Foothill – De Anza Community College District Technology Plan

Presented by:

The Educational Technology Advisory Committee & Educational Technology Services

Foothill –De Anza Community College District

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Introduction

Background

The FHDA district technology plan is meant to be a working document, something of value to the Foothill and De Anza college and Central Services communities. To that end, we are going to keep it short and to the point, and include in it information that is helpful to our colleagues and partners at the colleges and across the district.

Scope and Content of the District Technology Plan

Our goals in the technology plan are three fold. First, we attempt to understand the goals of the colleges and the district as presented in their respective strategic plans and articulate how Educational Technology Services (ETS) can support the pursuit of those goals. Second, we will emphasize the collaborative and customer focused role of ETS in the provision of technology services. To that end, we will explore ways to open up communication channels and share information about how ETS is organized, what services are available and who is responsible for what. Finally, we will articulate at the outset some guiding principles that inform how we strive to work and how we view our partnership with the colleges.

How the District Technology Plan Was Developed and How It Should Be Used

The jumping off points for the district strategic plan are the recently developed college and district strategic plans. The work that went into those plans and the resulting goals are consequential along two axes: first to identify what projects are important and where ETS can provide support; and second, how ETS and the colleges can work together to jointly achieve those goals.

In many ways, the writing of this strategic plan has involved and “external” scan of college needs and an “internal” scan of ETS capabilities and approaches. We have also reviewed what has accounted for successful collaborations as well as learning from occasional shortcomings in the way ETS and the colleges have worked together in the past. There has been considerable progress along the continuum from IT’s historical role as a “job shop” for the colleges to ETS’s evolving role as “partner” with the colleges. This document has been written to support the continuing migration along this continuum. It is as a “partner” that ETS will be best positioned to support the goals of the colleges.

While the college plans themselves were the starting point for this strategic plan, it is important to note that additional conversations with the authors of the college plans played an important role in increasing our understanding of issues and concerns that impact a successful partnership with ETS. An ongoing dialog, in both formal and casual settings, between the people at the colleges and people at ETS will be critical to furthering success going forward.

Guiding Principles and Core Capabilities for District’s Technology Planning

The guiding principles and core capabilities articulated below help guide the Foothill/De Anza community college district in selecting IT goals wisely. The intent of clarifying these guiding principles and core capabilities is to support IT decision-making across the district.

Guiding Principles

**GP 1) Technology needs to further the mission and vision of the colleges and district.** The implementation and use of technology should meet the core needs of the Foothill/De Anza community – academic, administrative and service – rather than purely expanding the use of technology.

**GP 2) Technology decisions should include broad input from users and stakeholders across departments and colleges impacted by the decisions.** Decisions about the selection, use, support and life- cycle of technologies will be made with the involvement of the users and stakeholders who are impacted by the technology’s use. Decisions at all levels about IT services and directions will be made in an open manner to promote sharing with others who face similar decisions. The district, college and departmental plans will guide decisions concerning technology.

**GP 3) Technology users and providers need to collaborate by first understanding the problems - based on academic and administrative needs, and then let the technology providers take the lead in providing suggested solutions.** Technology affects almost every function of the district, and we need to elevate the discussion of how technology should serve the academic and administrative missions. While there have been important recent changes, Foothill-De Anza has a history of decomposing issues into such categories as HR issues, enrollment issues, technology issues, etc. Typically, this decomposition of issues pushes the technology conversation down to tactical matters such as how to run a specific service. This must change - technology should be utilized to solve problems and should not be the end goal in itself. Based on this view, the district should not base its technology decisions on abstract or technical IT concepts. These changes should be based on how technology affects the everyday lives of faculty, staff and students - the academic and administrative missions of the colleges and Central Services.

**GP 4) “Integration”, “ease of use” and “accessibility” should be expected features of all new systems or technologies.** Campus applications, systems, communications devices and classroom technologies must be integrated, easy to use and accessible so as to provide effective IT solutions for the campus. The judgment of “ease of use” should be focused on the holistic user experience across multiple systems, even when these systems are developed and supported by multiple providers. Ease of use and the ability to integrate with other systems are two of the most important aspects of IT systems. We recognize that systems that can reuse, build upon, and integrate with our existing systems provide more value to the district and we will favor systems with these characteristics.

Core Capabilities

**CC 1) IT Infrastructure will be designed and implemented to provide a foundation for other services, using maintenance and funding models that are sustainable.** The hardware and software infrastructure required to support information technology must be secure, reliable and cost effective. Capital planning for maintaining, replacing, and renewing is an important part of sustaining the IT infrastructure. The infrastructure will support basic services across the campus and provide those services for all departments and classrooms. For this purpose, IT infrastructure includes the fiber in the ground, the wiring in the walls, the servers supporting applications, middleware, classrooms and other equipment and services broadly needed to provide applications. Equally important to providing a solid foundation, the infrastructure must be interoperable and consistent.

**CC 2) The Foothill-De Anza community college district must examine opportunities for business process improvements in conjunction with the adoption of IT systems.** Services are not just about technology nuts and bolts. An analysis of existing administrative processes and an examination of opportunities for process improvement is an important precursor for modifying existing or implementing new systems. In many cases, understanding the capabilities of technology helps educate us to business process possibilities; however, we should explore the implications of changing how we do business - the people and process - when exploring new technology services. This is especially true in enterprise-class administrative systems where customization can significantly increase lifecycle resource requirements and limit our ability to migrate to other solutions. When we identify a need to implement an application, we will define our ideal process and examine the marketplace for an application meeting those standards. If the closest match does not meet our goals, we will ask this question: Do we modify the application to meet our ideal process or do we relax our ideals and make process adjustments that fit in with the application?

**CC 3) IT decisions must always include plans for the ongoing support and provision of services.** These plans should include how the services will meet security, accessibility, personnel workload, interoperability needs, and budget constraints. When a project is approved or a new IT effort undertaken, budget needs must be part of the approval process and we should encumber the full set of funds including ongoing support and maintenance. A key aspect of effective planning for ongoing support is adequately providing customer support and training.

Strategic Capabilities: What are the academic and administrative capabilities desired by the colleges that require technology enablement and support (and where can ETS help)?

In this section we identify the strategic goals, objectives and steps that the colleges articulated in their respective college plans. Some goals and objectives can be supported by ETS; others are primarily the responsibility of the colleges. For those where ETS can provide support, we have tagged the goal or objective ”(ETS/College)”. For those that the colleges are primarily responsible, we have tagged them as “(College)”. As you’ll see, ETS looks forward to being an active partner for the vast majority of stated goals, steps and objectives.

Foothill College

**Strategic Capabilities**

Business processes

Communications

Information and knowledge management

Instruction and student services

**Goal 1:** Ensure that campus policies and procedures guide the appropriate use of technology to foster a dynamic and effective learning environment. (ETS/College)

Step 1: All proposed educational tech projects and initiatives will be reviewed by experts and stakeholders prior to submitting project request to ETS. Whenever feasible, proposed educational technology projects and initiatives will include a needs assessment in the project initiation phase. (ETS/College)

Step 2: The process for collaborative development, review and prioritization of educational tech project initiatives at the college level will be streamlined. (College)

Step 3: The service level agreements between Foothill College and District ETS will be reviewed and updated to ensure appropriate funding levels for virtualization and servicing computer/multimedia refreshes. (ETS/College)

**Goal 2:** Support expectations by students, faculty, staff, and administrators for access to informational resources, the internet and support for computing devices. (ETS/College)

Step 1: Qualified employees will be provided with secure software for collecting information via questionnaires. (ETS/College)

Step 2: The transparency and speed of the process for ordering and installation of technology equipment and software will be improved. (ETS/College)

Step 3: The number of paper-based only forms will be decreased by replacing them with digital submission alternatives. (ETS/College)

Step 4: Capabilities of meeting rooms for use of video-conferencing will be improved. (ETS/College)

**Goal 3:** Maintain the leading edge of higher educational computing to support students with planned updates and replacements in support of a sound technological infrastructure. (ETS/College)

Step 1: A quick turnaround process for systematic review and approval of time sensitive projects that involve technology will be developed and provided. (ETS/College)

Step 2: A standardized and timely process will be developed that provides all employees and facilities with technology equipment and software upgrades (ETS/College)

**Goal 4:** Provide high quality learning environments supported by technology in a secure, reliable, and safe manner. (ETS/College)

Step 1: Use of Office 360 by employees will be increased for secure communication, file sharing, and computer back-up. (ETS/College)

Step 2: Migration of the college-supported course management system from Etudes to Canvas course management system will be completed by July 1, 2017. (ETS/College)

Step 3: The number of student services that are available remotely will be increased. (ETS/College)

Step 4: A needs assessment will be conducted to determine baseline and optimal types, levels and location of classroom and meeting room technology. (ETS/College)

**Goal 5:** Ensure that students, faculty, staff, and administrators have access to and instruction for appropriate use of technology and systems necessary for student success. (College)

Step 1: The planned Foothill College website redesign will employ responsive design standards so that content is accessible on mobile devices. (College)

De Anza College

**Strategic Capabilities**

Ubiquitous agile technology across the campus community

Teaching, learning and student engagement

Deeper learning into student success and subsequent responses (i.e. actions taken to facilitate improvement)

Professional development

**Goal 1:** Support ubiquitous, agile technology across the campus community.

Objective 1: The Technology Committee will promote the consolidation of technology functions that will yield economies of scale and/or foster better communication and advance equitable outcomes for students.

* + Standardize frequently requested technology tools and services as appropriate, e.g. preferred mechanism for online surveys, online forms. (ETS/College)
	+ Consistent collection of syllabi from across the college. (College)
	+ Consistent design for division/departmental level web sites. (College)

Objective 2: To support improving online and hybrid course learning experiences, and therefore equity and success, the Technology Committee will assist with the transition of the course management system from Catalyst to Canvas over the next two years. This action also responds to findings in technology survey questions 3-5, 13 and 15. (ETS/College)

Objective 3: The Technology Committee will create a map for technology support at De Anza. This map will direct faculty, staff and students to the appropriate resources for technical support. In addition, the committee will filter requests and recommendations for tools that improve experiences with campus-wide applications, such as Banner, Office 365 and the Student Inquiry Tool. (ETS/College)

**Goal 2:** Teaching, learning and student engagement.

Objective 1: The Technology Committee will foster student access and equity by collaborating with Academic Senate and other key partners in the development and promotion of open educational resources. Such resources, especially when replacing costly textbooks and course materials, serve a significant role in advancing student equity. (College)

* Objective 2: In a similar vein and also with a goal of equity, the Technology Committee will assist as affordable and feasible in the organized provision of tablets and similar devices in classrooms and programs. (ETC/College)
* Objective 3: The committee will also guide the continual growth of course management system functionality to foster meaningful student-instructor and student-to-student communication and will support increasing the use of the Canvas CMS in hybrid and face-to-face classes to improve student engagement and multiple modalities in accessing course material. (College)
* Objective 4: The Technology Committee will collaborate with its accessibility expert and Disability Support Programs and Services (DSPS) to continually evaluate accessibility and Americans with Disabilities Act (ADA) compliance across the website, learning management system and student information systems. Meeting accessibility needs, a clearly equity-based goal, was noted in questions 3, 5 and 15 of the spring technology survey. (ETS/College)

Objective 5: In addition, the committee will improve student access to services via technology, including the implementation of responsive web pages, focused application development, supporting technology and applications through the college website, and the leveraging of social media to enhance education. (ETS/College)

**Goal 3:** Deeper research into student success and subsequent responses (i.e. actions taken to facilitate improvement)

Objective 1: The committee will continually collect and analyze data to guide the enrichment of the student experience through technology. (ETS/College)

Objective 2: The committee will also research and implement as appropriate emerging device-independent technologies that improve student access to services and explore the integration of such technologies through the website, research and work to implement device-independent technologies that improve student access and equity, faculty and staff email and the course management system. (ETS/College)

**Goal 4:** Professional Development

Objective 1: Notably technology training was one of the most requested services in the recent technology survey and a theme in questions 4, 5, 8, 15 and 17. The Technology Committee will cultivate a culture in which technology training is seen as beneficial for all employees, supporting and endorsing regular onsite staff and faculty training opportunities that are equity focused, support student success and improve workflow efficiencies. Feedback on training needs and sessions will be provided by the committee. Topics will include a focus on accessibility with particular attention to online and written documents, videos and other learning tools. (College)

What Steps Can Be Taken by the District to Support the Strategic Capabilities Outlined by the Colleges Over the Next One to Three Years?

In this section, we look at the project and initiative pipeline for the next three years as laid out in the college plans and identify where ETS can provide direct support. ETS will work directly with the colleges to define the level and type of support that would be most useful.

Foothill College

### 2016-2017

Routine use of an automated Technology Project Request intake process provided by ETS for collaborative development, review, and prioritization of educational tech project initiatives at the college level. (College)

Faculty and staff training in Office 365, computer security and computer back up. (College)

Course management system implementation to switch from Etudes to Canvas. (ETS/College)

Deployment of desktop virtualization in computer labs at the Sunnyvale Center (ETS/College)

Utilization of telepresence equipment at the Sunnyvale Center and Foothill campus to allow students to connect remotely with student services in the areas of counseling and financial aid when there is not an on-site staff person present. (ETS/College)

### 2017-2018

Needs assessment to determine baseline and optimal classroom and meeting room technologies. (ETS/College)

* Outfit meeting rooms with permanent capability (microphone and camera external to computer; browser updates) to host remote attendance via web conferencing. (ETS/College)
* Designation of technical support services, classrooms, cloud services, software, and equipment for faculty to experiment (or pilot-test) with innovative teaching approaches. (ETS/College)
* Development of formal process for annual review and evaluation of college website with input from students, faculty and staff to ensure that it meets needs for access to information and services. (College)

### 2018-2019

Selection and purchase of secure cloud survey services for qualified employees for purpose of data collection using questionnaires. (ETS/College)

### High Profile One Year Technology Projects (To Be Completed in Next 18 Months)

Sunnyvale Center - new regional state-of-the-art educational facility. (ETS/College)

* Foothill College Library Renovation Project. (ETS/College)

College website redesign. (College)

College course management system migration from Etudes to Canvas. (ETS/College)

Technology in support of student services: Edunav and Starfish pilot projects. (ETS/College)

De Anza College

### One Year Implementation Plan

**Goal 1:** Support ubiquitous agile technology across the campus community.

Promote the consolidation of technology functions to yield economies of scale and/or foster better communication

* + Gather data on systems used and desired by divisions, departments and offices (ETS/College)
	+ Research consolidation tools (ETS/College)
	+ Recommend solutions (may instead be a Year 2 activity) (ETS/College)

Assist with the transition of the course management system from Catalyst to Canvas

* + Promote Canvas through multiple channels to encourage faculty use (College)

Create a map for technology support

* + Initiate development of map (ETS/College)

**Goal 2:** Teaching, learning and student engagement.

Collaborate with Academic Senate, other partners on the development of open educational resources.

* + Initiate discussions and initial planning opportunities. (College)

Assist as affordable and feasible in the organized provision of tablets and similar devices in classrooms and programs.

* + Initiate conversations with Instructional and Student Services PBTs. (ETS/College)

Guide the continual growth of course management system functionality to foster meaningful student-instructor and student-to-student communication.

* + Perform faculty/student needs assessment. (College)
	+ Evaluate possible solutions. (College)

Collaborate with its accessibility expert and Disability Support Programs and Services (DSPS) to continually evaluate accessibility and Americans with Disabilities Act (ADA) compliance across the website, learning management system and student information systems.

* + Ensure routine attentiveness within key workgroups. (ETS/College)
	+ Add standing agenda item at TC meetings for discussion of accessibility needs, opportunities and compliance. (College)

Improve access to student and academic services via technology.

* + Regular input from TC members to ETAC and Banner on key topics. (ETS/College)

**Goal 3:** Deeper research into student success and subsequent responses.

Collect and analyze data to guide the enrichment of the student experience through technology.

* + Assess help request tickets, website analytics; continue to conduct regular technology survey; utilize results for improvements. (ETS/College)

Research and work to implement device-independent technologies that improve student access and equity.

* + Work collaboratively with ETAC and Banner committees to improve student access and services by maintaining membership on each committee and providing input. (ETS/College)

**Goal 4:** Professional development.

Cultivate a culture in which technology training is understood to be beneficial for all employees.

* + Communicate opportunities through multiple channels. (College)

Evaluate technology training needs and priorities.

* + Utilize technology survey results, participation data, qualitative assessment; incorporate training for new tools. (College)

Supporting the District Strategic Plan (2017-2023)

The broad District Strategic Plan (2017-2023), not to be confused with this narrower technology plan, contains several items that ETS will directly support over the next three years.

**District Strategy 1.1:** Develop a data rich environment that increases end user ability to utilize/engage student success data and develop strategies to decrease inequities in outcomes.

Metric 1.1a: Complete the development of customized data reporting tools - higher education profiles, inquiry tool, and Argos reporting.

Metric 1.1b: Conduct a minimum of two training workshops annually on the use of data resources - one during the district opening day and one (or more) in the academic year.

Metric 1.1c: Generate statistics reporting tools for Canvas course management system to allow for identification of target communities for early alert outreach.

**District Strategy** **3.1:** Through the Online Education Initiative, develop online resources to increase student participation and achievement in online education.

Metric 3.1a: Adopt online counseling and academic tutoring services.

Metric 3**.1**b: Fully implement the Canvas course management system at both colleges.

**District Strategy 3.2:** Support the development of additional technology-based student service resources.

Metric 3.2a: Integrate SARS, DegreeWorks, and other student support data and reporting systems with traditional student success reporting practices.

**District Strategy 3.3:** Adopt and enforce Universal Design standards for all digital and online instructional content.

Metric 3.3a: Increase number of Canvas course sites that meet minimum accessibility standards.

**District Strategy 5.2:** Implement district facilities master plan strategies regarding classroom and campus spaces.

Metric 5.2a: Increased number of smart classrooms and meetings rooms with videoconferencing capabilities.

District Technology Strategic Capabilities, Three-Year Goals, and Objectives for the 2017/2018 Fiscal Year

In addition to directly supporting the specific goals of the colleges and district, the district has identified its own set of strategic capabilities, three-year goals and a one-year project implementation plan that will enable ETS to continue to provide a high level of support to the colleges and district. Some of these capabilities, goals and projects relate directly to needs articulated by the college and district, others provide the infrastructure that everyone relies on to meet their goals. Many of the projects in the one year implementation plan listed below have already been launched; all will be completed in the 2017/2018 fiscal year.

Strategic Capabilities

Develop and maintain infrastructure and exostructure that supports the digital transformation of our colleges and Central Services organization.

Develop and maintain an agile product management methodology to support the efficient, effective and timely completion of IT projects.

Partner with established and start-up technology firms to enhance the capabilities of the district and provide leading edge services for students, faculty and staff.

Three-Year Goals

Goal 1: Modernize district-wide applications to support greater access, efficiency and effectiveness along with mobility.

* Goal 2: Improve district-wide infrastructure to support greater speed, reliability, and coverage.
* Goal 3: Improve information security at all levels.
* Goal 4: Utilize cloud technology to optimize fiscal and staff resources.

2017/2018 Objectives (One Year Implementation Plan)

**Goal 1 - Modernization**

Objective 1: Implement a student mobile application that supports course add and drop, fee payment, class schedule, classroom locator, grade view, and campus directory.  The mobile application will also integrate with popular social media platforms and the Canvas course management system.

Objective 2: Upgrade the MyPortal portal platform to support responsive design capabilities and improve security.

Objective 3: Implement the Adobe Sign system and integrate with the Banner ERP to support digital distribution, workflow, and signature of a wide variety of college/district forms, contracts, and other documents.

Objective 4: Upgrade the district ERP system to version 9 of the Ellucian Banner platform.

Objective 5: Deploy the Foothill College virtual desktop infrastructure (VDI) environment and incorporate the current VDI system housed in the Physical Science, Math, and Engineering Division.

Objective 6: Provide students with a foothill.edu or deanza.edu email account upon request.

Objective 7: Pilot business intelligence software for research.

Objective 8: Implement a managed print service system for all employee print output.

Objective 9: Convert the individual college instances of Resource25 to a unified instance of 25Live.

**Goal 2 - Infrastructure**

Objective 10: Complete the overhaul and refurbishment of 1911 machine room including physical security, HVAC, and primary and backup electrical systems.

Objective 11: Expand coverage of the wireless network and improve connection speeds at all district locations.

Objective 12: Upgrade the district Internet circuits provided by CENIC from 1 Gb to 10Gb.

**Goal 3 - Security**

Objective 13: Consolidate and streamline the district's Active Directory identity management system.

Objective 14: Deploy the *Securing the Human*information security training for all employees.

Objective 15: Conduct a penetration test and Payment Card Industry (PCI) compliance assessment.

Objective 16: Implement the Airwatch mobile device management system for remotely managing iPads, laptops, and other district-owned mobile computing devices.

**Goal 4 – Cloud Technology**

Objective 17: Select a cloud-based environment to host the district's Banner ERP.

Objective 18: Migrate the district's Microsoft Exchange email system from an on-premise server to the Office365 cloud.

How Does the District’s Strategic Technology Plan Support the Education Master Plan, the Equity Plan and Regional Accreditation Efforts?

The goals of the Education Master Plan and the Equity Plan for the Foothill-De Anza community college district have been addressed in considerable detail in both the Foothill and the De Anza college technology plans. The district strategic technology plan, in so far as it has been structured explicitly to support the respective college plans, is also addressing the goals of the Education Master Plan and the Equity Plan.

With regard to regional accreditation efforts, specifically Standard 3.3, it is important to note that the colleges and district are closely coordinating their efforts to effectively deploy educational technology to support academic mission of the colleges. As this document confirms, the colleges have spent considerable time and energy identifying their strategic capabilities and goals relating to educational technology. The district strategic technology plan responds directly to the college plans and outlines in clear terms where and how ETS can support the technology needs of the colleges.

User’s Guide to ETS and How to Build a Successful Partnership Between ETS and the Colleges

ETS is set up to be a technology services organization that partners with the colleges and the district to support needs relating to teaching and learning, administration and business processes. ETS is most successful when staff and leadership are able to work directly and early on with partners to understand issues, help define problems that need to be solved and work jointly to implement appropriate solutions. Historically, the IT department at Foothill/De Anza, and many other institutions, was largely seen as a utility or job shop, called up late in the game to come in and do a pre-defined scope of work. Over the past 10-15 years, ETS has been engaged in transitioning the role and perception of the organization to one based on partnership, transparency and a high level of customer service. The transition is ongoing and its continuing success requires the active involvement of ETS, college and district personnel.

ETS is aware that at times it can be difficult to know, on the one hand, who to contact for support with specific issues and, on the other hand, what all ETS is able to help out with. To address this shortcoming, ETS will be releasing a comprehensive (but easy to navigate) service catalog in Fall 2017. Prior to release, ETS will be making a beta version available and will be soliciting feedback to make sure information is presented in a way that it is actually useful in connecting people to the services they need.

ETS is also eager to hear directly from colleagues in the colleges about ways to improve the way ETS and the colleges work together. There has been a lot of attention in this technology plan to identifying where ETS can support the strategic and tactical goals of the colleges and district overall, and that is a good first step. In order to operationalize this technology plan, ETS wants to continue working closely with the colleges and district to further define the processes that will foster a successful collaboration and jointly identify and agree on specific steps that will be taken to support the identified goals.