Academic IT Support

March 31, 2003

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This model was developed in 1998 and the lower the number the closer the support is to the customer. The customer may enter the support model at any layer. Clarify is our workflow tool to track customer requests as they enter the support model and pass between groups.

Tier 1: Printed documentation, online information, portal services under development, and automated service requests for telephony, computing lab paper & toner requests and problem reporting.

Tier 2: There is a named liaison in every department with a certification path that includes optional online SkillSoft training and internal process training. Levels of certification include liaison, which is just a communication role, certified associate and certified partner. A certified partner has the ability to enter service requests or problem requests into Clarify, our workflow tool. Tier 2 liaisons are purposed by the department. They may have no IT related activities other than communication or they may be highly specialized with specific roles such as server administrators. We have semester gatherings for all Tier 2 liaisons to gather with the ITS department staff to discuss important campus IT issues from both perspectives.

Tier 3 is all of the centrally managed IT services to include our contact center, desktop support, hardware support, and educational technology facility support and will be covered throughout this presentation.

Tier 4: Core experts are technology specific groups such as networking, central servers, computing labs, application development and they receive the escalated cases that are entered but not resolved by Tiers 1 through 3.

Training is for all tiers and for internal as well as external use. There is online SkillSoft training for technology as well as orientations, hands on training for office applications, web use and university specific applications such as calendaring, web-based email and portal services.

Communication is also for internal an external purposes that has a public relations aspect for delivering the context of the message not just the how to.
Elements of Tier 3

- Contact Center – FrontLine
- Desktop Support
- Educational Technology Facility Support (ETFS)
- Distributed Academic Technology Coordinators (DATC)
- Hardware Support
- Contract Service Center

Elements of Tier 3: All centrally managed IT Services reside at this level of our support model.

The primary entry point for service requests and problem reporting is through our contact center named the FrontLine. Established in 1998 with the merger of the telephony and computing support groups, this group has 50,000 customer contacts per year primarily by phone but also through email and walk-in services for new customers not yet in the enterprise directory or with service requests requiring identification such as long distance authorization codes. The contact center is tasked with having an average wait time for customers of 15 seconds or less, a service time of 3 minutes on average, an 80% first contact resolution rate and they create 95% or more of all work flow cases for ITS. Our service and support metrics are published for the both internal and external customers to review. We have “ride-a-longs” for the ITS product and service providers so they can listen in on our support for their activities and aid us in improving the support and in particular improving our first contact resolution rate.

Desktop support was formally begun in 1989 as a free service that provides for operating system and software support. They are dispatched to faculty and staff on-campus locations and beginning in 1999 have a walk-in location for customers to bring in their home computing equipment in for support. This is provided in the form of one hour of support on a first-come-first serve basis.

Classrooms and labs have been supported separately for the past two decades. Educational Technology Facility Support began as a pilot in Fall 2002 and continues now as a formal entity.

Hardware support is a for fee service that was begun in the 1980s to service our own departmental computing equipment. This continues as an auxiliary that is both Dell and Apple certified serving on and off campus customers with 40% of its business being ITS managed computing lab CPUs, monitors and printers.

The success of our own service center has led to a contract service center where the Boulder campus central administration has contracted with ITS for the management of their IT support beginning January 2002. They changed the reporting of their own Tier 2 staff to ITS to implement a call center, workflow management, improved training and higher levels of customer service.
Tier 3 Principle Tenets

- Centrally Managed
- Locally Positioned
- Jointly Commissioned

Applies to: Distributed Academic Technology Coordinators, Desktop Support, Educational Technology Facility Support, Contract Service Center

Strong central management is key to providing consistent support when the elements are positioned remotely. This provides for common training, IT support standards, setting expectations and maintaining the highest levels of customer service. We monitor our service and support metrics to include telephony, workflow, and proactively solicit customer input every week. All staff, to include management, have customer feedback as a part of their evaluations. This feedback is publicly posted at http://www.colorado.edu/its/about/quality/index.html

Whenever possible we place the support staff as close to the customer as possible through local positioning. Positioning the staff in proximity in a dedicated service area increases the customer service by allowing the customer to receive service by the same person who is familiar with their specific computing environment, knowledge level and needs. Close proximity also reduces travel time and therefore improves response time.

Joint commissioning ensures that there is buy-in and acceptance of the locally positioned support. This provides flexibility in one model to meet the needs of a diverse and independent customer audience. We, the central support group, can provide a suite of offerings that the local academic group can choose from in order to meet their specific needs. This is ensures that we do not fall into a one-size-fits-all trap.
Agreeing to the tenets of a support model is one thing, signing a document agreeing to the execution of that support is another. The Executive Director of ITS has signed Memorandums of Understanding (MOUs) with the Deans of our schools and colleges. These MOUs provide boundary conditions for the levels and types of support that we provide as well as who will provide the support, how it will be managed, and provide for any specialized needs of the school or college.

Examples of the tailoring of the MOUs include:

• School of Music has a higher level of need for desktop support but has highly specialized classroom and lecture hall equipment that the centralized IT support staff is not trained or prepared to support and therefore excluded from centrally managed support and instead receives support internally from dedicated Tier 2 staff the way it has in the school’s past.

• Arts & Sciences is 75% of the faculty and is not treated as one entity but three, Humanities, Physical Sciences and Social sciences.

• Law has high levels of desktop support and classroom support needs.

• Engineering has the highest levels of technology in their curriculum but the least amount of technology actually deployed in the classroom.

• Libraries is a diverse organization dispersed across the campus and therefore not treated as separate entity but as sub group where ever they have locations in the other schools and colleges.

• Journalism and Education are smaller and but their needs specific and important and have benefited greatly from specialized and dedicated support.

• Business has a highly developed internal desktop support organization that has become a partner service center at Tier 2 of our support model where they manage IT support for themselves. They do however need ETFS and DATC support.

• Lastly Architecture and Planning is a satellite department of the University of Colorado Denver campus. They are currently receiving support from more than 20 miles away but we are working to develop an MOU that supports them as well.
If we have different individuals providing for specific IT support needs, we do not want our customers struggling to decipher our organization. For consistency we want to intake all problems in the Contact Center. This doesn’t always work as the customer may “find” their service provider, however, we try to communicate to the customer that they will receive consistent reliable support by going through the Service Center “FrontLine”. The Frontline attempts to resolve the problem without assigning the case to the distributed agents. However, when this is necessary the FrontLine must know the support model and deliver the service request not only to the correct service provider, that is desktop support, ETFS or DATC, and to the correct support staff responsible for that academic group. We minimize the training burden on the FrontLine by not educating them on which support staff is where but by using our workflow tool. If the FrontLine agent correctly triages the support request and verifies the location of the customer they can use Clarify to successfully direct the case to the correct support agent.

Additionally, when the support staff in the field note a need that is the responsibility of another, we can perform an internal handoff without the customer again having to understand that they have additional needs or again having to decipher our support model. We do not prohibit overlap of support as that is inevitable, and being cross-functional is beneficial in resolving emergency issues such as when a faculty member encounters problems connecting computing equipment to classroom IT equipment, but keeping the roles as clear as possible makes support consistent and expedient.

Team building between the Desktop Support, DATC and ETFS is important so they know the best way support their academic unit. As individuals have conflicting commitments, take vacations or are sick, the team can adapt and either cover within the academic team or have another member of the IT support group notified to meet our commitment.

Not only are the individual technicians in the field teams, but the managers of the support elements are a team that works together to make sure that model is working.
The program was begun in 1999 dedicating a full or part-time staff person to each school or college as a resource for the faculty to call upon when they were looking for support for incorporating technology into their curriculum. The faculty know how to teach and we are not here to change, influence or alter the way they teach but only to support them as they choose to use technology as a component of their courses. The DATC program was funded through a special allocation by the university.

The program was met with much anticipation in 1999 but their use was highly varied and not confined to the intended purpose of incorporating technology into academics. Upon analysis it was discovered that the faculty had numerous unmet technology needs that precluded their use of IT resources in their classes.

Faculty expressed “How can you expect me to incorporate technology into my teaching when I do not have or do not have enough support for my office computing equipment, for the servers, or for the equipment in the classrooms?”

In order for the DATC program to be successful we needed to build trust in the technology through Robustness, Reliability, Availability and Support and to eliminate the question “Who do I call for support?”
Desktop support was begun as a formal support group in 1989 as a centrally dispatched technician that covered the entire campus. This continued to grow as a predominately student technician organization through 1999. In the Fall of 1999 we piloted a mix of one student and one staff supporting the College of Arts & Sciences in a dedicated role although still being centrally dispatched. The intent of the pilot was to improve customer service by increasing stability by adding staff to the support mix and to personalize the support by dedicating the support to a specific academic group. As a byproduct of our pilot and even though we had not locally positioned this resource we found a 50% increase in productivity.

Walk-in support was added in 1998 as a resource for serving off campus computing needs without the resource commitment and liabilities of entering a private residence. This has been a valuable addition to our support model but has not been a complete answer to computing needs in the home.

As we are fortunate in having an on campus hardware repair facility to refer hardware support requests to, we have a “Do not open the computer policy.” The focus of Desktop Support is to resolve the computing problems of the customer within the guidelines of the supported hardware and software policies. Tier 3 works in cooperation with the core experts and the University’s IT Council to review annually the supported hardware and software. Important aspects of desktop support include operating systems, application both commercially available and internally developed, and security policies. This group is a critical resource for customers to rely upon when understanding and implementing security guidelines such as the University of Colorado’s Encrypted Authentication project where we converted all logins to ITS managed resources to be only done through encrypted sessions.

We self-funded desktop support and converted student hourly money to create the staff positions. We have allocated our resources according to the percentage of desktop support requests. Now schools and colleges are offered the opportunity to purchase additional desktop support and the College of Music, the School of Education and the School of Law have matched funds with ITS to increase their desktop support staffing.
For the past 20 years classrooms and labs have been supported though three separate groups, classroom support, site support and lab advising. Beginning with a pilot in Fall 2002, we applied the distributed support model to educational facilities. We did find that customer service improved with the personalized, dedicated, locally positioned technician.

One important finding with this element of Academic Support was that the positioning of the ETFS dedicated support technician for classrooms and labs does not align well with school or college. The complexity of centrally scheduled rooms that serve the entire campus and not one school or college did not fit the model being used for desktop support or the DATC programs. Instead a geographic policy is being developed to take advantage of geographic proximity irregardless of affiliation by school or college and whether they are centrally scheduled or not.

ETFS is self-funded from the merger of three existing service groups, Classroom Support, Site Support and Lab Advising.
Many departments and faculty administer their own servers out of a desire to run specialized applications, to develop their own applications or central servers do not have the ability to meet their needs. While there will not be a single solution to this problem, a number of options and offerings are being proposed to alleviate one of the last remaining known obstacles to faculty finding the levels and quality of IT support for them to find our facilities robust enough to increase their reliance on technology while teaching.

Because the reasons that faculty administer their own servers are highly varied, we do not believe that we can successfully migrate them to centrally managed server services. Instead we can only offer them server management services that they can purchase either on an as needed or on going basis.
Goals

- An Effective Model to Support the University Mission
- Increase Efficiency
- Common Support Strategies
- Leverage Existing Support Model
- Vertical Teams for Direction
- Horizontal Teams for Execution

Supporting the University's mission

CU-Boulder Mission Statement

Our mission is to advance and impart knowledge across a comprehensive range of disciplines to benefit the people of Colorado, the nation, and the world by educating undergraduate and graduate students in the accumulated knowledge of humankind, discovering new knowledge through research and creative work, and fostering critical thought, artistic creativity, professional competence, and responsible citizenship.
Measuring Value and Effectiveness

- Repurposing Existing Resources to Increase Effectiveness
- Objective Measures
- Adding Value to Our Facilities
  - Robust
  - Reliable
  - Available