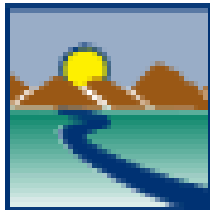

**West Hills Community College District:
Strategic Plan for Information Technology**

Version 1.0



April 1, 2008

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Table of Contents

Section	Page
1. Executive Summary	3
2. Introduction and Purpose	4
3. Understanding the West Hills Community College District <ul style="list-style-type: none">a. Profile of the Districtb. e-Learning Strategic Planc. District Strategic Pland. Current Enterprise Systems and Applicationse. Current Information Technology Servicesf. Current Information Technology Infrastructureg. Current Information Technology Organizational Structure and Staffing	6
4. Planning Assumptions	13
5. Presentation of Assessment Data <ul style="list-style-type: none">a. Interviews and Focus Group Discussionsb. Survey Results	14
6. Discussion of Assessment Data	25
7. Opportunities for Improvement <ul style="list-style-type: none">a. Administrative Information Technology Systems and Applicationsb. Information Technology Infrastructurec. Information Technology Servicesd. Information Technology Leadership and Managemente. Instructional Technology	27



West Hills Community College District:
Strategic Plan for Information Technology

1. Executive Summary

The West Hills Community College District recently completed a strategic planning process for information technology. The results of that process include substantial insight into the District's current circumstances and prospects for moving forward.

First, though, it should be pointed out that the District is already making considerable progress in many areas. For example, significant advances have been made with respect to distance learning, instructional technology, and online services for students and faculty.

Generally, the strategic planning process was based upon the following:

- Assessment (e.g., surveys, interviews, focus group discussions) in order to gain insight and create awareness
- Consideration of opportunities for improvement within key areas, including the following:
 - Administrative Information Technology Systems and Applications
 - Information Technology Infrastructure
 - Information Technology Services
 - Information Technology Leadership and Management
 - Instructional Technology

This planning document includes a consideration of specific opportunities for improvement. There is pragmatic information about potential action items within each of the above key areas.

The District's ability to pursue opportunities for improvement will be enhanced if there is an annual review of various efforts. The goal is to measure how well the institution is performing in numerous areas. Regular assessments of the District's circumstances will help reinforce everyone's understanding of expectations, commitments, accountabilities, priorities, etc.

The District deserves congratulations on its decision to complete a strategic planning process for information technology. The District took the initiative to ask questions about how to improve itself. As a result, it has substantial opportunities to enhance its vitality with respect to teaching, learning, service, operations, and sense of purpose.



2. Introduction and Purpose

Increasingly, information technology is a pervasive and integral part of our lives. It is becoming rather difficult to think of situations in which sophisticated systems do not have profound implications. Extraordinary technological advancements have been made in recent years in a number of areas, including the following:

- Education
- Communications
- Business and commerce
- Entertainment
- Health care
- Government

Within higher education, Google is used for research, iPods are commonplace, e-mail is a communications method of choice, and blogs are ordinary places for people to share their lives. Going forward, it is logical to assume that there will be increasingly widespread use of information technology.

How should the West Hills Community College District plan for the future? How will it address the following kinds of questions?

- What is the most appropriate way to leverage information technology to serve the mission of the District and its colleges?
- From an information technology standpoint, what must be done to support the District's *Strategic Plan for 2006 - 2010*?
- Are there particular opportunities for improving teaching, learning, and service?
- How can information technology help enable streamlined administrative services for students, faculty, alumni, staff, administrators, and others?
- Does the District have specific technology-related issues that require prompt remediation?
- Is there a particular roadmap that makes sense for the District? What practical steps should be taken?
- What obstacles and risks need to be anticipated and/or overcome?
- What are the most appropriate investments to be made with respect to information technology?

It is hard to overstate the importance of the above questions; a great deal is at stake. Information technology is widespread, foundational, increasingly complex, and costly. And, many systems and services are directly tied to the work of the District.

In addition to the practical aspects of information technology, there are important philosophical issues that need attention. For example, the advanced use of information technology is increasingly seen as an indicator of an institution's vitality and sense of progress.



Going further, there are democratic and egalitarian issues to consider. For example, the District must ensure that people have access to information technology that enhances their ability to teach, learn, interact, and serve others. We must enable everyone in the District to leverage information technology in highly beneficial ways.

Colleges and universities sometimes have rather dissimilar strategic plans for information technology. There can be substantial differences with respect to mission, priorities, resources, organizational structure, etc. Although this document recognizes best practices from other institutions, this strategic plan for information technology focuses on the unique circumstances of the West Hills Community College District.

Although the District has already realized substantial success in many areas, the basic premise of this strategic plan is that the District wants to enhance its ability to achieve certain critical outcomes. Examples of such important results can include the following:

- Improved teaching and learning
- Strong support for marketing/admissions programs
- Increased enrollment retention
- Increased productivity of students, faculty, and staff -- especially through the use of information technology
- Maximizing the District's return on the investments that are made in information technology
- Continued recruiting of talented faculty, staff, and administrators
- Streamlined administrative services (e.g., registration, financial aid)

Fundamentally, information technology helps enable certain results. It is meant to be supportive, not directive. It serves the needs of the District, not vice-versa.

This strategic plan for information technology describes numerous efforts that the institution can pursue over the next five years. The focus is on helping the District move forward in important ways.

This document is comprised of several sections. First, there is a profile of the District to help establish a context. Next, is a list of assumptions that were part of the planning process.

Third, are the results of various assessment efforts (e.g., focus group discussions, surveys that were completed by students, faculty, staff, and administrators). The assessment information is meant to provide insight into the District's existing circumstances, create awareness, and enable planning for future work.

And, finally, there is a consideration of the District's opportunities for improvement. Specific information is given on how the District might enhance its efforts.

The District deserves substantial commendation for its investment in a strategic planning process. Being thoughtful about the development of information technology will result in significant benefits to students, faculty, staff, administrators, and others.



3. Understanding the West Hills Community College District

The development of a strategic plan for information technology is at least partly rooted in an understanding of existing circumstances. Characterizing the District's current situation helps enable a sensible roadmap for the future.

a. Profile of the District

The West Hills Community College District began operations in 1932. Presently, its service area is a 3,464 square mile region that includes portions of five surrounding counties. Below, are some noteworthy statistics.

- Major Service Locations: West Hills Community College District Office, West Hills College Coalinga, West Hills College Lemoore, North District Center, Naval Air Station Lemoore.
- District Enrollment in 2006 – 2007: Headcount = 10,800; Budgeted FTES = 4,950.
- Total Degrees/Certificates Awarded in 2006 – 2007: 587.
- District budget for FY 2006 – 2007: \$32.9M.



b. e-Learning Strategic Plan

The District completed its *e-Learning Strategic Plan* in 2002. A considerable number of accomplishments resulted from the planning process and resulting initiatives. Clearly, much of the District's growth (e.g., enrollment gains, enhanced services to students/faculty/staff) can be attributed to the effective development of supportive information technology.

Specifically, the *e-Learning Strategic Plan* called upon the District to address the following goals. In turn, each goal involved a number of strategies, objectives, and tasks.

- Implementation of a fully functional web site.
- Creation of partnerships to help ensure that e-learning programs/services meet the needs of the community.
- Creation of a user-friendly call center for technical assistance.
- Provision of faculty development opportunities with respect to e-learning.
- Creation of goodwill among campuses.
- Development of a well-trained workforce within the District.
- Empowerment of students to make wise e-learning decisions.
- Provision of academic and technological support to enhance student learning.
- Implementation of appropriate management practices to support e-learning.
- Provision of necessary hardware, software, and infrastructure for students, faculty, staff, and others.
- Provision of fully accessible, interactive, online library services.

This plan assumes that the District has substantially fulfilled the above goals. Now, going forward, there is a desire to build upon the success. Increasingly, there are strong expectations for enhanced services that support the work of students, faculty, staff, and the community.



c. District Strategic Plan

Certainly, the use of information technology should support the overall mission of the District. Although ensuring the success of various systems, applications, services, etc., is worthwhile, the real goal is to leverage information technology to achieve specific strategic outcomes. Going forward, it is important to enable the District to address the goals within its *Strategic Plan for 2006 – 2010*, including the following:

- Achieve or exceed funded growth targets
- Focus marketing efforts on District-wide “stories”
- Annually increase community participation rates
- Annually improve transfer, completion, and graduation rates
- Become the preferred choice of students through ongoing and active recruitment



d. Current Enterprise Systems and Applications

Below, is a list of the District's primary enterprise systems and applications.

- Datatel Colleague Student
- Datatel Colleague Finance
- Datatel Colleague Human Resources
- Datatel Colleague Financial Aid
- MS Exchange (e-mail)
- IMail (e-mail)
- Blackboard
- SIRSI Library Automation
- Hershey Imaging
- SARS
- MS Office

Presently, the District intends to implement the R18 version of Datatel Colleague in December 2007. And, eventually, the system will be migrated to a MS SQL Server database (from UniData).

Additionally, the District has announced plans for the implementation of several enterprise applications in 2008, including the following:

- Datatel Colleague Payroll (as opposed to the use of the County's payroll processing system)
- Datatel Colleague ActiveCampus Portal
- Datatel Colleague ActiveAdmissions
- Datatel Colleague Advancement

And, finally, in addition to commercially available products, the District may consider Open Source applications when it implements solutions for particular purposes. Likewise, the District will consider the pros/cons of in-house solutions vs. outsourced services/applications.



Current Information Technology Services

The District's information technology services entail several major types of support, including the following:

- Infrastructure and maintenance, including the following:
 - Voice, video, and data networks
 - Central computing servers and other data center systems
 - Approval and purchase of all computers and peripheral hardware.
- Mission-critical business applications, including the following:
 - Datatel Colleague, Blackboard, etc.
 - e-mail
 - SIRSI
- Information management, including the following:
 - Data management
 - Data warehousing
 - Administration of web servers
- Web services
- Emergency Notification System
- Help Desk services, including assistance with Blackboard, e-mail, My West Hills, resetting passwords, etc.
- Learning Resources assistance, including help for faculty who use Blackboard
- End user technical services, including maintenance, repairs, installations, upgrades, etc.

Presently, the District's support services are managed and delivered in a matrixed manner. That is, a number of overlapping organizations/individuals assist users in a variety of ways. There is nothing wrong with such an arrangement, but it is always important for students, faculty, staff, et al., to know how to obtain help in a prompt, structured manner. Otherwise, there is a risk that ad hoc or uncoordinated services will result in duplicative efforts, conflicting activities, and/or breakdowns in assistance.

Generally, users take the path of least resistance when they need help. That is, they will opt for the services that can be delivered most promptly and effectively -- regardless of institution's policies, procedures, organizational structure, etc. It is important for the District to recognize the nature of user behavior and ensure a coordinated approach to service requests.



e. Current Information Technology Infrastructure

The District's primary data center includes Hewlett-Packard blade servers and a 5 TB storage area network (SAN). The platforms enable considerable consolidation and scalability. That is, the systems are within a limited number of frames, and there is room for growth. The data center also includes virtual and physical tape libraries for backup purposes.

The District has a CISCO AVID system that enables voice, video, and data services over the wide area network (WAN). Currently, the network supports nine separate sites with a T1 circuits (or multiple T1 circuits). All locations are interconnected by Cisco 3662 routers that include failover capabilities. A DS3 circuit provides connectivity between the Coalinga campus and the Lemoore campus.

Both the Coalinga and Lemoore campuses have DS3 connections to the Internet. The local area networks (LANs) provide 100 MB service to the desktop. And the switching equipment enables redundant gigabit fiber connections among buildings. A Cisco Enterprise PIX 525 is used as a firewall and VPN concentrator.

Presently, the District sees its current network infrastructure as nearing (or exceeding) the end of its useful life. Bond money is being sought for the replacement of switches, routers, and other components. Additionally, the District desires a VoIP solution across its network.

There are concerns about whether telecommunications carriers are providing sufficient bandwidth to the District. There are lobbying efforts within the State (e.g., "The Last Mile") to ensure appropriate service to rural communities like Coalinga, Lemoore, etc.

The District has standards for desktops, laptops, and productivity software, but the configurations are not fixed because of the dynamic nature of the information technology industry. All full-time faculty and many adjunct faculty are issued laptops.

In general, the District has a four-year replacement cycle for desktops and laptops. However, the funding for new hardware/software is budgeted by the colleges (not the District). The Information Technology Services Department generates fixed asset aging reports so that there is clear information about the systems that require replacement. The District's goal is to "ladder" the replacement cycle so that roughly 25% of the systems are replaced each year (over a four-year period).



f. Current Organizational Structure

In many ways, the District's organizational structure involves a matrix of functions, roles, staff, responsibilities, etc. Some efforts are handled by the District's Information Technology Services Department; other efforts are handled by other District departments (e.g., Learning Resources) or campus-based staff. Additionally, the District has advisory committees to help define many of its efforts.

In a number of cases (e.g., web services, technical support, video conferencing, instructional technology), the District works across several organizational boundaries to accomplish its objectives. Presently, it is not clear how some of the efforts are kept in alignment when cross-organizational responsibilities arise.

The Information Technology Services Department is a relatively flat organization, with all staff reporting to the Director. In turn, the Director reports to the Chancellor. The classified staff includes programmer analysts, technicians, data center personnel, et al., who are cross-trained to some extent. All of the employees visit the campuses on a regular basis to provide a variety of services.

A number of information technology operations occur outside the Information Technology Services Department. For example, the Learning Resources organization is responsible for video conferencing, distance learning, faculty/student use of Blackboard, certain Help Desk functions, etc.

In terms of committee structure, the District's efforts are guided by the WHCIST (West Hills Customer Information Support Team) and the TAT (Technology Advisory Team). The membership for both groups includes key stakeholders from the District and the colleges.

WHCIST's primary (but not exclusive) focus is on the enhanced use of enterprise technology (and especially Datatel Colleague). TAT's responsibilities center around the currency of the information technology that supports students and instructional programs.

There appears to be some uncertainty about the purposes and activities that are addressed by WHCIST and TAT. It is not clear, for example, that the groups are identifying opportunities, setting priorities, recommending resource allocations, reviewing the status of various projects, etc. The seeming uncertainties about WHCIST and TAT might have prompted Lemoore College's apparent efforts to create its own technology committee.



4. Planning Assumptions

A number of assumptions are associated with the District's planning process, including the following:

- Although it is certainly important to ensure the success of information technology in all respects, the District wants its strategic plan to have a District-level perspective. As appropriate, there may be planning opportunities at the campus level that are outside the scope of this document.
- The *e-Learning Strategic Plan* established clear goals and objectives with respect to instructional technology, and the District should continue its efforts to improve all aspects of teaching and learning. Now, though, the District desires a strategic plan that includes consideration of administrative systems and operations.
- Strategic planning is a continuous process. The District will make ongoing efforts to assess its efforts, identify opportunities for improvement, and move forward.
- In many respects, the District is large, diverse, and widespread. As such, it is not easy to ensure that the planning process touched all those who might have significant insight. So, again, it is important for the District to ensure ongoing efforts to assess its circumstances.
- The planning process uncovered a substantial number of potential projects and initiatives. Some of them (e.g., implementing Datatel Colleague Advancement, implementing an ActiveCampus portal) require very significant investments of time, money, staff, expertise, etc. So, there is an implicit assumption that the District either has all of the necessary resources (including that which is required for ongoing maintenance), or the District has a strategy for prioritizing its projects and initiatives -- so that it can live within its existing budget.
- The planning process assumed that new advisory committees will be created. And, one of the first responsibilities of such groups will be to review the District's opportunities for improvement -- with an eye toward funding, prioritization, timing, executive sponsorship, etc.



5. Presentation of Assessment Data

A considerable amount of qualitative and quantitative assessment data was collected with respect to the District's existing circumstances. The most significant information was obtained as a result of the following:

- Interviews and focus group discussions
- Surveys of students, faculty, staff, and administrators

a. Interviews and Focus Group Discussions

Several meetings were held with individuals and groups in order to gain insight into the District's perspectives, concerns, suggestions, issues, etc. Below, are representative comments that resulted from the discussions.

- The District has made considerable progress over the last few years. Information technology has been a key factor with respect to enrollment growth, service to students, teaching and learning, and administrative operations.
- The District should continue its innovative use of information technology to support teaching and learning.
- The Datatel Colleague system was implemented in a rather hurried manner. As a result, some functionality might not be used to its full potential. Likewise, there are training issues that need attention.
- A number of the District's business processes (e.g., registration, tuition/fee payment, purchasing) might need to be analyzed, re-engineered, and optimized.
- The District wants to eliminate (or at least minimize) a number of organizational and technological silos.
- It is important for the District to have a fully secure and reliable infrastructure (e.g., network, data center) that is available 24x7x365.
- There are opportunities for improvement with respect to infrastructure services (e.g., wireless access, telephony, video conferencing, hardware/software life cycle management, e-mail).
- There is a need for better integration among the District's enterprise systems and applications.
- As much as possible, all applications should be available in self-service mode -- and through a portal that enables "single sign-on."
- The District might benefit from the implementation of enhanced point solutions for imaging, workflow, data mining, web content management, ID cards, etc.
- From a management perspective, there are opportunities for improvement with respect to budgeting, governance, policies/procedures, communication, planning, etc.
- From a services perspective, there are opportunities for improvement with respect to training, Help Desk operations, etc.
- From an instructional technology perspective, there are opportunities for improvement with respect to online applications (e.g., Blackboard), faculty development, classroom equipment, library automation, etc.



-
- In relative terms, the District appears to be planning some rather aggressive development projects in 2008 (e.g., ActiveCampus portal, ActiveAdmissions, Datatel Colleague Payroll, Datatel Colleague Advancement). It is not universally clear, though, that the District has sufficient resources (e.g., financial, human, infrastructure) to implement such systems. Going further, it is not clear that the long-term total cost of ownership has been determined.
 - In terms of organizational structure, there is occasional uncertainty about who is responsible for various information technology functions. Going forward, it is important to ensure that information technology functions are allocated among groups/individuals in a relatively holistic, unfractured manner.



b. Survey Results

Students, faculty, staff, and administrators were asked to complete surveys in order to gain additional insight into the District's existing circumstances and potential opportunities for improvement. The surveys asked respondents to provide the following:

- Numerical ratings with respect to specific areas of performance
- Responses to open-ended questions about general performance

In terms of numerical ratings, participants were asked to respond to each survey item according to the following scheme:

NA = Not Applicable or No Opinion

1 = Strongly Disagree

2 = Disagree

3 = Mildly Disagree

4 = Neutral

5 = Mildly Agree

6 = Agree

7 = Strongly Agree

The tables on the following pages present the mean ratings from the two survey groups. The first survey group includes students. The second survey group includes faculty, staff, and administrators.



Student Survey Responses (N = 480)	
Item	Mean Rating
1. I consider myself to be a skilled computer user.	5.63
2. The College/District ensures that all computers are kept in good repair and have current software.	5.72
3. The College/District provides helpful technical assistance whenever I have a computer problem.	5.51
4. The College/District offers effective computer training so that I know how to use various systems/applications.	5.38
5. The College/District does a good job of equipping labs and classrooms with supportive information technology.	5.73
6. More online courses should be offered.	5.84
7. I prefer online courses to traditional classroom instruction.	4.84
8. I communicate with my instructor(s) via e-mail.	5.91
9. Considerable assistance is available to students who need help with instructional technology.	5.24
10. The College/District web site is easy to use and provides helpful information.	6.02
11. I use the College/District web site to register for classes, view grades, etc.	6.62
12. The College/District provides robust and reliable access to the Internet.	6.06
13. The College/District provides pervasive wireless network access.	5.19
14. I am pleased with the functionality of the e-mail system that the College/District makes available to students.	6.00
15. I am confident about the security of personal information on the College/District computer systems.	5.77
16. Aside from the College/District information technology systems, it is relatively easy to complete the business processes related to admissions, registration, payment of tuition, etc.	5.98
17. The College/District is ahead of other institutions with respect to the use of information technology to support students, faculty, staff, and administrators.	5.26
18. The College/District consistently finds ways to use information technology to enhance services to students, faculty, staff, and administrators.	5.58



Faculty/Staff/Administrator Survey Responses (N = 164)

Item	Mean Rating
1. I consider myself to be a skilled computer user.	5.85
2. The College/District ensures that all computers are kept in good repair and have current software.	5.97
3. The College/District provides helpful technical assistance whenever I have a computer problem.	6.27
4. The College/District offers effective computer training so that I know how to use various systems/applications.	4.79
5. The College/District does a good job of equipping labs and classrooms with supportive information technology.	5.93
6. More online courses should be offered.	4.59
7. I prefer online courses to traditional classroom instruction.	3.76
8. I communicate with students via e-mail.	5.92
9. Considerable assistance is available to students who need help with instructional technology.	5.26
10. The College/District web site is easy to use and provides helpful information.	5.52
11. I use the College/District web site to register for classes, view grades, etc.	5.92
12. The College/District provides robust and reliable access to the Internet.	6.27
13. The College/District provides pervasive wireless network access.	4.87
14. The College/District provides robust and reliable telephone services and voice mail.	6.08
15. I am confident about the security of personal information on the College/District computer systems.	5.64
16. I am pleased with the functionality of the College/District e-mail system.	6.15
17. I am pleased with the functionality of the Datatel Student System.	4.87
18. I am pleased with the functionality of the Datatel Finance System.	4.67



Faculty/Staff/Administrator Survey Responses (continued)

Item	Mean Rating
19. I am pleased with the functionality of the Datatel Human Resource Management System.	4.45
20. I can access a variety of online management information (e.g., budgets, enrollment) with relative ease.	5.02
21. Our business processes (e.g., registration, purchasing) are aligned with the Datatel Colleague software and enable streamlined processes.	4.72
22. I always know how to contact the IT department when I have a request.	6.15
23. The IT department has a clear sense of direction, and is responsive to institutional needs.	5.80
24. There are appropriate advisory groups in place to assist with information technology issues and planning.	4.85
25. Although the College/District does not have extraordinary financial resources, it is doing a good job of budgeting funds to support information technology needs.	5.53
26. The College is ahead of other institutions with respect to the use of information technology to support students, faculty, staff, and administrators.	5.41
27. The College consistently finds ways to use information technology to enhance services to students, faculty, staff, and administrators.	5.61



Most of the survey items can be tied to major areas of interest, including the following (in no particular order):

- Administrative Information Technology Systems and Applications (e.g., Datatel Colleague)
- Information Technology Infrastructure (e.g., networks, telephony)
- Information Technology Services (e.g., training, repairs)
- Information Technology Leadership and Management (e.g., vision, strategy, organizational structure, governance, operational excellence)
- Instructional Technology (e.g., classroom systems, online courses)

Basically, one purpose of the survey is to gauge the District's performance in such major areas. That is, we want a quantitative measure of how well important responsibilities are being handled.

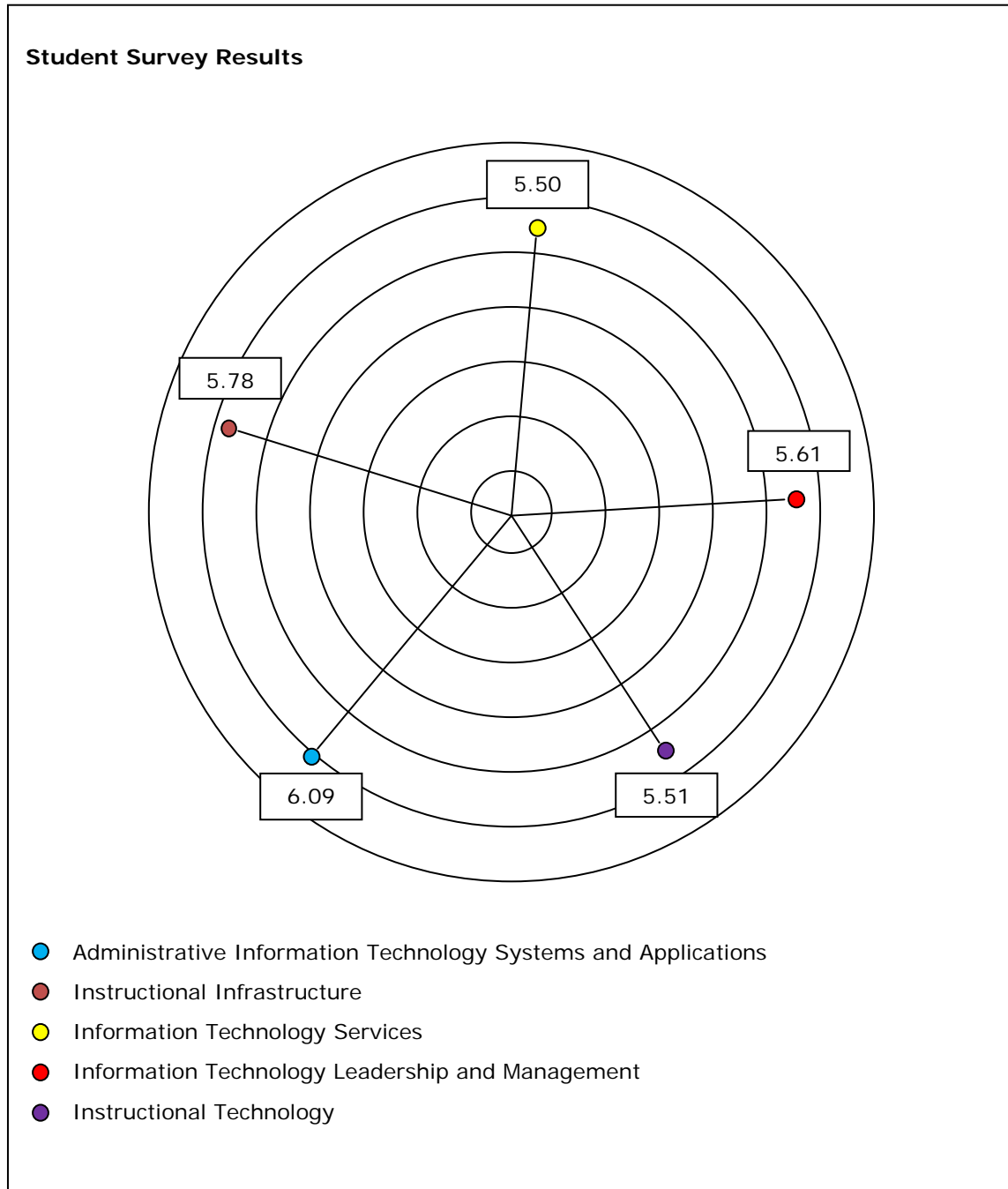
Other survey items, though, were not tied to a major area. For example, "I prefer online courses to traditional classroom instruction" is not evaluative. Instead, it reflects a desire to understand certain aspects of the District's circumstances.

The following table presents the mean ratings from the two survey groups with respect to the five major areas.

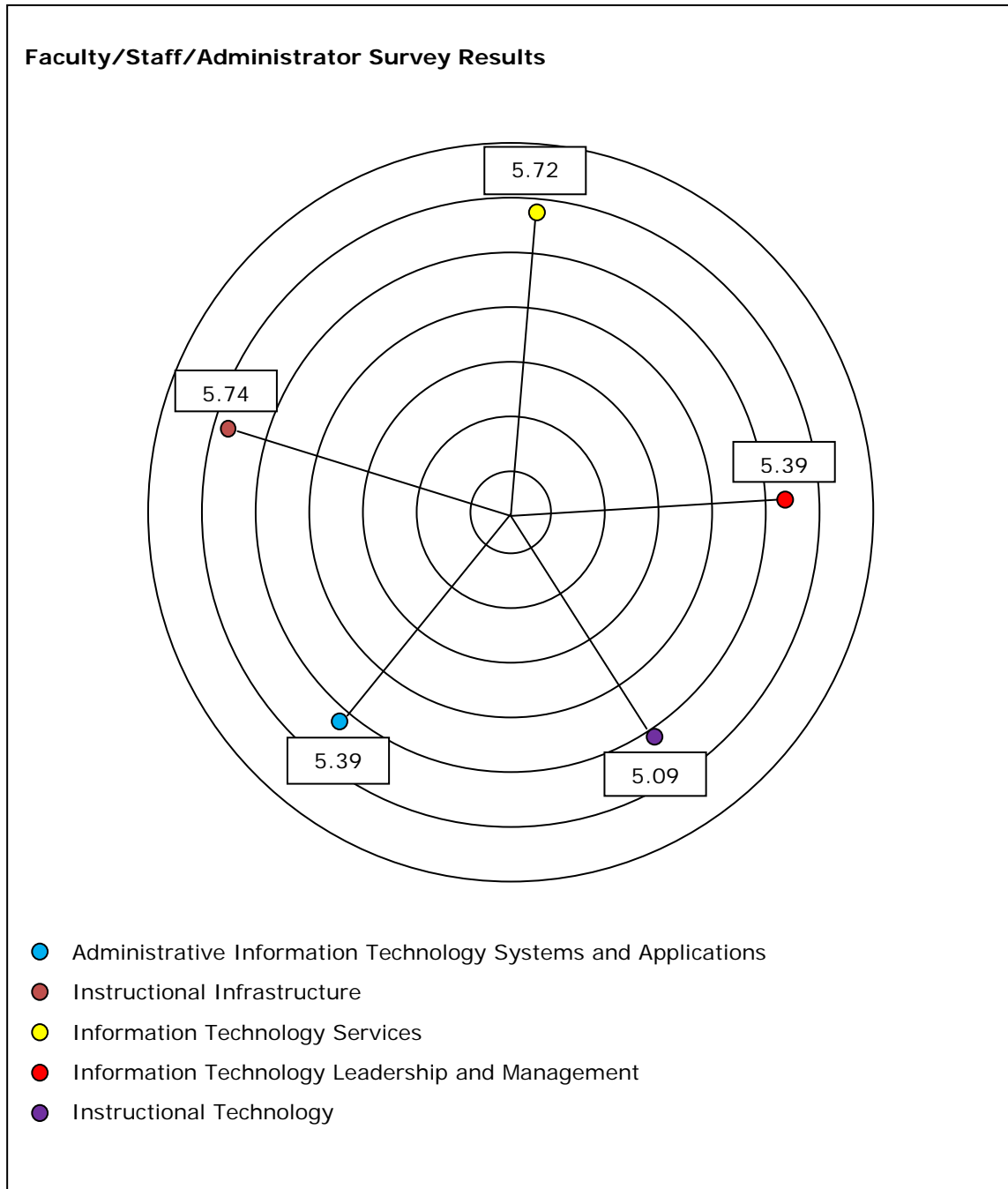
Survey Results for Major Areas		
Major Area	Student Survey Mean Rating	Faculty/Staff/Administrator Survey Mean Rating
Administrative Information Technology Systems and Applications	6.09	5.39
Information Technology Infrastructure	5.78	5.74
Information Technology Services	5.50	5.72
Information Technology Leadership and Management	5.61	5.39
Instructional Technology	5.51	5.09



Below, in graphical form, is a presentation of the mean ratings from the first survey group.



Below, in graphical form, is a presentation of the mean ratings from the second survey group.



In addition to the quantitative data that was obtained, both survey groups were asked to respond to two open-ended questions:

- With respect to information technology, what are the District's three most significant opportunities for improvement?
- What additional comments would you like to share about information technology systems and services?

Below, is a table with representative responses to the question about opportunities for improvement. It should be noted that some of the responses were given by *many* of the survey participants.

Question #1: With respect to information technology, what are District's three most significant opportunities for improvement?
Representative Student Responses
<ul style="list-style-type: none"> • More online classes are needed. • Using Blackboard is very difficult. • Wireless access should be available everywhere. • Up-to-date software is needed on all computers. • It is very difficult to navigate through various web sites. • The e-mail system is difficult to use. • None of the systems (e-mail, Blackboard) should have any downtime. • More technical assistance and training is needed. • Students need access to low-cost laptops.
Representative Faculty/Staff/Administrator Responses
<ul style="list-style-type: none"> • More technical assistance and training services are needed. • I would like a greater sense of IT customer service. • The Datatel Colleague system does not meet my needs. • Wireless access should be available everywhere. • It is difficult to use Blackboard. • We need better remote access to systems. • The e-mail system is problematic (e.g., spam, minimal storage capacity). • We need to streamline our operations; more tasks/processes should be automated. • Our web sites are clunky and not easy to navigate. • More online classes are needed. • Our computers need to be updated on an ongoing basis. • We need to improve our management practices (e.g., clarify the nature of District responsibilities vs. campus responsibilities).



Below, is a table with representative responses to the question about additional comments. It should be noted that some of the responses were given by *many* of the survey participants.

Question #2: What additional comments would you like to share about information technology systems and services?
Representative Student Responses
<ul style="list-style-type: none">• I think you guys are doing a great job.• I would like a student portal.• More online classes are needed. I work 50+ hours per week, and need access to such instruction.• I like online classes but do not want to lose any interaction with my instructors.• Instructors need to be well-versed in how to handle online instruction.• Some of the systems (e.g., e-mail, Blackboard) are difficult to use. In fact, Blackboard sometimes doesn't work at all when I try to take an online test.• Some of the self-service functions (e.g., viewing my class schedule) are rather clunky.• I am new at this and have never used a computer.• I am so proud to be here. Everyone is so helpful and nice.
Representative Faculty/Staff/Administrator Responses
<ul style="list-style-type: none">• I believe that our IT department does an excellent job.• The IT staff is responsive to any issues that arise, but there is always room for improvement.• There are a number of problems with Datatel Colleague functionality (e.g., pre-requisites, purchase requisitions).• Wireless access should be available everywhere.• Computers are "locked" down too tightly; users should be able to manage their systems to some extent.• Our web sites are too confusing and difficult to navigate.• Classrooms should be equipped with computers (so that faculty do not have to bring laptops with them).• More technical staff (e.g., programmers) are needed.• More training is needed.• It is very important for our information technology plan to ensure attention on Section 508 compliance.• More online classes are needed, but online classes are not for everyone.



6. Discussion of Assessment Data

There are a number of observations about the assessment data that deserve attention, including the following:

- In relative terms (compared with other colleges/universities), the mean ratings from the student survey are quite high. Many of the values are greater than 6.00.
- In relative terms (compared with other colleges/universities), the mean ratings from the faculty/staff/administrator survey are close to normal.
- Generally speaking, a mean rating below 5.00 indicates need for improvement. In the case of the faculty/staff/administrator survey, 9 out of 27 survey items had mean ratings below 5.00.
- Overall, when the mean ratings are grouped into major areas, the data shows that the District is performing reasonably well.
- In terms of specific survey items, the following mean ratings are noteworthy:

Students:

- "I prefer online courses to traditional classroom instruction." Mean rating = 4.84.
- "I use the College/District web site to register for classes, view grades, etc." Mean rating = 6.62.

Faculty/Staff/Administrators:

- "I prefer online courses to traditional classroom instruction." Mean rating = 3.76.
- "The College/District provides helpful technical assistance whenever I have a computer problem." Mean rating = 6.27.
- "I am pleased with the functionality of the Datatel Colleague Student System." Mean rating = 4.87.
- There is qualitative and quantitative data that suggests opportunities for improvement in several areas, including the following (in no particular order):
 - Providing pervasive wireless network access.
 - Enhancing the breadth and quality of online instruction.
 - Improving the delivery of Blackboard services.
 - Enhancing training programs for students, faculty, staff, and administrators, especially since some of them are new to the use of computers.
 - Resolving issues with respect to Datatel Colleague functionality.
 - Re-engineering business processes (e.g., tuition/fee payment, purchasing).
 - Resolving issues with respect to e-mail services.
 - Enhancing the integration of enterprise applications.
 - Implementing a portal, simplifying the navigation that is required on various web sites, and enabling single sign-on capabilities.
 - With respect to information technology, enhancing the District's approach to management, governance, budgeting, organizational structure, and staffing.
 - Improving the District's information technology infrastructure (e.g., telephony, networking, enterprise servers, disaster recovery, security, life cycle hardware/software replacement, 24x7x365 access).



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- It appears that students and faculty are in favor of more online instruction -- but only if it is handled in the proper manner. In particular, no one wants to sacrifice the interpersonal connection between student and instructor.
 - The District might benefit from the implementation of enhanced point solutions for imaging, workflow, data mining, web content management, ID cards, etc.
 - The District's unrestricted budget for FY 2006 – 2007 was approximately \$33M. It is not universally clear, though, how much of that was spent on information technology (e.g., hardware, software, salaries, maintenance). It is important for the District to implement management strategies that ensure an understanding of how funding is allocated. Additionally, such strategies should include prioritization efforts, cost/benefit analyses, etc.
 - The District should measure the percentage of its unrestricted budget that is spent on information technology and compare/contrast such a metric with peer institutions. On average, across the nation, the percentage ranges from 5% - 7%.
 - It seems that the four-year replacement cycle for hardware/software is managed at the campus or even departmental level. As a result, there is a risk of inconsistent handling of life cycle tasks. Some items might be replaced too soon; others might not be replaced until after the life expectancy is complete.
 - There is some uncertainty about the purpose and work of the District's committee structure (i.e., WHCIST, TAT).
 - The District seems to have very aggressive plans for the implementation of new enterprise systems in 2008, including ActiveCampus, ActiveAdmissions, Datatel Colleague Payroll, and Datatel Colleague Advancement. It is very, very important for the District to understand the implications of such development work and ensure that all efforts are manageable (e.g., realistic scope, affordability, return on investment).
 - There are questions about the costs/benefits associated with implementing in-house systems.



7. Opportunities for Improvement

In general, pursuing opportunities for improvement involves the alignment and optimization of several variables. *In particular, the District's strategic focus should be on Tools, People, Processes, and Organizational Context.*

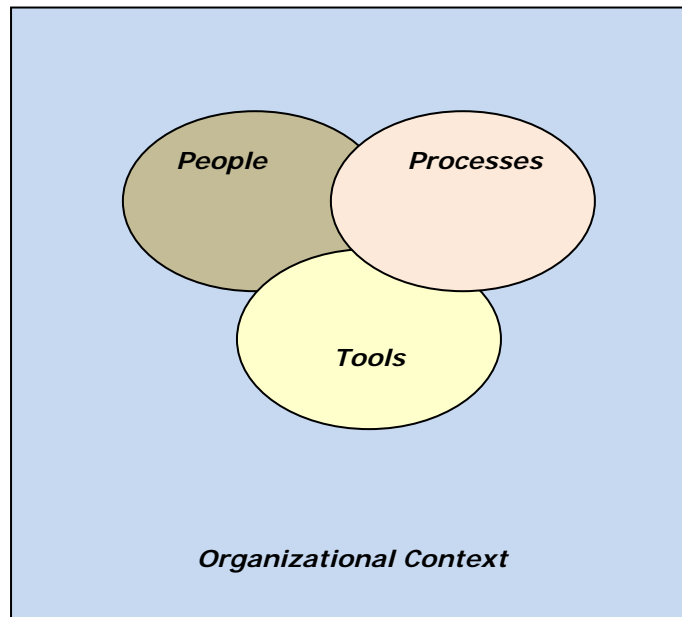
"Tools" refer to information technology systems/applications. So, for example, it is important for Datatel Colleague, Blackboard, and other systems to meet the functional and operational needs of students, faculty, staff, and administrators.

The "People" component includes a consideration of leadership, organizational structure, staffing, individual talents, accountabilities, etc. Obviously, tools are not very worthwhile unless there are people who can use them.

"Processes" refer to the tasks that comprise certain work routines. For example, the registration process, from beginning to end, includes many steps. The challenge is to ensure that all such steps reflect a streamlined effort. It is unrealistic to think that any information technology system can overcome a deficient business process. And, it is not advisable to compensate for difficulties by allocating more human resources (e.g., people).

"Organizational Context" is an important variable. It includes the institution's mission, culture, priorities, sense of community, style, etc. It serves as the framework for Tools, People, and Processes. Although an information technology system might work well at one institution, it might be a poor fit at another college/university because of different organizational contexts.

As depicted in the following diagram, the pursuit of opportunities for improvement is really a challenge of bringing a number of pieces together in the most complementary, synergistic fashion.



The District should consider a number of opportunities for improvement. And, ideally, each such effort will be tied to a number of principles, including the following:

- A focus on the ultimate outcomes that are desired (e.g., enhancement of teaching and learning, enrollment growth, operational excellence, substantial return on investment).
- Consistency among Tools, People, Processes, and Organizational Context.
- Specific deliverables, timelines, and accountabilities.
- Appropriate allocation of necessary resources -- financial or otherwise.
- Conspicuous executive sponsorship.
- Continuous assessment of all efforts to help ensure appropriate outcomes.



The next several pages list a number of potential opportunities for improvement for the District. Although the opportunities are grouped into five major areas, they are certainly not mutually exclusive. They should be seen as interrelated efforts.

Administrative Information Technology Systems and Applications

- Consider the implementation of advanced portal technology that enhances access to systems, improves integration among enterprise applications, simplifies navigation, etc. Additionally, such an interface should entail personalized channels and a single point of entry to all appropriate applications/services.
- Document perceived gaps in Datatel Colleague functionality. Consider alternative strategies for resolving such gaps, including the following:
 - User training.
 - Implementation of functionality that is not yet in production.
 - Functional consulting.
 - Business process analysis.
 - Implementation of best practices from other institutions.
 - System customization.
 - Implementation of ancillary software products.
- Analyze, and implement as appropriate, online education plans.
- Analyze, and implement as appropriate, Datatel Colleague functionality relating to online purchasing, fixed asset management, and budget development.
- Analyze, and implement as appropriate, human resource management tools for recruiting, applicant tracking, and time reporting.
- Resolve concerns about e-mail services, including the following:
 - Storage capacity.
 - Spam.
 - Remote access.
- Identify a limited number of business processes that require analysis and re-engineering. Pursue transformational opportunities that enable extraordinary improvements (and not just marginal gains) in services for students, faculty, staff, and administrators.
- Identify the need to implement a number of enhanced point solutions (e.g., imaging, data mining, workflow, web content management, bookstore applications, "One Card" system)
- Determine what enhancements, if any, are needed with respect to integrated library systems and applications.
- Assess the presence of any departmental "shadow systems" and determine whether the functionality should reside in an enterprise application.

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Administrative Information Technology Systems and Applications (continued)

- Create a written technical support plan for each system. Such plans should communicate clear messages about how the systems are maintained and who should be contacted in the event of a problem.
- Inventory all systems and ensure that each system is tied to a technology refresh (i.e., replacement) program.
- Conduct an assessment of the District's enterprise architecture. Document authoritative systems, interfaces, integration points, security/authentication schemes, databases, etc. Map the entire enterprise, resolve issues that become apparent, and ensure that future systems/applications can be supported by the architecture.
- Determine what must be done to ensure that the District's systems are compliant with Section 508 rules and regulations -- and that those with disabilities have appropriate access.
- Assess all of the implications (e.g., costs, benefits, required technical support, long-term maintenance, infrastructure issues, business processes) associated with the District's tentative development projects for 2008 (i.e., ActiveCampus, ActiveAdmissions, Datatel Colleague Payroll, Datatel Colleague Advancement).



Information Technology Infrastructure

- Implement pervasive wireless network access.
- Conduct a security audit that enables insight into potential threats. Such an audit should entail a comprehensive assessment of risk in all forms, including the following:
 - Facilities.
 - Data writes (e.g., encryption).
 - Database (e.g., ODBC connections).
 - Application (e.g., usernames, passwords).
 - Network (e.g., SSL transport).
 - Business processes.
 - System administration and operations.
 - Data archival.
 - Client data (e.g., laptops).
 - Data custodians.
 - Administrative policies.
 - Other.
- Ensure 24/7/365 access to all enterprise applications.
- Implement and rehearse disaster recovery plans.
- Implement and rehearse business continuity plans.
- On a regular basis, ensure that all necessary filters and other defenses are in place with respect to viruses, spam, etc.
- Assess the feasibility of enabling students, faculty, staff, and administrators greater access to low-cost personal hardware/software -- perhaps through the bookstore.
- Consider the need for enhanced emergency broadcast systems.
- Assess the need for enhanced, scalable video conferencing services.
- To the extent possible, ensure greater continuity and stability with respect to desktop/laptop standards.
- Consider centralizing the life cycle replacement program (and associated budgets) for desktops/laptops.



Information Technology Services

- Survey peer institutions and determine the ratio of technical support person to client devices (e.g., printers, desktops, laptops). Establish an appropriate ratio at the West Hills Community College District.
- Implement a structured curriculum of training programs/classes. Create a "College within a College" that offers both traditional and online instruction in Datatel Colleague, e-mail, word processing, etc. Such coursework is also an opportunity to provide documentation, share information about policies/procedures, etc.
- Ensure the development (and ongoing maintenance) of system-level documentation.
- Assist users with the development of functional documentation. Ensure that new employees are able to read such documentation and quickly assimilate their duties.
- Establish business processes that enable "First Day Services." That is, when a new employee arrives for his/her first day, there should be a computer, default username and password, e-mail account, system documentation, information about training classes, telephone, Help Desk contact information, etc.
- Likewise, establish business processes for "Last Day Services." That is, ensure that services are terminated (or perhaps continued) upon an employee's departure.
- On a regular basis, synthesize data on Help Desk calls, response times, satisfaction rating, etc. Establish benchmarks for service and report the results to the District's advisory committees.
- If necessary, assess the need for Help Desk management software.
- Ensure that any technical resources (support staff) who currently reside within user departments/organizations operate in conjunction with the District's Information Technology Services Department.
- Ensure the identification and cultivation of "power users" within various departments/organizations who can help ensure the success of their systems.
- Develop a "Succession Plan" that enables the District to continue operations in the event that a key employee is not available (e.g., illness, sudden retirement) -- especially for employees who are responsible for Datatel Colleague.
- Create a written technical support plan for various systems -- especially those that are used within classrooms, labs, and other instructional areas. Such plans should communicate clear messages about how systems are maintained and who should be contacted in the event of a problem.
- Inventory all systems and ensure that each system is tied to a technology refresh (i.e., replacement) program.
- Regularly update and articulate standards for user hardware/software.
- To the extent possible, centralize the procurement of hardware/software/supplies in order to manage standards, obtain volume pricing, and maintain a supply of parts/equipment so that repairs/replacements can be handled quickly.
- Consider hiring additional work study students to provide an expanded measure of user support.

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Information Technology Services (continued)

- Within its committee structure, resolve concerns about the extent to which desktop/laptop configurations are managed by users.
- Enhance the ability of users to obtain online support services (e.g., FAQs).



Information Technology Leadership and Management

- Consider an information technology committee structure that includes the following:
 - *Executive Committee*: Overall responsibility for the success of information technology within the District. Ordinarily, such a group includes key stakeholders and other individuals as appropriate. Usually, the Executive Committee is chaired by the Chancellor. And, frequently, the membership of the group is equivalent to a District's existing executive management organization.
 - *Instructional Technology Advisory Committee*: Responsible to the Executive Committee, with a focus on the use of information technology to improve teaching, learning, and research.
 - *Administrative Technology Advisory Committee*: Responsible to the Executive Committee, with a focus on the use of information technology to improve the use of systems (e.g., Datatel Colleague) that support the institution's business functions.
 - *Technical Advisory Committee*: Responsible to the Executive Committee, with a focus on the technical aspects of the institution's information technology (e.g., networking, hardware/software standards, telephony, support services).
- Ensure the identification of executive sponsors for important initiatives in order to resolve issues that might be problematic.
- Cultivate a project management function within the Information Technology Services Department. The goal (sometimes the work of a single, current employee) is to help drive the practical aspects of various efforts (e.g., project tasks, budgeting, resource management, training).
- Consider applying project management techniques to *all* information technology operations (not just major initiatives). That is, a substantial number of ordinary efforts (e.g., day-to-day user support, routine programming, network operations) can be driven with project management practices (e.g., timelines, specification of desired outcomes, monitoring of accountabilities). *Applying such techniques in an appropriate manner can provide the District with a clear and thoughtful structure for completing its work.* There will be increased certainty about results, how they are achieved, and what must be done to correct any difficulties.

In terms of caution, an appropriate *balance* must be developed with respect to project management. That is, some institutions have been too zealous in their approach; they've invested more in the management of projects than actual work activities.

- With respect to information technology, conduct regular assessments (at least annually) of the District's progress. Develop benchmarks and measure the District's performance against such standards. For example, metrics can be developed for customer service satisfaction, network uptime, etc.
- Address seeming uncertainty about how certain functions (e.g., web services) will be handled by different organizations/individuals. Assess the District's need for relatively holistic and seamless approaches to all operations.

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Information Technology Leadership and Management

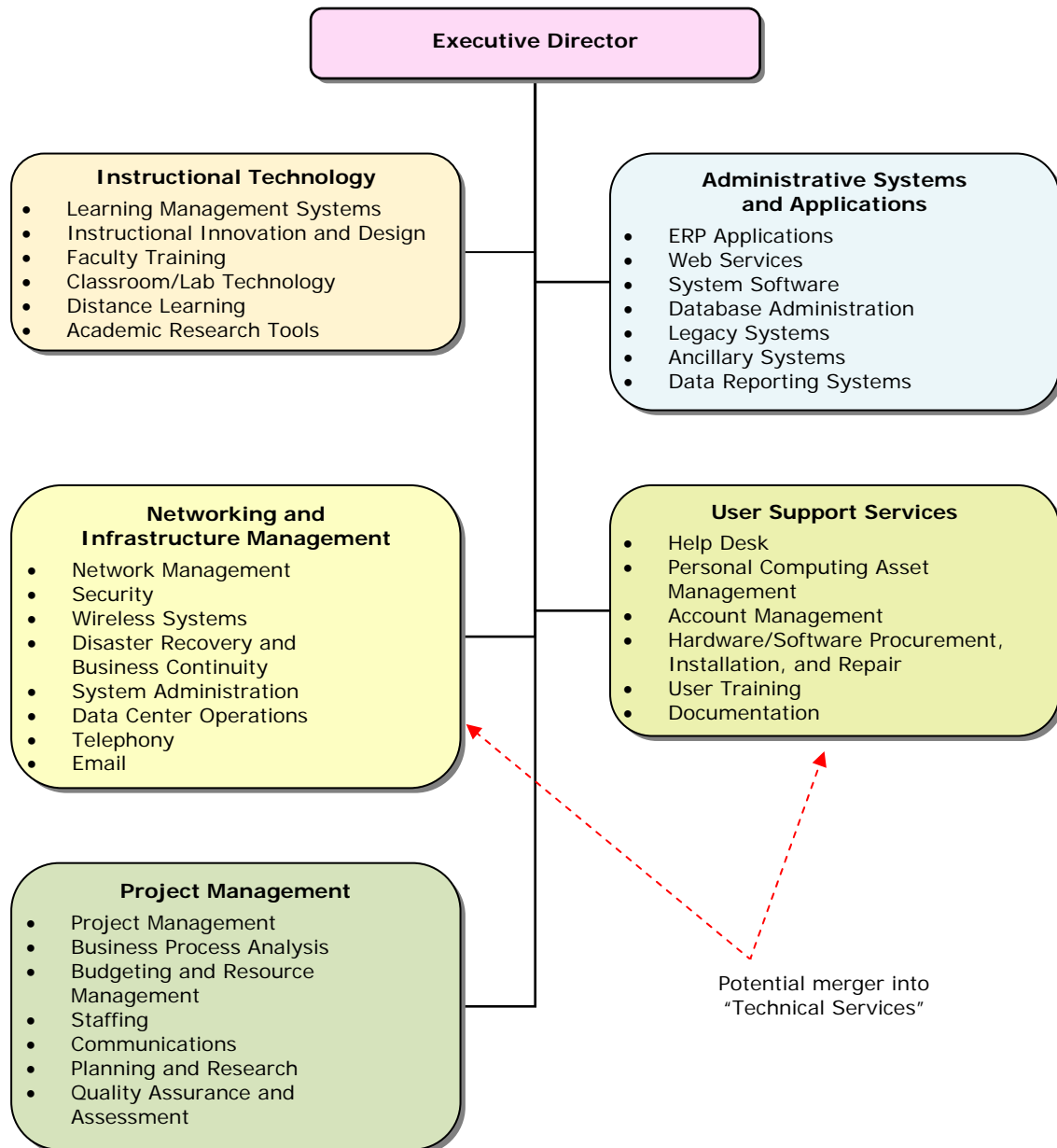
- Within its committee structure, develop relevant policies and procedures (e.g., Acceptable Use).
- Implementation a variety of communications techniques to help ensure District-wide insight into important topics and issues. Such communications can include newsletters, regular Board reports, publication of committee meeting agendas/minutes, etc.

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Information Technology Leadership and Management (continued)

- From a functional standpoint, consider an organizational structure that resembles the following diagram. As necessary, build links with campus-based programs and staff. It should be noted that the functional diagram is not indicative of staffing requirements. So, for example, some functions might be handled by the same person. And, some functions might be fulfilled by multiple people.



Instructional Technology

- Review the District's *e-Learning Strategic Plan* and ensure that all goals and objectives are met.
- Resolve concerns about the use of Blackboard; ensure that the system is reliable, properly configured, and totally functional.
- Seek opportunities to enhance the use of Blackboard. In particular, at a minimum, find ways of making all instructional materials (e.g., syllabi, reading lists, notes, assignments, reference documents) available online.
- Establish an ongoing mini-grant program that provides resources to faculty who want to pursue specific instructional technology initiatives. Such a program should focus on innovation in teaching and learning -- with specific deliverables. Additionally, the program should be available to faculty across all academic programs.
- Consider incorporating the outcomes of mini-grant programs into development programs for all faculty/staff/administrators. For example, the best practices that are learned can be shared at professional conferences. As another example, regular District-level symposia can be held to help others understand new instructional systems, techniques, and tools.
- Consider using the mini-grant program to pursue new opportunities in distance learning -- especially those efforts that ensure a strong connection between student and instructor.
- Establish an Instructional Technology Advisory Committee that helps drive the success of instructional technology.
- Create a conspicuous "Center for Instructional Technology" that helps extend the District's use of supportive information technology and innovative teaching/learning strategies.
- Seek widespread implementation of faculty web pages.
- Inventory all physical spaces (e.g., classrooms, libraries, offices, labs) to ensure appropriate access to instructional technology (e.g., wireless connectivity, printing, general access computers).
- Define a clear technical support plan that addresses policies, procedures, documentation, training, organizational structure, etc. Above all else, ensure a District-wide understanding of what must be supported, how it will be supported, and who will support it. Consider reorganizing the technical staff around the functions that must be fulfilled.
- Determine how funding for instructional technology should be handled across various groups/departments. Ensure a measure of support for those who have had insufficient resources in the past.
- Develop a life cycle funding plan for the replacement of hardware/software that becomes obsolete.
- Consider developing "Communities of Scholars" -- virtual forums for students, faculty, and others who want to discuss topics, issues, etc.

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Instructional Technology (continued)

- Determine what must be done to ensure that the District's systems are compliant with Section 508 rules and regulations -- and that those with disabilities have appropriate access.
- Assess the need for additional library automation services across the entire District.

