

**2007-08 Critical Functions Report -- Status Update
Vice President/CIO**

1. Major Theme/Issue: Collaboration				
Objective: Create an environment that supports the full range of collaborative activities of U.Va. faculty and students				
	<u>2007-08 Goals</u>	<u>Owner(s)</u>	<u>July 15, 2008 Status</u>	<u>Comments</u>
1.1	Help key players to think about IT strategically rather than reactively in order to create a more coordinated and collaborative IT environment across Grounds that enables ambition and experimentation.	James	Multiple groups (e.g. Deans Technology Council, Computational Science Advisory, and Course Management groups) expanded their capacity to work more collaboratively on strategic IT issues during the past year. James Hilton met with every Dean concerning funding models and other issues.	
1.2	Work with Provost to evaluate, select, and implement best-in-class course management and portal systems.	James (and Milton Adams)	The Provost/VP CIO advisory group completed their review of the options. They recommended, and we are implementing, a Sakai-based system (branded as UVaCollab).	<i>Done.</i>
1.3	Partner to plan physical spaces that enhance collaboration and access to information/knowledge. Engage the University community in a conversation about the future of computing labs.	Terry (and all)	Testing a virtual desktop software loadset is underway in the Alderman Library public computer lab. A new collaborative space is under construction in Clemons Library this summer. When it opens in the fall, it will serve as a model for other collaborative spaces around grounds.	
1.4	Deploy Sakai-based collaboration software to support research collaborations.	Tim	UVaCollab now hosts over 1400 collaboration worksites and over 600 course worksites. There are over 16,000 users. Over 300 faculty successfully participated in the Spring 2008 early adopter phase for using Collab for courses.	
1.5	Continue deployment of middleware infrastructure such as Active Directory, Shibboleth, Globus, and Avaki in support of collaboration and high-performance computing.	Jim	The work to complete the integration of myGroups with Exchange has been completed. Nine Virginia schools are now part of InCommon. Many of these schools joined specifically to participate in the VIVA project being supported by UVa.	
1.6	In partnership with HR, ISDS, and SSP move to an integrated IT help desk.	Terry	We are moving towards a summer 2008 implementation date for the 4-help single help number. In partnership with HR, ISDS, the Library, and the Student System Project, we are developing a more integrated help desk environment. We continue to work with the Library to provide front-line support in Alderman, Brown and Clemons Libraries.	
2. Major Theme/Issue: Access				
Objective: Create an environment of ubiquitous access to appropriate IT resources for all core activities.				
2.1	Design, finalize funding, and initiate construction for a major computer machine room construction project.	Jim	The funding model for the machine room building has been completed and approved. The RFP-based selection of the design engineering firm has been completed and an initial contract is being finalized now (June 30, 2008).	
2.2	Seek to acquire owned and/or controlled off-Grounds fiber-optic cable.	Jim	Several cutbacks and role transitions at Sprint have slowed the process of leveraging those contracts for direct access to dark fiber. We still hope that Sprint will prove to be a viable solution for both UVa and Virginia Tech. We have also started discussions on possible fiber-based solutions with Terremark. Terremark is developing large new facilities in Culpeper and fiber connectivity in our region will likely expand as a result of this work.	
2.3	In partnership with VP/CFO and the Provost, examine ways in which we can exploit the margins of our strategic investment in database services and database administration to support growing data management needs of research and teaching.	Don	Working with VP/CFO and the Provost a RFP and RFI were issued to investigate various product options for the Research and Compliance Initiative (RACI). No product was comprehensive enough to meet the unique needs of the institution. As a result, the RACI group is investigating the open source initiative, Quali, for research and grants administration. We have implemented an interim solution for Conflict of Interest.	

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2.4	Collaborate with the Library to begin implementing the Academic Information Space (AIS) that will enable users to work with digital resources from digital libraries, the web, and their own collections, in an integrated environment that provides powerful tools for analysis, collaboration, and delivery.	Tim (and Martha Sites)	Two groups in the Library, Digitization Services of Scholarly Resources and Inter-library Loan Services, have now been enabled to transfer their scanning output into a user's My Workspace in Collab. A third group, in the Health Sciences Library, will be enabled soon. In collaboration with Library staff and Fedora Commons, we have designed and initiated the next phase of the AIS which is a project to create a Scholar's Repository and Institutional Repository based on Fedora.	
2.5	Continue to improve the performance and reliability of ISIS while collaborating with stakeholders on implementation of the Student System Project.	Don	Additional capabilities were implemented such as priority registration and QuikPay@UVA to improve performance and service. ITC continues to work with SSP to provide data and meta-data related to ISIS.	
2.6	Continue to adapt infrastructure to support the wide range of mobile devices.	Mike	We deployed a University-wide Exchange service which provides a high level of integration of email and calendar services with portable devices such as BlackBerrys, Windows Mobile, and Palm devices. We continue an ongoing process of redesigning Web sites and online applications to work smoothly with Web browsers on portable devices.	
2.7	Continuously assess the adequacy and reliability of core infrastructure services and take steps to increase reliability of central services where appropriate.	Jim	We are triaging the services most in need of reliability improvements and updating them as part of the Infrastructure Hardening project. See Section 4.5.	
2.8	In collaboration with the Library and academic and administrative partners from across Grounds, begin planning and designing the next generation storage architecture.	Jim	We have started to look into the possibilities for a lower cost middle tier of storage based on open source software and hardware solutions such as low cost RAID arrays and possibly ATA over Ethernet. We expect to have examined some prototype scenarios by the end of calendar 2008.	
2.9	Make increasing use of computer virtualization technologies in order to improve reliability of services and decrease power and cooling requirements. Develop a pricing model that facilitates and encourages the use of this technology for departmental applications.	Jim	A pricing model has been developed and approved for virtualized server services. Along with expansion of our virtualized Windows-based environment, we have also started to use this environment to host Linux-based services. We expect to harden the VMWare infrastructure across two physical locations during FY2008-09 to provide greater reliability for virtualized services.	
3.	Major Theme/Issue: Alignment			
	Objective: Create new and more effective ways for faculty, students, and staff to participate as partners in creating the vision and ambition for technology-enabled teaching, learning, and research at U.Va.			
3.1	Engage other VPs, deans, key members of faculty, and technologists in discussions of the challenges we face and the formation of plans to address those challenges.	James	Challenges have been discussed during presentations to the President's Cabinet, funding meetings with all the Vice Presidents, meetings with the Faculty Senate's Executive Council and the whole Faculty Senate, and work on the academic infrastructure portion of the COFU report. Working closely with the Dean's office in the School of Medicine and with the new CTO in Health Sciences.	
3.2	Work with the Provost to ensure that our IT plans are aligned with the academic mission of the University and that appropriate consideration is given to needs and resources.	James	The VP CIO started reporting to the Provost on January 1, 2008 and became a member of the Provost's Leadership Team. He served as Co-Chair of the COFU Academic Infrastructure subcommittee.	

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3.3	Establish programs that encourage and nurture experimentation with technology (e.g. student grant programs)	James	1.) We are working with the Provost office to launch a student grant program that focuses on the intersection between technology and scholarship. 2.) Students who participate in the new Computational Science 'tiger teams' (helping researchers use advanced computational techniques) have an opportunity to use new computational intensive tools.	
3.4	Diversify IT funding models to ensure that financial incentives align with desired outcomes.	James, Mike, Susie	We are on track to migrate to an FTE-based access fee for communication services for Agency 207. We will begin looking at the model's fit with Agency 209 needs in the year ahead.	
3.5	Evaluate and enhance classroom technology support to ensure that it is available and functional when needed.	Terry	Co-owners of classroom support have formed a community and are meeting to address issues of common interest.	
3.6	Continue to work with the Library and schools to grow the New Horizons faculty/staff/student enrichment conference and related activities.	Terry (and Martha Sites)	The second annual New Horizons conference was held May 19-23. It was a success with about 100 people attending the keynote addresses and lunch round-table discussions. The smaller sessions were also successful with 20-30 participants each.	
3.7	Coordinate and consolidate the Microsoft Exchange services already offered across Grounds, and invest in the infrastructure to meet increase in demand for those services.	Jim	A central Microsoft Exchange service available to all Agency 207 users has been deployed. We expect to migrate Madison Hall users to the new Exchange cluster sometime over the next few months. The work planned for FY 2008-09 will include hardening Exchange so that it is more fault tolerant and operational from two physical locations on-grounds.	
3.8	Examine our essential services with respect to commoditization and, where there are not compelling reasons for sourcing internally, be prepared to source externally in order to redirect our staff and potential savings to new services that have greater strategic value.	James, Mike	We are outsourcing student and alumni email, and evaluating hosting services for our Help Desk functions.	
3.9	Develop expertise in sourcing discipline including service specification, contract negotiation, and contract management in collaboration with Procurement and General Counsel.	James, Mike	We have made little progress towards this goal. The Google and Microsoft contracts for student email were atypical and thus do not contribute much generalized knowledge in this area.	
3.10	In collaboration with the VP/CFO, move the reporting line of ISDS and fully integrate them in the VP/CIO reporting line and functions.	James	On January 1, 2008 ISDS began reporting to the VP/CIO.	<i>Done</i>
3.11	Continue to leverage the new delegated authority achieved through Restructuring and to meet all related performance commitments.	Shirley	All performance commitments have been met.	
3.12	Explore and develop opportunities for external fundraising,	James (and Karin W.)	Participated in two VA2020 weekends and the National Committee on University Resources weekend meeting at Darden. Working with Bob Sweeney to explore development opportunities related to IT. Working closely with the library on development opportunities.	

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4.	Major Theme/Issue: Hardening and Securing Core			
	Objective: Ensure that the University's information technology systems and services address emerging risks of system compromise and data exposure while continuing to move the University toward its goals.			
4.1	Work with key partners across Grounds to define and implement aggressive new strategies for management of sensitive data, including examining University policies, strengthening the data stewardship role, completing security assessments and remediation for servers housing sensitive data, and reducing reliance on Social Security numbers as identifiers.	Shirley	A new university-wide SSN usage policy has been implemented and departments have identified if/why they use SSNs and developed remediation plans. University ID #s have been assigned to all students & employees and new University ID cards have been issued to all previous card holders. A second university-wide Electronic Storage of Highly Sensitive Data Policy has also been implemented, along with guidance and tools to assist individuals in complying.	
4.2	Continue building a more security risk-aware culture at the University by updating and enhancing the IT Security Risk Management program as it moves into its second cycle, conducting annual risk assessments for ITC using the program tools, and continuing enhancement of our security awareness and training program.	Shirley	University departments completed the first three-year cycle for conducting risk assessments and developing security plans. As of July 1, 2008 all allocated staff resources were in place to begin enhancements to the risk management program and to invest sufficient time on security awareness.	
4.3	Continue increasing the intrinsic security of networks and services, including the More Secure Network, deploying a wireless More Secure Network, and consolidating user password management into a single Web application.	Jim	The wireless version of the More Secure network has been deployed. Network Security hardware from Nitro Security is nearing production status and will first be used to provide additional security for the Student System Project and the More Secure Network. A Wireless LAN (WLAN) auto-setup tool that eases the complexity of configuring a secure WLAN connection has been developed and is presently in testing. The first stages on a new VPN infrastructure that enables users to access more simultaneous secure services is in production testing. More modern replacement VPN and firewall hardware is in production. The new VPN services relied on enhancements to our Directory Services infrastructure. Much of this work will reach production status by the end of the summer.	
4.4	In partnership with key IT providers on Grounds, develop and implement a large-scale stress-testing capability to ensure that production systems are robust and reliable.	Don	ITC has worked with IBM Global Services to review the commercial market for establishment of a large scale performance testing environment. We have purchased performance testing software from Hewlett Packard. We are working with IBM Global Services on installation and implementation of the performance testing software.	
4.5	Make significant progress in hardening the infrastructure. Complete half of the projects associated with our infrastructure addendum request.	James, Mike, Jim	Major storage system upgrades and hardening were completed this year including those used for electronic mail and our virtualized services. This work also included the ability to automatically replicate data between physical locations. These storage upgrades build the foundation for our hardening plans for FY2008-09 where more of our services will use the newly redundant storage to recover quickly from a variety of potential disaster scenarios. During 2007-08 key network components were replicated so that the main university web cluster is now hardened and operational from two physical locations.	

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4.6	In collaboration with the Business Operations Card Services unit, leverage the process to re-issue ID cards to all members of the university community to significantly enhance the identity proofing portion of our Identity Management processes. This enhanced process is a foundation that will enable us to complete other work to automate password resets, enable higher levels of authentication assurance for critical on-grounds applications, and prepare for emerging federal and inter-institutional applications based on federated identity management.	Jim	An Identity Proofing process that meets the specifications of NIST 800-63 was developed and deployed. This process included the creation of a new central University ID number that is being used for ID cards and SSN remediation. Students (new and returning), and most academic employees went through the Identity Proofing process over last summer-fall. We have already started Identity Proofing for the incoming class of new students. During FY 2008-09 we will work towards increasing the percentage of people at the university who have completed the whole process and set their security questions during the deployment of the next phase of NetBadge. We will also identify a long-term solution for Identity Proofing in the academic portions of the Health System.	