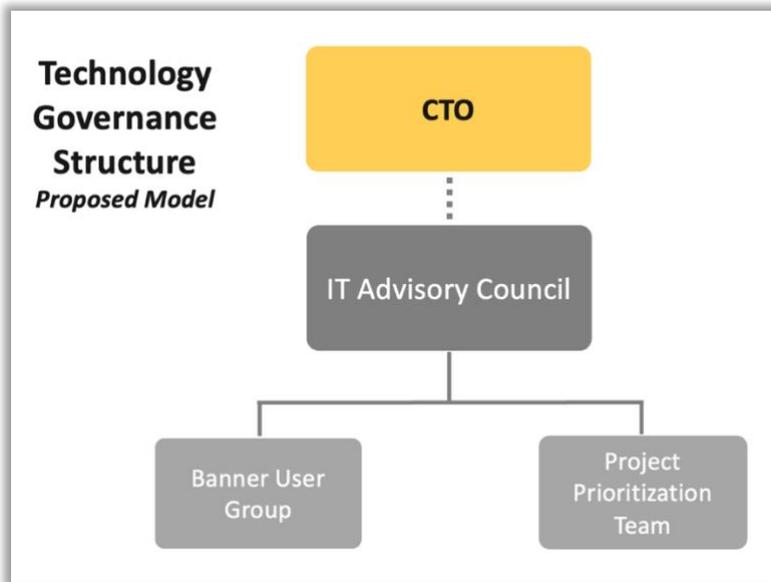
Summary

Technology Portfolio
- **Priority for Banner, Degree Works, Starfish, & TeamDynamix**
- **Priority for User Training**
- **Priority for Integration**

ITS Staffing
- **Models for Growth**
- **Priority for Client Experiences**
- **Support for Cybersecurity, Cloud, PMO, and Training**

Technology Governance
- **Project Prioritization Team**
- **Strategic Advisory Council**
- **Banner User Group**

Appendix A: Peer Staffing Information

	Clerical Support	Management	Help Desk	Desk Top Support	Enterprise	Application	DBA	Senior Application	Security	System Architect	Other	Total IT Staff	Total IT Staff per 1000 FTE
Allan Hancock		2	3	6	3	4			1			19	2.32
Antelope	2	4	2	12	6	0	1	4	2	1	3	35	4.20
Butte		2	2	6	8	5			1		3	27	3.15
COD	1	3	1	8	1	2		3	1		1	20	2.19
Cuesta (San Luis Obisbo)	1	1		8	4	0	2	5	3	0	0	23	1.25
Hartnell	0.5	1	0.5	5	3	1		5	1	0	0	16.5	2.58
IVC	1	2	1	3.5	2.5	1	0	5	1	1	0	17	2.14
Ohlone	1	2	1	6	4	3	0	5	0	0	0	21	2.89
Shasta	1	4		7	2	5		3	0	0	1	22	4.12
Sierra												21.83	2.87
Solano		4		6	2	2		4	0	0	0	18	2.92
Victor Valley	1	2	2	5	2	1	1	2	0			15	1.84
TOTALS												21.67	2.94

Appendix B: Additional Report Resource

The following resources were developed over the course of the project and are located in the Teams Collaboration folder at Deliverable Resources:

- ITS Cabinet Presentation Powerpoint
- ITS Summary Deck Powerpoint
- IVC Software Inventory spreadsheet
- IVC Portfolio Matrix spreadsheet
- IVC Interview Summary PowerPoint
- IVC Questionnaire Results PowerPoint
- IVC ITS Organizational Charts PowerPoint
- Doctums Technology Governance Resource PowerPoint