

CEHS Technology Committee Strategic Plan

2017-18

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Mission Statement

Knowledge is the business of a university—creating it, studying it, analyzing it, and disseminating it—and the storage, transfer, and construction of knowledge as information relies increasingly on digital technology. Technology promotes and supports the excellence and innovation of faculty members, students, and staff in the College, stimulating their creativity, productivity, and efficiency. In order to support and advance the work of faculty members, students, and staff, it is important that the technology equipment, systems, and processes be robust, accessible, secure, and timely. The mission of the College is to address these needs for the benefit of all of its constituents. This is best done through the development and implementation of an efficient, comprehensive, and equitable technology plan.

Values

The following values have influenced the technology plan.

1. Technology is an important and compelling contributor to excellence and innovation in the work of faculty, staff and students.
2. The study of how and where technology impacts education and human sciences contributes important new knowledge.
3. Individual and diverse applications of technology are important to advancing ideas.
4. Technology enhances the productivity and efficiency of faculty, staff, and students.
5. Technology extends the reach and impact of the College.
6. Program graduates should possess knowledge, skills, and attitudes that allow them to apply technology to meet professional goals.
7. Technology has become the medium and repository for much of faculty, staff, and student work. The access to and the security of these resources is essential.
8. Excellence in the area of technology means continuous learning and application of new technologies.
9. The adoption of technology represents a challenge and an effort on the part of the College and on individual faculty and staff. This effort moves both the College and individuals forward and has a substantial payoff in productivity, quality and impact and as such should be recognized as an important contribution critical to the mission of the College.
10. Systems and processes that make the use of technology more creative, reliable, efficient and effective support these values.

General Technology Goals

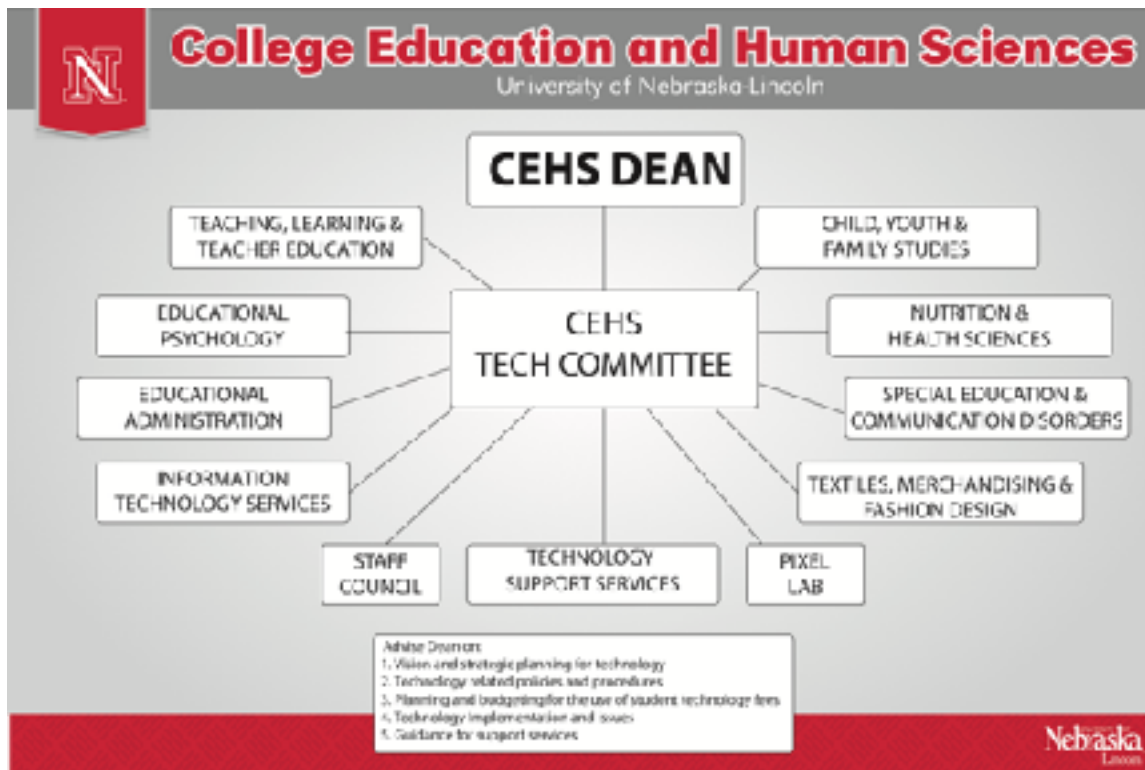
1. Provide a climate where technology is recognized and valued including support for CEHS faculty, staff and students to develop expertise and leadership roles in educational technology.
2. Provide high quality teaching and learning opportunities for distance education, on-campus students and life-long learners through a technology-rich environment.
3. Provide all faculty and staff with modern software and equipment tailored to meet their specific interests and responsibilities, including support for research, teaching, and service.

4. Provide reliable and secure access to data and networks and protection of data from damage, attack or loss for all CEHS faculty, staff and students.
5. Provide the necessary support to faculty, staff, and students in the College to maintain their software and computer hardware.
6. Provide technology support to CEHS faculty and staff who are interested in software development.
7. Provide access to graphic design services and technology to enhance productivity and innovation for teaching, research, and outreach for all CEHS faculty, staff and students.
8. Provide adequate financial and human resources to allow consistent and systematic development of technology in the College.

Organization and Purpose of the Committee

Members of the Committee represent academic departments, the staff council, Pixel Lab, and Technology Support Services. The Committee also includes a representative of UNL Information Technology Services. The Committee is chaired by Al Steckelberg who serves as the Technology Director for the College.

The committee advises the Dean on vision and strategic planning, technology related policies and procedures, planning and budgeting for the use of student technology fees, technology implementation and issues and provides guidance for CEHS Technology Support Services. The role of the committee is to both listen and gather input from the College and to present new ideas and recommendations.



Part I – Progress Toward Specific Goals for 2016-17

Establish CEHS as a leader in providing innovative approaches to enhancing knowledge and delivering instruction locally and globally.

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- A. Maintain a high quality technology infrastructure that supports the work of faculty and staff. Support for infrastructure is basic and foundational to other efforts. The most fundamental priority is access to quality technology.

Security/Workflow and Resource Management

1. Enhanced security practices with the College.
 - a. Continued follow-up of the 2014 Security Action Plan and address issues related to security.
 - b. Supported security best practices including two-factor authentication.
 - c. Supported staff participated in security training (Security+) & Securing the Human: Security Awareness Training
 - d. Met with ITS Security about two-factor authentication, LAPS training, Grouper, Proofpoint, and others.
2. Moved servers in HECO to Walter Scott. Consolidated and upgraded/updated the servers to enhance security and efficiency.
3. Implemented tools and strategies that make commodity services more efficient and allow more support time with people and more complex service issues. For example, implemented client management tools such as SCCM and Casper.
4. Web, database and software development to support college functions including:
 - a. Developed registration sites for conferences and workshops that accept credit card payments.
 1. ASDNetwork (SECD)
 2. WELC (EDAD)
 3. Para-educator (TLTE),
 4. IT Leadership (UNL),
 5. IQSC and Hillestad Gallery (TMFD),
 6. Various other conferences, workshops and meetings. (CYAF, NHS)
 - b. Setup a new secure server for sites that take credit card payments and migrated active sites to it.
 - c. Supported OLLIE ACEware implementation (student registration software)
 - d. Developed site for CDL to manage online application and payment, as well as for making online tuition payments.
 - e. Rewrote the TLTE Online Undergraduate Evaluation and Admission system to support a new evaluations form.
 - f. Developed a website for managing annual computer replacements.
 - g. Developed content type and styles for a new alumni newsletter website, CEHS-Connections.
 - h. Ongoing development of Pixel Lab point of sale software.

Hardware

1. Hardware purchases and updates.

Location	Equipment	Number
Faculty Staff Upgrades	Computers	37
New Faculty (23)	Computers & Startup	29
HECO 121	4 displays including 1 touch screen, instructor computer	
HECO 142	Computers	35
HECO 216	TV Display	1
MABL 120	Upgrade RAM & SSDs	26
MABL 144	TV Displays	2
One-Button Studio	Computer, cameras, microphone, green screen,	1

2. Other hardware related activities.

- a. Worked with Dell to negotiate better pricing for computers and monitors.

Software

1. Software Purchases

Software	Licence	Number	Notes
Qualtrics	College-wide	433 accounts	2462 new surveys since Feb 2014
SPSS	College-wide	500	
SPSS	Individual	8	\$900/each
SCCM	ITS Supported	323	
Casper	ITS Supported	448	
Creative Cloud	Individual	92	10 fac/staff; 82 computer labs
Acrobat Pro	Individual	30	
SAS	Individual	35	8 fac/staff; 27 computer lab
HLM	Individual	2	
MPlus	Individual	7	
NVivo	Individual	8	
MaxQDA	Individual	34	4 fac/staff; 30 computer lab

Software	Licence	Number	Notes
STATA	Individual	3	
Endnote	Individual	3	
Hospitality Business Simulation Software	Unlimited		

2. Other Software Related Activities

- a. Worked with the Business Office and Purchasing to understand and monitor restriction of different kinds of licensed software. Developed new understandings of licensing terms on SPSS and Creative Cloud.
- b. Evaluated available solutions to software needs in terms of cost and instructional value.

Support

1. Support Tickets handled by CEHS IT Services

Trouble Ticket Issue	Number	Percentage	Notes
Access	189	12%	Access to files, servers, computers, networks, lost passwords, etc.
Apple Products New	67	4%	
Apple Products Repair/Rebuild	52	3%	
Apps	4	0%	
Box	8	0%	
Browsers	15	1%	
CEHS Classrooms/ Conf. Rms	69	4%	
Chromebook	1	0%	
Computer Management System	34	2%	
Dell New	106	7%	
Dell Repair/Rebuild	70	4%	
Email	67	4%	

Trouble Ticket Issue	Number	Percentage	Notes
Event Management System	3	0%	
Hardware	91	6%	
International Travel	1	0%	
Inventory	8	0%	
MAC OS or iOS	17	1%	
Microsoft Surface Pro	8	0%	
Move Computers	45	3%	
Non-CEHS Room	3	0%	
Peripherals	131	8%	Speakers, scanners, label makers, web cams, etc.
Printers	178	11%	
Servers	27	2%	
Software	412	25%	
Warranties	2	0%	
Windows OS	20	1%	
TOTAL	1628		

2. Other Support Related Activities

- a. Provided specific software support for faculty and staff with focus on providing assistance with immediate problems.
- b. Supported staff on the use of EMS for scheduling College classrooms and conference rooms.
- c. Supported the use of Box as a method for faculty/staff data storage.
- d. Continued efforts to be aware and cooperate with ODE, HuskerTech and ITS in providing faculty and staff support.
- e. Provided support for registering mobile devices on the UNL network.

Staff Development

1. Contributed to establishing and delivering initial Women in Technology Conference by co-chairing the conference.

B. Support innovation in teaching

1. Provided instruction and support to faculty in improving the production value of online and teaching materials including professional presentation and production.
 - a. CEHS IT Services staff (Matt Kutscher) participated and made recommendations to department sub-committees focused on teaching/learning.
 - b. Design services provided by Pixel Lab.
2. Re-examined how student tech support funded by student tech fees was used to support teaching
 - a. Supporting teaching identified as a key decision factor in allocating use of student tech fees.
 - b. Emphasized piloting new and emerging technologies.
 - c. Emphasized impact of technology on teaching practice.
3. Explored and created new opportunities for students bringing their own technology including access to software licenses and effective learning/working spaces.
 - a. Redesigned Mabel 163b to support use of student laptops and iPads. Refocused on supportive and emerging technologies.
 - b. Completed construction of the Digital Research and Design Studio.
4. Encouraged, supported and showcased innovative projects by faculty and staff through Technology Innovation Projects.
 - a. 2016-17
 1. Incorporating Simulation in Hospitality Courses to Improve Student Learning (Dipra Jha)
 2. Emerging Classroom Technology Practices (Guy Trainin)
 3. Removing Barriers: Turning a Large Lecture Room into an Active Learning Space Using a Microsoft Surface Device Paired with Microsoft Wireless Display Adaptor (Sabine Zempleni)
 4. Capturing moments from Children's Perspective (Erin Hamel, Jenny Leeper Miller, Mollie von Kampen)
 5. Music and Movement: Including Arts in Outdoor Classroom (Jenny Leeper, Erin Hamel, Mollie von Kampen)
 - b. 2015-16
 1. Digital Research and Design Studio (Justin Olmanson, Andrew Zimbrotff)
 2. Studying Talent in Nebraska: A Documentary Approach (Ken Kiewra)
 3. Development and Evaluation of Mobil Devices, GoPro Instructional Videos with Student Peer Models to Help Students Understand Basic Food Preparation (Georgia Jones)
 4. Learning to Teach Mathematics with Digital Mathematics Curriculum Materials (Lorraine Males)
5. Identified and provided resources for supporting faculty and staff use of technology. As part of this effort addressed issues in dealing with and supporting the faculty and staff who are least proficient with technology.
 - a. Hired additional staff directed at providing instructional support.
 - b. Staff Council provided annual technology training workshops.
 - c. Design and production services provided by Pixel Lab.
6. Continued enhancing video conferencing capability to support distance and hybrid teaching and advising. Provide support/resources that allows faculty to effectively use the technology.
 - a. Participated in the Zoom pilot
 - b. Assisted departments in the selection of video conferencing equipment.

7. Identify ways to provide and support innovative learning spaces.
 - a. Steelcase grant to redesign the Mabel Lee 163B learning space
8. Support the development of Web, iPad/iPhone, and/or other applications that are used to manage and enhance teaching and learning.
 - a. Not addressed.
9. Supported the development of technology that enables or enhances assessment of program outcomes.
 - a. Provided support for integration of Livetext in teaching and assessment.
 - b. Provided support for use of Swivl in teaching and assessment.
10. Exploration of strategies for systematic evaluation of the impact of College technology initiatives.
 - a. Not addressed.
11. Explored and promoted ways to effectively utilize newly remodeled student areas in the Pixel Lab and the Hub.
 - a. Collaborated with faculty on the use of podcasting in their classes requiring the use of the One button studio.
 - b. One-Button Studio used for demonstration and assignments in CEHS courses.
 - c. Supported teaching in Hub.
 - d. Hub space used for creating instructional video.
 - e. Promoted student use of support services provided in the Hub.
12. Contribute to the discussion and creation of a CEHS Digital Research and Design Studio.
 - a. Email list and other promotion
 - b. Presentation to CEHS faculty meeting
 - c. Monthly Incubator Meetings in Design Studio
 - d. Open studio times and support
 - e. Initiated Design Incubator Group in Design Studio.
13. Supported the application of professional technologies in instructional programs providing students with experiences with technology that they will encounter in job settings.
 - a. Google Classroom
 - b. Hospitality Business Simulation Software
 - c. Visual Retailing
14. Participated in the development of educational technology tools such as providing feedback on learning management systems like Canvas and Google Classroom.
15. Identified and worked to resolve issues with Google Education.
 - a. Create a Google Apps for Education account, giving access to the Google tools our faculty and students see used in the area K-12 schools.

C. Support innovative approaches to inquiry and creative work.

1. Identified and provided technology tools that supported inquiry and creative work. Examples include software (See table in Section A - Software).
2. Application of full-wall projectors in Hillested Gallery for display of creative work and enhanced exhibitions.
3. Continued development of the Research and Design Studio in Henzlik 46.

D. Identify and implement strategies to facilitate and enhance the international efforts of the College.

1. Investigated new and innovative technology that has potential to support and expand international efforts.
 - a. Ongoing.
2. Explored options and supported secure use of technology during international travel.
 - a. Reference to expanded University level information in this area.

E. Create long term vision for technology in CEHS

1. Engaged departments, faculty, students, and other stakeholders in discussion of long-term vision for technology.
 - a. Addressed emerging technology trends and vision as part of FY 2016/17 Strategic Plan for Technology.
 - b. Reviewed and updated trends in FY 2017/18 plan.
2. Identified areas where CEHS can play a leadership role both within the University and externally.
3. Collaborated with other colleges and ITS in developing and supporting the vision.
 - a. Ongoing
4. Examined on-campus, distance and blended instruction needs.
 - a. Ongoing
5. Examined accessibility issues.
 - a. Ongoing

F. Articulate and Disseminate the Mission and Functions of the CEHS Tech Committee within CEHS

1. Shared information on the composition, mission and role of the committee.
 - a. Developed of Web pages for Strategic Plan
 - b. Shared Strategic Plan with CEHS Faculty and Departments.
 - c. Presented CEHS Technology Strategic Plan to Dean's Expanded Council
 - d. Presented Technology Innovation Projects to college faculty meeting.
 - e. Updated development of web pages related to Technology Innovation Projects.
2. Increase awareness of important technology issues and information across the College.
 - a. Development of web pages to support sharing of information about technology issues is under development.
 - b. Use of CEHS News You Can Use and emails for announcements under development.
 - c. Hired new staff member (Matt Kutscher) to increase communication in this area.
3. Increased awareness of services being offered and where and how to get support.
 - a. Ongoing.
4. Explore how centers and non-instructional staff fit into the scope of the Tech Committee.
 - a. Ongoing.

Part II – Emerging Technology Trends and Vision

The CEHS Technology Committee has identified the following technology trends that will potentially impact the College over the longer term.

Part II provides context and direction for the College's thinking over the longer term. We have identified a set of trends likely to influence how we use technology to support our mission. We considered ideas from two sources: EDUCAUSE: *Top 10 IT Issues: Divest, Reinvest, and Differentiate* by Susan Grajeck and the 2015-16 EDUCAUSE IT Issues Pane found at <http://er.educause.edu/articles/2016/1/top-10-it-issues-2016> and *Six Trajectories for Digital Technology in Higher Education* by Malcom Brown found at <http://er.educause.edu/articles/2015/6/six-trajectories-for-digital-technology-in-higher-education>.

A. Personalization of learning and adaptive learning technology

Using multiple resources and pathways to create custom learning approaches for individual students. Learning options can be geared more directly to the individual needs of students.

B. Hybrid learning models and flipped classrooms

Taking advantage of both in-person and digitally delivered instruction. Technology supports new ways to organize and present learning opportunities that expand on traditional course delivery.

C. Virtual and augmented reality and virtual education

Simulations provide opportunities to experience ideas and concepts and offer new more authentic opportunities for practice. Virtual learning offers new rich opportunities for communication and collaboration.

D. Device ownership and mobile-first – learn everywhere

Supports student use of their own devices for learning. Extends opportunities for learning outside the classroom with continuous access to learning and research tools. Provides new opportunities for instructional approaches that personalize the learning experience.

E. Textbook and open educational resources

Digital development and sharing of educational resources. Potential reduced costs for students. Potential access to wider range of sources and materials that can be tailored for use in courses.

F. Learning spaces

Design of learning spaces for creative and active participation in learning. Learning spaces occur both within and outside of classrooms and reflect student participation in the creation of knowledge.

G. Next generation learning management systems

Development of digital learning systems that will support new models of instruction and provide new digital learning tools. May involve participation in the development of these systems.

H. Learning analytics

The collection, display and analysis of data to support instructional design and learning.

I. Crowd sourcing

New approaches to the development of resources and technology. Offers opportunities to think about new ways of building and disseminating knowledge.

J. Maker movement

Importance of providing creative space and community for making as part of the learning process. Supports transformation from seeing to doing.

K. Citizenship in the digital age

Attention to issues of privacy, security, responsible citizenship and critical digital literacy.

L. Rise of amateurism

Ability of amateurs to work alongside and sometimes replace professionals. Changing lines between professionals and amateurs in part brought on by ability to share ideas digitally.

M. Internet of things

Ability of digital devices to communicate and work together to provide richer experiences and provide new data sources.

N. Decisions on technology obsolescence.

With rapid advancements in technology it is necessary to identify ways to recognize and predict obsolescence. Allows refocusing of resources to maximize impact.

O. Social dimensions of learning.

Students seeking learning environments that include social elements. These occur both in physical spaces and virtually.

P. Cloud storage technology.

Creates new opportunities for access to software, data, and student work while considering management and security. Offers additional opportunities for collaborative work and feedback.

Q. Rapid Advancement in Technology.

Keeping pace with rapid advancement in technology creates challenges and requires shared information among faculty and staff.

Part III – Strategies for Meeting Goals 2017-18

Establish CEHS as a leader in providing innovative approaches to enhancing knowledge and delivering instruction locally and globally.

- A. Maintain a high quality technology infrastructure that supports the work of faculty and staff. Support for infrastructure is basic and foundational to other efforts. The most fundamental priority is access to quality technology.
1. Enhance security practices with the College.
 - b. Continue follow-up of the Security Action Plan and address issues related to security.
 - c. Support security best practices including two-factor authentication.
 2. Provide specific software support for faculty and staff with focus on providing assistance with immediate problems.
 3. Support the use of Box as a method for faculty/staff data storage.
 4. Implement tools and strategies that make commodity services more efficient and allow more support time with people and more complex service issues. For example, implement client management tools such as SCCM and Casper.
 5. Investigate ways to support collaborative planning and support for clinics within the College. For example, bring representatives together to discuss common technology needs.
 6. Provide faculty and staff with regular computer upgrades and maintenance
 7. Provide current technology in classrooms, seminar rooms and conference rooms.
 8. Understand and monitor restriction of different kinds of licensed software.
 9. Evaluate available solutions to software needs in terms of cost and instructional value.
 10. Identify ways technology can be used to make resources go further.
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- B. Support innovation in teaching.
1. Provide instruction and support to faculty in improving the production value of online and teaching materials including professional presentation and production (Pixel Lab).
 2. Encourage, support and showcase innovative projects by faculty and staff.
 3. Identify and provide resources for supporting faculty and staff use of technology. As part of this effort address issues in dealing with and supporting the faculty and staff who are least proficient with technology.
 4. Identify ways to provide and support innovative learning spaces. Explore and create new opportunities to students bringing their own technology including access to software licenses and effective learning/working spaces.
 5. Support the development of technology that enables or enhances assessment of program outcomes.
 6. Provide continued support for the CEHS Digital Research and Design Studio.
 7. Support the application of professional technologies in instructional programs providing students with experiences with technology that they will encounter in job settings.
 8. Participate in the development of educational technology tools such as providing feedback to learning management systems like Canvas and Google Education.

9. Identify and work to resolve issues with Google Education.

C. Support innovative approaches to inquiry and creative work.

1. Identify and provide technology tools that support inquiry and creative work. Examples include software such as Qualtrics, SPSS and SAS.
2. Provide web and application development in support of research.
3. Investigate and support training regarding handling data and facilitate safe data storage. Leverage available ITS training.
4. Investigate ways to use and showcase technology in College Research Fair.

D. Identify and implement strategies to facilitate and enhance the international efforts of the College.

1. Offer technology as a way to support College international teaching efforts.
2. Offer technology as a way to support international research and collaboration efforts.
3. Explore options and support secure use of technology during international travel. Collate and highlight available security resources for faculty/staff.
4. Expand and pilot tools that addresses challenges in international video conferencing including a listing of what options are available where.

E. Create long term vision for technology in CEHS

1. Utilize trends identified in Part II of the Strategic Plan as a framework for thinking about college-wide strategies.
2. Examine best use scenarios for creating learning and educational spaces as part of Mabel Lee renovation.

F. Articulate and Disseminate the Mission and Functions of the CEHS Tech Committee within CEHS

1. Share information on the composition, mission and role of the committee.
2. Increase awareness of important technology issues and information across the College.
3. Increase of awareness of services being offered and where and how to get support.
4. Explore how centers and non-instructional staff fit into the scope of the Tech Committee.