

Funding Information Technology in Academia

by Geoffrey C. Tritsch

Editor's Note: The following article is an abridged and updated version of an article that appeared in the Winter 2009 edition of the ACUTA Journal. The original article (www.acuta.org/wcm/acuta/pdf/jor13-5.pdf) includes additional discussion on charging metrics and pros and cons of an FTE model.

An institution needs a consistent, holistic view of charging for technology services—an algorithm that is fair across all services and all departments. Today's economic challenges, changing revenue sources, and trends toward fiscal accountability necessitate a move away from outdated funding models, cross-subsidization, and unreliable one-time capital allocations and toward an approach based on the true cost of each service, differentiated service levels, and life-cycle funding. The need is for a predictable and controllable IT funding model that will do the following:

- Keep pace with rising demands for technology services
 - Provide pricing and funding strategies that can scale to meet future needs
 - Support cost-effective IT operations
 - Provide a context for making IT decisions
 - Cover a wide range of clients and services
 - Be durable under the pressure of changing demand and shifting services
 - Address the technology objectives in the university's strategic plan
- That's a lot to ask of one, simple funding model! But there's more.

The IT cost-recovery model also becomes the framework for the ongoing acquisition and management of new technologies and applications. Given that

services and technologies will change, the income to support IT services has to adjust as those changes occur. Since you don't have unlimited resources, you can't be everything to everyone. You need to prioritize, maximize, and make decisions as part of your overall *technology context*—an institutional framework for evaluating technology decisions.

Why You Need a Context

While some institutions have developed a context when it comes to campus master planning (commonly reflected in a consistent look and feel to buildings on campus), most institutions don't have this same kind of context when it comes to technology in general, much less to the funding of technology. Without this context, technology decisions are too often made on an inconsistent, ad hoc basis. This is partly because few schools have gone through the process of determining the true costs of their IT services nor have they developed a methodology for recovering those costs. Consequently, we find that many suffer from some or all of the following maladies:

- While IT is acknowledged to be critical, the funding for technology services is inadequate and/or unpredictable.
- Many schools recover voice costs through telephone charges to users but do not charge for other technology services.
- Budgeting for technology costs is not all inclusive. Funding for system renewal and replacement is often not included, but should be.
- Data network electronics and cable and wire infrastructure are in constant need of improvement to ensure stability

and redundancy. There is often no identified funding source for this work.

- Budget cutbacks and increasing demands for fiscal restraint are occurring at the same time as the disappearance of traditional revenue sources (such as income from residence hall telephone service).
- Traditionally separate services (voice, data, and video) continue to converge. Continued deployment of services such as VoIP and video over IP have a direct impact on support services such as help desk, troubleshooting, and staffing.
- IT expenses often exceed income. Budgets are balanced using depleting reserves, and equipment replacement is deferred.
- IT income frequently does not track with expenses. For example, the data network is often funded through flat general allocations that are unrelated to the growth or decline of the services provided or to the demand on IT resources.
- IT departments tend to be insufficiently staffed to meet growing expectations. While most IT departments do an admirable job of keeping up with service demands, increasing requirements can eventually overburden the staff, raising the potential for staff burnout and the likelihood of losing key personnel.
- Many institutions charge for voice but not for data and other IT services. This will not continue to work as voice, data, alarm, and video services continue to converge.

So, how does one go about getting to that predictable and controllable IT funding model?

First of all, keep in mind that much of the benefit of developing funding models is not the model; it's the process. The process forces an in-depth consideration of all of the technical, operational, and political issues associated with what you do, how you do it, and the benefits you provide to the user community.

The model itself is a relatively straightforward matter of allocating costs to services. The complexity lies in developing an in-depth understanding of your services and costs. Here's the process in a nutshell:

1. Identify the specific services you provide and the components that make up each service (dial tone, voicemail, wired data, wireless, etc.).
2. Identify the expenses associated with each service, including staff time.
3. Add in any applicable expenses not presently addressed within present budgets.
4. Estimate depreciation schedules to fund future expansion and replacement. These should be based on capital cost and useful life of the applicable equipment.
5. Identify new services expected to be implemented within the time frame of the project and allocate those across the services
6. Roll up the identified services into "chargeable" user services. Remember that not all services are chargeable. For example, DNS, DHCP, and LDAP are all services that you provide, but none are chargeable. These "pseudo-services" need to be rolled up into a logical data network or data access charge.
7. Estimate the growth or decline in services and changes in costs over your planning horizon.
8. Identify current revenue sources and cost offsets.
9. Develop rates and cost-recovery strategies as applicable.

Once you have accomplished the above, you should be able to plot a matrix of costs against chargeable services. The complicated part is making the decisions, such as how to roll up and allocate the

costs for the underlying, shared services (such as DHCP) and how to allocate time for people who serve multiple functions. Additionally, it makes sense at this point to develop an approach that will deal with future services as well.

There are a number of cost-recovery options, each with pros and cons. Here are the major arguments for charging for services:

- Charging shifts responsibility to the departmental level. This is not desirable.
- It makes the "cost causers" the "cost payers."
- It makes users aware of the cost of technology.
- It controls costs by eliminating the "if it's free, I'll take ten" mentality.

Here are the major points against charging:

- The services are required by virtue of the academic mission and are therefore considered to be critical core services.
- Services should be provided based on need, not on budget. Less well funded departments suffer if they must pay for services.
- Provision of services without charging saves the cost of management and tracking systems.

Whether or not you charge, there are a number of different ways to approach technology cost allocation (by port, by traffic, by head count, etc.). There really is no "right" or "wrong" way to do all this; it is primarily a matter of what works best for you in the long run. Whether or not you charge, base IT cost allocations on the true costs of services as if IT were a stand-alone business responsible for its own profits and losses.

An appropriate cost allocation/cost-recovery algorithm must be:

- *Objective.* The "measurables" should be unbiased and the formula fixed in advance.
- *Simple.* It must be easy to perform the measurements, apply the formula, and bill those who are going to pay for specific services (assuming billing is going to be done).

- *Transparent.* Concerned parties should be able to comprehend the logic and the formula and be assured that the values are correct and the formula appropriately applied.
- *Relevant.* Measurables should correlate with cost.
- *Manageable.* It should be easy to keep up-to-date as things change.
- *Reasonable.* Amounts recovered should not exceed full costs, or if cross subsidizing is necessary, the logic should be understood.
- *Growth-oriented.* It should be easy to reallocate costs as the network expands or services change.
- *Encouraging of desired behavior.* Approaches used should encourage behaviors that are beneficial to the institution as a whole and discourage those that are detrimental.
- *Viable long-term.* It should continue to be applicable into the future.

Conclusion

The good news is that the process (as painful as it might be) offers the opportunity to educate senior management and the campus community on what it really costs to deliver technology services and to firmly establish the value that technology has on campus. There is an increasing demand for technology services and resources due to the increased role of information technology. However, without significant thought to funding, IT will not be able to meet the long-term goals of the institution, implement new technologies, or even continue to adequately support the current technologies already on campus.

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