

## **Description of Programs and Services**

In the District Reorganization Plan 2005-2006, the IT Department was reorganized and the position of Associate Vice President of Information Technology (AVP-IT) was created. Under the reorganization plan, the AVP-IT is responsible for providing technology leadership to both Administrative and Instructional areas of the College. In this role one of the primary tasks assigned to the AVP-IT is to work collaboratively with faculty and staff in the development of a multi-year technology master plan for the college. Additional areas of focused attention for the AVP-IT are instructional and administrative technology planning for the Newark Center for Health, Science, and Technology (NCHST), and the new Student Services building.

As the Chief Technology Officer (CTO) for the college the AVP-IT is responsible for providing instructional technology leadership. Working with the College's newly formed Instructional Technology Advisory Committee (ITAC) and Administrative Technology Advisory Committee (ATAC) the AVP-IT develops technology strategies to meet the college's goals and objectives. The CTO collaboratively champions technologies, methodologies, and processes that support the Learning College Model and improves the effectiveness and efficiencies of the learning environment.

Added to the Information Technology Department as a result of the District Reorganization Plan, is the Innovation and Technology Center (ITC). The ITC serves faculty and students with instructional technology resources. For faculty this includes resources for online course planning, instructional design and development, pedagogy, and best practices for online teaching/learning. The ITC staff also provides support for faculty in the use of the College's Course Management System (CMS) WebCT. The ITC also provides student and course administration for the WebCT application. Working with the AVP-IT the ITC researches new technologies and methodologies for integrating technology into instruction.

Also under the direction of the AVP-IT the Information Technology Department of Ohlone College serves the faculty, staff, and students through a series of services that includes: administrative and instructional technology support; Information Technology infrastructure planning; Information Systems support for the Colleague ERP system, and 3<sup>rd</sup> party integrated computer systems (e.g., Timekeeper, Voyager, SARS, WebCT, etc.); telecommunication and networking support; instructional and classroom technology support; desktop technology support of multiple platforms such as PC, Mac, and Linux in computer labs and administrative offices; and wireless network and internet access across the campus.

## **Mission**

The proposed mission of the Information Technology department is to provide quality information technology (IT) services and solutions to faculty, staff, and students. By successfully aligning College and technology objectives through collaboration, the most strategic solutions that facilitate and improve efficiency and effectiveness of the teaching and learning processes of the campus communities will be provided.

**In support of this mission, we will**

- Work with the Ohlone College community to identify and deliver quality service and solutions that meet the information needs of the institution.
- Provide leadership and planning for the effective and informed use of technology and the thoughtful exploration of new technologies.
- Create, communicate, and implement rational funding models for information technology initiatives and services.
- Promote the professional development of IT staff.
- Constantly strive to exceed customer expectations through our professionalism, courtesy, consistency, and commitment to excellence.

**Our values are**

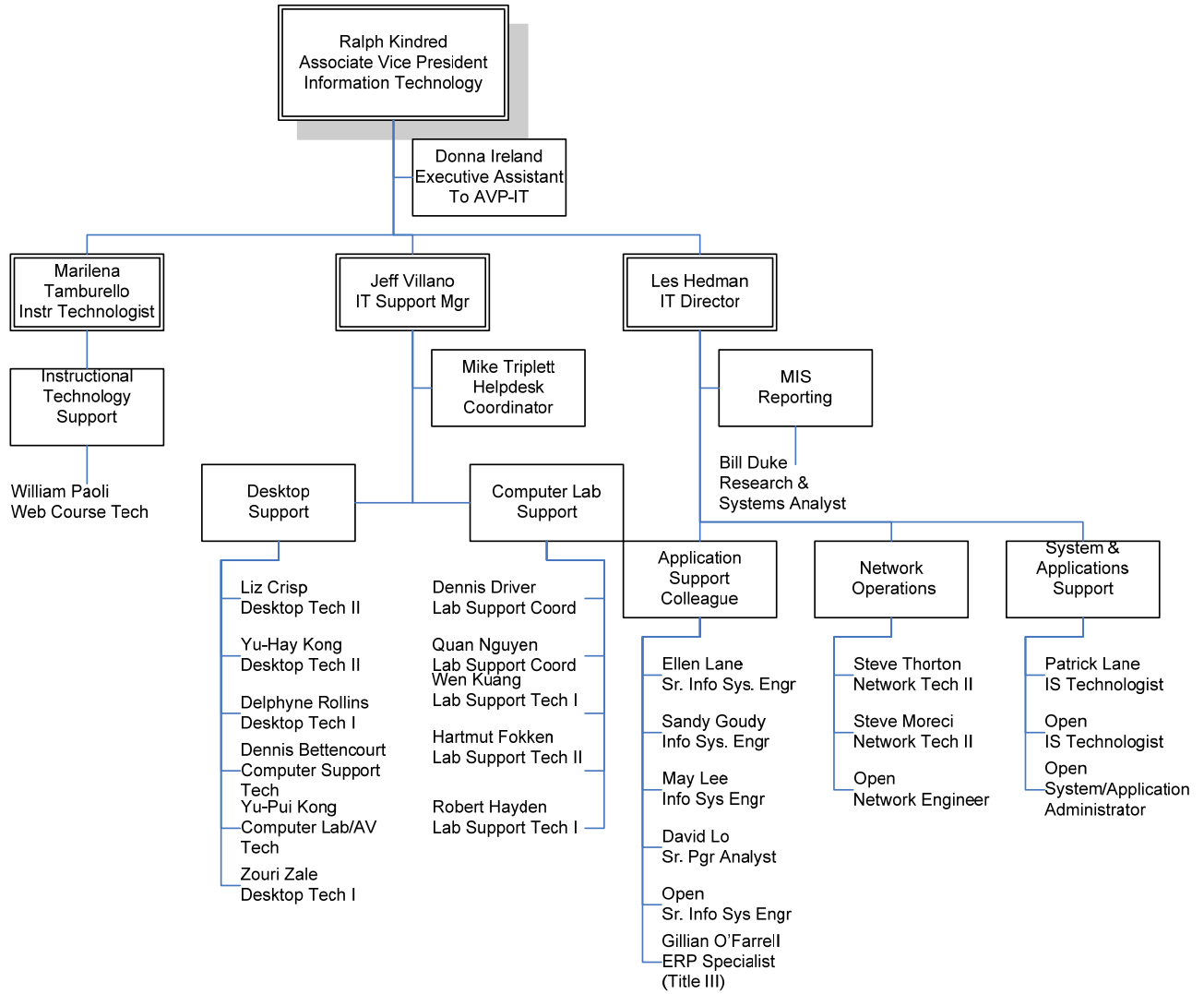
- We value our staff as key resources.
- We maintain a high degree of integrity and ethics.
- We foster open communication.
- We are accountable for our actions.
- We promote excellent service delivery.
- We encourage teamwork and mutual respect.
- We clearly define policies, procedures, and standards.
- We use resources effectively.

**Targeted Outcomes**

- Provide quality, cost effective technology services to all campus constituents.
- Provide and maintain effective business applications, which meet our customers' business needs.
- Provide and maintain a secure, reliable, and effective Information Technology Infrastructure.

Administrative Services Review  
Information Technology Department

**Information Technology Organization**



## **Scope of Programs and Services**

### **Technology Leadership:**

The AVP-IT is the chief strategist and visionary for Information Technology planning and implementation for Ohlone College. The Associate Vice President serves as the college's Chief Technology Officer (CTO) and has primary responsibility for instructional and information technology planning, awareness, policy, and practices. In this role the AVP-IT also oversees the daily operations of the campus information technology resources, setting direction for personnel, and communicating technology solutions in a collaborative and proactive style. The AVP-IT works extensively with faculty, students, and staff in developing plans, priorities, and policies on instructional and information technology. The AVP-IT also leads the College in instructional and administrative technology infrastructure planning for two new facilities: Newark Center for Health, Science and Technology and the Student Services building.

### **Technology Committees:**

In 1999 the College established the Technology Advisory Committee for Ohlone (TACO) to facilitate faculty and staff input into technology issues and decisions affecting the college. After several years of active participation TACO became inactive in 2004. A review of TACO's record reveals that the effectiveness of this committee process was challenged by the scope of its charter as a college-wide technology advisory group. For academic institutions technology issues usually fall within two distinct domains: instructional technology and administrative technology; the technical characteristic of each of these domains being of distinct complexity to require the focused attention of the affected groups.

Recognizing the value of an effective technology advisory process the College is implementing a new three-prong technology advisory structure. This new structure will include a Technology Strategic Plan Task Force, an Instructional Technology Advisory Committee (ITAC), and Administrative Technology Advisory Committee (ATAC). Each of the groups will be co-chaired by the AVP-IT and include faculty, staff, and students. While each group will maintain a separate charter, it is planned that they will have periodic joint meetings to coordinate recommendations for technology initiatives, budgets, and resources.

### **Title III:**

Ohlone College's Title III project includes several goals for strengthening institutional programs. Examples include:

- To develop across the curriculum teaching methods and technologies which hold the most promise for increasing success rates of under-prepared students.
- To improve student, faculty, and administrator use of ERP data for decision making.

Because several of the Title III project goals include College-wide technology initiatives, the Title III project will be one of the primary drivers of the IT Strategic Plan. In addition to the support provided by the AVP-IT the following IT resources are funded in part by the Title III project:

- Senior Information Systems Engineer, 100%
- ERP Specialist, 50% FTE

## **Instructional Technology:**

Innovation and Technology Center: Provides support to faculty and students for the Colleges' Distance Learning program using WebCT. This includes WebCT user administration, course design and integration. Additionally this unit provides support to faculty in integrating technology into the classroom. This support includes training and consulting on pedagogy, technology, and methodologies to support faculty and students.

### Scope of Support:

- Online course instructional design
- Faculty online pedagogy training
- Faculty technology workshops
- Chair the Distance Education Committee
- WebCT/Datatel administration
- Course management - Creating Course accounts
- Student management - Adds and Drops
- Integrating technology into instruction
- Help desk for Faculty and Students
- Facilitate faculty resource center

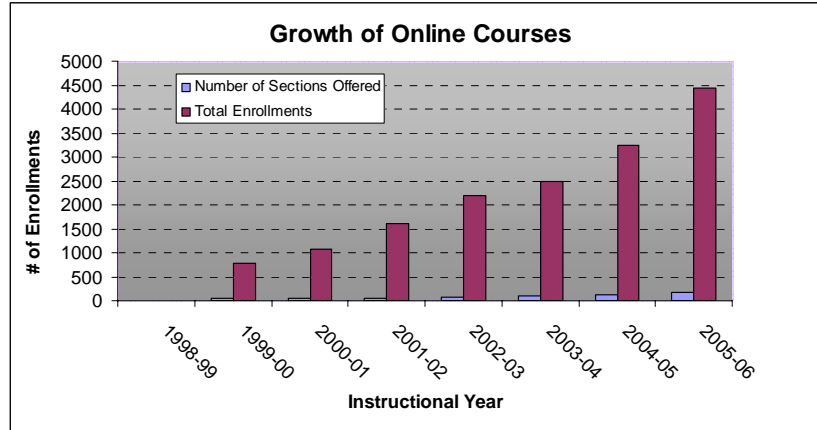
### Staffing:

- (1) Instructional Designer, 100 %
- (1) Web Course Technician, 100 %

The number of faculty using instructional technologies and the technology mediated courses has steadily increased over past several years. This is in direct response to the dramatic increase in student interest and demand for online courses. Additionally the College's Title III Learning College Initiative includes the development and implementation of new instructional technologies and methodologies (e.g. e-Portfolio, collaboration tools, iTunesU, experimental classrooms, etc). While the number and scope of ITC services has expanded to meet the growing demands of a technologically innovative college, the numbers of ITC staff and resources deployed have remained constant. To continue to meet the growing needs of Ohlone's instructional technology environment and the requirements of the Learning College Model initiative, additional ITC staff needs to be hired. Additionally the assigned duties and responsibilities of the existing ITC staff members have changed significantly since the ITC was

implemented. A job audit needs to be conducted with ITC staff job re-classification as a likely result.

Additionally since the ITC is a new unit of the Information Technology Department, the strategy plan for Distance Education/Instructional Technology needs to be updated and revised to reflect its new placement in the organization and the College's goals and objectives for integrating technology into instruction.



**Information Technology Department:**

The Information Technology Department provides a wide range of technical and user support services to Ohlone's staff, faculty, and students. The department is organized into five units: Applications Systems Support, System Administration Support, Network Operations Support, Desktop and Computer Lab Support, and newly added under the District Reorganization Plan, Instructional Technology Support and MIS Reporting. Essentially these service areas provide support for the College ERP applications, Federal and State reporting, voice and data wide-area network, 1,800 computer workstations, administrative applications, and the WebCT online course management system. Additionally the AVP-IT is charged with infrastructure planning for the implementation and operation of administrative and instructional technologies to support the Fremont and Newark campuses. What follows is a brief description of the scope of each of the IT sub-units:

Applications Systems Support: This unit is the software development arm of the Information Technology Department. As such, the group provides application development and system maintenance support services, as well as project management of the Datatel Colleague ERP application to the College's operational units:

Instruction and Student Services:

- Admissions and Records
- Financial Aid
- Counseling
- Instructional Services
- Scheduling

Administrative Services Review  
Information Technology Department

Business Services:

- Finance
- Purchasing
- Human Resources
- Facilities
- Information Technology (IT)

As a result of the reorganization this group also provides support for MIS reporting for required Federal and State reporting requirements:

- State MIS Reports Requirements
- IPEDS
- VTEA
- Title III
- NCS
- Accountability Reporting for Community Colleges (ARCC) new in 2006
- Curriculum Reporting for Community Colleges (CRCC) new in 2006
- Institutional Research and Assessment Team (IRAT)

Scope of Support:

- 320+ named administrative information systems users
- 85% of student population using WebAdvisor online student registration system
- Focus is on administrative systems support (i.e., Finance, HR, Purchasing, Facilities)

Services Provided:

- Produce management reports from administrative systems
- Ensure data reporting to outside agencies and the State Chancellor's Office
- Automate departmental processes
- Modify administrative databases to collect new or different data
- Assist Operations with client security and access changes as needed
- Technical response on questions of process

Staffing:

- (1) Senior Information System Engineer, 100 %
- (2) Information System Engineer, 100 %
- (1) programmer analyst, 100%,

Administrative Services Review  
Information Technology Department

- (1) ERP Specialist, (Title III Funded), 50%
- (1) Research and Systems Analyst, 100%
- Occasional contract programming, from part to full-time as needed for systems conversions and implementations.

Systems Administration Support: Maintains and supports the computing operations center that houses the College enterprise servers and applications; provides application and user administration support (e.g., application integration, account creation); support administrative and instructional applications (e.g., email, security, wireless, and Web Hosts); install and maintains operating systems, allocates of storage space, manages and tunes systems to assure an efficient and reliable operating environment; provides nightly backup and recovery services to assure that the operating environment can be restored in the event of a disaster. Customers supported include:

Instruction and Student Services:

- Admissions and Records
- Financial Aid
- Counseling
- Instructional Services
- Scheduling

Business Services:

- Finance
- Purchasing
- Human Resources
- Facilities
- Information Technology (IT)

Services Provided:

- Schedule batch jobs with departmental authorities
- Apply authorized changes in security and access to systems
- Maintain, upgrade, and backup all enterprise application servers
- Monitor network servers and report problems to network administration
- Maintain offsite backup archives
- Supervise contracted maintenance
- Keep ERP (Datatel) systems up to date with upgrades and new releases of software.
- Assist or supplement Technology Training area on administrative information systems.

Administrative Services Review  
Information Technology Department

Staffing:

- (2) Information Systems Technologist, 100%; 1 Open
- (1) Systems and Application Administrator, 100%; Open

Hardware and Application Portfolio:

Operating System	Servers	Application Types	Apps Total
Sun	20	ERP (Colleague), SunRay Term Servers, Net Backup, LDAP, Voyager Endeavor	30+
Windows (Students)	21	SunRay Term Servers, Timekeeper, Curriculum file server, Go-Print, Kurzweil, Domain server, Antivirus, Firewall Management, etc.	10+
Windows (Admin)	30	WebAdvisor, Camera Surveillance, Antivirus, Trapeze, Network Admins, Voicemail, SARS, Health Center, Ticket Office, App Development, Web Development, Domain Servers, etc.	28+
Linux	25	Medi-Soft, Network Admin, Help Desk, File Servers, Web Development and Services, FTP, etc.	10+
Total	96		78+

Network Operation Support: Provides infrastructure and support for the College's data network, serving all desktop clients and host servers for the District, offices, classrooms, and labs; support for College's telecommunications systems including telephone lines, units, PBX switch, and voicemail, plus special-purpose lines dedicated to video-conferencing. This includes planning, installing, and maintaining all network wiring and equipment to ensure the integrity of the voice communications and data network requirements of the District's wide-area-network. Customers and infrastructure supported include:

Instruction and Student Services:

- Admissions and Records
- Financial Aid
- Counseling
- Instructional Services
- Scheduling

Business Services:

- Finance
- Purchasing
- Human Resources
- Facilities

Administrative Services Review  
Information Technology Department

- Information Technology (IT)

Infrastructure:

- 10 Mb Ethernet network using TCP/IP. Fiber backbone. 1300+ wired sites.
- T1 network link to Newark Center. Double T1s to ISPs. 5 @Home connections

Services Provided:

Telecommunications Services

- Administration of the voice network and the copper backbone
- Maintain and support the main telephone switch and equipment
- Provide telephone services college wide
- 500+ College employees' voicemail boxes
- Construction and new cabling project management
- Train employees in the use of telephone equipment
- Maintain dedicated lines for Internet, video-conferencing, college network links
- Stock, repair, and replace phone units and parts
- Minor wiring installation and routing
- Departments with special telephone support needs:
  - Radio station for antenna; TV station for marquees
  - Security for emergency communication
  - Library for video-conferencing
  - Instructional Classroom Telephones
- Newark Center for remote telephone systems
- TTY users

Data Network Services

- Network architecture and design
- Network infrastructure maintenance and support
- Network servers and services administration.
- Network traffic management and addressing
- Construction and cabling project management
- Desktop and host-network connections
- Network documentation and maps
- District-wide networking services and connections based on TCP/IP
- Network printing configuration and support
- Network server maintenance and upgrades
- Network server security and usage monitoring
- Emergency support in classrooms and labs
- Wireless network planning, implementation, and maintenance

Administrative Services Review  
Information Technology Department

Staffing:

- (2) Data/Voice Network Technicians, 100%;
- (1) Network Engineer, 100% (Open)

Desktop/Computer Lab Support: Provide technical support for personal computing technology throughout the College; set-up new and reassigning computer workstations; deliver and install computer systems; install and maintain functionality of software packages such as web browsers, word processors, spreadsheets, presentation, calendar applications, databases, anti-virus, e-mail clients, instructional/academic applications for administrative offices, classrooms and instructional labs; manage the computer assets of the College; manage warranty repair process; negotiate and manage individual and site licenses for supported software; update software packages with new releases as required. The support includes network connectivity and communication, software installation, assistance, troubleshooting, system recoveries, and printing. This unit also operates a College-wide Help Desk to facilitate technology-related problem determination and resolution for all supported systems.

Customers Supported:

Instruction and Student Services:

- Admissions and Records
- Financial Aid
- Counseling
- Instructional Services
- Scheduling

Business Services:

- Finance
- Purchasing
- Human Resources
- Facilities
- Information Technology (IT)

Scope of Support

- 500+ College faculty and staff; 1800+ desktop and mobile computers for faculty, staff, and instructional areas (i.e., Hyman Hall, Library, and instructional labs):
  - # of Client Computer Systems – ~1,800
  - # of Thin-Clients – 250
  - # of Printers Supported - 220

Administrative Services Review  
Information Technology Department

- # of Academic Computer Labs – 45
- # of Academic Programs Supported - 28
- # of Administrative Services Supported – 17
- # of Student Services Supported - 17

Services Provided:

- Ensures new system functionality
- Coordinates problem resolutions with vendors
- Ensures and tracks software licensing
- Maintains hardware and software inventories
- Assists in establishing hardware standards for purchasing and support
- Assists in establishing software standards for purchasing and support
- Installs and configures licensed and supported software and upgrades
- Installs and configures printers and peripheral equipment
- Maintains virus protection
- Performs minor cabling and connection
- Provides hardware support and repair service
- Troubleshoots systems; communicates with vendors for problem resolution
- Supports standard applications for e-mail, Internet, Web, office productivity such as word processing, spreadsheet, presentation, and database, terminal emulation, virus protection, server clients
- Manages a College-wide Help Desk for problem determination and resolution for all supported systems
- Evaluate, specify, and recommend software and hardware products and services

Staffing:

- (1) IT Support Manager, 100%
- (1) Help Desk Coordinator, 100%
- (6) Desktop Support, 100%
- (2) Computer Lab Coordinators, 100%
- (2) Computer Lab Technicians, 100%

**Information Technology Department Performance Measurement:**

External benchmarks: are established by the Board of Governors of the California Community Colleges' Technology II Strategic Plan 2000-2005. Benchmarks indicated in the "Student, Faculty, and Managerial and Classified Staff Baseline Standards with TCO Categories" section establish baseline standards for training, funding levels, support services, technical infrastructure, equipment replacement schedules, assistive technologies, networking and Internet services, and technical staffing levels. The intent of the TTIP/TCO model for community colleges was to create a program with the intent to fund colleges to the baseline minimums using the TCO categories.

The total cost of the ownership model establishes a baseline standard for technology staffing levels. However it is important to note that an important premise behind these standards is a PC Life-cycle model. PC life cycles reflect the entire cost of owning a desktop or laptop computer, from decisions and negotiations regarding purchases through management (including maintenance) of the resources and disposal of obsolete equipment. The life cycle quantifies costs beyond the purchase price of hardware and software. The determination of how long a PC is useful and cost effective to an organization must be made with a complete understanding of overall processes and institutional needs

While the chart below demonstrates a low to moderately high staff-to-PC' ratio, what the chart doesn't reflect is the average age of our installed personal computer base. On average the PCs installed throughout the Ohlone campus are 5-6 years old. Industry standards recommend PC life cycles of 3-4 years<sup>1</sup>. Beyond this period of time personal computer equipment start to exhibit higher failure rates thereby increasing the workload of IT support staff.

<b>Comparison of Recommended to Actual Staff-to-Computer Ratios</b>				
<b>Service Type</b>	<b>Recommended by Gartner Group</b>	<b>2003- 2004</b>	<b>2004-2006</b>	<b>2005-2006</b>
		<b>1,200 PCs</b>	<b>1,500 PCs</b>	<b>1,800 PCs</b>
Level 1 Support (Desktop and Computer Lab Support)	<b>1 staff / 150 PCs</b>	1 staff / 171 PCs	1 staff / 214 PCs	1 staff / 257 PCs
Technical Management	<b>1 manager / 500 PCs</b>	1 manager / 1200 PCs	1 manager / 1500 PCs	1 manager / 1800 PCs

Internal benchmarks: are established through service level agreements (SLAs) and performance metrics that measure the efficiency and effectiveness of IT operations. The essential goal of these internal benchmarks is to measure the IT department's contribution to the operations and processes of the college. Efficiency means delivering more for less. IT cost efficiency improvements make a direct contribution to the bottom line of the college. Effectiveness is achieved by making a direct contribution to college process improvement. This involves improving information flow, reducing time to market and streamlining transaction processing.

Indicators of effective IT management are understanding the cost of IT, managing IT services efficiently and being able to assess the impact of business and technology changes quickly.

---

<sup>1</sup> Margevicius, Mark, "Desktop PC Life: Four Years for the Mainstream," Research Note T-13-8045, Gartner Group, August 21, 2001.  
October 1, 2006

Building on the premise that IT contribution can be expressed in terms of efficiency and effectiveness, the following metrics (Figures 7 and 8) are common measurement techniques used to identify each.

**Figure 7 — “Standard” Service and Support Performance Measurements**

<b>Service</b>	<b>Acceptable</b>	<b>Marginal</b>	<b>Unsatisfactory</b>
<b>End-User Services</b>			
Installation functional	>98%	95%-98%	<90%
Failures per desktop device	0-1	2-3	3-4
Mean time to repair problem	4 hours	8 hours	3 days
Average response time	2 hours	4 hours	1 day
<b>Support</b>			
Average call answer time	20 seconds	30 seconds	40 seconds
Availability of online services	99%	97%	95%
Cost per incident	\$20	\$25	\$30

Source: META Group

While these measurement techniques don’t currently exist at Ohlone College, the management maxim “what doesn’t get measured, doesn’t get managed” argues that the implementation of these types of measurement techniques should be pursued. Without the ability to quantitatively assess IT operations, the College is unable to answer the questions of IT’s contribution to improving the effectiveness and efficiency of the overall organization.

Because IT impact is experienced across the breadth of the Ohlone College environment, performance measures used to assess IT operational performance should be developed collaboratively with a College-wide constituency. The Associate Vice President of Information Technology recommends that the newly formed technology committees<sup>2</sup> ITAC and ATAC are the appropriate forums to develop performance measures that reflect the strategic priorities of the college.

<sup>2</sup> Instructional Technology Advisory Committee (ITAC) and Administrative Advisory Committee (ATAC) October 1, 2006

**Figure 8 — “Standard” Service and Support QoS Measurements**

Service	Performance Ranges		
	Acceptable	Marginal	Unsatisfactory
<b>End-User Services</b>			
Procurement: Order placement	24 hours	36 hours	48 hours
Procurement: Delivery — std	3 days	5 days	7 days
Procurement: Delivery — custom config.	5 days	8 days	10 days
Hardware: On-site	4 hours	8 hours	8 hours
Hardware: Off-site/replace	2 days	3 days	5 days
MACs: On-site	1 day	2 days	3 days
MACs: Complete	3 days	5 days	7 days
<b>Support</b>			
Average queue time	30 seconds	45 seconds	60 seconds
Abandonment	3%	4%	5%
Average first-contact resolution	85%	80%	70%
Average problem closure time (by priority)	2 hours	5 hours	8 hours
Reopened problems	7%	10%	15%

Source: META Group

Additionally Service Level Agreements (SLAs) are another type of a performance measurement technique that is developed in collaboration with specific campus constituents. Because each user or group has their own expectations of the level of service they should receive, these agreements attempt to establish common expectations and measurements for levels of service and areas of responsibility. SLAs also define common terms, levels of priority for response and resolution of service requests, supported hardware and software, interdependencies, hours of staff support, and responsibilities of users.

Prior Service Level Agreements at Ohlone College defined a ticket prioritization system as follows:

**High Priority** – The problem prevents an employee from working  
*Response – Immediate response from Help Desk*

**Normal Priority** - The problem interferes with normal work but does not prevent an employee from working,

Administrative Services Review  
Information Technology Department

*Response - 1 – 3 Business Days*  
Low Priority - Requests for services and problems that do not interfere with normal work.  
*Response - 1 – 5 Business Days*

Our current measurements for this prioritization system are as follows:

Response time to Help Desk tickets will fall within these guidelines:

<u>Urgent Priority</u>	Immediate response
<u>Normal Priority</u>	Response within 3 Business Days
<u>Low Priority</u>	Response within 5 Business Days

Target Resolution time to Help Desk tickets will fall with these guidelines from time of response:

<u>Urgent Priority</u>	Same Day as response
<u>Normal Priority</u>	Solution within 3 days of response (maximum of 6 days)
<u>Low Priority</u>	Solution within 5 days of response (maximum of 10 days)

To measure our success at meeting the goals set in the service level agreements, we have analyzed the data collected in the Information Services web-based, Help Desk ticketing system. This ticketing system provides users with a mechanism to submit and track requests for service. This system also provides the Information Services Department with a tool to organize and prioritize, track, and update work assignments.

The following table provides a three-year summary of the tickets assigned to the five units within the IT department. Ideally the analysis of submitted tickets should include a breakdown by: unit assigned, person assigned, problem type, and other incident specific information. Unfortunately the ticketing system currently in use doesn't support detailed trouble ticket reporting. Currently only macro-level, generalized information is collected that track number of calls received, the initial assignee, and resolution time. Additionally the current version of the help desk software does not track ticket information in a format that translates easily into our service-level agreement goals.

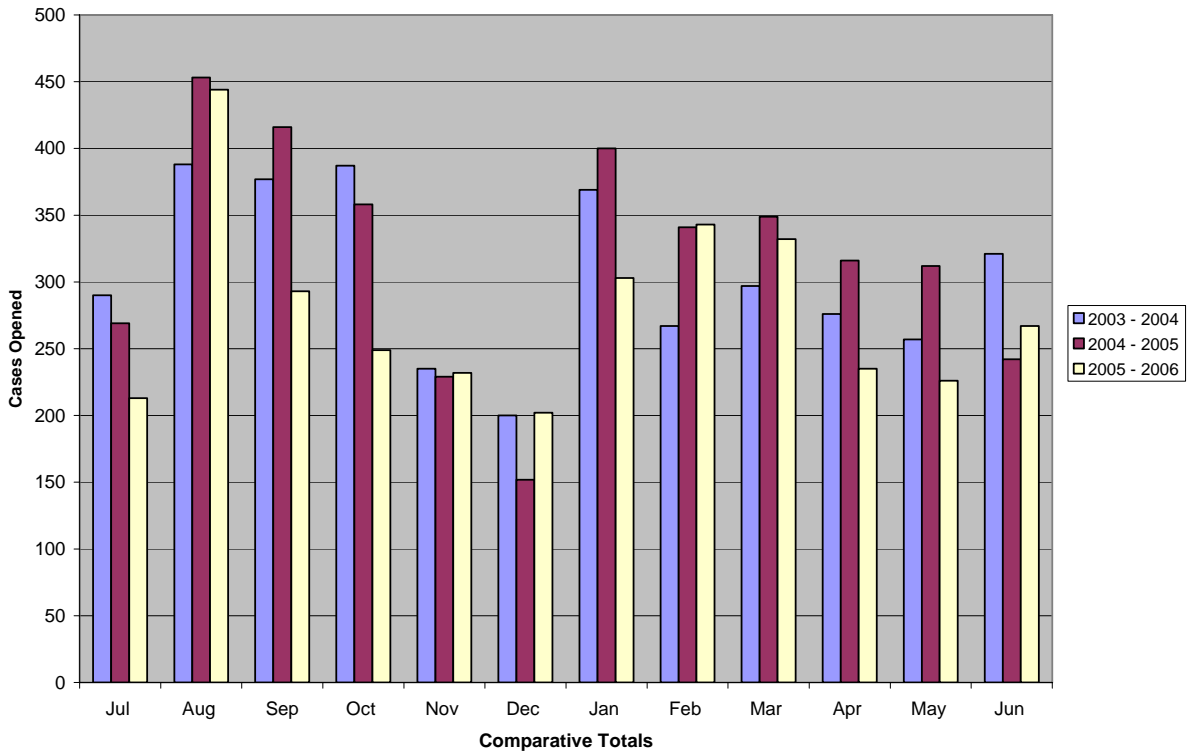
The information in the table below is intended to measure the number of tickets that were closed within the maximum number of days for urgent, normal, and low priority tickets.

Administrative Services Review  
Information Technology Department

**Analysis of Data from the Help Desk Ticketing System**

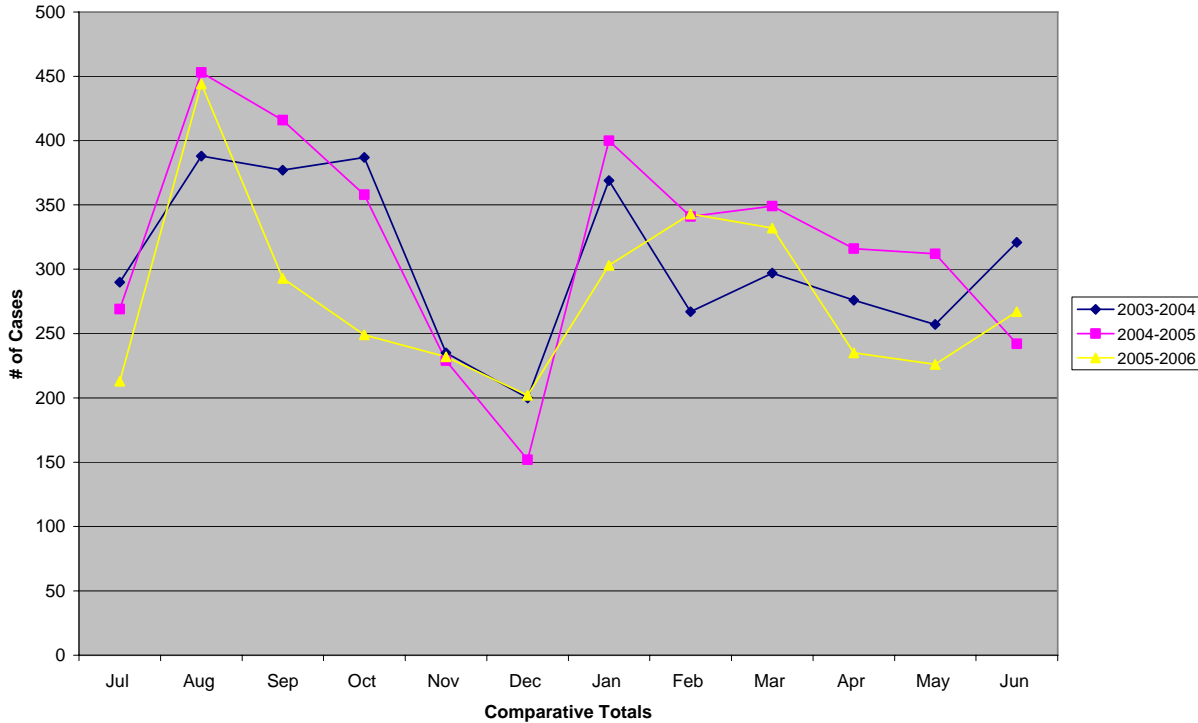
<b>Total Numbers of Service Requests</b>	<b><u>2003-2004</u></b>	<b><u>2004-2005</u></b>	<b><u>2005-2006</u></b>
<b>Total Number of Tickets</b>	<b>3680</b>	<b>3864</b>	<b>3495</b>
<b>Total Tickets Closed</b>	<b>3670</b>	<b>3847</b>	<b>3345</b>
<b>Average Monthly Tickets</b>	<b>306</b>	<b>321</b>	<b>279</b>
<b>Number of Days to Resolution</b>	<b><u>2003-2004</u></b>	<b><u>2004-2005</u></b>	<b><u>2005-2006</u></b>
Tickets Closed the Same Day that the Ticket was Opened	723	1040	690
Tickets Closed in 1-6 Days	1199	1390	1271
Tickets Closed in 7-10 Days	388	346	286
<b>Tickets Closed within 10 Days</b>	<b>2310</b>	<b>2776</b>	<b>2247</b>
Tickets Taking More than 10 Days to Close	1360	1071	1098
<b>Percentage of Tickets Closed</b>	<b><u>2003-2004</u></b>	<b><u>2004-2005</u></b>	<b><u>2005-2006</u></b>
% of Tickets Completed the Same Day	20%	19%	21%
% of Tickets Completed in 1 – 6 Days	33%	31%	34%
% of Tickets Completed in 7 - 10 Days	11%	9%	8%
<b>% of Tickets Completed within 10 Days</b>	<b>63%</b>	<b>72%</b>	<b>64%</b>
<b>% of Tickets Taking more than 10 Days to Close</b>	<b>37%</b>	<b>28%</b>	<b>31%</b>

**IT Department  
Helpdesk Statistics**



Administrative Services Review  
Information Technology Department

IT HelpDesk Trend Lines



3

Additionally these charts show the trends and patterns of IT performance as reflected in response to trouble tickets. However, a brief examination of the charts reveals cyclical patterns to the performance output of the IT Department over time. The variances within these general patterns suggest that there might be environmental factors (e.g., management changes, budgetary impacts, staffing inconsistencies, etc.) that contribute to performance fluctuations beyond the control of IT staff members to prevent. And although the particular environmental factors that contribute to these variances are themselves varied and unpredictable, the magnitude of their effect call for further analysis in an effort to diagnose their cause and influence their frequency.

Furthermore while the Help-Desk metrics presented here provide a view of IT performance levels, at best they should be considered a limited view. IT trouble incidents that get reported to the help desk account for only a portion of the IT staff workload. In addition to calls received at the help desk, it is typical that IT staff throughout the course of their workday receive request for support directly from College staff and thereby bypassing the IT help desk altogether. It is estimated by IT staff that these adhoc unreported service request account for nearly one-fourth of the service requests that they respond to daily.

<sup>3</sup> There is also an internal IT factor that may have contributed to the workload variances for last year. The IT Department implemented a new work assignment model in 2005-2006. IT staff members were assigned as primary supports to buildings. Experience with this model show that at least 1/3 of support calls previously reported as trouble tickets are being addressed directly by IT staff members assigned to a particular building and effectively bypassing our reporting system. While we believe this assignment model results in increased customer satisfaction we will need to revise our process to accurately document the work being performed.

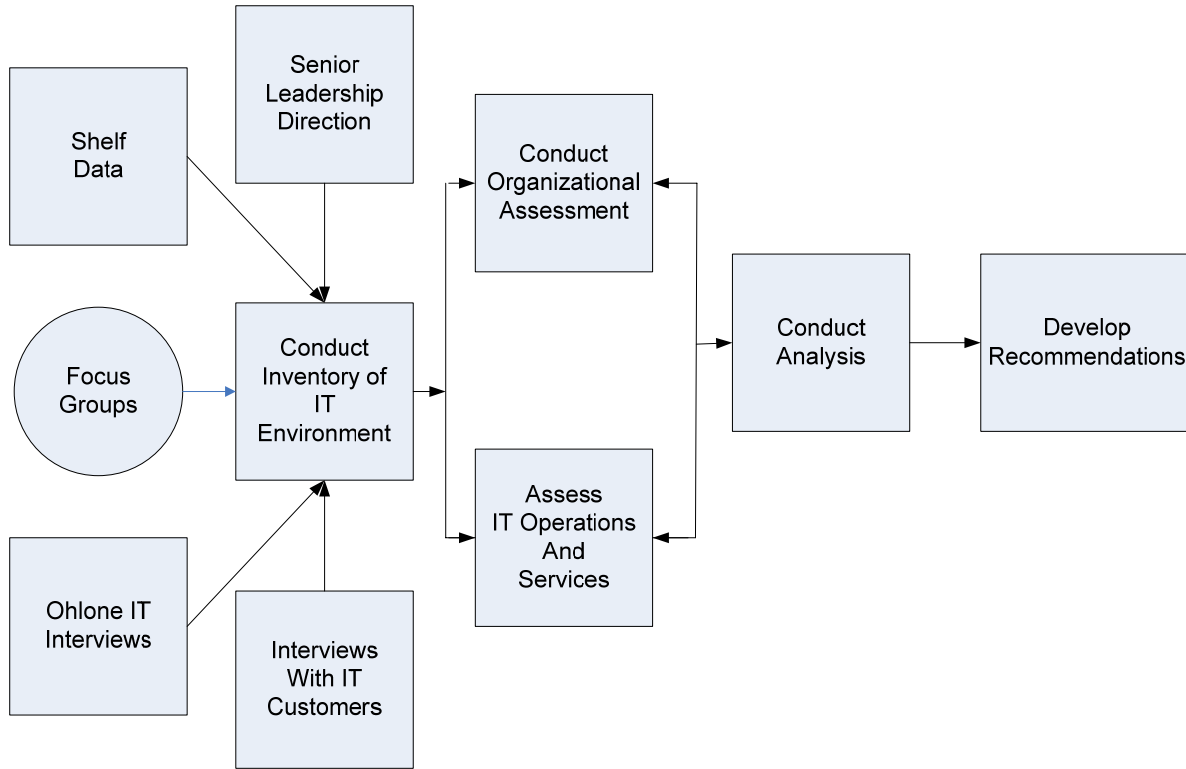
October 1, 2006

In addition to the work generated through service requests/tickets, the staff of Desktop Support is assigned responsibilities for technical projects. These projects range in scope from building and reconfiguring the 45 + computer labs (e.g. Room 1405 Assessment Center) each semester to supporting significant campus-wide initiatives (Compressed Calendar Project). It is difficult to track all of the projects that have been completed over the past three years but below is a list of some of the highlights:

### **IT Department Completed Projects Highlights**

- **2003-04**  
Colleague R17 upgrade (new Sun Hardware/SAN and Datatel software)
  
- **2004-05**  
Student De-Registration for Non-Payment  
E-Commerce 2.0 Implementation  
FAFSA/ISR Implementation  
A/V Smart Podiums  
Video-Phones for Deaf Students  
Trapeze Wireless Network Pilot (Hyman Hall)
  
- **2005-06**  
Campus Surveillance System  
Move Newark One-Stop to Balentine Site  
Assessment Center, New Computers and Software  
Compressed Calendar  
Collections Project  
Online Purchasing Requisition Pilot  
Datatel Audit  
Voicemail System Upgrade

### Program Review Methodology



The assessment to support this Program Review was conducted from November 2005 through April 2006. The following techniques were used to collect data to support the analysis provided in this review:

Previous Assessment Documentation: Information Technology Department files were reviewed for Department assessment/evaluations that had been conducted over the past 5-6 years. These assessment/evaluations included the Information Technology Support Plan 1999, Academic Computing Program Review 2000, the Distance Education/Instructional Technology Plan produced by the Distance Education Plan Committee dated February 1998, and the College Symposium 2005.

Shelf Data: Additionally numerous documents that identify the District's technology needs based upon organizational goals and objectives were consulted. These included the District Strategic Plan, Education Master Plan, Title III Project Plan, along with Academic and Administrative Program Reviews.

Interviews/Focus Groups: Over 60 individual interviews and 4 focus groups were conducted. These interviews were used to obtain College-wide perspective on Information Technology delivered services, current user needs, and to validate observations made from analysis of the documentation. The interviews included faculty, administrators, the Information Technology staff, group meetings with the ASOC, Learning Resources staff, the Instructional Resources staff, and the Hyman Hall faculty. Working sessions were held with Business Services, Student Services, and the Newark Campus Planning Committee.

The following table summarizes the interview and focus group activities within the IT Department, with IT customers including faculty, staff, students and College administrators. The goal of these interview/focus groups was to obtain campus-wide perspectives of IT’s operational effectiveness. This process was extensive and provided valuable input that drove the operational analysis of IT. The completion of the review of shelf data, interviews, and focus groups information provided a basis for constructing a comprehensive view of the IT Department.

The synthesis of the data collected can be viewed as an inventory of the information technology environment which reflects the IT organization at a snapshot, and reflects my understanding of the IT environment in performing the overall assessment.

**Listening Sessions Conducted**

<b>Group</b>	<b>Number of Interviews/Focus Groups Conducted</b>	<b>Number of Interviews/Focus Group Participants</b>
President’s Cabinet	10	10
Business Services	1	28
Student Services	1	7
NCHST Retreat	1	35
IT Department	1	23
Faculty	22	22
Classified Staff	42	42
ASOC Students	1	7
Total	79	168

**Assessment Findings**

**Strategy, Plans, and Budgeting**

In reviewing the shelf data and assessing campus-wide perspectives as clearly defined, relevant and recent IT mission statement was noticeably missing. Synthesis of the available information suggests the reasons for this include dramatic changes to Ohlone’s organizational context (i.e., reorganization, staff reductions, budgetary rollbacks, etc.) over the past three to five years. Additionally IT department leadership has experienced fluctuations with changes in the personnel who provide vision for technology and the role of the IT department. The current strategy for IT is to perform reactive technology-related services in response to customer requests to the best of their ability, given resource and budgetary constraints. This current operational posture reflects a reactive “Utility” model of IT service delivery rather than a mission driven strategy for service delivery. The result is a lack of formal planning and definition for what the IT department seeks to accomplish overtime. Services to be provided are not clearly

defined or communicated to the customer groups or the campus community. Therefore, customers make demands on IT at all levels of the organization and IT staff feels forced to work frantically to meet the needs of impacted/vocal instructional and administrative departments at the expense of less vocal College departments. Additionally low department morale has resulted from IT staff feeling overwhelmed by their inability to meet growing customer demands, and from being constantly criticized for not being able to do so.

Budgeting for information technology is not performed in comprehensive manner across the campus in connection with an overall information technology strategy. The budgeting process for information technology is an incremental process, whereby budget adjustments are made by independent justification for new financial outlays. Campus departments may also allocate portions of budgeted moneys for information technology, independent of campus-wide IT initiatives. Since departments have different levels of funding, due to internal budget allocations or externally acquired funds (such as grants), the IT investment of each department may vary significantly. The result is a wide disparity of IT platforms, tools, and the IT Department's ability to provide consistent levels of support.

### **Organizational Structure, Culture, and Management Processes**

The IT Department is aligned according to a traditional IT stovepipe or silo organizational model, separated into five units: Applications Systems Support, System Administration Support, Network Operations Support, Desktop and Computer Lab Support, and Instructional Technology Support. These units operate independently of one another and coordination between the units is limited. Components of the Department exhibit a protective and sometimes adversarial approach toward fellow unit members and have constructed barriers to protect and control certain activities.

The traditional IT organizational alignment, the utility service model orientation, and the lack of strategic focus have prevented the department from effectively achieving a customer focus. The IT structure, culture, and management processes still contain vestiges of past management practices. It is only recently, with a change in IT leadership, that there has been an opportunity and freedom to evolve into more efficient and effective modes of operation. It should be noted that there is common recognition by IT staff of the organizational impacts caused by the limitations of previous management practices. However, while this level of recognition does exist, IT staff's lingering mistrust of management in general continues to slow the rate of progress toward change. Nonetheless, real progress to developing a new culture within the department is beginning to take hold. With most variables affecting the IT department remaining the same, this change seems to be driven primarily by two factors, one the new IT leadership, and secondly the infusion of fresh perspectives and positive attitudes toward the work environment by new unit members who are not weighed down with the legacy of the previous IT culture.

### **IT Staff**

The IT department is currently funded for 30.5 FTE staff members. Current staffing level is at 84% or 25.5 FTE. The average staff member tenure is 15 years. However this average is skewed by two staff members with over 30 years of service. Factoring out these extremes the resulting average tenure is 9.1 years.

Five IT positions are currently unfilled and a recruitment effort is underway. Recruitment efforts for qualified staff are taking an excessive amount of time. At least one of the positions has been open for more than a year. Several factors contribute to the long lead time in filling these positions: lack of resources to lead recruitment efforts, quality of candidate pools, competition in the market, and Ohlone College IT salary levels compared to surrounding market.

To meet staffing needs the use of temporary contractors has been approved with support from the CSEA leadership. While this has been an effective strategy, it must be viewed as a short-term arrangement to meet critical needs. Regular full-time replacements are needed in order to provide the consistent technology support required by the College.

As was noted earlier in this report, the IT department is organized around a traditional IT organization structure which is best described as silo or stovepipe. In this configuration individual staff members have skills in one technology area and operate as functional specialists. The problem with this orientation is that staff members often don't see beyond their own functional expertise to the bigger picture view that multiple technology expertise is required to support our integrated IT environment. The current IT staffing orientation contributes to high levels of inefficiencies as most technology issues are handled serially rather than holistically.

The current IT staffing configuration is a result of several factors: lack of a focused IT Department mission and strategy, current collective bargaining agreement, and staff member comfort zone. The College has recently embarked on a "New Ways to Work" initiative. For IT this initiative will result in a realigned staffing model that reflects the changing support requirement of the campus. For instructional technology support, the integration of more technology into the teaching and learning process, the opening of the experimental classrooms, and the increasing number of technology types implemented requires IT staff to have broader support scope and technical capabilities. Under the New Ways to Work initiative, individual job classifications will be merged into broadened job families. Job families will be designed to reflect the support requirements of a Learning College environment: collaborative, holistic, with team-directed teams. It is envisioned that this re-alignment of broader job families will increase staff efficiency, user satisfaction, and job satisfaction.

Additionally, several other factors both internal and external recommend that Ohlone College re-assess its current IT staffing alignment. One is the current state of the IT job market. While IT job hirings languished over the last five years, the technology sector is beginning to experience resurgence. A recent Bay Area Council Survey<sup>4</sup> reported that hiring is expected to be significantly higher than any time since the 2001 Dot.Com bust. Ohlone is already seeing the effects of this as IT recruitment efforts for fulltime and/or contract employees is taking significantly longer. When viable candidates are located our current IT salary structure isn't competitive with the local IT market and as a result we don't have access to top candidates.

Internal factors also argue for a realignment of IT staff. A critical part of the IT infrastructure is the IT staff. IT staff trained in the latest technologies and with knowledge of college business operations are essential for maximizing the value of the College's IT investments. Moreover, to get the most value out of our IT investments, the appropriate levels of IT staff should be focused on the strategic needs of the institution. Several years ago the College made a strategic investment in the Datatel Colleague application. Colleague is the primary system for servicing students, managing enrollment, scheduling classes, etc. Ergo, Colleague should be viewed as one of the primary strategic applications of the college. The current IT alignment of staff to

---

<sup>4</sup> <http://www.bayareacouncil.org/site/apps/nl/content2.asp?c=dkLRK7MMIqG&b=248023&ct=2486039>  
October 1, 2006

Administrative Services Review  
Information Technology Department

support Colleague does not support the view of the systems as a strategic application. Of the Department's 30.5 FTE only 20% or 5 staff members are primarily assigned to supporting the Colleague application. Currently the lion's share of the IT staff is focusing on operational vs. strategic systems. To achieve the full value and effectiveness of our IT infrastructure, the current staffing alignment needs to be reconfigured with emphasis on strategic systems and initiatives. A part of the IT staffing realignment assessment will include a review of IT Department core competencies relative to the College's strategic objectives. The essential questions for this review will be as an IT organization: Are we doing things right? And more importantly are we doing the right things?

IT Role	Funded Staffing	Current Staffing	Staffing Level
Management	3	3	100%
Administration	1	1	100%
Application Support/MIS	6	5	83%
System Support	3	1	33%
Network Support	3	2	66%
Instructional Tech Support	2	2	100%
Desktop/Lab Support	12	11	92%
Title III Support	.5	.5	100%

IT Staffing Tenure	
0 – 1 Year	2
3 – 5 Years	7
5 – 10 Years	12
10 + Years	5
Average	9.1 years

**Service Delivery Policies, Standards, and Management**

In the mode in which the IT Department operates today, few explicit service-level agreements are established between IT and customer groups. Additionally no consistent methodology is employed for project prioritization or expectation management for delivered projects and/or services.

Service delivery is often based upon organizational hierarchy and politics, where customers who have organizational influence or access to those who do, receive higher levels of service and support. However, service delivery to staff and departments who don't have similar influence or access is subject to the shifting demands of IT resource availability.

The central tracking database for the IT Department is several years old and was implemented when the IT environment at Ohlone College was less mature. The application software for the tracking database has never been updated and no longer meets the needs of the Department. Additionally the policies and procedures for the operation of the Help Desk need to be revamped. The communication, training, and consensus on the use of the database are practically non-existent. The current tracking database is ineffective as a tool for managing IT service delivery. Although the system receives project-related requests, application-enhancement requests, as well as problem-resolution requests, all of which should require different prioritization and processing, the tracking database treats all service requests alike. A more robust and functionally-rich service request management system needs to be implemented to support the needs of the College.

### **Information Technology Infrastructure**

The IT infrastructure for Ohlone College consists of: the computer hardware, operating systems, communication/telecommunications networks, data, business applications, and IT staff. An effective IT infrastructure is one that is designed around an information technology architecture that proposes a set of policies and processes that govern the use of information and systems toward meeting the operational objectives of an organization.

The current Ohlone IT infrastructure is not based upon an enterprise information technology architecture model. A review of the College's IT infrastructure acquisition history reveals that most of the technologies and systems in place grew organically in response to the needs of individuals departments. As a result, technology islands exist with little or no integration of user applications and data. Common negative effects include: redundant processes and systems, poor data quality, and increased costs of maintaining a poorly leveraged infrastructure.

Of the information technology that does exist, 90% of it is past its life-cycle and requires constant maintenance and monitoring to keep functioning. Recent major component failures of student and business IT infrastructure highlight the vulnerability of campus operations. Additionally the College does not have an up-to-date IT Business Continuity Plan in the event of a major systems failure.

While the Board of Trustees and the senior college administration have given their support to addressing the current IT infrastructure issues through recently approved \$1 million Bond funding, two factors mute the impact of this support. One factor is the advanced deteriorated state of IT infrastructure. Because much of the IT infrastructure is significantly passed its life-cycle and has not been regularly maintained<sup>5</sup>, critical components of the infrastructure experience outages daily. These frequent failures cause IT to be perpetually in a fire-fighting mode of trying to keep the systems up and running. A consequence of this highly reactive work mode is that IT staff have little time to design and implement new system replacements.

The other factor that constrains IT's ability to implement new technologies is the difficulty in finding and keeping skilled IT staff members. As was noted above, this is due to a heating of the IT job market and non-competitive nature of our IT salary scale relative to Silicon Valley wages.

---

<sup>5</sup> Lack of regular system maintenance was due to previous funding constraints.  
October 1, 2006

To address the wage disparity between the current CSEA agreement and the local market, the AVP-IT will work collaboratively with the CSEA leadership to design and implement broadened IT job families under the New Ways to Work Initiative. A part of this effort will include validating and updating job classifications to reflect the knowledge, skills, and abilities required of IT staff to support a Learning College Environment.

The combination of these factors provide overwhelming evidence that if we are going to have the robust IT infrastructure required to support the Learning College Model, a new IT infrastructure model needs to be explored. Toward this end the AVP-IT and staff have been working with other public agency partners on an IT infrastructure model that more accurately reflects the needs and constraints of our academic environment. It is anticipated that this proposed model will be presented to the Board of Trustees in November, 2006.

Effective IT infrastructure is affected by the age of technology in use, software applications used to support college operations, and IT staffing knowledge and expertise. To ensure that the College's IT infrastructure continues to support the College's operations and business processes, an enterprise architecture model needs to be designed in conjunction with an IT Strategic Plan.

### **Measuring the Success of Programs and Services**

Results of Focus Group Feedback: Over 60 individual interviews and 4 focus groups were conducted. These interviews were used to obtain College-wide perspective on Information Technology delivered services, current user needs, and to validate observations made from analysis of the documentation. The interviews included faculty, administrators, the Information Technology staff; and group meetings with the ASOC, Learning Resources staff, the Instructional Resources staff, and the Hyman Hall faculty. Working sessions were held with Business Services, Student Services, and the Newark Campus Planning Committee. Below are the general themes of feedback on perceptions of IT service and operations:

#### **IT Listening Session Themes:**

- Inconsistent IT service levels
- IT as a service provider vs. solution provider
- Confused on the role of IT
- Good people, bad IT management
- Bad IT morale
- No consistent IT service processes
- Lack of Communication between IT and faculty
- Old technologies
- Lack of funding for technology
- Inconsistent deployment of technology
- IT seen as bottleneck
- IT not included in decision-making
- IT has never taken a leadership role with Colleague
- Colleague implemented in response to Y2K
- No College-wide strategic plan for Colleague implementation
- User driven Colleague Implementation
- “Vanilla” approach to implementation

Inadequate skill of IT staff to support Colleague  
Limited Communication between IT and end-users  
IT doesn't understand college business operations  
End-user based application development  
Lack of standards  
Lack of documentation  
No formal Change Management Process  
Inconsistent Business Processes  
Technology viewed as "Silver Bullet"  
Frustration with email and lack of calendaring  
System unreliable  
IT doesn't function as a team  
Wireless slow to rollout  
Lack of Trust in IT, resulting in work-a-rounds to avoid IT  
Excitement over uses of technology  
Need an IT Strategic Plan

### **List Strengths and Areas Needing Improvement**

#### Strengths

Board of Trustees and Senior Administration Support for Technology Improvement Initiatives  
Bond Funding for Technology Infrastructure Projects  
Title III funding for IT staff and projects  
Campus-wide support for formation of Technology Advisory Committees  
College Strategic Plan to direct technology strategic planning  
IT staff members reputation of being hardworking knowledgeable and dedicated  
Appropriate headcount exists under current staffing plan; however, staff resources need to be realigned  
IT staff's ability to work cohesively on campus-wide projects (e.g., Compressed Calendar, Apple Computer deployment)

#### Areas Needing Improvement

IT Staff members need up to date training on latest IT technologies and methodologies  
Ineffective intra- and inter-department communication  
Development of hardware, software, and application standards and IT purchasing guidelines  
Develop and implement negotiated Service Level agreements  
Update IT Policies  
Development of unit level process and procedures (e.g. Change Management, Patch Management, production calendar)  
IT Managers need to be more accessible and responsive  
Re-align staff to support Learning College Model

**Recommendations and Implementation Plans with Timeline**

<b>Recommendation/Goal</b>	<b>Timeline Begin</b>	<b>Complete</b>
Complete hiring of full-time IT staff	Ongoing	Fall 2006
Develop and Implement New Ways to Work Staffing Plan & collaborate with CSEA on new IT job descriptions	Spring 2006	Fall 2006
Implement Technology Committees	Fall 2006	Fall 2006
Collaboratively develop IT Strategic Plan with newly appointed advisory committees (to include Title III projects)	Fall 2006	Fall 2006
Work with Technology Advisory Committees to develop Bond funded IT infrastructure project plans	Fall 2006	Early Spring 2007
Develop and Implement Enterprise Architecture Plan	Fall 2006	Spring 2007
Develop and Implement PC Life-cycle Equipment Model; Desktop 4-5 years, Laptops 3-4 years	Fall 2006	Spring 2007
Develop and Implement Staff Training Plan	Fall 2006	Ongoing
Develop and Implement IT Communication Plan		
Implement Remote Desktop Support Tools	Spring 2007	Summer 2007
Implement a Ticket-Tracking and Reporting Process	Fall 2006	Spring 2007
Implement Standard Service and Support metrics	Fall 2006	Ongoing
Improve Project tracking and follow through	Immediately	Ongoing
Develop and Implement Negotiated Service Level Agreements (SLA's)	Spring 2006	Ongoing
Develop and Implement Sustainable Technology Funding Models, (e.g. Leasing, Gain-sharing, etc.)	Fall 2006	Ongoing
Revise/Update Distance Education/Instructional Technology Strategic Plan	Fall 2006	Summer 2007
Audit Web Course Technician position, and Re-classify	Fall 2006	Spring 2007
Develop/Revise MIS Reporting Operations Calendar and Procedures	Spring 2007	Summer 2007