# Report of the College of Arts and Sciences Information Technology Implementation Planning Committee, October 23, 2015

## Charge to the Committee

In 2014, Executive Dean Manderscheid appointed an Information Technology Taskforce to:

- Provide guidance to the Arts and Sciences Executive Dean for issues related to information technology (IT) personnel, services and expenditures.
- Analyze current IT operations and staffing across the College of Arts and Sciences with a focus on increasing effectiveness, efficiency, and levels of service to college units.

Their report is attached as Appendix 1.

In the spring of 2015, Executive Dean Manderscheid directed the College of Arts and Sciences' Chief Information Officer (CIO) to examine IT operations in the College and make recommendations based on the goals of improving the efficiency and effectiveness of how IT services and support are delivered, and on identifying a related ~ $1 million dollars in cost savings. The present committee was also formed to oversee and assist in this process. Building upon the earlier Taskforce Report, the committee has spent the last five months considering ways to meet these efficiency, effectiveness and cost-saving goals while avoiding a negative impact on college operations. This report details the committee's findings and its recommendations for implementing such organizational and operational improvements, and meeting the necessary budget reduction goals.

## Background

The Arts and Sciences have long played a leadership role in the adoption and use of new information technologies on this campus. This role has been, in part, the result of many of our disciplines aggressively pursuing the application of information technology in their teaching and research. It has also been the result of a commitment by college and departmental administrators to allocate sufficient resources to acquire the latest in information technology and employ the highly skilled practitioners necessary to support that technology. Today our challenge is to continue and expand this tradition of leadership and excellence in information technologies, in what is a rapidly changing landscape, and to do so in a concurrent economic climate of diminishing resources.

Indeed in these times of tight resources and increasing demand for new technology solutions, we must strive to be as efficient and effective as we can. Of course, we are not alone in either the new demands or the tight resources. Universities across the country have been confronting the same challenges and factors over the past few years and we can learn much from their experiences. Ultimately we must act soon, or risk losing the IT advantage so critical in the modern academic environment.

There are at least six ways in which IT has changed in the past few years that are noteworthy in how they shape the recommendations herein:

- Compliance Expectations: We are challenged to deal with increasing regulations, and escalating reporting requirements. A myriad of new IT-related laws and regulations necessitate considerable work be devoted to compliance and risk reduction activities and to do so without growing our staff or diverting efforts from essential activities.
- A Security Imperative: An interconnected world has brought with it threats from hackers worldwide and our great dependence on IT facilities means substantial downtime can be catastrophic. Just about all of us have been affected by security breaches in the institutions that hold our personal and financial information. The same threats and security issues are present every day at the university. The costs of such computer security breaches can be very high in terms of dollars, hardware, software, staffing and reputational damage. In response, the University has mandated substantial security improvements be implemented university-wide over the next three years, which will result in substantial new costs to the college. As a college, we need to deploy people and fiscal resources more efficiently to meet these mandates, and to reduce our vulnerability to security breaches.
- Demand for Additional Services: Information technology has a substantial impact on all aspects of teaching and research, and the pace of technological innovation is only increasing. ASC absolutely needs to keep pace, but doing so while maintaining everyday operations is nearly impossible with the current distribution of IT staff in the college. The greatest demand for additional capabilities is in such areas as research computing, support of local instructional technology and support for distance education. All of these new needs are increasingly technical in nature and require highly specialized IT expertise. The only way to meet these obligations, without growing our staff or diverting efforts from other essential activities, is through the centralization and reassignment of IT staff.
- Reduced Duplication of Services and Effort: Many services once considered unique (such as file servers, print servers, virtualization servers, server rooms, storage systems, networking equipment, and directory services) are now commonly employed across the college, but implemented separately in each unit. By consolidating personnel, equipment, space, and support, ASC Technology should be able to reduce duplication of efforts, deploy personnel more efficiently and create specialists who can provide services and solve problems more effectively than we can currently. A critical consideration in such efforts is that current levels of service and support be maintained or actually enhanced.
- Increased Staff Expertise Requirements: Along with the demand for new services comes the need for staff expertise in these areas that no single generalist can fill. With a consolidated pool of personnel, ASC Technology can offer better opportunities for professional development, create opportunities for specialization, and offer career paths that do not currently exist within the college. And staff members freed up from their

generalist positions in individual units can acquire more specialized skills and expertise, something the modern university IT environment demands.

- Bulk Buying of Hardware, Software, and Purchased Services: By consolidating services, we create leveraged opportunities to purchase services from the OCIO or other professional service providers at reduced costs, and take advantage of the savings derived from bulk purchases. Many services, software, and hardware products can be provisioned in quantity realizing marked time-savings in procurement and operations while achieving much higher levels of quality

In general, as a College and University, we must make serious and significant changes to the ways we provide and consume IT services, and in the support we provide. IT in the college has developed and grown through the hard work and good efforts of administrators, faculty and staff. But it has done so largely in an uncoordinated fashion and typically in response to new local unit needs. Beginning in 2010, with the creation of ASC Technology Services, work commenced on bringing some overall coordination and some centralization to local efforts in such areas as networking, email, web design, instructional technologies, security and risk management and a few others. While a commendable effort, and a start in the right direction, there is much more to be done centrally to give the faculty and staff the IT tools they need in this IT dependent world and to give individual academic units the IT wherewithal to adapt and thrive. What follows are twelve specific recommendations on how the College of Arts and Sciences needs to change its IT structures and operations to adjust to this new world of IT and continue to provide the very best IT services and support possible to our faculty, staff and students.

## Recommendations:

### (1) Build Centralized Shared Services and Provide them College-wide.

The day of each department independently operating its own computing infrastructure is over. Economies of scale and current day requirements for infrastructure that protects against downtime, fulfills performance expectations and meets regulatory requirements necessitate larger-scale, highly secured and redundant facilities. Right-scaling such facility is a critical part of increasing efficiency and effectiveness.

### (2) Concentrate the expertise of staff persons in the areas of networking and infrastructure.

Bring together staff with networking and infrastructure expertise, and combine their efforts to build these larger-scale, shared services rather than having them remain as generalists in the departments. Today's IT demands specialists with advanced skills in particular areas. Bring these "specialists" together and put them in a position to apply their expertise and come together to build out bigger and better.

### (3) Provide unit-level support primarily with local staff but with defined channels of collaboration and coordination.

For many units with more substantial end-user support needs and ones that are accustomed to support personnel being located in the unit, support should continue to come from a local support

manager who would function as a support provider and as a local advocate for unit computing needs. This arrangement maintains the close relationship between support provider and end-user. What would change is that these support managers would be part of a larger support network that can provide backup, additional assistance and expertise as a team when needed. To build this web of support will require the hybrid approach of a support manager dedicated to the local unit but also reporting to the central support group for coordination, collaboration and backup. A key feature of this model is that each unit will retain local support for IT services that are essential and specialized to that unit with regard to both research services and instructional capacity through the support manager.

**(4) Make security an integral part of computing operations and in all college IT facilities and infrastructure.**

This year Penn State University and the University of Virginia, as just two examples, were both the victims of major international hacking and technology espionage resulting in campus network outages and significant expense in repairs of the breached systems. The administration of Ohio State has committed substantial money and manpower to securing its IT infrastructure and the job will remain an ongoing concern for the foreseeable future. Arts and Sciences also needs to make security a foundational part of all of its systems and practices. Without central leadership and direction on security such considerations can become an afterthought when local IT staff are caught up in the many demands of everyday IT.

**(5) Meet university, funding agency, and other compliance requirements as well as IT related laws and regulations.**

Part of the university effort to manage IT risk is a major security program that places a substantial compliance burden on the college. In addition, university computing in general is subject to a number of laws and regulations from governmental entities and funding agencies that did not exist fifteen years ago. Compliance with all of these standards requires a substantial commitment of time, resources, and personnel with the expertise to do so. Meeting all of these obligations requires a collaborative effort best coordinated at the college-level by those completely familiar with the university security framework. Security efforts succeed only when they are focused and directed. ASC Technology Services needs to be charged with implementing the security and risk management.

**(6) Reduce needless duplication of effort and purchases.**

The IT marketplace has matured considerably and many items have become either standard or commoditized. In both cases, bulk purchasing can yield considerable savings in money and time spent putting together purchases. Routinizing, standardizing and centralizing many of these purchases will reduce duplication of efforts, free up personnel, and spend money more wisely.

**(7) Create a shared governance model with faculty to benefit academic goals.**

It is an IT truism that top performers succeed when they utilize governance to support their efforts. It is also an imperative in a college such as ASC with such a diverse IT environment and so many competing IT needs. Since IT and computing expertise can benefit faculty and their work, ranging from special projects and grants with unique and often shorter term needs, faculty must play a central role in strategy and decision-making. The ASC Technology operation will be guided by a faculty governance committee to set goals, provide feedback on progress toward

those goals and encourage IT strategies in line with faculty and college needs. This may be a stand-alone committee or a subcommittee of the main college governance body, the College Faculty Advisory Committee.

**(8) Make planning more strategic and be willing to outsource some work and facilities.**

The goal here is to deploy IT assets consistently with college strategic goals. As a greater proportion of IT services have evolved from a local concern to more of an enterprise concern, the planning and the execution of those plans have needed to address more strategic issues and goals. This is an issue of the effectiveness and efficiency of a right-sized IT organization. It is also about the capacity of a larger organization to take a broader view and to conceive of solutions that transcend traditional boundaries and may involve outside service-providers.

**(9) Foster an environment of quality, develop expertise and continue creating new opportunities for Staff Development.**

ASC Technology Services can offer better opportunities for professional development, create opportunities for specialization, and offer career paths that do not currently exist within the college. Attracting and keeping top IT talent when the demand is so high for them is both a challenge and an imperative.

**(10) Consolidate formally all IT operations in the College.**

All IT support personnel will report to the CIO and work as a part of ASCTech to deliver support throughout the college. Support managers will also have dotted-line reporting to department chairs, who will serve to provide ongoing input on performance and goals related to the unit. Personnel will be re-positioned into one of these service areas:

Academic and Instructional Services (all aspects of IT in teaching and learning)
Application Development (web pages and applications)
Governance, Risk Management and Administrative Services
Infrastructure and Operations (Networking, servers, data storage)
Research Computing Consultation (assist local support managers)
Support of End-Users (unit-level support managers and service desk)

**(11) Elevate on the organizational chart the head of college IT position to report to the Executive Dean.**

A very effective way to convey to the college the singular importance the Executive Dean places on IT, and that he is fully involved in this transformation of our IT structures and capabilities, is to show it on the organizational chart. We recommend a dual reporting structure for the ASC CIO where the CIO reports to the Chief Administrative Officer of the College for administrative perspectives and to a Divisional or Associate Dean for academic perspectives on her/his duties.

In sum, the model of local area network unit-level services and support has served us well over the past twenty years, just as the all-centralized services and support of the mainframe era did in the prior era. But time and innovation in the IT field have marched on, and today the need is for a hybrid combination of the two models with centralized services for the overarching tasks, together with customized local support as it has been provided for the past two decades. Central

services allow for the concentration of expertise to meet the complex demands of new, advanced technologies. Local support with central coordination provides the much needed intimacy of support while giving the college flexibility to meet increased support needs by shifting staff accordingly. The eleven changes listed above will accomplish both objectives.

## Scope and Implementation plan

These eleven changes would be implemented college-wide. Many require the shifting of personnel and reporting lines. With no new budget for personnel the college will need to move a number of IT staff members who are supporting services locally to ASC Technology Services to do the same on a college-wide basis to supplant and greatly expand the service offerings. This should be at worse case zero-sum for the departments as the services will continue and service levels and functionality will get better. This transition has already started as almost all departments have migrated their networking and directory services to ASCTech's central services thus eliminating the considerable cost and staff time devoted to those services while moving them to more capable and robust central services. In order to move all such services some number of personnel will need to be moved from local service roles to the central services.

The draft organizational chart shows a number of these central functions or what might be termed central services including:

- Administrative Services
- Infrastructure and Operations
- Governance and Risk Management
- Application Development
- Academic Technology
- Research Consulting (to supplement unit-level research computing environments)
- Support (a mix of divisional and unit-level support managers)

On the support side, all units that currently employ local support personnel will retain at least one of those individuals as a coordinator/main provider of local support. These positions, termed support managers, will provide and oversee support activities in their respective units. The support manager should be familiar with the local computing environment and with the needs of the faculty, staff and students in a unit. The primary role of the support manager will be to serve as a single point of contact for unit IT issues and to address the essential and specialized IT needs of the unit. These needs include both research computing services and instructional technology needs.

All units will have an assigned support manager and a backup. Both may be shared with another area that is related in terms of location, discipline, or computing activities but all areas will have a minimum of two assigned support personnel. All of these support managers will report to the CIO but will be responsible to their assigned units.

It is expected the support manager for each unit will continue to work closely with unit leadership. We expect that the CIO will respect the role of the support manager and a manager's responsibilities to the unit. It is essential that the CIO consult with the unit leadership (typically the chair or director) to be certain that the manager is meeting unit expectations for performance and that the manager is treated fairly and appropriately in the AMCP process. The unit

leadership will have the opportunity to participate in writing of annual reviews for departmental support managers.

Specifically, this plan affects IT professionals in the College of Arts and Sciences who are appointed on general funds. There will be no changes in processes or procedures for IT staff appointed on restricted funds, including those on sponsored projects. However, it would be wise for units and/or PIs to consult with the CIO to determine if there are opportunities or efficiencies to be gained by teaming or contracting with ASC Technology for support of projects on restricted funds. In this report unit refers to a division, department, school, center and academic or administrative office.

The plan will be implemented unit by unit within the college over the 2016-2017 calendar years. It will follow the current path where certain functions are centralized to achieve efficiencies and focus talent on pressing IT issues while maintaining or enhancing levels of support received by faculty, staff and students. As has been the case for the last several months, each new general funds IT appointment will be made in consultation with the CIO. A major consideration for all new positions and appointments will be how the candidate fits into the ASC IT staffing plan.

As each unit undergoes the transition to centralized services, the unit will have the opportunity to provide to ASCTech a list of IT needs that it feels are essential to proper functioning of the unit. The transition team will then meet with the unit leadership to discuss the specific manner in which each of these needs will be addressed under the centralized system. Once established, ASCTech will meet with unit leadership regularly to assess whether the current handling of IT services is meeting the needs of the unit. These meetings will also be a critical part of the feedback about ASCTech performance. The unit will have the opportunity to discuss issues with the assigned IT personnel and also discuss issues with the tasks assigned to the IT personnel. Any issues that cannot be resolved through these discussions can be brought to the governance committee.

The primary goal of this plan is increased effectiveness and efficiency. Although many current staff would be redeployed, the anticipated cost savings cannot be achieved without a reduction in staffing. That reduction would be phased over 12-24 months with most staffing reductions occurring through attrition. Some vacant positions would not be filled. Other vacant positions would be redefined.

The draft organizational chart for IT is given in Appendix 2. We recognize that this represents a change in culture for some units within the college. Therefore this recommendation will be phased-in as the plan is implemented. Implementation will be assisted by a project manager from the OCIO, the university-level Office of the Chief Information Officer.

A series of FAQs designed to answer unit-level inquiries is included in this report as Appendix 3.

Implementation will be assisted by a project manager from the OCIO, the university-level Office of the Chief Information Officer.

## Governance Structure

A formal faculty advisory committee for IT to provide faculty governance on all aspects of IT in the college will be formed. We see two crucial roles for the advisory committee. First the committee will set priorities, direction, and policy for IT in the college. Second the committee will serve as one of the feedback mechanism for ASCTech. The chair of the committee should be one of the divisional dean appointees. The appointee from SAC should not be an employee of ASCTech.

1. CIO – ex-officio
2. Divisional Dean faculty appointee
3. Divisional Dean faculty appointee
4. Divisional Dean faculty appointee
5. FAC member
6. SAC member
7. Faculty at large
8. Faculty at large
9. Secretary (Sweasey)

## Appendices:

Appendix 1: Information Technology Taskforce Report of January 21, 2015

Appendix 2: ASC Technology Draft Organizational Chart

Appendix 3: FAQs

Appendix 4: Committee Membership

**Footnote 1:** CHRR, as primarily a federally funded research center and with very strict federal strictures on IT, is exempt from this plan though they will remain, as they are now, fully engaged with College IT and IT risk management activities.

## Conclusion

In the last decade we in higher education have been a part of a transformation to a whole new model of computing that is platform and location independent. Just as occurred some thirty years ago with the move from dedicated terminals and mainframes to local networks and personal computers, the move to a whole new model of computing is well underway. Instruction via online courses, administration through email and digital signatures on smartphones, and research conducted in computer simulations are just a few examples of the integration of IT into every aspect of university life and business, and the ubiquity of such needs.

Major advances in networking now allow computing facilities to be located outside of departmental boundaries, with few performance penalties, while overcoming many local physical barriers to more robust and capable facilities. The increasing sophistication and complexity of

hardware and software that requires considerable expertise and specialization to build and maintain, and thus has different staffing requirements than with previous systems.

As a college we must adapt to and embrace these changes in how we utilize information technology, how we build and maintain the physical infrastructure and ultimately deliver these services and how our IT professionals staff these services and provide support. Otherwise we risk being unable to embrace all of the changes because of lack of IT expertise, appropriate facilities and the financial wherewithal. As a committee we believe the plans here will make it possible.

# ASC IT Taskforce Report

January 21, 2015

## Purpose of the Taskforce

*Provide guidance* to the Arts and Sciences Executive Dean for issues related to information technology (IT) personnel, services and expenditures.

*Analyze current IT* operations and staffing across the College of Arts and Sciences with a focus on increasing effectiveness, efficiency, and levels of service to college units.

## Background

Currently, Arts and Sciences Technology Services (ASCTech) provides IT services directly to faculty, staff, and students in the Division of Arts and Humanities, as well as units in the Biological Sciences. ASCTech also provides consulting and some infrastructure services for the entire college. Units outside Arts and Humanities and the Biological Sciences support IT through their own local IT staffs. The individual unit support model is referred to as distributed support and the support of many units at once is referred to as shared support. The two support models, shared and distributed, have served the college well.

## Analysis

The use of both distributed and shared IT support has been a strong suit for the college, and the overall support delivery model has adapted well to changes over time. The task going forward is to ensure college IT operations continue to deliver high quality service and support in light of a very rapidly changing computing environment and the addition of significant new security requirements. These new requirements, as well as disruptive advances in computing, mean that it is time to review our current support model and consider changes to ensure that it continues to serve optimally the research and academic missions of the college.

Distributed support typically provides better flexibility and a unique fit of services for the unit served. It is also typically more personal and local. However, this personal service can be more expensive, per FTE supported, than shared services. Also, because distributed personnel are called upon to answer questions along the entire gamut of IT issues, they are sometimes supporting services for which they have a working knowledge, but limited expertise. Distributed services maximize the flexibility and the support of unique or specialized services, but can be a more costly approach to common or uniform services.

Common shared services, services that most, or all, units require, can sometimes be delivered at a lower cost, while also being staffed by experts in those particular services. The experts can provide a consistent high level of service, freeing units to develop unique or unproven services. Shared services staff can more easily coordinate using their collective buying power to negotiate better pricing and terms from vendors. However, shared services are not as flexible when faced with large changes and are frequently removed from the faculty and staff being served and will frequently lack an understanding of their specific needs. Shared services are best used for services where the advantages can be

demonstrated to exist, such as with common or highly technical services that would otherwise be duplicated in each unit.

In the interest of achieving the goals of increasing effectiveness, efficiency, and improvement of service level to all the units, it is clear that neither distributed nor shared support will serve the college's needs. The challenge is to maintain a good balance between distributed and shared support, and local versus centralized services. We seek to resolve these issues by providing a clear set of guiding principles which can be used to provide the best support and services at the lowest cost.

## Guiding Principles

We propose that the college commit to some basic principles that will guide future decision-making regarding IT operations and staffing.

### Principle One: Stay on Mission

College IT operations primarily exist to facilitate the college's academic and research missions. Shared and distributed IT services and support must be first and foremost designed around advancing these missions. Other IT activities such as administrative support, communications with external constituencies, and risk management and compliance activities are all performed within the context of furthering the academic and research missions. Changes to current practice are to be done in such a way as to not increase technical or compliance burdens unnecessarily.

### Principle Two: Some IT Standards Are Required

There are certain IT standards that all units must meet. It is understood that such standards may complicate the academic and research missions, but are still required. For reasons including cost-efficiency, compliance with external risk and security requirements, and college-wide consistency in levels of IT service, the Executive Dean will direct the Chief Information Officer (CIO) of Arts and Sciences to set certain IT standards that will apply to all units. Implementation of those standards will be done in accordance with the principles outlined here. Mandatory standards will be used only when necessary. One example of such a standard is the Information Security Standard (ISS), created by the Office of the CIO's Enterprise Security group. The ISS is based on the NIST SP 800-53 security standard, which is increasingly required for federal grants, and so college-wide compliance is a necessary requirement. The Executive Dean is called upon to certify the college's level of compliance with the ISS, so it follows that the Dean must set common requirements across the college.

### Principle Three: Maintain Transparency

All college IT operations must maintain complete transparency, including but not limited to planning, projects, purchasing, equipment, services, space, and staffing. By being transparent about all aspects of IT functions, it will be possible to make decisions that serve the college's goals of increasing effectiveness, efficiency, and improvement of service level to its units. This is not intended to add a large new reporting burden, but rather to share information already held by ASCTech and the distributed units.

### Principle Four: Assess Needs Collectively Through Regular Communication

As new or different needs arise, formalized communication channels must be in place to make an assessment of the needs and to bring service and support providers together with the faculty, staff, and unit leadership. The faculty and unit-level administration must have a strong voice in the selection of

shared services to be provided and determining when units develop unique capabilities. Shared services may be attractive for a particular service, if reduced costs and consistent or improved service can be documented, and are well-balanced against losing any of the advantages of more personal distributed support. The faculty represent the academic and research missions and have critical insights regarding the balance between shared and distributed support, and how changes in services and the distribution of resources affect those missions.

### Principle Five: Use Distributed Support

IT operations throughout the college must have a distributed component. Distributing some services and support to the unit-level provides flexibility and diversity of approach to IT problems and allows the college and units to be nimble in a way that a monolithic central organization cannot manage. Distributed services and support primarily should be used for specialized or unproven services that are necessary to further the academic and research missions of the unit. IT tasks must be efficiently matched to service and support solutions on a unit-by-unit basis. IT support and service requirements in each unit should be assessed and addressed on an ongoing basis. Ultimately, the chair or director of the unit, advised by their local IT support and the CIO, may decide that a service or support should be maintained locally.

### Principle Six: Use Shared Services

Units should use shared IT services when available and sensible. Common requirements should be recognized and utilized to bring together those activities or services that could be delivered on a shared basis. Shared services may be provided by ASCTech, by groups of distributed units with common requirements, or by other providers, such as OCIO or a commercial cloud service provider. Distributed operations allow for flexibility, but they can also be more expensive because they may replicate other services and the quality for such services varies widely between units. By providing and using shared services staffed by experts where sensible, all units gain access to a common level of service without having to build and manage those services themselves. Units also gain access to a stronger negotiating position with vendors by using their collective buying power to secure the best pricing and service.

## Taskforce Recommendations

Implementing these guiding principles requires changes from the current state. We recommend the following:

- Create a college-wide IT advisory committee to advise the CIO of Arts and Sciences and the Executive Dean on IT-related matters. Ten members will be appointed by the Dean from nominations solicited from unit leaders. The members will provide feedback on existing services and support, as well as review the impact of newly-proposed services on research, teaching, and administration of the ASC units. Appointees may be faculty or staff, but may not include the local IT managers, as they have a separate path to interact with the CIO. The CIO will meet with the IT advisory committee no less than quarterly to brief them on new items and to receive their feedback on existing services and support. Either the CIO or the chair of the IT advisory committee may call a meeting. Minutes from the meetings will be provided to the chairs/directors. The CIO must respond, in writing, to specific requests from the committee.

- Each IT staff vacancy will be reviewed against these guiding principles by the local chair/director and the Chief Administrative Officer, with the CIO of Arts and Sciences offering advice. In some areas, distributed support will need to increase. In other areas, distributed support will shrink as shared services reduce the load. Reviewing each vacancy will help to maintain an appropriate balance between distributed and shared instances of services and support.
- All large, expensive, or otherwise significant new services will be reviewed by the distributed IT personnel, ASCTech, and the ASC IT Advisory Committee to determine where they should be hosted and how they should be staffed. The IT managers from the distributed units will review such services with the CIO of Arts and Sciences as part of a monthly meeting.
- Existing IT facilities and services will be reviewed to identify and eliminate redundancy, and to promote sharing where sensible. Candidates for elimination or enhancement may be proposed by the CIO of Arts and Sciences, the IT managers, the IT advisory committee, or the chairs/directors. Proposals will be reviewed during the CIO's scheduled meetings with the IT managers' group and the IT advisory committee. Advice from the CIO, the distributed IT personnel, and the IT advisory committee will be used by the chairs/directors and the college office for final determination.
- Funding will be designated for key shared services. Shared services must be set up and running before the distributed units can use them. This will, necessarily, cause costs to rise initially. At the college level, funding for shared networking infrastructure support and facilities are priorities. Also, funding will need to be designated at the college and unit levels for security and risk compliance. Aspects of security and risk compliance fall under the *required standards* principle, so risk and compliance policies and procedures will be formulated centrally by ASCTech and evaluated by the local IT managers for potential impacts on local IT operations and risk reduction efficacy.
- The CIO of Arts and Sciences will provide each chair/director and their local IT staff an annual review of current IT service offerings and recommendations. This will provide an opportunity for the chairs/directors to gather information directly so that they can make informed decisions, understanding the costs and consequences of their options.
- The IT managers from the distributed units and the CIO of Arts and Sciences will share available IT-related information at an appropriate level of detail on an annual basis. This would include information such as plans, projects, budgets, purchases, equipment, services, space, and staffing. This information will be used by the IT advisory committee, the CIO of Arts and Sciences, and the IT managers from the distributed units to determine the best arrangements for sharing and distributing services and support.
- The College of Arts and Sciences administration will seek ways to share cost savings with the units to incentivize appropriate sharing and distribution of IT services and support.

## Conclusion: Finding Balance Through Cooperation Between College and Unit-Level Administration

The administration of IT in the college comes down to three factors. The first is the need for some central standards. External compliance requirements and overall service cost efficiencies demand some amount of central decision-making by IT professionals. Two, in general, local IT support needs vary

among units and are driven by the unit's academic and research requirements. These needs are best determined locally by the faculty and their unit heads supported by central IT expertise. And three, balancing the IT needs of units and college prerogatives regarding security and budget is best addressed through shared responsibility in the form of informed local administration and the local IT managers, a college-wide technical perspective from the CIO and ASCTech, and a college-wide IT advisory committee that brings local needs to decision-makers.

In sum, the principles above are a start toward a framework for decision-making regarding the College's IT operations and staffing. Using these principles, IT operations employ distributed support and shared services where they are strongest. The principles also serve to clarify the primacy of the college's mission, the value of the faculty in IT decision-making, and the idea that some IT standards cannot be avoided. These principles will help make the college's IT operations more effective, efficient, and provide a higher level of service to the units.

# Addendum

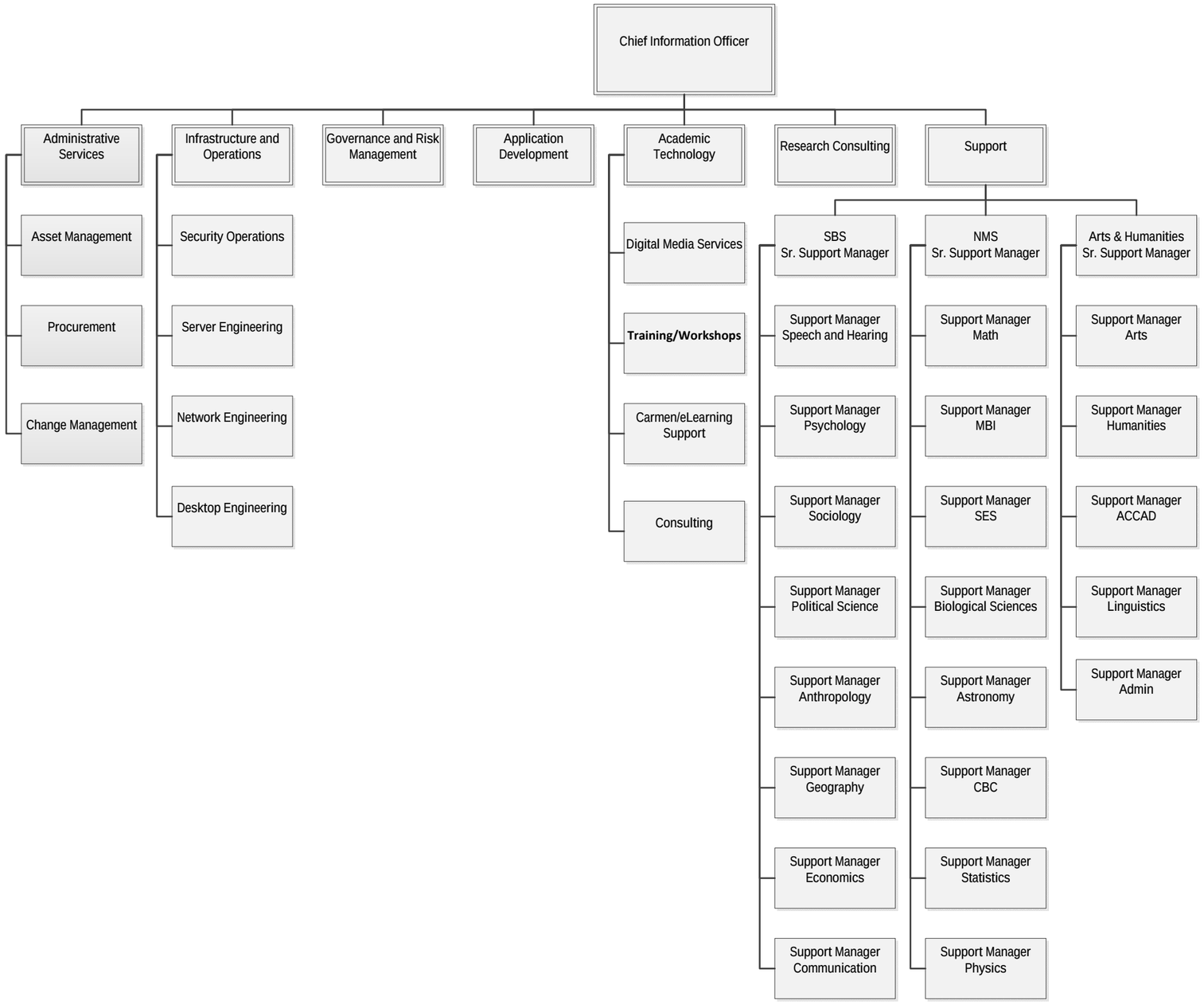
## Interaction Examples

### Significant New Service

In the event of a proposed significant new service, the CIO would meet with the IT managers to discuss where the service should be hosted and how it would be supported (centrally, as a shared service, or in one or more of the distributed units, for example). Next, the CIO would meet with the IT advisory committee to discuss how the service would benefit and impact the research, teaching, and administration of the units. Appropriate modifications to the proposed service would be made at each of these steps to optimize the service to minimize negative impact and maximize benefit for the college as a whole. The CIO would work with the Chief Administrative Officer from the Office of the Executive Dean to build an appropriate funding model. In a briefing with each unit chair/director and their IT staff, the CIO would outline the new service with specific focus on costs and benefits of accepting the service, as well as the consequences of declining the service. Each chair/director would have the opportunity to accept or decline the service, and change their mind later, based on their unit's requirements. Appropriate modifications to the funding model would be made at each of these steps, based on feedback from the Chief Administrative Officer and the chairs/directors. Each group would communicate the features of the new service to their unit and send feedback for future improvements through the IT advisory committee and the IT managers.

### Service Changes

When a service is not serving the faculty and staff adequately, the IT advisory committee is one method to bring the fact to the attention of the CIO. In that case, the IT advisory committee would explain the issue to the CIO, and perhaps suggest possible solutions. The modifications to the service would be reviewed in the appropriate steps, as outlined in the *New Service* case, with feedback to the IT advisory committee as to the resolution.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Procurement
Change Management
Infrastructure and Operations
Security Operations
Server Engineering
Network Engineering
Desktop Engineering
Governance and Risk Management
Application Development
Academic Technology
Digital Media Services
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Research Consulting
Support
SBS Sr. Support Manager
Support Manager Speech and Hearing
Support Manager Psychology
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Support Manager MBI
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Support Manager Physics
Arts & Humanities Sr. Support Manager
Support Manager Arts
Support Manager Humanities
Support Manager ACCAD
Support Manager Linguistics
Support Manager Admin

# Appendix 3 – FAQ

1. How will I get support in the new model?
    a. Each unit that had local IT support, will have an assigned Support Manager who will be located in the unit. The Support Manager functions as a member of the Arts and Sciences Technology Services (ASCTech) Support team and is the primary contact for computer hardware and software support to users in the assigned unit. This person maintains users' IT hardware and software, and computer-related instruments and devices; troubleshoots and resolves problems; installs and deploys new/upgraded hardware and software; directly supports other departmental IT facilities such as laboratories, AV-equipped conference rooms, and computer classrooms.
2. What about my research support?
    a. ASCTech will have a Research Consulting Service that can help with connecting your research with the proper technical resources. Your local Support Manager will also be available to assist with your research computing needs.
3. What about the IT personnel I pay for with grant money?
    a. There will be no changes with grant funded IT personnel. The main change overall in terms of grant funded research is the overall improvement in the IT infrastructure that is available to all college IT users.
4. Why the move to a more centralized approach to computing services?
    a. Ohio State and the Arts and Sciences strive to provide faculty and staff with the best available computing service. With the advent of the high speed network, data storage on a massive scale and an ever increasing demand for new capabilities there are not only economies of scale but also the need for specialized personnel and computing resources in numbers and scales that far exceed local capabilities. We must change the way we do business to achieve the state of the art. We are also facing security and compliance challenges that will require us to work more closely together than we have in the past.
5. My department's IT support has been fine. Why change it?
    a. You will continue to have a seasoned IT support person in your unit who will ensure that you continue to receive excellent support and services. This person is also your IT liaison and advocate tasked with bringing the centrally-provided services to your department. By providing central services in things like networking, storage, backups etc., your support person will be freed up to support your specific needs.
6. My needs are fast paced and when I need IT help I need it right now, how will that change?
    a. Indeed one of the primary reasons for this adjustment is this immediacy factor. In addition, unlike with the present arrangement, the local person will be backed by a team of other support personnel available to lend a helping hand.
7. Does this reorganization save money? Is that a reason behind the plan?
    a. Yes, over time the reorganization should save money by eliminating duplicative facilities and hardware, recalibrating the workforce around strategic initiatives, the general efficiency of coordinated design and purchasing, and other economies of scale.

8. Is all this “security stuff” I keep hearing about a part of this reorganization?
    a. Reducing IT risk and improving security has become an institutional priority at OSU and universities across the country. As we saw at Penn State recently, security breaches can have profound effects on all aspects of the academic enterprise. Under this reorganization, the Arts and Sciences should be much better positioned to comply with all the university security and risk requirements. Equally important, we will have more concentrated resources to devote to the two biggest risks to the college – keeping the IT aspects of teaching and learning up and running, so-called business continuity, and protecting all research data from loss and highly available to the faculty.
9. Why not a gradual shift to more centralized services and reorganized support?
    a. We need to move quickly because we trail many of our peers in providing advanced IT services to our users. Also, centralization requires that many of the personnel changes need to occur within the same timeframe to keep current support and services available while building anew.
10. On a personal level, I am concerned about the fates of our existing IT staff? What is the personnel plan?
    a. Our intention is to reduce staffing through attrition. We believe that that no one will lose their job classification level or have a salary reduction. Many will have a change in duties and may have to learn new skills. The emphasis will be on matching individual skillsets and personal preferences with the staffing position needs of our IT operation.
11. In my department IT personnel have from time to time fulfilled other roles and handled other tasks. Will that continue?
    a. IT personnel will focus on IT. We will attempt to identify and plan for other duties that were often assigned to IT staff.
12. The old adage is, if it ain’t broke don’t fix it. Why violate the adage?
    a. While problems and shortcomings may not be noticeable, we are falling behind in our obligation to maximize return on IT investments and take advantage of the rapid changes in technology.

# Appendix 4 – Committee Membership

## Arts and Sciences

David Manderscheid, Executive Dean and Vice-Provost (Chair)

Rich Hall – Associate Executive Dean (ASC Lead)

Jan Box-Steffensmeier – Divisional Dean for Social and Behavioral Sciences

Laura Kubatko - Professor, Statistics and Evolution, Ecology and Organismal Biology

Shari Speer – Professor and Chair, Linguistics

David Staley - Associate Professor of History, Adjunct Associate Professor of Design

John Nisbet – Chief Administrative Officer

Timothy Smith – Chief Information Officer

## Office of the CIO

Michael Hofherr – Vice President and Chief Information Officer (Chair)

Diane Dagefoerde – Deputy CIO (OCIO Lead)

Bob Corbin – Senior Director of Infrastructure

Liv Gjestvang – Associate Vice President of Learning Technology, Office of Distance Education and eLearning

Jason Haskins – Associate Director for Relationship Management