District-wide Technology Strategic Master Plan

South Orange County Community College District

May 2022

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Letter from the Chancellor

It's my pleasure to present to you, the South Orange County Community College District, Technology Strategic and Master Plan. This plan is a culmination of many months of collaborative work between Irvine Valley College (IVC), Saddleback College, and District Services stakeholders, which includes students, faculty, staff, and administrators.

Although the plan was completed throughout the pandemic through virtual efforts, the collaboration between stakeholders was stronger than ever to create a comprehensive plan that outlines methods to address anticipated challenges and barriers, while mapping out how to best utilize our strengths and assets.

The South Orange County Community College District works to support the efforts of Irvine Valley and Saddleback colleges to offer excellent education to our students as they prepare to be our community's future leaders. That work can be enhanced and expanded through the execution of the DTSMP, as we navigate through a rapidly changing technological era.

Each college is simultaneously executing a site-specific TMP to prepare for their growing technological needs. The development of their plans included surveys and forums to help solicit input from faculty, staff, students, and management teams. Ultimately, each TMP will align and work in concert with their respective Educational Master Plans, and the District- wide Facilities Master Plan.

The DTSMP promotes the notion of Accreditation Standard III.C.2 calling for plans, updates, and technology replacements to ensure the District's technological infrastructure, quality, and capacity are adequate to support its mission, operations, programs, and services.

I am confident that this DTSMP will position the South Orange County Community College District to support the activities for the future of modern learning and student support to best prepare the next generation of leaders. Anticipating changes in technology to best carry out our mission to provide excellent education will benefit our District for years to come.

Thank you for your time and attention in reading, reviewing, and supporting the implementation of this plan.

Respectfully,

Kathleen F. Burke, Ed.D.
Chancellor

Background

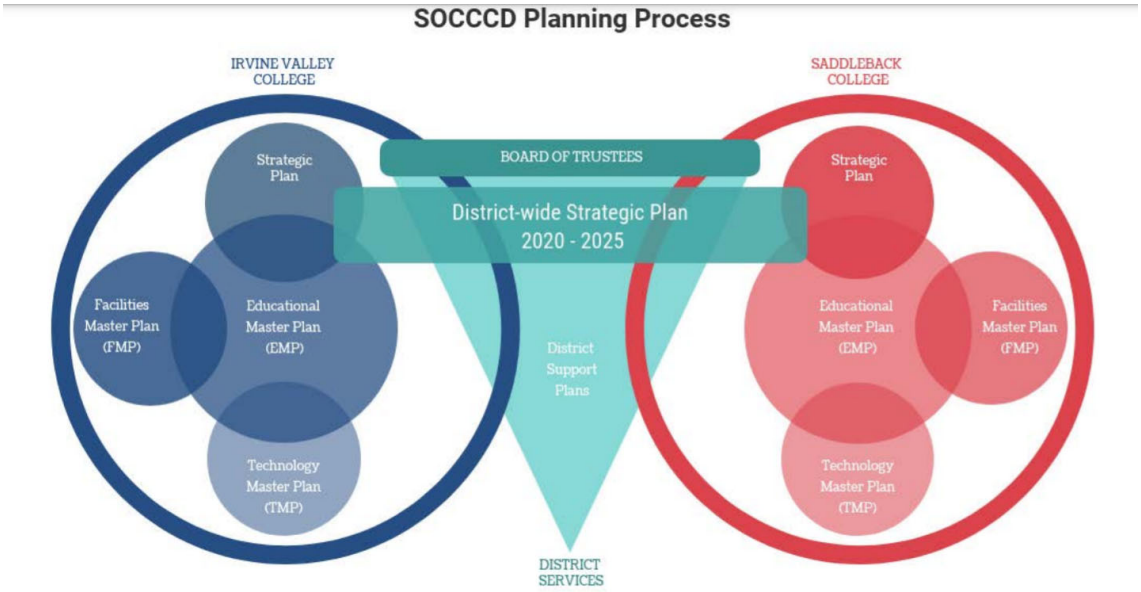
About South Orange County Community College District

South Orange County Community College District (SOCCCD) covers 382 square miles, serving nearly one million residents across 26 communities in the southern portion of Orange County. The District covers the largest square mile area of four community college districts in Orange County. Established in 1967, SOCCCD is a multi-campus district comprised of Saddleback College and Irvine Valley College. Originally a satellite campus to Saddleback, Irvine Valley became an independent institution in 1985. In 2007, the District opened the Advanced Technology & Education Park (ATEP) in the City of Tustin, which provides opportunities to study advanced technology and complete career, technical and workforce development training programs for high demand industries.

SOCCCD aims to promote access, success, and equity to meet each student's goals of skills development, certificate, associate degree, transfer, or personal enrichment. Saddleback and Irvine Valley are fully accredited and aim to provide an educational foundation to a diverse local and regional community. The colleges offer programs with transfer opportunities to four-year colleges and universities, associate degrees, certificate awards, employment, and occupational skills training and community and basic skills education. Both colleges use Guided Pathways models to foster student learning and expand student success, promote equitable program access and outcomes, and provide connections for students to the regional economy.

SOCCCD Education Master and Strategic Plans (EMSP)

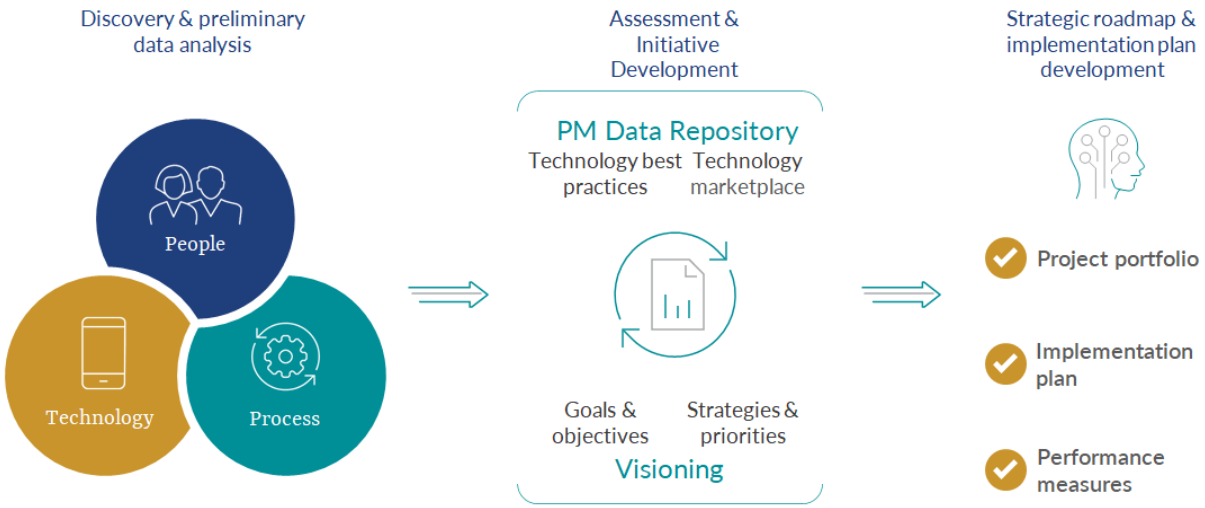
The SOCCCD District-wide Strategic Plan was developed concurrently with the Education Master Plans of both Irvine Valley College and Saddleback College. Together, these three inter-related plans comprise the Education Master and Strategic Plan (EMSP) for the District. Community input collected at both colleges was applied to develop all three EMSP planning documents. The role of the District-wide Strategic Plan (DWSP) within the EMSP is to provide an overarching framework of goals and objectives for the Education Master Plans of the two colleges. In turn, the EMSP forms the foundation for a Facilities Master Plan and a Technology Master Plan for each of the two colleges, as well as other planning documents and processes (see Figure below).



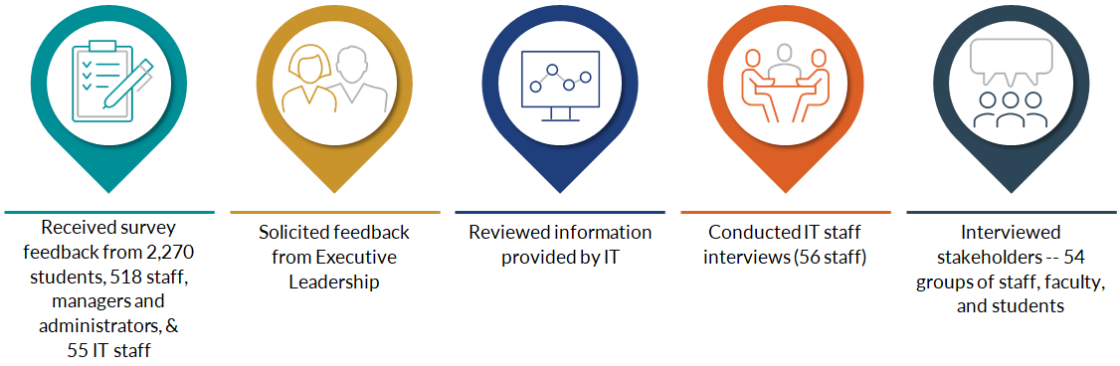
District-wide Strategic Technology Master Plan

The District-wide Strategic Technology Master Plan (DTSMP) has a 10-year horizon, and describes the IT vision and mission, goals, objectives, and initiatives for SOCCCD and its member colleges, Irvine Valley College and Saddleback College. Developing the plan was a joint effort.

The process for developing the plan included steps for conducting discovery and preliminary data analysis, developing the assessment and recommendations, and developing the strategic roadmap and implementation plan.

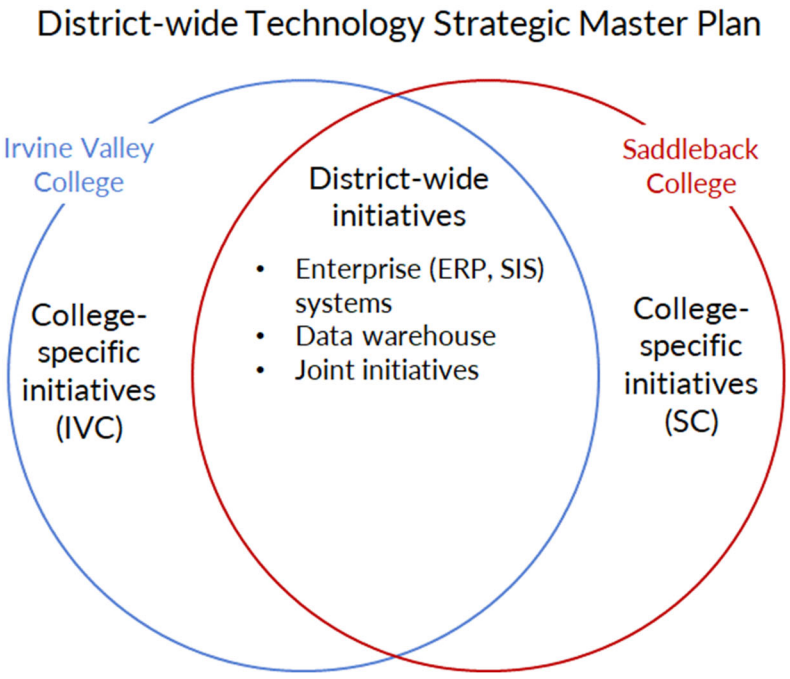


Discovery and preliminary data analysis. These activities included a comprehensive stakeholder survey of students, faculty, staff, and management teams; group and individual interviews with these stakeholders, interviews with District and College IT staff; and a review of technical, functional, and strategic documentation on the IT environment. An overview of the comprehensive information gathering is shown below.



An additional activity in this discovery effort was to examine key higher education and IT trends that may impact the District over the next ten years. These are described in the Appendix, "Key higher education and technology trends."

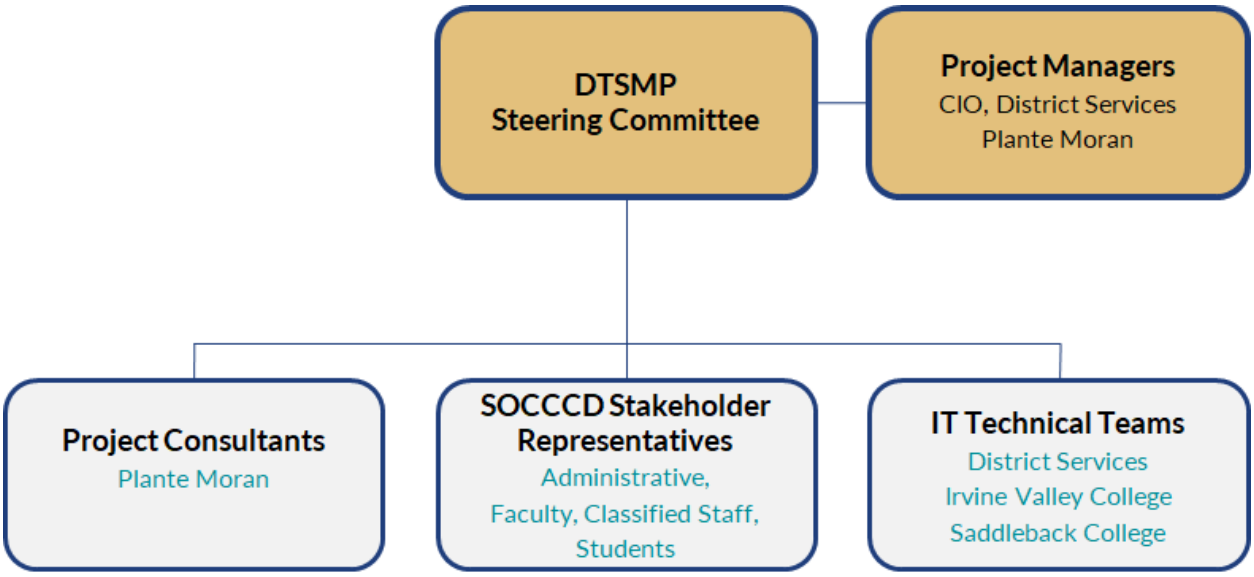
Assessment and initiative development. These activities included aggregating the information provided in the earlier phase, assessing against best practices for technology and technology management, and identifying opportunities resulting from trends in technology and higher education. Other activities included in this phase were establishing the IT vision, defining the goals, objectives, and specific plan initiatives to achieve the goals. District-wide, common, and shared initiatives can be executed as a collaborative effort with the colleges, while individual, unique initiatives can be executed more independently by the colleges.



Strategic roadmap and implementation plan. These activities included developing the DTSMP project portfolio and associated estimates, developing the implementation plan, and identifying performance measures to gauge plan execution progress.

These activities took place from November 2020 through December 2021. The project structure is shown below.

Project structure



The DTSMP Steering Committee is a shared governance committee established to provide enterprise guidance for the planning effort. The members include leadership from administrative, academic, technology, staff, and student areas from both colleges and the District.

The project managers met weekly and facilitated monthly meetings with the DTSMP steering committee and the Technology Leadership Team (TLT), and the expanded College Presidents' Cabinets to provide updates, and to get their advice and counsel on project activities and emerging deliverables. In addition, the members of the steering committee acted as a primary point of contact for their respective organizations and provided information on the ongoing planning process. They in turn, recommended and facilitated meetings with other governance bodies within the District, such as listening sessions with faculty, staff, and students at both colleges. A full list of the participants in the core planning teams is shown in the Appendix, "Participants."

Accolades

It is important to recognize those areas where the stakeholders felt IT was managed well. These included:

- IT services & infrastructure

- Overall, stakeholders (District Services and colleges) felt that IT support is responsive and helps achieve positive results.
- Substantial investments in network technologies (specifically VDI) prior to the pandemic allowed for a quick pivot to remote instruction and work.
- Air-blown fiber infrastructure implemented across the District is an innovative and efficient way to provide robust campus connectivity.
- Software development and project management methodologies, as well as the release management process, are comprehensive and well documented.
- A common toolset is used for incident management and service requests.

- IT governance & communication
  - Lines of communication between District Services and the colleges are open.
  - Consistent funding mechanisms and well-established IT infrastructure refresh schedules keep hardware platforms current.
  - Key cybersecurity policies, procedures, and controls (administrative regulations) are in place.
- IT enablement
  - The student information system is viewed positively by students, faculty, and staff.
  - Enhancements to classroom technology implemented by IT have assisted in establishing the hybrid classroom.

District-wide Technology Strategic Master Plan

2022-2032

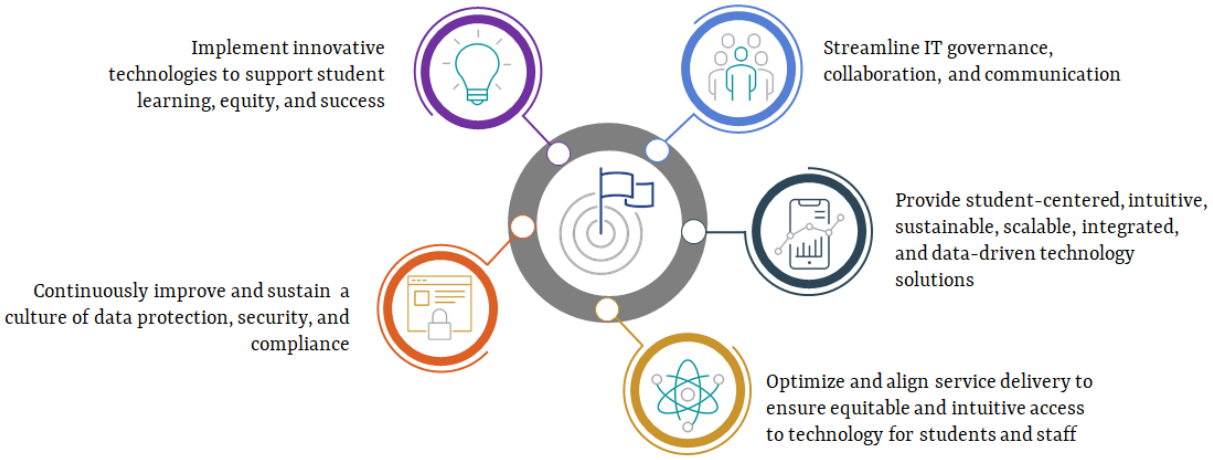
IT vision

We are the preeminent leader in higher education empowering our students to be successful with innovative technologies.

Mission

We provide value-based, advanced technology solutions as a foundation for equitable access and student success. We provide secure, student-centered technology solutions that enable effective learning and teaching. We collaborate across diverse groups to solve institutional problems with technology.

Goals and objectives



Goal 1: Implement innovative technologies to support student learning, equity, and success

Early trial and adoption of newer technologies, including cloud, mobile, automation, and other emerging technologies, to understand their potential impact on the student accessibility and experience, whether on-campus or remote.

- Create standardized processes for reviewing, approving, executing, and maturing innovation initiatives and technology-driven business process improvements.
- Implement modern platforms to support online education and to enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services.
- Develop analytics capability to elevate student learning, success, and equity.

Goal 2: Streamline IT governance, collaboration, and communication

Determine the appropriate level of centralization/decentralization (including delineation of roles/responsibilities), internal communication, and use of external IT services to meet the shared and unique needs of each entity, in alignment with the overall funding and strategic requirements.

- Enhance the process for prioritization, approval, funding, and tracking of technology-related initiatives.
- Establish and streamline IT policies, regulations, processes, tools, committees, and responsibilities.
- Establish IT communications program and practices.

Goal 3: Provide student-centered, intuitive, sustainable, scalable, integrated, and data-driven technology solutions

Adequately architect, procure, maintain, operate, support, and retire technologies to provide resiliency, business continuity, and flexibility for teaching, learning, and operations. Make stakeholder-led data-driven decisions to enable value creation with technology.

- Align technology lifecycles with holistic approach to an enterprise architecture.
- Reduce technical complexity by implementing cohesive platforms and solutions, including cloud.
- Provide well-connected on-campus spaces to accommodate next-generation educational technology.
- Align and integrate various ERP platforms and related software applications to provide an optimal user experience.

Goal 4: Optimize and align service delivery to ensure equitable and intuitive access to technology for students and staff

Follow an integrated approach to stakeholder enablement (including students, faculty, and staff) and support processes aligned with the institutional requirements of District Services and the colleges while recognizing unique aspects of the colleges. Ensure training and professional development evolves to support service delivery.

- Adopt common and standardized processes and solutions for IT support across the District.
- Streamline service and solution delivery through formal IT service management practices.
- Provide standardized access, tools, and training necessary to achieve a high-level of IT support and ease of use, leading to increased self-sufficiency by students, faculty, staff, and community members.

Goal 5: Continuously improve and sustain a culture of data protection, security, and compliance

Enhance the security practices, policies, procedures, and enabling solutions of District Services and colleges to protect people, data, and resources, and begin the transition to a security-by-design approach to all IT activities across entities.

- Develop individual and collective cybersecurity responsibility, training, and accountability for SOCCCD employees and stakeholders (e.g., contractors, partner entities, etc.).
- Continuously review and implement best practices for risk management, including security awareness, vulnerability assessment, regulatory compliance, and incident response.
- Establish a security-by-design approach that integrates cybersecurity early in the development lifecycle of technology solutions.

As a part of the overall planning process, it is important to demonstrate the alignment of IT goals and objectives to the institutional goals. This is shown in the following section, "Alignment with Education Master and Strategic Plan (EMSP)."

Once the plan is adopted, District Services, Irvine Valley College and Saddleback College will work collaboratively to execute and monitor plan progress. This collaborative approach is described in the Appendix, "DTSMP Governance."

Alignment with Education Master and Strategic Plan

The District has four strategic goals listed below that were adopted in 2020 as a part of the EMSP:

1. Ensure student equity in access and achievement.
2. Transform lives through learning and achievements.
3. Engage with the community through athletic and cultural events, enrichment programs, and in creating economic prosperity.
4. Optimize our institutional design and structure with a student-centered focus.

These goals informed and guided the development of the DTSMP to align the use of technology resources with the overall strategic direction of the colleges and the district as a whole. In particular, the DTSMP initiatives, given their alignment with the established goals will substantively and directly impact the EMP goals for student equity (Goal #1) and optimizing institutional design and structure (Goal #4) through the deployment of technology and application of technology management activities. This is shown in the alignment matrix in the Appendix "Table 1: DTSMP alignment with Education Master and Strategic Plan goals."

In addition to identifying goals and objectives, the planning teams developed themes to help correlate to the projects and plan activities. These are shown below and defined in the Appendix, "Table 2: Key DTSMP Themes."

- Analytics
- Application development standards
- Cloud
- Communication
- Data governance and security
- Diversity, equity, and inclusion
- ERP including SIS
- Hybrid working environment
- Innovation/Business Process Improvement (BPI)
- Integration
- Mobility
- On-campus classroom technology
- Online education
- Procurement
- Project Management Office
- Staffing/Professional development
- Standards
- Student-friendly technology
- User training

In developing and defining the DTSMP initiatives, the planning team took many elements into consideration, such as understanding the meaning of shared initiatives, leveraging the existing solutions and experience available district-wide, including updated due diligence efforts, taking a full life-cycle view, including a mix of tactical initiatives, and establishing an agile execution approach. This is explained in the Appendix "DTSMP initiatives – Additional Considerations."

Strategic Initiatives

The activities in the strategic plan are made up of key initiatives, each of which are aligned to the goals and themes. The planning team developed a plan project portfolio with 136 initiatives, each with a detailed description of the scope and the potential benefits. These initiatives were prioritized to identify the top candidates for the first one to two years of plan execution. (See appendices for the details behind the prioritization process.) The team estimated the cost for these high priority initiatives, using a total cost of ownership approach.

An overview of the complete DTSMP project portfolio is shown below.

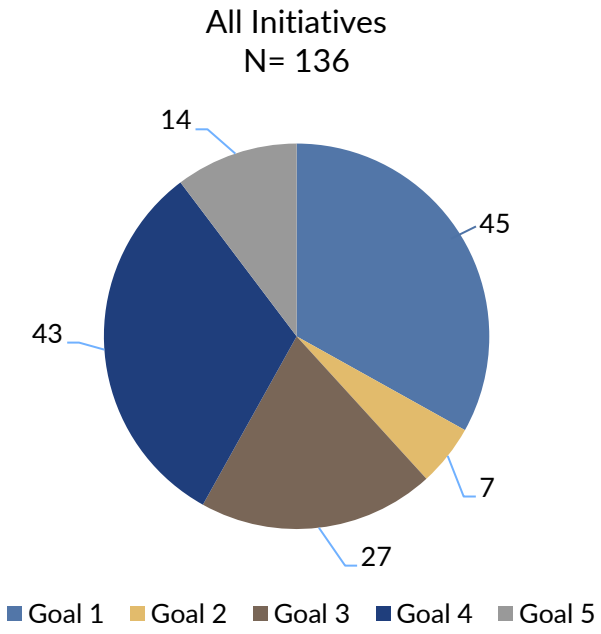
Goal 1: Implement innovative technologies to support student learning, equity, and success

Goal 2: Streamline IT governance, collaboration, and communication

Goal 3: Provide student-centered, intuitive, sustainable, scalable, integrated, and data-driven technology solutions

Goal 4: Optimize and align service delivery and equitable and intuitive access to technology for students and staff

Goal 5: Continuously improve and sustain a culture of data protection, security, and compliance



One-time costs ($ x M)	10 -year total ongoing costs ($ x M)	10-Year total costs ($ x M)
$32.2 M	$132.0 M	$166.7 M
	Including contingency	$183.2 M

The portfolio investment summary includes the following components:

- One-time costs: These costs represent an estimate of initial costs to execute the initiative. Typically, they include activities such as planning, strategy development, and assessment, etc. For the entire portfolio, one-time costs are based upon the start year of the initiative. For example, Tier 1 starts in year 1, Tier 2 starts in year 3, Tier 3 starts in year 5, etc.

- 10-year total ongoing costs: These costs represent the operational and recurring costs associated with the initiative, and may include licensing, subscription, maintenance, and refreshment costs. For the full portfolio, these costs are aggregated over the 10-year span of the plan.

- 10-year total costs: These costs represent the summative amount of both the one-time and the ongoing costs over the life of the plan.

- Contingency: 10% of the total costs provides an allowance representing the uncertainty inherent in developing estimates. This enables the District to absorb changes to initiative scope or priorities, or if unexpected events occur that override previous estimates.

The 10-year costs for the portfolio are estimated at $166.7 million, and with a 10% contingency to accommodate changes, would be $183.4 million. These costs are in addition to those already set aside for similar or related initiatives. The initiatives are listed in an attachment with the detailed descriptions and costs.

While the full plan horizon is 10 years, there is greater visibility into what might happen over the next one to two years. With that in mind, the roadmap has been divided into five execution tiers. As a part of the annual plan maintenance and update process, District-wide IT leadership is encouraged to review the plan details and update as needed to reflect scope changes, project completions, and additional initiatives that may result from unanticipated events. This may involve changes to initiatives in future tiers as well. The 10% contingency is designed to help, should those changes lead to cost increases.

In the chart below we show the 10-year total investment for each year, as well as the total investment required for each tier, including contingency.

Year of launch				
1-2	**3-4**	**5-6**	**7-8**	**9-10**
Tier 1 34 initiatives $123,538,800*	**Tier 2** 24 initiatives $7,663,700*	**Tier 3** 29 initiatives $43,214,600*	**Tier 4** 22 initiatives $4,918,100*	**Tier 5** 27 initiatives $4,028,200*
$31.6 M (2-year tier total cost)	**$25.3 M** (2-year tier total cost)	**$44.0 M** (2-year tier total cost)	**$33.2 M** (2-year tier total cost)	**$49.2 M** (2-year tier total cost)

*This includes the total costs through 2032

Projects listed in the Tier 1 project portfolio are those that will be the focus of the first two years of plan execution. The Tier 1 project portfolio overview is shown below.

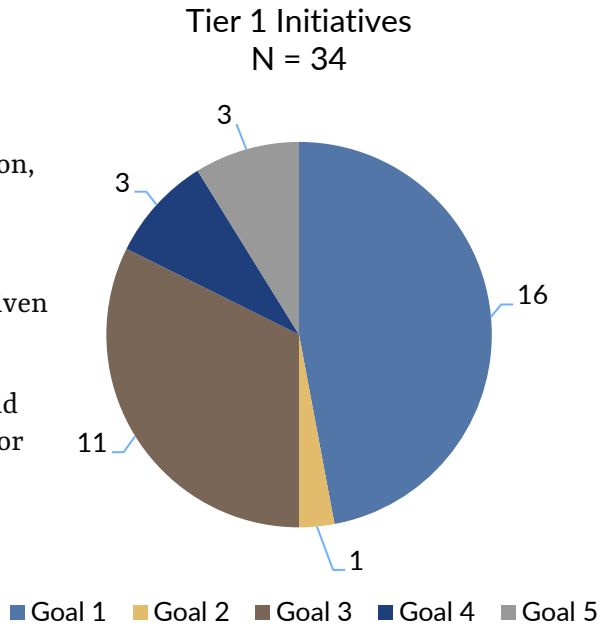
Goal 1: Implement innovative technologies to support student learning, equity, and success

Goal 2: Streamline IT governance, collaboration, and communication

Goal 3: Provide student-centered, intuitive, sustainable, scalable, integrated, and data-driven technology solutions

Goal 4: Optimize and align service delivery and equitable and intuitive access to technology for students and staff

Goal 5: Continuously improve and sustain a culture of data protection, security, and compliance



The investment required to support the plan is shown in the chart below, by tier, for each two-year span.

	Number of Initiatives	Years 1-2	Years 3-4	Years 5-6	Years 7-8	Years 9-10
Tier 1	34	$ 31.6 M	$ 21.7 M	$ 20.8 M	$ 24.1 M	$ 25.3 M
Tier 2	24		3.7 M	1.4 M	1.0 M	1.5 M
Tier 3	29			21.7 M	4.2 M	17.3 M
Tier 4	22				3.9 M	1.0 M
Tier 5	27					4.0 M
Total Budget		**$ 31.6 M**	**$ 25.4 M**	**$ 43.9 M**	**$ 33.2 M**	**$ 49.1 M**

The individual projects in the Tier 1 portfolio are shown in the Appendix "Table 5: Tier 1 Portfolio Initiatives – District Services." The alignment between initiatives and the plan themes is shown in the Appendix "Table 4: Initiative/Theme Alignment."

Once the plan is adopted, District Services, Irvine Valley College and Saddleback College will work collaboratively to execute and monitor plan progress. This collaborative approach is described in the Appendix, "DTSMP Governance."

District Services

About District Services

District Services provides centralized administrative services for the two campuses and the Advanced Technology and Education Park (ATEP), and is comprised of the following departments: Chancellor and Trustee Services, Business Services, Technology Services, Human Resources, and Public Affairs. These departments provide accounting, benefits, facilities planning, fiscal services, human resources, information technology, institutional research and planning, payroll, public affairs, purchasing, risk management, and warehouse/ mailroom services to the district.

In the context of this plan, District Technology Services provides execution for district-wide initiatives.

Strategic initiatives – District Services

District Services strategic initiatives are those projects that only impact District Services or are District-wide. The total 10-year costs for Tier 1 initiatives directly related to District Services is shown below.

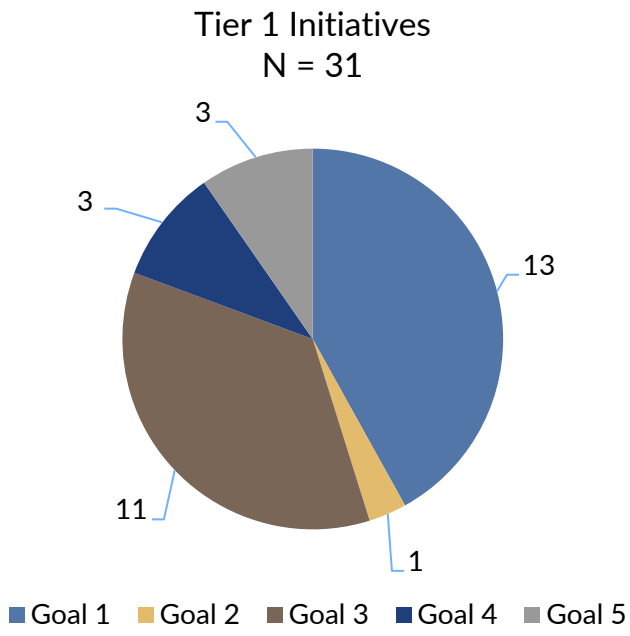
Goal 1: Implement innovative technologies to support student learning, equity, and success

Goal 2: Streamline IT governance, collaboration and communication

Goal 3: Provide student-centered, intuitive, sustainable, scalable, integrated, and data-driven technology solutions

Goal 4: Optimize and align service delivery equitable and intuitive access to technology for students and staff

Goal 5: Continuously improve and sustain a culture of data protection, security, and compliance



The investment required to support the plan is shown in the chart below.

District Services	
10-year total cost	$120,907,000
10-year total cost with contingency	$132,997,700

The individual projects in the District Services Tier 1 portfolio are shown in the Appendix Table 5 "Table 5: Tier 1 Portfolio Initiatives – District Services."

Once the plan is adopted, District Services, Irvine Valley College and Saddleback College will work collaboratively to execute and monitor plan progress. This collaborative approach is described in the Appendix, "DTSMP Governance."

Irvine Valley College Technology Master Plan

Letter from the President

Welcome to the Irvine Valley College (IVC) Technology Master Plan (TMP). This document is the result of a 16-month-long collaborative planning process between IVC, Saddleback College, and district services stakeholders of the South Orange County Community College District (SOCCCD).

The entire plan was developed during the COVID-19 pandemic, which did not hinder the collegial spirit of our college and district community and the work was successfully concluded using collaborative technologies. Despite the many challenges caused by the global pandemic, our TMP team put together this comprehensive plan that aims to address many of these challenges and prepare the college to meet the needs of future generations of students. I believe our plan will make IVC more resilient, nimble, and inclusive for all students including and especially those who experience a digital divide.

Our constituent groups came together to envision how we should prioritize and plan for tomorrow's technological needs. As part of the process, surveys and forums were held to solicit input from faculty, staff, students, and management teams. This allowed for the development of reoccurring themes such as online education and on-campus classroom technology, cloud, communication, Enterprise Resource Planning, hybrid working environment, mobility, and student-friendly technology, which would work in tandem with our college Educational Master and Strategic Plan as well as Facilities Master Plan.

The TMP underscores the college's responsibility under Accreditation Standard III.C.2 to continuously plan for, update, and replace technology to ensure the college's technological infrastructure, quality, and capacity are adequate to support its mission, operations, programs, and services. As such, our plan supports the college's four strategic planning goals prioritized as 1) ensuring equity in access and achievement; 2) transforming lives through learning and achievement; 3) engaging with community through athletics and cultural events, enrichment programs, and creating economic prosperity for all; and 4) optimizing our institutional design and structure with a student-centered focus.

I am confident that the TMP will position IVC for the future of modern educational, learning, and student support technologies to not only attract students to IVC but to also provide them with the best opportunities to succeed in their educational mission. The long-term view of the college taken in this plan will allow us to address our most significant technological challenges and opportunities thoughtfully and strategically.

John C Hernandez

John C. Hernandez
President, Irvine Valley College

Participants

The following contributors participated in the Technology Master Plan development as members of the district-wide steering committee.

Name	Title	Role
Davit Khachatryan	Vice President, Administrative Services	Irvine Valley College
Nick Wilkening	Director, Technology Services	Irvine Valley College
Brent Warner	Professor of ESL, Irvine Valley College	IVC Academic Senate
Amanda Turner	Applications Specialist II, Irvine Valley College	IVC Classified Senate
Brianna Ross (11/1/20 to 10/25/21)	Student – Irvine Valley College	Associate Student Government
Harin Lee (10/26/21 to present)	Student – Irvine Valley College	Associate Student Government
Alexandrea Wong (10/26/21 to present)	Student – Irvine Valley College	Associate Student Government

In addition, the following team of IVC employees contributed to the process through various college-level discussions.

Name	Title	Role
John Hernandez	President	Member, Expanded President's Cabinet
Chris McDonald	Vice President for Instruction	Member, Expanded President's Cabinet
Martha McDonald	Vice President for Student Services	Member, Expanded President's Cabinet
Diane Oaks	Executive Director of Marketing and Creative Services	Member, Expanded President's Cabinet

Name	Title	Role
Daniel DeRoulet	President, Academic Senate	Member, Expanded President's Cabinet
Desiree Ortiz	President, Classified Senate	Member, Expanded President's Cabinet
DeAngelo Hunter	President Associated Students of IVC	Member, Expanded President's Cabinet
Cheryl Bailey	Librarian, Co-Chair of Technology Advisory Committee and Online Education Committee	Member, Expanded President's Cabinet
Korey Lindley	Director of Financial Aid	IVC DTSMP Review Team
Deejay Santiago	Director, Student Recruitment and School Relations	IVC DTSMP Review Team
Rosa Prado	Director of Extended Opportunity Programs and Services	IVC DTSMP Review Team
Frank Riviera	Manager of Outreach Services	IVC DTSMP Review Team

About Irvine Valley College

Irvine Valley College (IVC) combines a small-college environment with more than 60 acres of modern facilities and equipment; dedicated staff; and an excellent faculty who combine knowledge and experience with a sincere commitment to learning. After its creation as a satellite campus in 1979, IVC became an independent institution in 1985, and has seen its transfer rates and campus community flourish.

IVC Vision and Mission

Vision

Irvine Valley College is a premier educational institution that provides students avenues for success through exceptional services and dynamic partnerships.

Mission

Student equity, inclusion, access, and success are central to Irvine Valley College's identity. We offer clear and guided pathways to transfer opportunities, certificates, associate degrees, employment, and further education to a diverse and dynamic local and global community. IVC

fosters economic and workforce development through strategic partnerships with business, government, and educational networks.

IVC Assessment Observations

The purpose of the assessment was to discover longer term issues and opportunities for IT, based on stakeholder input, and by assessing people, process and technology aspects of technology management. The profile of IVC participants in this discovery process is below:

Survey

- 16.6% (86) of the stakeholder participants cited their primary work locations as IVC. Of these:
    - 41% were Academic
    - 25% Student Services/Success
    - 12% were administrative
    - 16% were operations – e.g., facilities, technology campus grounds, etc.
    - 6% were "Other" – e.g., Community, Foundation etc.
- 46% (1136) of the student participants attended IVC, including those who attended both colleges.
- 27.7% (13) of the IT staff respondents cited their primary location as being IVC.

The discovery activities also included 54 group or individual interview sessions, 17 (31.5%) of which included IVC student, faculty, staff, or administrative stakeholders.

Survey respondents were asked how well they thought the technologies used at their college met their needs, and how well, they felt the IT support at their college met their expectations as well. IVC stakeholder survey respondents reported:

- The three technology solutions that least met their needs were computer lab (38%), lecture capture tools (42%) and campus student information systems (45%).
- The technology solutions that most met their needs were email (88%), Zoom/teleconferencing (86%), and learning management systems – Canvas (86%).
- 85% of the respondents felt that IT personnel were adequately trained to provide the level of service needed, and 73% felt that IT staff took the time to understand the nature of the problem.
- Conversely, only 34% of the respondents felt that IT has sufficient staff to ensure that technology is functioning properly, 38% felt that new technology equipment and projects are manage effectively, and 45% felt that prioritization of problems and their resolution is understood by the end users.

- Students overwhelmingly reported that their instructors' effective use of technology to support teaching and learning was one of their top technology factors. Rounding out the top five characteristics were: having adequate technology in classrooms and learning spaces, having online access to College services, finding the information needed on the College website, and knowing how to effectively use Canvas LMS.

Additional observations on the IT environment at IVC were gleaned from the group and individual interviews. These include:

- Improvements and technology investments made ahead of the pandemic positioned the College to pivot readily to the fully remote environment.
- Overall, stakeholders feel that IT support is responsive and helps achieve positive results. Lines of communication with Saddleback and District services are open.
- Improvements to IT infrastructure in campus buildings are needed to meet future needs.
- Staffing gaps exist for a variety of technical roles within IT, including need for additional instructional technology support.
- Limited training opportunities for staff on newly implemented new and emerging technologies.
- The strategy for addressing accessibility as it relates to technology within the College is unclear.
- Recent incidents that have affected the availability and security of College infrastructure have reinforced the need for improved cybersecurity.

Strategic initiatives – Irvine Valley College

It is within this context, in alignment with District-wide strategies and awareness of key education and technology trends, that individual initiatives were identified and defined. Irvine Valley College strategic initiatives are those projects that only impact Irvine Valley College, are District-wide, or shared by the colleges. Very few of the initiatives are Irvine Valley only – most are either District-wide or shared.

The 10-year total cost for the Irvine Valley College initiative portfolio is shown below.

Irvine Valley College	
10-year total cost	$21,177,000
10-year total cost with contingency	$23,294,700

The full plan horizon is 10 years; however, there is greater visibility into what might happen over the next one to two years. This is represented by the Tier 1 project portfolio, which are those that will be the focus of the first two years of plan execution. There are 34 initiatives in the Tier 1 project portfolio overview as shown below, categorized by the IT goals they impact. IVC's costs for the Tier 1 project portfolio are shown following this chart.

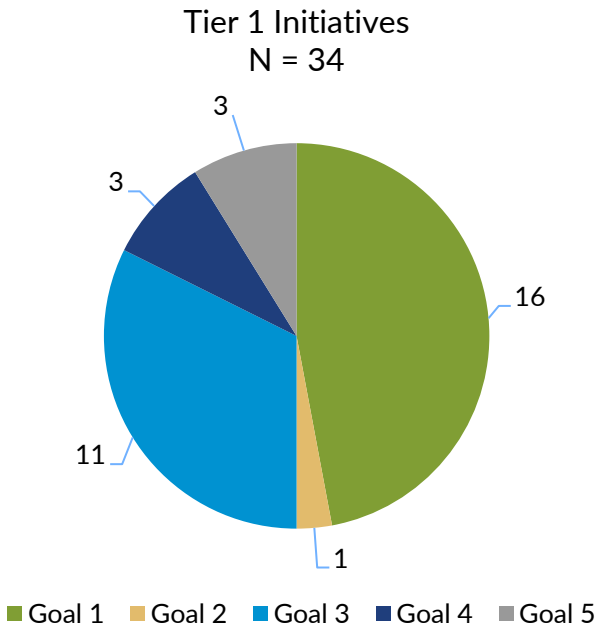
Goal 1: Implement innovative technologies to support student learning, equity, and success

Goal 2: Streamline IT governance, collaboration, and communication

Goal 3: Provide student-centered, intuitive, sustainable, scalable, integrated, and data-driven technology solutions

Goal 4: Optimize and align service delivery equitable and intuitive access to technology for students and staff

Goal 5: Continuously improve and sustain a culture of data protection, security, and compliance



One-time costs ($ x M)	10 -year total ongoing costs ($ x M)	10-Year total costs ($ x M)
$0.9 M	$4.8 M	$5.7 M
	Including contingency	$6.3 M

The individual projects in the Irvine Valley College Tier 1 portfolio are listed in the Appendix "Table 6: Tier 1 Portfolio Initiatives – IVC."

The budget created for the plan is incremental to the existing baseline budget. To that end, we estimated the additional costs incurred when executing the initiatives associated with the plan. The plan budget was adjusted to address the overlap with the existing baseline budget. The baseline budget reflects the ongoing costs of maintaining and refreshing the existing hardware, software, and network infrastructure. In the budget workbook, tabs are included that provide detailed estimates for plan initiatives and the baseline budget.

Once the plan is adopted, District Services, Irvine Valley College and Saddleback College will work collaboratively to execute and monitor plan progress. This collaborative approach is described in the Appendix, "Governance."

Saddleback College Technology Master Plan

Letter from the President

Saddleback College is known for its state-of-the-art teaching and training programs and student supports, all employing modern technologies that facilitate learning and success for all students. Accordingly, our Technology Master Plan (TMP) emphasizes our philosophy of not only filling technology gaps and staying current but planning forward for innovations for the next generation of learners.

The TMP reflects the diverse voices of our shared governance groups. The value of that diversity in technology planning is especially important because the many voices represent varied end users of technology with varied needs and tech savviness; but these diverse voices also bring to the table their experiences and exposures to new technology from other workplaces, other colleges, and from attending conferences and other professional development activities. We often want what we already have because we don't know of anything better. With diverse input, we bring to the discussion the possibilities of the world, not just those known to a small cadre of leaders at the institution.

I am grateful to all who participated in this process, conducted using technology to connect us virtually during the Covid-19 pandemic. I am confident that we had no less robust discussion and brainstorming than would have taken place in-person, in part because we had great technology to facilitate those virtual meetings!

Indeed, one of the silver linings of the pandemic, particularly vis-à-vis this planning process, is that it brought to consciousness technology access gaps among students and widened our vision of what teaching, learning and student supports could look like post-Covid. The nearly 1000 students who borrowed laptops during the pandemic made more acute the impact of technology gaps and the importance of portable devices, ubiquitous Wi-Fi access and BYO device supports across campus. The hybrid flex live-streaming hardware and software installed in labs and conference rooms all around campus will drive new forms of teaching and learning not previously visioned. Web-conferencing platforms that allowed us to continue Counseling, Mental Health, Wellness, Financial Aid, Tutoring and other student supports remotely aren't going anywhere after Covid, now that students have experienced the benefits of ease of access and want us to continue remote support platforms.

The TMP is a roadmap, not a wish list. Our College's reputation as a leader in innovative and high-quality teaching depends on the implementation of this thoughtful and highly deliberated plan for our technology future. We thank the contributors for their student-centered focus, bold and innovative thinking, and their vision of technology as a support for teaching and learning and a bridge to the future for the students who count on us to help them get there.

Dr. Elliot Stern

President, Saddleback College

Participants

Name	Title	Role
Cory Wathen	Vice President, Administrative Services	Saddleback College
Anthony Maciel	Director, Technology Services & Broadcast Systems	Saddleback College
Lewis Long (11/1/20 to 6/30/21)	Professor of English, Irvine Valley College	SOCCCD Faculty Association
Frank Gonzalez (7/1/21 to present)	Professor of Math, Saddleback College	SOCCCD Faculty Association
Blake Stephens (11/1/20 to 6/30/21)	Professor of Architecture, Saddleback College	SC Academic Senate
Margot Lovett (7/1/21 to 8/24/21)	Professor of History, Saddleback College	SC Academic Senate
Brett Myhren (8/25/21 to present)	Assistant Professor of English, Faculty Coordinator for Online Education, Saddleback College	SC Academic Senate
Darren England	Senior Matriculations Specialist, Saddleback College	SC Classified Senate
Vacant	Student – Saddleback College	Associate Student Government

About Saddleback College

Saddleback College has been the first choice for higher education and training in South Orange County since 1968. More than 500,000 alumni can attest to the quality of the academic and career training programs that enable students to successfully achieve their educational, professional, and personal goals. Saddleback College has rich academic traditions and strong reputation that make it an ideal place for students seeking associate degrees and certificates, transferring to four-year colleges and universities, preparing for the workforce, or pursuing lifelong learning opportunities.

Saddleback College is fully accredited, offering over 270 associate degrees, certificates, and occupational skills awards in 190 program areas taught by a faculty renowned for its expertise, experience, and commitment to student success. Study abroad, cooperative work experience, online learning, and honors are just some of the additional programs we offer for a well-rounded educational experience.

Saddleback College ranks 8th in transfers to the University of California and 17th in transfers to the California State University.

Saddleback College Vision and Mission

Vision

Saddleback College empowers its diverse student body to achieve personal, academic, and economic advancement through equitable and innovative educational experiences.

Mission

Inspired by a passion for teaching and learning and a belief in human potential, Saddleback College transforms the lives of its students by offering high-quality, career-building, and life-enriching education.

Saddleback College Values

Saddleback College embraces:

- Empowerment: We empower students through challenging, collaborative, and engaging educational experiences.
- Excellence: We dedicate ourselves to excellence in academics, student support, and service to the community
- Inclusivity: We create a welcoming environment in which all members of our college community have equitable opportunities and feel capable, nurtured, and respected
- Integrity: We promote honesty, transparency, and accountability.
- Openness: We cultivate a learning environment open to diverse perspectives and the free exchange of ideas.
- Partnership: We strive to develop strong and lasting partnerships across the college and with the surrounding community.
- Success: We place our highest priority on helping students achieve their academic and career goals.
- Sustainability: We promote environmental sustainability and use our resources responsibly.

Saddleback College Assessment Observations

The purpose of the assessment was to discover longer term issues and opportunities for IT, based on stakeholder input, and by assessing people, process and technology aspects of technology management. The profile of SC participants in this discovery process is below:

Survey

- 75.9% (393) of the stakeholder participants cited their primary work locations as IVC
    - 68% were Academic.
    - 17% Student Services/Success.
    - 8% were administrative.
    - 4% were operations – e.g., facilities, technology campus grounds, etc.
    - 3% were "Other" – e.g., Community, Foundation etc.
- 54% (1332) of the student participants attended Saddleback College, including those who attended both colleges.
- 17% (8) of the IT staff respondents cited their primary location as being Saddleback College.

The discovery activities also included 54 group or individual interview sessions, 17 (31.5%) of which included Saddleback College student, faculty, staff, or administrative stakeholders.

Survey respondents were asked how well they thought the technologies used at their college met their needs, and how well, they felt the IT support at their college met their expectations as well. IVC survey respondents reported:

- The three technology solutions that least met their needs were lecture capture tools (41%), campus student information systems (48%), and wireless access outside buildings on campus (52%).
- The technology solutions that most met their needs were email (92%), Zoom/teleconferencing (92%), and learning management systems – Canvas (84/%).
- 84% of the respondents felt that IT personnel were adequately trained to provide the level of service needed, 78% felt that IT staff took the time to understand the nature of the problem, and at IT "listens" to their needs (76%).
- Students overwhelmingly reported that their instructors' effective use of technology to support teaching and learning was one of their top technology factors. Rounding out the top five characteristics were: knowing how to effectively use Canvas LMS, finding the information needed on the College website, having online access to College services, and having adequate technology in classrooms and learning spaces.
- Additional observations were gleaned from the individual and group interview with Saddleback College stakeholders. These include:
    - Improvements to IT infrastructure in campus buildings are needed to prepare for future needs.
    - Staffing gaps exist for a variety of technical roles within IT.

- Significant customization has been implemented by IT staff to optimize Ivanti to the processes of IT at Saddleback.
- Limited training opportunities for staff on newly implemented new and emerging technologies.
- District-wide changes that have affected faculty and students at Saddleback have occurred with little to no warning to those who support the faculty and students.
- Inconsistent IT service delivery expectations exist between IT and OELR support teams.
- A major security incident at the College created the need to add new tools and controls to address vulnerabilities.

Strategic initiatives – Saddleback College

It is within this context, in alignment with District-wide strategies and awareness of key education and technology trends, that individual initiatives were identified and defined. Saddleback College strategic initiatives are those projects that only impact Saddleback College, are District-wide, or shared by the colleges. Very few of the initiatives are Saddleback only – most are either District-wide or shared.

The 10-year total cost for the Saddleback College initiative portfolio is shown below.

Saddleback College	
10-year total cost	$24,612,000
10-year total cost with contingency	$27,073,200

The full plan horizon is 10 years; however, there is greater visibility into what might happen over the next one to two years. This is represented by the Tier 1 project portfolio, which are those that will be the focus of the first two years of plan execution. There are 33 initiatives in the Tier 1 project portfolio overview as shown below, categorized by the IT goals they impact. Saddleback College's costs for the Tier 1 project portfolio are shown in the Appendix "Table 7: Tier 1 Portfolio Initiatives – Saddleback College."

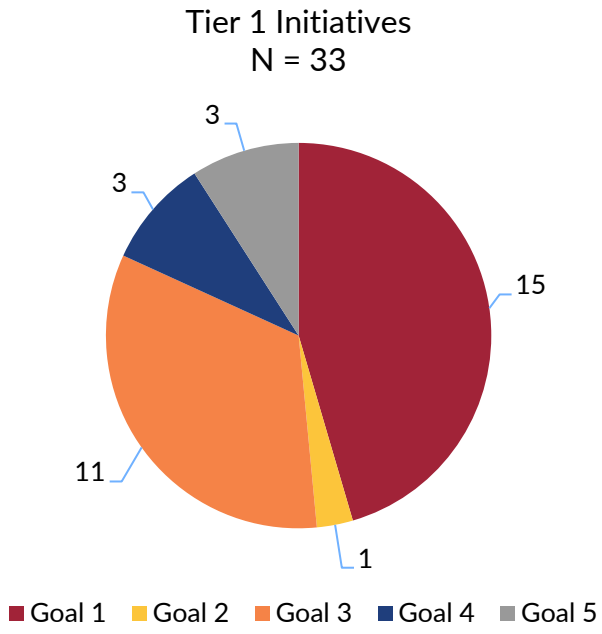
Goal 1: Implement innovative technologies to support student learning, equity, and success

Goal 2: Streamline IT governance, collaboration, and communication

Goal 3: Provide student-centered, intuitive, sustainable, scalable, integrated, and data-driven technology solutions

Goal 4: Optimize and align service delivery equitable and intuitive access to technology for students and staff

Goal 5: Continuously improve and sustain a culture of data protection, security, and compliance



One-time costs ($ x M)	10 -year total ongoing costs ($ x M)	10-Year total costs ($ x M)
$0.9 M	$4.8 M	$5.7 M
	Including contingency	$6.3 M

The individual projects in the Saddleback College portfolio are shown in the Appendix "Table 7: Tier 1 Portfolio Initiatives – Saddleback College."

The budget created for the plan is incremental to the existing baseline budget. To that end, we estimated the additional costs incurred when executing the initiatives associated with the plan. The plan budget was adjusted to address the overlap with the existing baseline budget. The baseline budget reflects the ongoing costs of maintaining and refreshing the existing hardware, software, and network infrastructure. In the budget workbook, tabs are included that provide detailed estimates for plan initiatives and the baseline budget.

Once the plan is adopted, District Services, Irvine Valley College and Saddleback College will work collaboratively to execute and monitor plan progress. This collaborative approach is described in the Appendix, "Governance."

Appendix

1. Participants

DTSMP Steering Committee

Name	Title	Role
Robert Bramucci	Vice Chancellor, Technology & Learning Services	Chair
Daune Main	Executive Assistant, Office of the Vice Chancellor, Technology & Learning Services	Recorder
Cory Wathen	Vice President, Administrative Services	Saddleback College
Anthony Maciel	Director, Technology Services & Broadcast Systems	Saddleback College
Davit Khachatryan	Vice President, Administrative Services	Irvine Valley College
Nick Wilkening	Director, Technology Services	Irvine Valley College
Jeff Dorsz	Executive Director, District IT	District Services
Gerlie Jeltema	Director, District IT – Enterprise Systems	District Services
Denice Inciong	Director, Research, Planning & Data Management	District Services
Lewis Long (11/1/20 to 6/30/21)	Professor of English, Irvine Valley College	SOCCCD Faculty Association
Frank Gonzalez (7/1/21 to present)	Professor of Math, Saddleback College	SOCCCD Faculty Association
Brent Warner	Professor of ESL, Irvine Valley College	IVC Academic Senate
Blake Stephens (11/1/20 to 6/30/21)	Professor of Architecture, Saddleback College	SC Academic Senate
Margot Lovett (7/1/21 to 8/24/21)	Professor of History, Saddleback College	SC Academic Senate

Name	Title	Role
Brett Myhren (8/25/21 to present)	Assistant Professor of English, Faculty Coordinator for Online Education, Saddleback College	SC Academic Senate
Allen Dehnke	Applications Specialist III, District IT	California School Employees Association (CSEA)
Amanda Turner	Applications Specialist II, Irvine Valley College	IVC Classified Senate
Darren England	Senior Matriculations Specialist, Saddleback College	SC Classified Senate
Brianna Ross (11/1/20 to 10/25/21)	Student – Irvine Valley College	Associate Student Government
Harin Lee (10/26/21 to present)	Student – Irvine Valley College	Associate Student Government
Alexandrea Wong (10/26/21 to present)	Student – Irvine Valley College	Associate Student Government
Vacant	Student – Saddleback College	Associate Student Government

2. Table 1: DTSMP alignment with Education Master and Strategic Plan goals

	DTSMP goals/objectives	Education Master Plan goals			
		1	2	3	4
		Ensure student equity in access and achievement	Transform lives through learning and achievements	Engage with the community through athletic and cultural events, enrichment programs, and in creating economic prosperity	Optimize our institutional design and structure with a student-centered focus
1	Implement innovative technologies to support student learning, equity, and success				
1.1	Create standardized processes for reviewing, approving, executing, and maturing innovation initiatives and technology-driven business process improvements		X		X
1.2	Implement modern platforms to support online education and to enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services	X	X		X
1.3	Develop analytics capability to elevate student learning, success, and equity	X	X		

	DTSMP goals/objectives	Education Master Plan goals			
		1	2	3	4
		Ensure student equity in access and achievement	Transform lives through learning and achievements	Engage with the community through athletic and cultural events, enrichment programs, and in creating economic prosperity	Optimize our institutional design and structure with a student-centered focus
2	Streamline IT governance, collaboration, and communication				
2.1	Enhance the process for prioritization, approval, funding, and tracking of technology-related initiatives				X
2.2	Establish and streamline IT policies, regulations, processes, tools, committees, and responsibilities				X
2.3	Establish IT communications program and practices	X		X	X
3	Provide student centered, intuitive, sustainable, scalable, integrated, and data driven technology solutions				
3.1	Align technology lifecycles with holistic approach to an enterprise architecture				X

	DTSMP goals/objectives	Education Master Plan goals			
		1	2	3	4
		Ensure student equity in access and achievement	Transform lives through learning and achievements	Engage with the community through athletic and cultural events, enrichment programs, and in creating economic prosperity	Optimize our institutional design and structure with a student-centered focus
3.2	Reduce technical complexity by implementing cohesive platforms and solutions	X	X		X
3.3	Provide well-connected, on-campus spaces to accommodate next-generation educational technology	X	X		X
3.4	Align and integrate various ERP platforms and related software applications to provide an optimal user experience	X			X
4	Optimize and align service delivery and equitable and intuitive access to technology for students and staff				
4.1	Adopt common and standardized processes and solutions for IT support across the District	X	X		X

	DTSMP goals/objectives	Education Master Plan goals			
		1	2	3	4
		Ensure student equity in access and achievement	Transform lives through learning and achievements	Engage with the community through athletic and cultural events, enrichment programs, and in creating economic prosperity	Optimize our institutional design and structure with a student-centered focus
4.2	Streamline service and solution delivery through formal IT service management practices	X	X		X
4.3	Provide standardized access, tools, and training necessary to achieve a high-level of IT support and ease of use, leading to increased self-sufficiency by students, faculty, staff, and community members	X	X		X
5	Continuously improve and sustain a culture of data protection, security, and compliance				
5.1	Develop individual and collective cybersecurity responsibility, training, and accountability for SOCCCD employees and stakeholders (e.g., contractors, partner entities, etc.)				X

	DTSMP goals/objectives	Education Master Plan goals			
		1	2	3	4
		Ensure student equity in access and achievement	Transform lives through learning and achievements	Engage with the community through athletic and cultural events, enrichment programs, and in creating economic prosperity	Optimize our institutional design and structure with a student-centered focus
5.2	Continuously review and implement best practices for risk management, including security awareness, vulnerability assessment, regulatory compliance, and incident response				X
5.3	Establish a security-by-design approach that integrates cybersecurity early in the development lifecycle of technology solutions				X

3. Table 2: Key DTSMP Themes

In addition to identifying goals and objectives, the planning teams developed themes to help correlate to the projects and plan activities. These are shown below.

Theme	Description
Student friendly technology	Technology, (to include websites, SIS, mobile app with student ID integrated, etc.) should be easy to navigate and encourage students to have the ability to obtain the information easily. Focus areas are those that students interact directly with, such as SIS, Student Relationship Management (SRM), and mobile application.
Online education	Ensure instruction, supporting materials, and training are focused on fully remote and hybrid learning environments.
On campus classroom technology	Review and implement innovative technologies to support modern teaching and learning using technology, including hybrid learning paths.
Diversity, equity, and inclusion	Leverage technologies focused on meeting diversity, equity, and inclusion initiatives for the college, e.g., multi-language support, 508/504 compliance, etc.
Staffing/Professional development	Establish a staffing model formula and structure that continuously supports the strategic, operational, and emerging technology needs throughout the district. Implement a program for the ongoing professional development needs of technology and related staff.
ERP including SIS	Establish and implement a long-term roadmap for ERP including SIS with emphasis on full integration across all business and student applications. Establish continuous review of ERP/SIS operational health and ensure alignment of tactical initiatives with strategic goals.

Theme	Description
Data governance and security	Establish an institutional data governance program. Continuously improve the institutional data security practice to address existing and new regulatory compliance requirements, audit findings, and stay current with emerging threats and trends. Continuously improve the unified security practice.
Innovation/BPI	Create a culture of innovation by incubating and delivering on the goal of being a premier provider of online services to our students, faculty, and staff. Establish institutional practice for the continuous evaluation of trending or emerging technologies and their potential use and impact on the institutional community. Implement a continuous evaluation of existing technology solutions to ensure ongoing vendor support and regulatory compliance. Under the same focus of innovation, business process evaluation needs to be in alignment.
Analytics	Develop an institutional data analytics program. Define a continuous institutional practice review to ensure the program meets the institutional data needs with emphasis on completeness, accuracy, security, accessibility, and availability.
Integration	Define and develop a unified data and system integration practice across the entire enterprise.
Mobility	Encourage a strategy to allow for mobility (outdoor wireless, mobile devices, wayfinding, etc.) for students and faculty.
Communication	Establish and continuously review a unified technology communication matrix and plan.
Hybrid working environment	Ensure that faculty, management, and staff have the technology needed to support working on campus and remotely.
Standards	Establish institutional technology standards and a business process for reviewing and updating the standards.
Procurement	Establish and implement a technology acquisition and procurement process to improve transparency, evaluation, collaboration, integration, and adoption.

Theme	Description
Application development standards	Continuously improve the existing development practice with common methodologies, toolsets, and documentation across the institution with emphasis on collaboration, security, and accessibility.
Project Management Office	Create a formal Project Management Office that manages institutional projects across all business units. Establish an institutional technology prioritization and delivery practice that is aligned with institutional needs. Establish a regular evaluation of operational and strategic technology roadmaps to align priorities, reduce redundancies, establish dependencies, and inform staffing and funding needs.
Cloud	Develop an institutional cloud strategy, implementing standardized practices and technologies in support of the strategy.
User training	Establish a unified training practice.

4. Table 3: Tier 1 Initiatives – District-wide

Initiative #	Tier 1 initiatives	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
85	Develop and execute ADA compliance strategy	Y	4	5	5	3	1	REQUIRED
33	Conduct third-party compliance assessment	Y	2	2	2	3	1	REQUIRED
48	Evaluate future-state alternatives to current SIS and develop a replacement strategy		5	5	5	4	2	435
49	Implement future-state SIS		5	5	5	4	2	435
46	Enforce zero trust approach to security		5	5	2	5	1	395
103	Provide enrollment services solutions		4	4	4	5	1	375
26	Develop digital divide strategy and technology implications		4	4	5	3	2	365
21	Conduct cloud migration		4	5	2	4	3	360

Initiative #	Tier 1 initiatives	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
70	Assess and improve remote and online education solutions for longer term viability		4	4	5	2	3	360
124	Establish a data integration repository		3	5	2	5	2	350
142	Develop future-state SIS enhancements strategy		4	4	5	3	1	350
25	Assess and develop program to improve faculty online instruction capabilities		4	4	5	2	2	345
136	Establish integrated student financial solution		3	4	4	4	2	340
109	Establish special programs information systems		3	2	5	5	2	335
135	Provide instructional support tools and solutions that will enable anytime anywhere and online learning		4	2	4	3	3	325
149	Develop and execute student mobile app strategy		3	4	4	4	1	325

Initiative #	Tier 1 initiatives	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
50	Establish enterprise architecture approach to applications		4	4	3	3	1	320
72	Evaluate and improve student onboarding process		3	4	4	3	2	320
3	Implement best practices for IT service management (ITSM)		4	4	3	3	1	320
15	Conduct IT Benchmark to assess IT staffing levels and organization		3	5	2	4	1	315
59	Enhance ERP integration capabilities		3	4	2	4	3	310
88	Provide student career placement automation and integration		4	2	5	3	1	310
90	Implement outdoor wireless coverage		3	4	3	4	1	310
119	Evaluate and refresh data analytics infrastructure		3	4	2	4	2	310

Initiative #	Tier 1 initiatives	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
37	Conduct regular and mandatory user security awareness training		3	5	3	3	1	310
74	Establish business relationship management function within the IT organization		4	4	2	3	1	305
64	Expand data sources for data analytics programs		3	4	3	3	2	305
63	Conduct a comprehensive assessment of the District-wide data analytics and execute data analytics strategy recommendations		3	4	3	3	2	305
151	Expand learning management tools		3	4	4	3	1	305
23	Develop and implement student CRM		3	3	3	3	3	300
125	Develop academic program planning and effectiveness model		3	3	4	3	2	300
145	Data integration (Canvas and common API)		3	3	4	3	2	300

Initiative #	Tier 1 initiatives	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
14	Create Emerging Technologies Center of Excellence		4	1	3	2	5	300
83	Standardize classroom technology design(s)		3	3	3	3	3	300

5. Table 4: Initiative/Theme Alignment

These initiatives are aligned to the themes.

Tier 1 initiatives	Objective	Themes
85: Develop and execute ADA compliance strategy	Objective 2.2: Establish and streamline IT policies, regulations, processes, tools, committees, and responsibilities	Project Management Office, standards, application development standards, data governance and security
33: Conduct third-party compliance assessment	Objective 5.2: Continuously review and implement best practices for risk management, including security awareness, vulnerability assessment, regulatory compliance, and incident response	Data governance and security
48: Evaluate future-state alternatives to current SIS and develop a replacement strategy	Objective 3.4: Align and integrate various ERP platforms and related software applications to provide an optimal user experience	Student friendly technology, integration, ERP including SIS
49: Implement future-state SIS	Objective 3.2: Reduce technical complexity by implementing cohesive platforms and solutions	Student friendly technology, integration, ERP including SIS
46: Enforce zero trust approach to security	Objective 5.2: Continuously review and implement best practices for risk management, including	Data governance and security

Tier 1 initiatives	Objective	Themes
	security awareness, vulnerability assessment, regulatory compliance, and incident response	
103: Provide enrollment services solutions	Objective 1.2: Implement modern platforms to support online education and to enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services	Diversity, equity, and inclusion, mobility, hybrid working environment, online education, cloud
26: Develop digital divide strategy and technology implications	Objective 1.2: Implement modern platforms to support online education and to enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services	Diversity, equity, and inclusion, mobility, hybrid working environment, online education, cloud
21: Conduct cloud migration	Objective 4.3: Provide standardized access, tools, and training necessary to achieve a high-level of IT support and ease of use, leading to increased self-sufficiency by students, faculty, staff, and community members	User training, standards, staffing/professional development, student friendly technology

Tier 1 initiatives	Objective	Themes
70: Assess and improve remote and online education solutions for longer term viability	Objective 1.2: Implement modern platforms to support online education and to enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services	Diversity, equity, and inclusion, mobility, hybrid working environment, online education, cloud
124: Establish a data integration repository	Objective 1.3: Develop analytics capability to elevate student learning, success, and equity	Diversity, equity, and inclusion, analytics, data governance and security
142: Develop future-state SIS enhancements strategy	Objective 3.4: Align and integrate various ERP platforms and related software applications to provide an optimal user experience	Student friendly technology, integration, ERP including SIS
25: Assess and develop program to improve faculty online instruction capabilities	Objective 1.2: Implement modern platforms to support online education and to enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services	Diversity, equity, and inclusion, mobility, hybrid working environment, online education, cloud
136: Establish integrated student financial solution	Objective 3.4: Align and integrate various ERP platforms and related software applications to	Student friendly technology, integration, ERP including SIS

Tier 1 initiatives	Objective	Themes
	provide an optimal user experience	
109: Establish special programs information systems	Objective 3.4: Align and integrate various ERP platforms and related software applications to provide an optimal user experience	Student friendly technology, integration, ERP including SIS
135: Provide instructional support tools and solutions that will enable anytime anywhere and online learning	Objective 1.2: Implement modern platforms to support online education and to enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services	Diversity, equity, and inclusion, mobility, hybrid working environment, online education, cloud
149: Develop and execute student mobile app strategy	Objective 1.2: Implement modern platforms to support online education and to enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services	Diversity, equity, and inclusion, mobility, hybrid working environment, online education, cloud
50: Establish enterprise architecture approach to applications	Objective 3.2: Reduce technical complexity by implementing cohesive platforms and solutions	Integration, ERP including SIS

Tier 1 initiatives	Objective	Themes
72: Evaluate and improve student onboarding process	Objective 3.2: Reduce technical complexity by implementing cohesive platforms and solutions	Integration, ERP including SIS
3: Implement best practices for IT service management (ITSM)	Objective 4.1: Adopt common and standardized processes and solutions for IT support across the District	Project Management Office, standards, application development standards, procurement
15: Conduct IT Benchmark to assess IT staffing levels and organization	Objective 4.1: Adopt common and standardized processes and solutions for IT support across the District	Project Management Office, standards, application development standards, procurement
59: Enhance ERP integration capabilities	Objective 3.4: Align and integrate various ERP platforms and related software applications to provide an optimal user experience	Student friendly technology, integration, ERP including SIS
88: Provide student career placement automation and integration	Objective 1.2: Implement modern platforms to support online education and to enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services	Diversity, equity, and inclusion, mobility, hybrid working environment, online education, cloud
90: Implement outdoor wireless coverage	Objective 1.2: Implement modern platforms to support online education and to	Diversity, equity, and inclusion, mobility, hybrid

Tier 1 initiatives	Objective	Themes
	enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services	working environment, online education, cloud
119: Evaluate and refresh data analytics infrastructure	Objective 1.3: Develop analytics capability to elevate student learning, success, and equity	Diversity, equity, and inclusion, analytics, data governance and security
37: Conduct regular and mandatory user security awareness training	Objective 5.1: Develop individual and collective cybersecurity responsibility, training, and accountability for SOCCCD employees and stakeholders (e.g., contractors, partner entities, etc.)	Data governance and security
74: Establish business relationship management function within the IT organization	Objective 1.1: Create standardized processes for reviewing, approving, executing and maturing innovation initiatives and technology-driven business process improvements	Innovation/BPI
64: Expand data sources for data analytics programs	Objective 3.1: Align technology lifecycles with holistic approach to an enterprise architecture	Project Management Office

Tier 1 initiatives	Objective	Themes
63: Conduct a comprehensive assessment of the District-wide data analytics capability; develop & execute data analytics strategy recommendations	Objective 3.2: Reduce technical complexity by implementing cohesive platforms and solutions	Integration, ERP including SIS
151: Expand learning management tools	Objective 3.2: Reduce technical complexity by implementing cohesive platforms and solutions	Student friendly technology, integration, ERP including SIS
23: Develop and implement student CRM	Objective 1.2: Implement modern platforms to support online education and to enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services	Diversity, equity, and inclusion, mobility, hybrid working environment, online education, cloud
125: Develop academic program planning and effectiveness model	Objective 1.3: Develop analytics capability to elevate student learning, success, and equity	Diversity, equity, and inclusion, analytics, data governance and security
145: Data integration (Canvas and common API)	Objective 1.3: Develop analytics capability to elevate student learning, success, and equity	Diversity, equity, and inclusion, analytics, data governance and security

Tier 1 initiatives	Objective	Themes
14: Create Emerging Technologies Center of Excellence	Objective 1.2: Implement modern platforms to support online education and to enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services	Diversity, equity, and inclusion, mobility, hybrid working environment, online education, cloud
83: Standardize classroom technology design(s)	Objective 1.2: Implement modern platforms to support online education and to enable students, faculty, and staff to access anywhere/anytime learning, teaching, and support services	Diversity, equity, and inclusion, mobility, hybrid working environment, online education, cloud

7. Table 5: Tier 1 Portfolio Initiatives – District Services

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
85	Develop and execute ADA compliance strategy	Y	4	5	5	3	1	REQUIRED
33	Conduct third-party compliance assessment	Y	2	2	2	3	1	REQUIRED
48	Evaluate future-state alternatives to current SIS and develop a replacement strategy		5	5	5	4	2	435
49	Implement future-state SIS		5	5	5	4	2	435
46	Enforce zero trust approach to security		5	5	2	5	1	395
103	Provide enrollment services solutions		4	4	4	5	1	375
26	Develop digital divide strategy and technology implications		4	4	5	3	2	365
21	Conduct cloud migration		4	5	2	4	3	360

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
70	Assess and improve remote and online education solutions for longer term viability		4	4	5	2	3	360
124	Establish a data integration repository		3	5	2	5	2	350
142	Develop future-state SIS enhancements strategy		4	4	5	3	1	350
25	Assess and develop program to improve faculty online instruction capabilities		4	4	5	2	2	345
136	Establish integrated student financial solution		3	4	4	4	2	340
109	Establish special programs information systems		3	2	5	5	2	335
149	Develop and execute student mobile app strategy		3	4	4	4	1	325
50	Establish enterprise architecture approach to applications		4	4	3	3	1	320

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
72	Evaluate and improve student onboarding process		3	4	4	3	2	320
3	Implement best practices for IT service management (ITSM)		4	4	3	3	1	320
15	Conduct IT Benchmark to assess IT staffing levels and organization		3	5	2	4	1	315
59	Enhance ERP integration capabilities		3	4	2	4	3	310
88	Provide student career placement automation and integration		4	2	5	3	1	310
119	Evaluate and refresh data analytics infrastructure		3	4	2	4	2	310
37	Conduct regular and mandatory user security awareness training		3	5	3	3	1	310
74	Establish business relationship management function within the IT organization		4	4	2	3	1	305

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
64	Expand data sources for data analytics programs		3	4	3	3	2	305
63	Conduct a comprehensive assessment of the District-wide data analytics and execute data analytics strategy recommendations		3	4	3	3	2	305
151	Expand learning management tools		3	4	4	3	1	305
23	Develop and implement student CRM		3	3	3	3	3	300
125	Develop academic program planning and effectiveness model		3	3	4	3	2	300
145	Data integration (Canvas and common API)		3	3	4	3	2	300
83	Standardize classroom technology design(s)		3	3	3	3	3	300

Initiatives in progress

There are a number of district-wide and college specific initiatives currently in progress that are aligned with the planned initiatives. These are shown in the charts below.

District-wide Initiatives In Progress

Application Development

- Student Relationship Management (SRM)
- Faculty Dashboard and Add Priority Code (APC) Upgrade
- Attendance Tracking
- Instructional Management System (IMS) Upgrade
- Student Payment Plans
- Guided Pathways
- California Virtual Campus/Online Education Initiative (CVC- OEI)
- Block Registration
- Electronic Forms Integration
- Extended Opportunities, Programs and Services (EOPS) Applications
- Student Information System (SIS) to the Cloud

Project Management

- Project Management Tool Implementation
- Prioritization and Intake Process Development

Enterprise Resource Planning (ERP)

- Sabbatical tracking
- Workday Journeys and Assistant
- Workers Comp Claim/Safety Incident Tracking
- Property Transfer Process

Infrastructure and Security

- SharePoint Refresh (SharePoint Online)
- Network Refresh and Voice Enhancements
- Endpoint Security Replacement
- Cloud Migration and Security Enhancements
- Security Assessment
- Regulatory Compliance

College Initiatives In Progress

- Refresh of the following technologies
  - Data center
  - Building IT closets
  - Cabling infrastructure
  - Servers
  - Desktops
  - Classroom technology
- Storage Area Network
- Enhance indoor and outdoor wireless environment
- Domain Name System enhancements

8. Table 6: Tier 1 Portfolio Initiatives – IVC

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
85	Develop and execute ADA compliance strategy	Y	4	5	5	3	1	REQUIRED
33	Conduct third-party compliance assessment	Y	2	2	2	3	1	REQUIRED
48	Evaluate future-state alternatives to current SIS and develop a replacement strategy		5	5	5	4	2	435
49	Implement future-state SIS		5	5	5	4	2	435
46	Enforce zero trust approach to security		5	5	2	5	1	395
103	Provide enrollment services solutions		4	4	4	5	1	375
26	Develop digital divide strategy and technology implications		4	4	5	3	2	365
21	Conduct cloud migration		4	5	2	4	3	360

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
70	Assess and improve remote and online education solutions for longer term viability		4	4	5	2	3	360
124	Establish a data integration repository		3	5	2	5	2	350
142	Develop future-state SIS enhancements strategy		4	4	5	3	1	350
25	Assess and develop program to improve faculty online instruction capabilities		4	4	5	2	2	345
136	Establish integrated student financial solution		3	4	4	4	2	340
109	Establish special programs information systems		3	2	5	5	2	335
135	Provide instructional support tools and solutions that will enable anytime anywhere and online learning		4	2	4	3	3	325
149	Develop and execute student mobile app strategy		3	4	4	4	1	325

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
50	Establish enterprise architecture approach to applications		4	4	3	3	1	320
72	Evaluate and improve student onboarding process		3	4	4	3	2	320
3	Implement best practices for IT service management (ITSM)		4	4	3	3	1	320
15	Conduct IT Benchmark to assess IT staffing levels and organization		3	5	2	4	1	315
59	Enhance ERP integration capabilities		3	4	2	4	3	310
88	Provide student career placement automation and integration		4	2	5	3	1	310
90	Implement outdoor wireless coverage		3	4	3	4	1	310
119	Evaluate and refresh data analytics infrastructure		3	4	2	4	2	310

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
37	Conduct regular and mandatory user security awareness training		3	5	3	3	1	310
74	Establish business relationship management function within the IT organization		4	4	2	3	1	305
64	Expand data sources for data analytics programs		3	4	3	3	2	305
63	Conduct a comprehensive assessment of the District-wide data analytics and execute data analytics strategy recommendations		3	4	3	3	2	305
151	Expand learning management tools		3	4	4	3	1	305
23	Develop and implement student CRM		3	3	3	3	3	300
125	Develop academic program planning and effectiveness model		3	3	4	3	2	300
145	Data integration (Canvas and common API)		3	3	4	3	2	300

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
14	Create Emerging Technologies Center of Excellence		4	1	3	2	5	300
83	Standardize classroom technology design(s)		3	3	3	3	3	300

9. Table 7: Tier 1 Portfolio Initiatives – Saddleback College

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
85	Develop and execute ADA compliance strategy	Y	4	5	5	3	1	REQUIRED
33	Conduct third-party compliance assessment	Y	2	2	2	3	1	REQUIRED
48	Evaluate future-state alternatives to current SIS and develop a replacement strategy		5	5	5	4	2	435
49	Implement future-state SIS		5	5	5	4	2	435
46	Enforce zero trust approach to security		5	5	2	5	1	395
103	Provide enrollment services solutions		4	4	4	5	1	375
26	Develop digital divide strategy and technology implications		4	4	5	3	2	365
21	Conduct cloud migration		4	5	2	4	3	360

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
70	Assess and improve remote and online education solutions for longer term viability		4	4	5	2	3	360
124	Establish a data integration repository		3	5	2	5	2	350
142	Develop future-state SIS enhancements strategy		4	4	5	3	1	350
25	Assess and develop program to improve faculty online instruction capabilities		4	4	5	2	2	345
136	Establish integrated student financial solution		3	4	4	4	2	340
109	Establish special programs information systems		3	2	5	5	2	335
135	Provide instructional support tools and solutions that will enable anytime anywhere and online learning		4	2	4	3	3	325
149	Develop and execute student mobile app strategy		3	4	4	4	1	325

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
50	Establish enterprise architecture approach to applications		4	4	3	3	1	320
72	Evaluate and improve student onboarding process		3	4	4	3	2	320
3	Implement best practices for IT service management (ITSM)		4	4	3	3	1	320
15	Conduct IT Benchmark to assess IT staffing levels and organization		3	5	2	4	1	315
59	Enhance ERP integration capabilities		3	4	2	4	3	310
88	Provide student career placement automation and integration		4	2	5	3	1	310
119	Evaluate and refresh data analytics infrastructure		3	4	2	4	2	310
37	Conduct regular and mandatory user security awareness training		3	5	3	3	1	310

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
74	Establish business relationship management function within the IT organization		4	4	2	3	1	305
64	Expand data sources for data analytics programs		3	4	3	3	2	305
63	Conduct a comprehensive assessment of the District-wide data analytics and execute data analytics strategy recommendations		3	4	3	3	2	305
151	Expand learning management tools		3	4	4	3	1	305
23	Develop and implement student CRM		3	3	3	3	3	300
125	Develop academic program planning and effectiveness model		3	3	4	3	2	300
145	Data integration (Canvas and common API)		3	3	4	3	2	300
14	Create Emerging Technologies Center of Excellence		4	1	3	2	5	300

Initiative #	Tier 1 initiative	Legal/ regulatory	Strategic alignment	Continuing operations	Direct student impact	Value, cost, benefit	Innovation for competitive impact	Total score
83	Standardize classroom technology design(s)		3	3	3	3	3	300

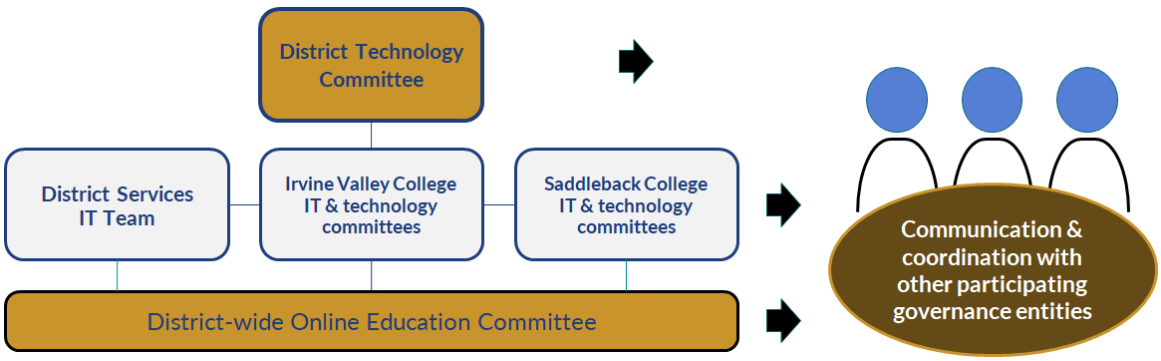
10. Governance

Plan governance structure

Moving forward, the District will have to establish a District-wide process to monitor and guide plan execution to achieve the desired plan outcomes. This will involve the District Technology Committee, District-wide Online Education Committee, College Technology Planning Committees, and the IT teams for District Services, Irvine Valley College, and Saddleback College.

- **District-wide Technology Committee** (DTC) will act as the coordinating body with overall accountability for plan execution. It is a district-wide group, with participants from each of the local IT teams, as well as academic, student services, and administrative representations. The DTC is responsible for aggregating college IT funding requests and ensuring overall alignment with DTSMP and District priorities.
- **District-wide Online Education Committee** whose role is to support online student success and coordinate the technology needs of online education throughout the district, will provide coordination, guidance, and assistance with online education activities included in the DTSMP. This group is also district-wide, with an emphasis on instructional and technology leadership and practitioners.
- **District Services IT team and Irvine Valley College and Saddleback College Technology Committees** will provide local expertise and insight; advice, guidance, and counsel, based on their scope; as well as specific resources for project management and execution of DTSMP initiatives.
    - **IVC Technology Committees** include Technology Advisory Committee, Online Education Committee, Academic Planning and Technology Council and Budget Development and Resource Planning Council.
    - **Saddleback Technology committees** include College Technology Committee and College Resource Committee.
    - **District IT** uses the District Services Planning committee (DSPC).

Collectively, these groups will also communicate and coordinate with other district departments and participating governance entities.

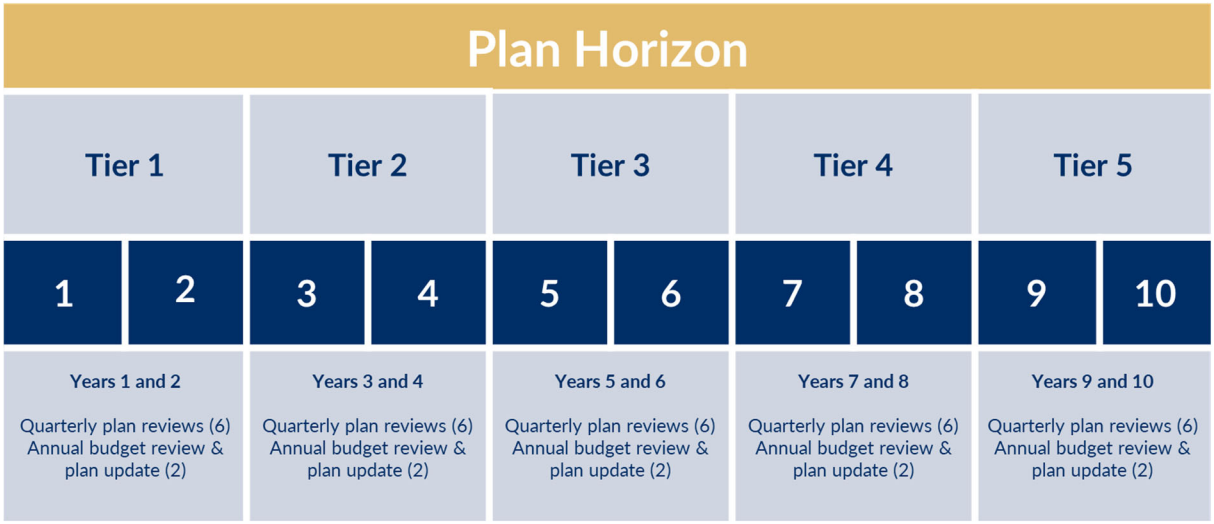


Ongoing plan governance and oversight

The DTSMP has a ten-year horizon, during which time, there will be a need to review and report on plan execution, update the plan and initiatives based on changes in institutional priorities, execution progress or issues, and unanticipated events. A structured process is the best practice approach for providing effective oversight and governance, which should include:

- Ongoing reporting of DTSMP project portfolio execution, based on standard metrics, such as projects underway, budget performance, schedule adherence, and risk management.
- Quarterly review and discussion of DTSMP project portfolio and activities.
- Annual planning to confirm projects included in DTSMP project portfolio, alignment with institutional priorities, inclusion, or exclusion of specific initiatives.

An overview of this is shown in the graphic below.



In addition, each of the initiatives include operational maintenance, upgrades, and technology refresh activities, based on the implementation timeline. This will also feed into the annual review and update process.

11. Prioritization rubric

One of the key elements of strategic planning is the prioritization process, where the institution determines how to allocate the resources amongst competing activities to achieve the stated goals. The planning team reviewed each of initiative to gauge its impact according to select criteria. Each criterion was weighted to show its importance relative to the others. Each initiative was then evaluated and assigned a prioritization rating, which was summarized to achieve a total prioritization score. The prioritization criteria, with the definition and the weighting assigned to each one, are shown below.

Criteria	Definition	Weight
Legal/Regulatory/ Board/Labor	Are there legal requirements or regulations, board decisions, or labor contract requirements that must be met? Includes additional requirements such as fire code, safety, health, and ADA.	No Points
Strategic Program/Master Planning impact	Level of connectedness/importance to DTSMP Strategic Goals and Objectives, Education Master Strategic Plan, Facilities Master Plan, and program review.	30
Continuing operations/schedule	How well does the project/initiative support continuing IT, administrative, student, or educational services operations? Is this project/initiative already listed in the current project portfolio? Will this initiative stop, alter, or impact an existing project in the project portfolio?	20
Direct impact on students	To what extent does this project/initiative impact students directly, including student success, achievement, and student learning outcomes (SLO)?	15
Value, cost benefit	To what extent does this initiative provide additional productivity value or cost/benefit (i.e., ROI) for the District or colleges?	20
Innovation	To what extent does this initiative transform the District/colleges to better achieve its mission and/or create a significant competitive differentiator compared to peer institutions?	15
Total		100

The individual initiatives were scored, using the rubric on the following page.

12. Table 8: Initiative Scoring Guidelines

	Give this initiative the score listed if the following conditions are met				
Criteria	**5**	**4**	**3**	**2**	**1**
Strategic Program/Master Planning impact	This project has **significant impact on multiple strategic programs**; it aligns or enables **multiple goals (three or more)** of any of the DTSMP, Education Master Plan, and Facilities Master Plan goals.	This project impacts **multiple strategic programs in multiple goals or objectives**; it aligns or enables **multiple goals (three or more)** of any of the DTSMP, Education Master Plan, or Facilities Master Plan goals.	This project impacts **multiple strategic programs in one goal or objective**; it aligns or enables **one or two goals** of the DTSMP, Education Master Plan, or Facilities Master Plan goals.	This project impacts **a single strategic program in multiple goals or objectives**; it aligns or enables **one or two goals** of either of the DTSMP, Education Master Plan, or Facilities Master Plan goals.	This project impacts a **single strategic program in multiple goals or objectives**; it aligns or enables a **single goal** of the DTSMP, Education Master Plan, or Facilities Master Plan goals.
Continuing operations/schedule	This project/initiative is **critically important** to support continuing IT, administrative, student, or educational services/ operations; or it is integral to **multiple significant** existing	This project/initiative is **very important** to support continuing IT, administrative, student, or educational services/ operations; or it is integral to a **few minor, and up to one larger scale, existing**	This project/initiative is **important** to support continuing IT, administrative, student, or educational services/ operations; or it is integral to **two minor existing projects** in the project portfolio.	This project/initiative is **moderately important** to support continuing IT, administrative, student, or educational services/ operations; or it is integral to	This project/initiative has **little or no impact** on continuing IT, administrative, student, or educational services/ operations; and it not integral to **any project** in the project portfolio.

	Give this initiative the score listed if the following conditions are met				
Criteria	**5**	**4**	**3**	**2**	**1**
	projects in the project portfolio.	**projects** in the project portfolio.		**any one project** in the project portfolio.	
Direct impact on students	This project/initiative will have a **significant and direct impact** on improving student success and achievement.	This project/initiative will have a **substantive and direct impact** on improving student success and achievement.	This project/initiative will have a **moderate and direct impact** on improving student success and achievement.	This project/initiative will have an **indirect impact** on improving student success and achievement.	This project/initiative will have **no direct impact** on improving student success and achievement.
Value, cost benefit	This project/initiative will provide significant productivity or service enhancements and direct cost/revenue benefits to the colleges and District.	This project/initiative will provide significant productivity enhancements or service and moderate direct cost/revenue benefits to the colleges or District.	This project/initiative will provide significant productivity or service enhancements and/or direct cost/revenue benefits to the colleges or District.	This project/initiative will provide some productivity or service enhancements and/or moderate direct cost/revenue benefits to the colleges or District.	This project/initiative will provide **some productivity or service enhancements** to the colleges or District.
Innovation	This project/initiative will significantly	This project/initiative will significantly	This project/initiative will introduce new technology or	This project/initiative will introduce a new	This project/initiative will introduce a new technology or solution

	Give this initiative the score listed if the following conditions are met				
Criteria	5	4	3	2	1
	transform or enhance the colleges in comparison to peer and competitive institutions. It has not been proven in a higher ed environment. It **provides new capabilities that peer/competitive institutions are not situated** to provide.	transform or enhance the colleges in comparison to peer and competitive institutions. It has not been proven in a higher ed environment. It **provides new capabilities that only a few (up to three)** peer/competitive institutions are situated to provide.	solution that will enhance the colleges in comparison to peer and competitive institutions. It may have been proven in a higher ed environment, but not at the same scale. It will be **moderately difficult for most peer and competitive institutions to implement**.	technology or solution that may enhance the colleges in comparison to peer institutions. While new, it may not be proven. It will be **moderately difficult for most peer and competitive institutions to implement**.	that will have little or no impact in comparison to competitor or peer institutions. While new, **it is proven and will be easy for most peer and competitive institutions to implement**.

13. DTSMP initiatives – Additional Considerations

The detail information for the DTSMP initiatives is included in in the accompanying DTSMP workbook (Excel).

In reviewing the initiatives, readers are encouraged to understand that the initiatives are written to be broadly defined for the 10-year horizon. Other considerations that readers can and should take into account for the initiatives are discussed below.

The inclusive planning process led to 136 initiatives for SOCCCD to implement over the 10-year horizon of the plan and offers these additional considerations for **all** the initiatives:

- Shared initiatives
  - In the case of the "shared" initiative, the priority is shared, and work should be coordinated so that conflicting priorities at the local level do not disrupt the overall implementation and execution priorities.
  - There will continue to be tension associated with meeting conflicting needs of the colleges and District, typically referred to as their 'unique differences'. In many cases, the initiatives are designed to move the entities closer in their execution of the initiative where appropriate. This tension will need to be addressed with each initiative.
  - Colleges reserve the right to acquire and integrate where necessary to retain flexible and responsive support to respective communities. For example, but not limited to, academic department software acquisitions.
- Leverage existing solutions and experience
  - Existing solutions may be in place throughout the district that are related to the area of recommended initiatives. In those cases, the existing solutions be included in the review, evaluation, and assessment of alternatives.
  - Existing projects (or initiatives) may be underway related to the area of the recommended initiatives. In those cases, the assumption is that they are equivalent, but that they can be combined into a single initiative to achieve the greatest impact for the District and colleges.

- Definition and due diligence
  - Initiatives are described at a fairly high level. When an initiative is begun, the team should perform the due diligence to confirm the current state, changes to scope and other elements, and update as appropriate to reflect new information. This will enable additional detail, scoping, and constraints to be discovered and incorporated at a later date.
  - A substantive and comprehensive financial or business case analysis will be needed for large scale initiatives. This should be consistent across the evaluation and prioritization of similarly size/scope initiatives (and in fact, this is an initiative). This could include total cost of ownership comparison between in-house and outsourced solutions, including technical support, training, and other supplemental areas of consideration. This is included implicitly if not explicitly stated.
- Full life cycle view
  - The purpose of the initiative is to establish a new capability for the institution. In all cases, this includes the creation, maintenance, and on-going refreshment, whether it is explicitly mentioned or not.
  - Several initiatives have a prerequisite event: to analyze the current situation and develop a strategy for addressing it. In all cases, the subsequent initiatives are to be performed in the context of that strategy.
  - As new IT solutions are introduced into the enterprise and core solutions portfolio, the IT organizations District-wide will need to assess the impact on IT support staff, processes, and service level agreements. These will need to be reviewed and assessed at least annually.
- In general, and especially for larger scale, District-wide initiatives, the resulting recommendations and execution plan should leverage a phased or agile approach to build intermittent capabilities and deliver ongoing results more quickly to the organization. This further enables the organization to build on lessons learned and adjust project scope and activities as needed to optimize value to SOCCCD.
- 'Tactical' initiatives
  - Some initiatives are recommended because they address an important near-term issue or opportunity and may not seem to be as strategic in nature as others, i.e., tactical. They have been included to enable District Services and colleges to consider them for near term value.
  - Enterprise system operational upgrades and maintenance were identified, but not included in the strategic plan initiatives. These should be included in the annual operating plan for IT, as they are a part of the normal execution of IT activities.

Funding and allocation plan

The funding and allocation plan information is included in the master initiative workbook "DTSMP Portfolio Initiatives.xlsx

Cost-benefit analysis for high value, high priority initiatives

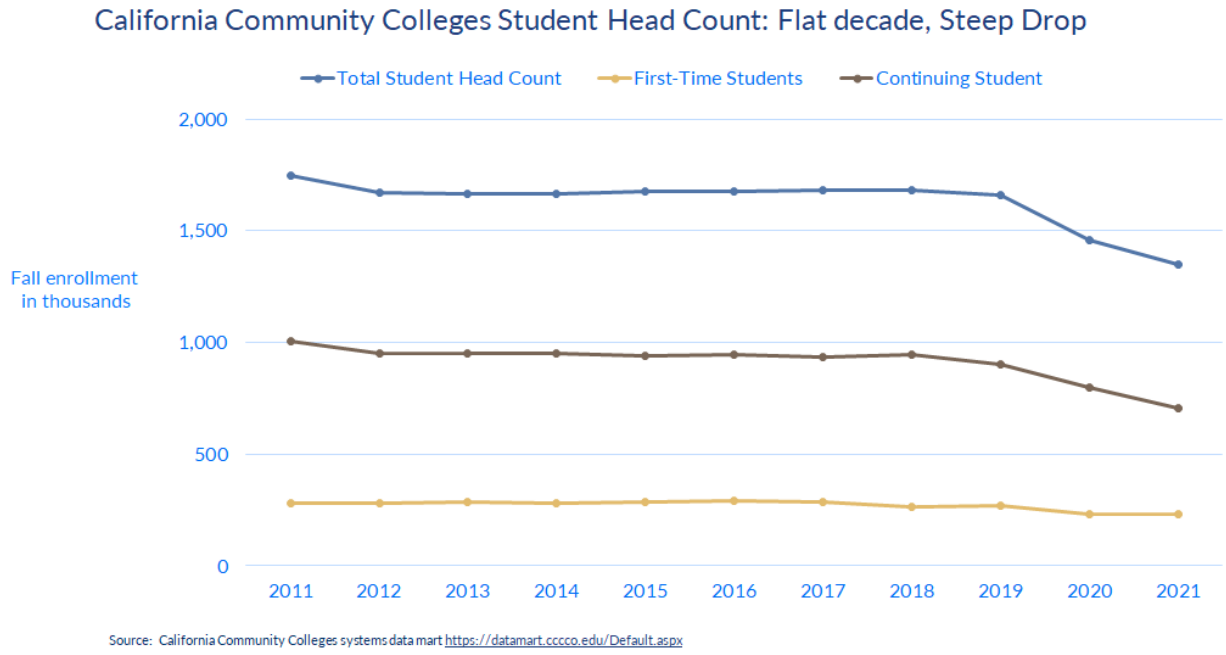
The cost and estimated benefits are identified in the master initiative workbook "DTSMP Portfolio Initiatives.xlsx

14. Key higher education and technology trends

Looking into the future, considering the 10-year horizon of the DTSMP, there are a number of factors that will impact technology planning and investments for SOCCCD and higher education in general.

Higher education trends

- **Continuing decline in community college enrollment.** According to the state of California Community Colleges Chancellor's Office, headcount for community colleges has been flat for the last decade, and in fall of 2020, faced a 13% drop in enrollment. This enrollment drop continued into the Fall 2021 term as shown in the diagram below.



Source: California Community Colleges systems data mart https://datamart.cccco.edu/Default.aspx

- **The COVID-19 pandemic accelerated the adoption of technology in education.**[1] Prior to the pandemic, distance learning was growing in higher education. In fall 2018, nearly 6 million undergraduates nationwide (or 35%) enrolled in distance courses, up from 4.6 million in 2013. It is likely that the pandemic accelerated this trend.

- **COVID-19 also highlighted the digital divide and other inequities.**[1] The pandemic highlighted long-standing digital gaps that have affected African American, Latino, and low-income students. In 2019, 13% of K–12 students and college students did

[1]Source: : PPIC Fact Sheet "The digital Divide in Education" February 2021 https://www.ppic.org/publication/the-digital-divide-in-education/

not have broadband at home. College students in rural (22%), low-income (21%), and Latino (16%) households were particularly likely to lack home broadband.

Technology trends

Gartner, Inc. has identified several areas that are projected to impact higher education throughout the pandemic and beyond. [2]

- Virtual experiences: Creating a digital environment for recruitment, teaching, graduation, and advancement without requiring a presence on campus. Based on NICHE annual survey of students, virtual experiences are valued by students.
- Cross-life-cycle CRM: Creating an enterprise-wide, 360-degree view of a constituent, most often a student, across the major life cycle phases. This will enable higher education institutions to catch up with other industries using CRM solutions.
- Cyberthreats: Continue to be an ever-present issue.
- Low-code applications: Using model-driven or visual development paradigms supported by expression languages.
- Cloud now: An immediate and scalable response for delivering services via virtual and remote delivery.
- Chatbot: A software or a computer program that simulates human conversation through text or voice interactions or both.
- Hybrid classrooms: Providing the capability to allow faculty to teach students on campus and online at the same time. 87% of institution reported hybrid as being the preferred approach for teaching.
- Content curation and creation: Provides pre-built training, protocols, etc.
- Robust networks: As more students rely on connected devices, demand his will continue to grow exponentially.
- Remote exams/proctoring: Creating environment for remote assessments and for preventing remote academic dishonesty; online learning is here to stay.

[2] Gartner: "Top Technology Trends Impacting Higher Education in 2021"; Published 23 February 2021 - ID G00742584

Educause 2022 Top 10 IT Issues and Trends[3]

1. *Cyber Everywhere! Are We Prepared?:* Developing processes and controls, institutional infrastructure, and institutional workforce skills to protect and secure data and supply-chain integrity
2. *Evolve or Become Extinct:* Accelerating digital transformation to improve operational efficiency, agility, and institutional workforce development
3. *Digital Faculty for a Digital Future:* Ensuring faculty have the digital fluency to provide creative, equitable, and innovative engagement for students
4. *Learning from COVID-19 to Build a Better Future:* Using digitization and digital transformation to produce technology systems that are more student-centric and equity-minded
5. *The Digital versus Brick-and-Mortar Balancing Game:* Creating a blended campus to provide digital and physical work and learning spaces
6. *From Digital Scarcity to Digital Abundance:* Achieving full, equitable digital access for students by investing in connectivity, tools, and skills
7. *The Shrinking World of Higher Education or an Expanded Opportunity?:* Developing a technology-enhanced post-pandemic institutional vision and value proposition
8. *Weathering the Shift to the Cloud:* Creating a cloud and SaaS strategy that reduces costs and maintains control
9. *Can We Learn from a Crisis?:* Creating an actionable disaster-preparation plan to capitalize on pandemic-related cultural change and investments
10. *Radical Creativity:* Helping students prepare for the future by giving them tools and learning spaces that foster creative practices and collaborations

[3]Source: Educause "Top 10 IT Issues, 2022: The Higher Education We Deserve" November 2021 https://er.educause.edu/articles/2021/11/top-10-it-issues-2022-the-higher-education-we-deserve

15. Other supporting materials

The documents listed below are additional documents providing selected details for the planning effort. They were provided separately to the DTSMP Steering Committee.

- Survey results – students
- Survey results – stakeholders (staff, managers and administrators)
- Survey results – IT staff
- Stakeholder interview observations
- Assessment findings presentation