# Los Angeles Harbor College Technology Plan

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# Los Angeles Harbor College
# Technology Plan

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**Mission**: Los Angeles Harbor College fosters learning through comprehensive programs that meet the educational needs of the community as measured by student success, personal and institutional accountability, and integrity.

**Technology Vision Statement**: Los Angeles Harbor College will use information technology to enhance access, learning, retention, and success.

**Guiding Principles**:
Los Angeles Harbor College is complex in both its organization and its technology which requires competing information technology (IT) needs be carefully evaluated to ensure the optimal use of limited resources. Information technology decision makers must therefore balance:

Ease of Use/ Simplicity vs. Complexity/Difficulty
Ease of use refers to a user's experience, the ability to complete tasks in a "pain-free" manner, with less training rather than more. Complexity/Difficulty refers to a particular technology's ability to provide specific or customizable results (answers) or functionality to users.

Often there exists an inverse relationship between ease of use and the complexity of a technology. Exceptions may include Google search, which is widely popular because it provides preferred results to an average user's questions. Photoshop software, another exception, can be successfully utilized by a toddler (as a simple paint application) yet it continues to be the industry standard for imaging and retouching, and includes advanced features and techniques that take professionals years to master. It would be terrific if all technology worked in this way, but many systems have steep learning curves.

An appropriate level of "ease" depends upon expectation, and identifying the intended user group's capability is necessary. Technology that is somewhat difficult for the average millennial teenager is probably unacceptably difficulty for someone who did not grow up using electronics and technology. Likewise, an interface that is "easy" for a technologically illiterate person may not provide the level of Complexity (functionality or customization) that an advanced user seeks.

To find that careful balance, the committee need carefully consider minimum and average levels of technological competency in the users of systems (students, faculty, and administration.) Most likely, the ease of use desired to register for classes via the internet probably will be different from the ease of use for students utilizing dedicated software in an advanced course.
Innovation vs. stability/reliability: The College must maintain a balance between the energy for innovation, the drive to find newer and better solutions to learning issues, and need for stability and reliability in the system. Innovation tends to move individuals in disparate directions, opening the door to risk in the system and a resulting instability. At the United Nation's Internet Governance Forum in 2006, presenters offered this contrast: Private industry is focused on innovation, but government is averse to risk and prefers stability. Within the educational institution, the faculty is often more open to innovation in technology, experimenting with platforms and applications as they appear on the horizon. The IT staff, however, tends to focus on the side of stability and reliability in order to provide the highest and most consistent levels of support to the institution as a whole.

Standardization vs. autonomy/experimentation: The true paradox lies in the reality that standardization and differentiation strive to achieve two very different goals: standardization encourages management while differentiation respects autonomy. Both, however, must coexist in an educational environment.

Standardization is maintained by a managed set of extrinsic manipulators. Its intent is to introduce efficiencies into the system, making possible savings on purchases through master contracts and volume discounts. It also narrows the range of support that is necessary, especially in an era of severe budget restraints. The IT staff cannot hope to maintain the level of expertise required to provide support if the institution permits the unbridled use of any platform or any brand of computer. On the downside, too rigorous a standardization may lead to staying with something long after it should have been discarded.

Autonomy and experimentation, on the other hand, are necessary if we are to find amid the welter of emerging technologies those that will best serve our students. Faculty, for one, need the opportunity to incorporate the latest in hard- and software that is industry standard.

Thus, the institution has to find the appropriate balance between standardization and autonomy. The institution requires a negotiation between what is practical and what is avant garde.

Accessibility vs. security/privacy:    At Harbor College, all of the computers are connected to the college network and access internet resources through the campus network. The college network provides high speed connections to internet resources, district systems, as well as other computers and network resources within the campus. It is easy to understand that many people want to have full access, called administrative access, to the computer provided for them in their work so that they can install or update software themselves whenever there is a need or desire to do so. Some programs will not operate properly if the person using the software does not have this local administrative privilege. In addition to allowing a user the freedom to install and update software, administrative access gives users a greater sense of both privacy and ownership of the computer provided to them. The feeling of privacy comes about because administrative access can give a user complete control over the computer.

    Having administrative access does have its risks. A person with administrative privilege can modify or delete software which is required for the computer to operate. Having the ability to install software also means a person has the ability to "install" malware (viruses and spyware). A person with administrative access can infect a computer in a number of ways like opening a bogus email attachment, inadvertently running infected software, or being tricked into downloading malware from a web site. In many cases a person without administrative access would not be able to infect the computer via those means.

    A compromised campus computer (i.e. one infected with a computer virus or spyware) could potentially corrupt or erase information on the local computer, collect and send information to others for possible nefarious purposes, as well as cause network disruptions throughout the local campus and the district. Due to the high speed connection the campus has to internet resources,

infected campus systems can also cause substantial problems for internet sites. Watchdog groups who monitor internet disruptions are more likely to blacklist traffic from the campus when there is an infection, meaning that campus information, most commonly email traffic, will no longer be accepted from Harbor College at other sites.

The campus is responsible for ensuring that all software running on its computers is properly licensed. Allowing users to install software without any oversight also opens the campus to additional risk of violating software licensing rules.

For the majority of people on campus the software installed and provided by the school is sufficient for their needs. Most users do not have the knowledge and discipline needed to prevent problems due to having administrative access. Many users see campus computers as similar to their home computers.

Centralization vs. distributed services: When deciding whether IT services should be centralized, distributed or somewhere in between, it is important to agree upon who it is that is being served and which services should be on offer. Once this is clear, IT should look at organizational strengths, organizational weaknesses, IT architecture, and organizational culture in order to decide upon a service policy. Other factors to consider may be availability of personnel and budgeting issues. Some applications don't work well in one environment, or IT staff doesn't know the specifics of a unique application (e.g., MAC operating systems, special printers, etc.). Centralized services can provide standardization and consistency, control and security and, therefore, a great deal of efficiency can be achieved. Distributed services are best when poorly run or understaffed centralized services mean slow response times, needless levels of management, inability to communicate directly with required people and time wasted with pointless micromanagement. Distributed services usually work best when various users have special requirements (when one size does not fit all). If done right, distributed services can also improve response time and lower overhead and other cost. If done poorly, distributed services can lead to no recourse if no local expertise is available.

Proprietary vs. open source:

*Open Source* (Examples: Linux, Mozilla, Opera, OpenOffice, Moodle CMS. Available also for games, video editors, photos, CAD, project management, texts and other curricular resources). There are many advantages in adopting open source software.

- Lower cost, often zero. There will, of course, be transitional short-term costs of switching to open source --even if substantial for a large organization—which may be recovered by long-term savings.

- There will be a greater variety of applications for the platform selected than with proprietary products since competitors have incentive to finance applications.

- Interoperability across vendors due to adherence to open standards.

- Because it is open source, individual users will find maximum freedom, choice, customizability offered to each user. All that is required is knowledge to write code.

- Open code, therefore greater security since more eyes search for problems.

There will also be disadvantages to the adoption of open source software:

- There is no guarantee that open source program will be around in the future.

- There is no guarantee that files created with Microsoft Office will run on the open source version; hence, user must also have the Microsoft version as well.

- Cost of switching from existing proprietary system may be substantial.

- Fewer complementary applications than offered with proprietary products.

- Smaller (or no) staff to provide professional attention to quality concerns, especially with curricular materials.

- Time is required to overcome habits formed with proprietary products that have been the default.

- Technical support must be obtained from forums or must be purchased at a cost

*Proprietary* (Example: the Microsoft and Google behemoths. There will certainly be a greater variety of platforms available or to become available as they become profitable)

The advantages to adopting proprietary software are significant:

- Interoperability within the universe of the vendor's products.

- Technical support (24/7) included with the product.

- Hidden code, therefore more security.

- Economic studies show greater market share and profitability accrue to proprietary products than to open source products making long-range planning possible

There will also be disadvantages to the adoption of proprietary software:

- Cost of features not needed or not in use. Frequent upgrades and new versions require almost continual expense.

- More limitations / less choice due to settings placed beyond the control of the user.

- Must maintain profitability by managing evolution of the platform in response to competition.

## I.  Statement of purpose for Technology:

Asking "what is the purpose of technology at Harbor College?" is as big a question as asking "what is the purpose of technology in society?" As an educational institution, after all, we are one of the essential builders and shapers of society. It helps, however, to occasionally discuss and revisit the big questions. It is, in fact, the duty of the TAC committee to do so. Any changes or refinements in thinking should be reflected in the Technology Master Plan.

Our college mission and our technology vision statement can be summed up as follows: we are here to serve our diversely constructed community and our diversely skilled students by providing a universally successful learning environment. Technology plays a big part in shaping this environment. Our environment is broad in that we serve students with vastly different pedagogical needs, and it is deep in that we serve a globalizing community that requires both general (permanent) and very specialized (ever changing) skills.

The question, therefore, becomes "how can technology at Harbor College be both broad and deep at the same time"? And the answer is, even in these days of decreasing apportionments, that we must keep in mind whom it is we serve: *our* community and *our* students. When thinking or arguing about the purpose of technology at Harbor College, therefore, the following four guiding principles should apply:

I.  Technology should serve our globalizing community and therefore should foster an environment of independent learning. We can no longer simply teach the facts or the methods, because the facts (and narratives) keep adding-up and the methods keep changing. Technology, therefore, should encourage independent curiosity, self-guided learning, flexibility, and ultimately self-teaching. Technology must foster independence and self-discipline.

II.  Technology should serve our local community and should, therefore, be used to prepare students for jobs with local businesses and other community employers. The word 'technology' is often used synonymously with 'computers' or 'communications' but our local community may require an even broader definition.

III.  Technology should serve our students. The educational needs of our students must come first. Neither political pressures, professional curiosity, public relations potential, nor the allure of easy solutions should drive our technology goals. Nor should the availability of grant money be a primary driver, nor should the desire to be cutting edge.

IV.  Technology should serve education. Except for student services applications (which could best and most efficiently be dealt with in the District Technology Plan), education technology at Harbor College should be nurtured from the classroom level up. This bottom-up approach will insure that a one-size-fits-all mentality does not take hold; it will maintain academic freedom and guard against unwieldy or expensive educational technology being imposed by people who know little about how our students learn. On the other hand, technology at Harbor College should not cater to the whims of consumer electronics. Though we should not ignore the technology used by our students in their personal lives for personal goals, we should not feel the need to drive policy based on the latest technology in the marketplace.

Technology should do no harm. If we cannot do something well, we should not do it at all. Technology today has changed in its pervasiveness but not in its very nature. Regardless of technology students must still learn to read, comprehend, write, think, question, research, debate, memorize, rationalize, diagnose, judge, emote, observe, decide and process. In other words, the human element has not changed and in education the human element still needs to be nurtured. Technology should enhance not encumber this growth.

Technology is part of society. We use technology everyday to buy, bank, apply, communicate, and create. Rare, too, is the job these days that does not incorporate a lot of dynamic technology. Our work lives and our personal lives will forevermore be rich in technology. For those who specialize in a highly technical field, technology will be even more important. Some academic subjects, it must be admitted, may just as easily be successfully taught with little help from technology. Some would even argue that technology just gets in the way for some students. The fact is, however, that the use of technology is itself a basic skill and must be incorporated into all subjects in some way. To do other than that would be to do both our community and our students a disservice.

## II. The Strategic Planning Process:

Planning at Los Angeles Harbor College is done largely from the bottom up. That is, planning is initiated with the various units of the college in response to the fiscal, enrollment, regulatory, and environmental factors facing the college. The units of the three planning clusters (Academic Affairs, Student Services, and Administrative Services) begin the process in the fall of the academic term. They identify and prioritize both core and supplementary activities for the unit and then pass them forward to the cluster. At the cluster level, the activities are again prioritized and forwarded to the College Planning Council for inclusion into the College Master Plan. The entire process must be completed by the end of the academic term for implementation during the following year.

The Technology Advisory Committee is a "clearance committee" as provided for in the College Planning Policy and Procedures Manual, and must be involved in the overall planning process accordingly. As each unit contemplates an activity involving technology procurement or implementation, it must have that activity reviewed by TAC to make sure that it conforms to the general planning parameters established for the college. Moreover, as the college continues to build new buildings under the bond projects, users' groups must include a review by TAC to again ensure compliance with the general directions set for the college.

In order to comply with the requirement that a unit must secure the review and approval of the Technology Advisory Committee before procuring or implementing any form of technology, the unit must submit its request on the appropriate form to the budget owner responsible for that unit. No purchase order or facilities request may be entered into the system without a copy of the approved form.

## III. Our Planning Assumptions

**Assumptions about Our Students**:

Data from the 2007 student survey at Los Angeles Harbor College:

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- More than 86% of our students often or sometimes use a computer at home to do school work.
- Eighty-two percent (82%) often or sometimes use the Internet for an assignment.
- Another 76% utilized the Internet to apply, register, check grades, and add or drop classes.
- Excerpts from the National Education Technology Plan (2004): 90 percent of children between ages 5 and 17 use computers
- 94 percent of online teens use the Internet for school-related research.
- The largest group of new users of the Internet from 2000-2002 were 2-5 year olds
- About 25 percent of all K–12 public schools now offer some form of e-learning or virtual school instruction. Within the next decade every state and most schools will be doing so.
- Today's students are very technology-savvy, feel strongly about the positive value of technology and rely upon technology as an essential and preferred component of every aspect of their lives.
- Students are not just using technology differently today but are approaching their lives and their daily activities differently because of the technology.
- As students get older, their use of technology becomes more sophisticated, but, comparatively, the younger students are on a fast track to becoming greater technology users and advocates.
- The access point for technology use, particularly for older students, is home-focused, not school-focused.

**Assumptions about Our Faculty**

Full-Time Faculty Demographics

The full-time faculty remains about 58% female and 42% male.

In age, our faculty are largely from the older demographic, with 45% in the 55-64 age range and 14% in the over 65 range. Thus, the preponderance of the faculty are in the category that Prensky would call "digital immigrants;"the younger faculty would most likely fall into the category of "digital natives," having grown into their adult, professional lives as "native" users of technology.

**Assumptions about Our Staff**

Full-Time Staff Demographics

The percentages here are only slightly different, with 52% of staff employees being male, and 48% being female.

In age, 59% of these employees are over 45 years of age. The bulk of these employees might also be thought of as "digital immigrants," while the younger employees might be thought of as "digital natives." The technology demands on this group, however, are continuing to grow apace; not only do these employees need to run office computers, but many are being required to learn to operate computer controllers on various systems (e.g., electronic lock systems, HVAC systems, etc.)

Our IT staff at Harbor College is very much under-resourced for the number of computers and the infrastructure that they have to maintain. At present there are only six personnel to maintain 1,400 computers, servers, and related network infrastructure.

**Assumptions Related to Our Culture**
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The culture of Los Angeles Harbor College has been one of reluctance to change. This, however, is little different than the culture at many other colleges and universities. The faculty and staff would distribute along a nearly perfect bell curve, with 15-20% of employees leading the way toward increasingly sophisticated use of technology. On the other end, there are 15-20% of employees who actively resist any move to include technology in their daily activities. Those in the middle are reluctant to move toward change, but will slowly adapt to a changing work world if shown how advances in technology will improve their work lives.

**Assumptions Related to Technology**
Competition in Virtual Space Summary
- Online classes and degrees are the fastest growing part of higher education (and soon, K-12 education)
- Our students see online programs as a viable choice in continuing their educations.
- There will be increasing pressure to move from "online classes" to a "virtual campus".

**Assumptions about Our Resources and the Budget**
College Capacity Needs Based on Area Demographics and Participation
Rates:

The 2006 Harbor College Accreditation Self-Study set an enrollment target of 12,000 students for the year 2010. The District Allocation Grant task force established this as the minimum enrollment "break even" level at which the college can maintain long-term financial self-sufficiency. The college has nearly achieved that goal in the fall of 2010, showing more than 11,000 students enrolled. The main factor accounting for this increase has been the recession and the significant downturn in employment, the decreased apportionment from the state, and the resulting limitation on numbers of sections. These constraints have been felt by all community colleges in the state, and as a result, we are carrying a large number of unfunded FTES.

A study of the demographics of our draw area, however, indicates these trends on enrollments will be reversed; and in the absence of policy initiatives to counteract this, enrollment declines can be expected in the years beyond 2010. This plan specifies initiatives needed to mitigate any downturn, recognizing the competing institutions in our service area, facing the same trends will take similar initiatives, backed by greater resources. The essential demographic obstacle to sustaining our target enrollment level, given other trends, is currently leveling-off of the high school student population in the service area which is projected to continue. The demographic possibility for mitigating this is in the projected growth in other area populations and at local levels of career demand that can be served by the new and expanded programs this plan specifies.

**IV.Strategic Goals and Timeline**

• One Year Goals:
1. Review campus technology standards
2. Establish procedures for acquisition, operation, and repair of technology
3. Develop a plan to promote the use of technology at Harbor College
4. Develop a plan to improve support from within the various departments
5. Design a campus technology Website
6. Work with Title V on pilot of ePortfolio

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• Two Year Goals:
  1. Implement a campus technology Website
  2. Identify academic technology needs for the campus
• Three Year Goals:
  1. Develop and implement a faculty/staff development program to support district student portfolio system
  2. Develop and implement a faculty/staff development program to support the new, robust student portal.

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