The Lexington ice storm of February 2009 saw the arrival of Vince Kellen, the new Chief Information Officer, at the University of Kentucky.

The first to hold this title at Kentucky, Kellen is experienced in enterprise architecture, project management offices (PMOs), quality management frameworks, major enterprise resource planning (ERP) migrations and upgrades, data warehousing and analytics, customer relationship management (CRM) technology, and IT infrastructure planning.

The formulation of the University of Kentucky’s IT Strategic Plan for 2009-2014 was one of the first tasks for Kellen and his management team to accomplish at UK.

The approach for the strategic plan began with a careful examination of the goals of the university and consideration of how IT’s contribution could best fit this strategy. To become acquainted with IT at the University of Kentucky and to obtain the best data on how UKIT is serving its most important clients, Kellen decided to ask them. Knowing that collaboration among people trying to achieve a goal is essential, Kellen met with dozens of leaders across campus. The key players were easily identified. UK HealthCare IT was a major cooperative partner, and the people in other IT positions at the university also were contributors. Likewise, UK students and their needs could not be neglected in formulating IT’s goals. Faculty and staff are most important in supporting student and research needs, and this segment of the UK population was included among the collaborators.

With 16 colleges and many other institutes and centers to be considered, Kellen initiated a procedure of having these groups participate in the assessment of IT and the formulation of its goals. Academic deans and others across the campus were requested to appoint personnel familiar with information technology in their areas. A team, named the Deans’ IT Group, agreed to assist Kellen in assessing the state of Information Technology at UK. Meeting first in mid 2009, the Deans’ IT Group divided itself into subcommittees assigned to assess five major components of the IT world and the status of each at the university:

- Academic Facilities
- Enterprise Computing
- Research Cyberinfrastructure
- Ubiquitous Technology
- Funding Model

To gain a complete picture of Information Technology at UK and where its clients wanted it to proceed with respect to UK’s goals, Kellen gave the groups carte blanche in their assessments.

Having the collaborative input of many resulted in the formulation of strategic goals for 2009-2014. Information Technology is grateful for the service of these groups and their interest in the betterment of the University of Kentucky.

The framework and organization of a 5-year roadmap, with a rolling 2-year implementation horizon
University of Kentucky Strategic Plan

Mission
The University of Kentucky is a public, land grant university dedicated to improving people’s lives through excellence in education, research and creative work, service, and health care. As Kentucky’s flagship institution, the University plays a critical leadership role by promoting diversity, inclusion, economic development, and human well-being.

Vision
The University of Kentucky will be one of the nation’s 20 best public research universities.

Values
• Integrity
• Excellence
• Mutual Respect and Human Dignity
• Diversity and Inclusion
• Academic Freedom
• Shared Governance
• Work-life Sensitivity
• Civic Engagement
• Social Responsibility

Goals
The five goals of this Strategic Plan identify the principal areas of activity in which the talents and resources of the University will be invested over the next five years.

Goal 1: Prepare Students for Leading Roles in an Innovation-driven Economy and Global Society

Goal 2: Promote Research and Creative Work to Increase the Intellectual, Social, and Economic Capital of Kentucky and the World Beyond its Borders

Goal 3: Develop the Human and Physical Resources of the University to Achieve the Institution’s Top 20 Goals

Goal 4: Promote Diversity and Inclusion

Goal 5: Improve the Quality of Life of Kentuckians through Engagement, Outreach, and Service

Information Technology Strategic Plan

Mission
Information Technology will provide innovative support for the University of Kentucky in its quest to be one of the nation’s Top 20 universities in teaching, research, healthcare, cultural enrichment, and economic development.

Vision
To deliver technology services and support at a level recognized as world-class.

Values
Excellence • Leadership • Collaboration
• Innovation • Mutual Respect • Lifelong Learning • Social Responsibility • Shared Governance

From the CIO

Like many others new to the University of Kentucky, I have noticed that the most important part of the university’s and the region’s success lies in its people. This community, with people that possess a combination of brilliance and graciousness, has the right ingredients for success. This strategic plan was assembled with the invaluable help and collaboration of many across the campus. For that we are grateful. Looking forward to the challenges ahead, this collaboration will be essential to achieve our goals.

Here and elsewhere, higher education is faced with difficult problems. The recent economic crisis is waning, and what appears ahead may be a difficult and uncertain recovery. The prospect of continually shrinking means to advance our mission is real, but educating our citizens continues to be a critical public objective. University of Kentucky leadership matters.

While current economic prospects may bring concern, the beneficial aspects of new forms of technology have never been more striking to the imagination or more impactful on society. Information technology is developing everywhere. Education and healthcare at a distance via high-speed Internet connections are now practical. Next-generation imaging technology is enabling scientists and historians to discover previously inaccessible secrets of the human body and historical artifacts thought to be too damaged to be read. Researchers are running simulations of molecules for drug design and deciphering the origins of the universe with a quantity of data and a need for computational cycles unimaginable just a decade ago. The next generation of supercomputers is coming on line in the United States at eye-popping performance levels, scale, and cost. Social networking has exploded in just a few years from being a mild amusement to now richly connecting more than 450 million people across the globe. By the end of 2010, mobile phone technology will be in the hands of about 5 billion people, roughly 70 percent of the world’s population. The availability of books, magazines, and scholarly articles via electronic readers is on an unprecedented rise.

Public policy may be changing to reflect this new reality. Governments are beginning to recognize the need to reach rural underserved areas with high-speed connections. The demand for IT in education, research, and healthcare continues to accelerate.

While the digital divide separating those who have access to educational information and those who do not may be moving in the right direction, a line needs to be erased. The exponential growth in information creates big opportunities and equally difficult problems. The complex information distribution channels now available can fragment, isolate, and confuse people, creating challenges for government and education. This explosion of information requires growth in individual information literacy and a body of authentic institutions, virtual and physical, that people can trust, learn from, and rally around.

The University of Kentucky is one such critical institution. To be not just viable but also vibrant in the coming years, we will need to leverage information technology acutely. The uncertainty and promise ahead are both unsettling and exhilarating. The University of Kentucky’s leadership is needed now more than ever. To create the future we collectively desire will require the efforts of the IT community. This plan is just one small but important step in shaping our future.

The University of Kentucky’s leadership is needed now more than ever.

Yvon Kalin, CIO
Strategic Plan for Information Technology

Introduction
The UK Information Technology Strategic Plan is an integral part of the university’s strategic plan as it undertakes to achieve the mandate of the 1997 Kentucky General Assembly to become a Top 20 public research university by the year 2020. The strategies and tactics suggested here comprise the criteria by which UKIT will measure its progress as the University of Kentucky approaches the middle portion of that time frame. These efforts guide our actions toward supplying world-class information technology service to our institution, helping it to become Top 20 and thus helping the Commonwealth of Kentucky to achieve an improved standard of living and quality of life for its citizens.

1. Help improve student success and patient outcomes
   a. Expand the adoption of social media and other Web 2.0 interaction tools in curricular and co-curricular interactions
   b. Enable a rich array of services for mobile devices for students, faculty, and staff; support mobile healthcare applications
   c. Develop tools to identify at-risk students and to support student success and retention; develop tools to improve institutional research; support healthcare analytics
   d. Improve the use of online access to course content; support growth in the creation and use of digital course content and faculty/student use of technology resources

2. Improve workstation labs and classroom facilities
   a. Increase the level of basic classroom technology; increase the number of high-end classrooms
   b. Replace older workstation labs with newer facilities encouraging collaborative or social interaction; support growth in pedagogy-specific workstation lab use
   c. Achieve 100 percent wireless network coverage in all academic buildings

3. Exploit disruptive technology for cost/benefit gain
   a. Leverage new telecommunications technology and improve the chargeback model to encourage its rapid adoption
   b. Identify opportunities to use new IT delivery models such as cloud computing and software-as-a-service
   c. Identify a UK-led IT commercialization/open source project to support the goals of the university’s strategic plan

4. Adjust research computing model to support growing research programs and utilize new technology
   a. Prepare for emerging uses of HPC and research computing in the language arts and health sciences
   b. Provide better consulting/programming services for researchers
   c. Proceed with cloud computing research pilots and programs

5. Digitize content, automate and improve processes
   a. Implement imaging technology to eliminate paper handling in enrollment, personnel, and other processes; improve business process efficiency through increased use of workflow tools and business process redesign; reduce printing usage and costs
   b. Proceed with e-book pilots and programs
   c. Provide a research and academic portfolio repository for all faculty and students; implement a web content management system to help all units with basic web publishing
   d. Provide online tools for course evaluation, program review and assessment, promotion and tenure, and accreditation
   e. Promote training and assistance for faculty, staff, and students in adopting technology as active members of the UK Learning Community

6. Use collaboration and governance for advantage
   a. Improve the governance processes to engage faculty and colleges/units in UKIT planning
   b. Engage all UKIT units in annual, joint IT plan development and plan sharing; continue collaboration with HealthCare IT, eventually merging appropriate operations
   c. Expand IT service desk performance metrics across the UKIT enterprise to achieve more effective, efficient, and measurable service delivery
   d. Work closely with the Development Office to build deeper relationships with IT suppliers and partners; continue to develop close relationships with government and industry to support UK’s efforts in technology transfer and economic development

The innovations that will come from the Strategic Plan will transform the design, deployment, and support of information technology at the university.
1. Regular assessments
   a. Workstation lab and classroom IT use and needs
   b. Instructional software use and support needs
   c. High performance computing use and needs
   d. Researcher IT use and needs
   e. UK business process portfolio and enterprise software use
   f. Wired and wireless network infrastructure

2. University and IT operations
   a. Improve the level of automated and preventive maintenance for workstations, workstation labs, and classrooms
   b. Establish an accurate and comprehensive list of learning spaces and technology inventory within them
   c. Improve timing and sequencing of major system upgrades and installs using appropriate university governance structures
   d. Continue improving the security of personal information and IT audit and compliance risk management

3. Infrastructure
   a. Move the university’s data centers to a consolidated data center off campus, at Coldstream or a suitable alternative
   b. Identify buildings with insufficient network connectivity; determine the costs of and establish a schedule for improvement
   c. Improve the backup, recovery, off-site storage, and stewardship of critical data assets, including research, faculty, and key departmental data; revisit the IT disaster recovery plan and adjust
   d. Improve email archival storage and access for personal and group productivity and compliance needs
   e. Support UK HealthCare IT’s zero-downtime initiative

4. Coordination and communication
   a. Communicate the services offered by the various IT units on campus. Clarify the interdependence between IT service providers and rationalize service delivery
   b. Improve coordination of IT asset purchases, including software, hardware, and consulting services to ensure best pricing and reduce redundant purchasing
   c. Improve the user experience with IT by using experience analysis and voice-of-the-customer research in IT system
   d. Improve the scheduling of workstation labs through a more centralized coordination process

5. Funding and governance
   a. Ensure all workstation labs and classrooms have sufficient funding for regular IT upgrades
   b. Engage the appropriate university IT committees to provide input into the level and allocation of funding in labs and classrooms
   c. Foster adoption of multimedia learning by establishing a vibrant community of faculty that can share knowledge and practices
   d. Review the student technology fee annually with input from the appropriate university committees

6. Talent management
   a. Improve staff and faculty skills in UK’s enterprise and learning management software (SAP, Blackboard, teaching IT, etc.)
   b. Invest in the leadership development of IT staff to prepare the next generation of leaders; conduct recurring joint leadership sessions with UK HealthCare
   c. Continue to improve group and individual skills in cross-departmental teamwork

Solving Problems with World-Class IT

UKIT Strategic Plan Metrics

<table>
<thead>
<tr>
<th>Goal 1</th>
<th>Help improve student success and patient outcomes</th>
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<tbody>
<tr>
<td>1.1</td>
<td>Contribute to 1% improvement in student retention</td>
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<tr>
<td>1.2</td>
<td>Expand use of online access to course content from 35% to 70%</td>
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<td>1.3</td>
<td>Grow mobile volume from 10% to 30% for all web traffic</td>
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<td>1.4</td>
<td>Enhance systems in the areas of portal, Web 2.0, student and faculty transactions: 100% of the identified features list implemented</td>
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<tr>
<th>Goal 2</th>
<th>Improve workstation labs and classroom facilities</th>
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<tbody>
<tr>
<td>2.1</td>
<td>90% of classrooms with basic technology and 40% with interactive technology</td>
</tr>
<tr>
<td>2.2</td>
<td>100% wireless coverage in academic buildings</td>
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<td>2.3</td>
<td>Modernize five student labs</td>
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<th>Goal 3</th>
<th>Exploit disruptive technology for cost/benefit gain</th>
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<tr>
<td>3.1</td>
<td>Deliver chargeback rehabilitation recommendations in 2010 and implement fully by 2012</td>
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<td>3.2</td>
<td>Double the use of VoIP by 2014</td>
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<tr>
<td>3.3</td>
<td>Expand the use of cloud services for email and enterprise computing; student email by June 2011; administrative email by 2013</td>
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<td>3.4</td>
<td>Expand desktop tele-video conferencing use to 40% by 2014</td>
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<tr>
<th>Goal 4</th>
<th>Adjust research computing model to support growing research programs and utilize new technology</th>
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<tr>
<td>4.1</td>
<td>Migrate 7% of research computing cycles to the cloud by 2014</td>
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<td>4.2</td>
<td>Provide improved faculty support for research computing by two FTEs</td>
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<th>Goal 5</th>
<th>Digitize content, automate and improve processes</th>
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<td>5.1</td>
<td>Generate $2,000,000 in recurring savings through business process improvement and automation through e-procurement, print management, virtualization of computing architectures across the enterprise and Enterprise IT contract optimization</td>
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<tr>
<td>5.2</td>
<td>Improve IT support efficiency enterprise-wide (FTE per workstation, student) by 35%; maintain student/faculty satisfaction</td>
</tr>
<tr>
<td>5.3</td>
<td>100% of systems and features identified implemented by 2014 (web content management, enterprise content management, research repository, course evals, assessment, and program review)</td>
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<th>Goal 6</th>
<th>Use collaboration and governance for advantage</th>
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<tr>
<td>6.1</td>
<td>New Administrative Regulations in place by 2010</td>
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<tr>
<td>6.2</td>
<td>ISO 20000 certification by 2012</td>
</tr>
<tr>
<td>6.3</td>
<td>Enterprise-wide IT support SLAs in place by 2014</td>
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<tr>
<td>6.4</td>
<td>100% of full-time IT staff will have learning plans aligned with skill transformations needed</td>
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<td>6.5</td>
<td>Regional, national, or international presentations of UKIT initiatives and expertise will increase by 10% annually</td>
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The goal of Top 20 status for UK demands world-class support service from UKIT. Collaboration across the enterprise to achieve the goal is essential and will include not only traditional Information Technology groups but also HealthCare IT and IT support within the colleges and centers at the university. Technology change will drive the larger cultural change, and our support and understanding of both are necessary to allow us to achieve the goal – world-class Information Technology.

Having an accurate assessment of current UKIT abilities is key to providing a roadmap for achieving improvements and to formulating a strategy for goal attainment. Assessment should be broadened not only to cover the traditional roles of information technology in our organization but also to consider how we can meet the unforeseen technology changes.

In 2009, CIO Kellen started a unique collaboration when he convened IT representatives from across the university. UKIT staff, as well as staff from various colleges and departments, provided a realistic perspective on technology at UK and contributed input for the 2009-2014 Strategic Plan. This group, called the Deans’ IT Group, was given the challenge of examining UKIT’s current status as well as strategic preparation to meet new challenges and demands from technology users.

The Deans’ IT Group looked at areas where UK’s services can be enhanced to reach UK’s Top 20 goal. Subcommittees examined:

- Academic Facilities
- Enterprise Computing
- Research Cyberinfrastructure
- Ubiquitous Technology
- Funding Structure

Each subcommittee prepared an extended document investigating its area. Documents are available for review at www.uky.edu/UKIT/deansgroup.htm.

UKIT is grateful for the many hours of investigation and reporting that went into each of the reports. Inescapable are the ideas that:

- Economic resources are increasingly stretched
- Technology must carry the torch in the march to Top 20 research status
- Technological changes will never stop

The Deans’ Group reports reflect these sentiments and represent an important effort at proposing a revised plan for achieving the best possible outcome over the period of the strategic plan.

Achieving Top 20 status poses a significant challenge for all areas of the university. IT is a critical resource to help the university meet that challenge. The demands placed on healthcare, academics, and research in the future will require IT to change its culture intelligently, to alter how the work of educating students, performing research, and improving healthcare is completed. We lay a foundation for that effort here, thanks to a collaborative effort of many.