

Task Force Report with Recommendations

Discovering and Innovating

April 8, 2008

Modified May 8, 2008

Introduction

On January 29, 2008, Chancellor Robert Hemenway convened the Initiative 2015 task forces to officially kick off the planning process and charge the task forces. The task forces met over the next two months to develop the recommendations contained in this report.

Discovering and Innovating Task Force Recommendations

Recommendation 1: Infrastructure

KU should undertake a comprehensive effort to rethink the infrastructure necessary to support world-class research and creative activities. The goal of this effort must be to lower the barriers to success in a globally interconnected world with enormous opportunities but limited resources. Enhanced success in this environment will require hard decisions in terms of what to invest in and support locally and what to acquire from the global marketplace.

Recommendation 2: Raising the Research Bar

The University of Kansas should identify and emphasize research and innovation in areas in which we have great depth, which lend themselves to multidisciplinary study, and that represent emerging opportunities. KU should then actively recruit researchers with demonstrated excellence to enhance these programs. KU should involve KUEA, the State, philanthropic foundations, and other agencies to raise funds for the support of research and scholarship, particularly through the support of new faculty positions, faculty retention, and research programs and activities. Based upon this rationale, a strategic planning process would be implemented to establish priorities, goals and objectives, design an implementation plan, and secure funding to realize this vision.

Recommendation 3: Communication

Expand public communication efforts and create novel communication forums that will continually inform the state and nation that KU is a transformative leader in discovery and innovation. Pioneering modes of communication will be utilized such as innovative internet formats and advertising enterprises. The goal is to inform and impress Kansans, U.S. and world citizens, and the international community of scholars about the exciting research and accomplishments at the University of Kansas.

Recommendation 4: Training

The University of Kansas should generate enhanced support for graduate students to make us more competitive in attracting the best and brightest junior research scholars. To further set us apart, KU should develop more innovative and multidisciplinary integrated education and research programs across the campuses.

Recommendation 5: Collaboration

KU should make major efforts to promote collaborative interdisciplinary research and creative activities involving its faculty and students. These efforts should include increased collaborations both within and between KU's campuses, with industry partners, and with other institutions around the world.

Recommendation 6: Rewards and Recognition

KU should develop a broader set of standards and metrics as the basis for recognizing, acknowledging, and rewarding faculty for discovery and innovation.

Background and Rationale of Recommendations

Discovering and Innovating Task Force

Recommendation 1: Infrastructure

Recommendation: *KU should undertake a comprehensive effort to rethink the infrastructure necessary to support world-class research and creative activities. The goal of this effort must be to lower the barriers to success in a globally interconnected world with enormous opportunities but limited resources. Enhanced success in this environment will require hard decisions in terms of what to invest in and support locally and what to acquire from the global marketplace.*

Background: Technology continues to transform the way we conduct research and scholarship and the way we interact with each other. Barriers to progress are created when transformative technologies exist but cannot be easily accessed by faculty and students. The costs and complexities of these technologies require innovative models to promote and sustain collaboration and funding across the university and with other entities throughout the world. KU should seek partnerships with other universities, government organizations, and corporations aimed at securing access to cutting edge technologies and infrastructure irrespective of where these technologies are located. In the global, networked, “flat” world that is rapidly emerging, “access” to advanced technologies by KU scholars will be more important than location in many cases, while in others the presence of state of the art facilities located on campus will remain absolutely essential. Strategic investments must also be made in the people that make these technologies function optimally.

In a world of limited resources, the analysis of costs and benefits should examine the entire business model that undergirds the university. What functions can we and should we outsource? For example, it may soon be less expensive to lease storage on the Internet than to fill warehouses with servers. Reducing the costs for some infrastructure may then free up resources that can be used to enhance our central mission of discovering and disseminating knowledge.

To maximize creative synergy, the push to create one university in symbol and substance should further accelerate. This must occur in a variety of small and large ways. For example, videoconferencing should be ubiquitous and there should be open electronic access to all KU libraries by faculty and students regardless of location. Further efforts should be made to ease travel between campuses along with efforts to create a one university calendar of events, identical business and management approaches, and shared core research services. Finally, efforts to address the chronic problem of deferred maintenance should be redoubled.

Rationale: The Task Force believes that a concerted focus on infrastructure within and across campuses is necessary to enable sustained progress given the opportunities and barriers that exist at multiple levels. This will require a thorough analysis of our current practices followed by well-informed, rational decisions about what to invest in and support internally and what to acquire from the global marketplace. The goal of the decision-making process should be to further promote internationally recognized strengths and facilitate success in emerging areas in which KU is poised to impact. We can and should embrace opportunities to enable new technologies that advance the central mission of the university.

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Recommendation 2: Raising the Research Bar

Recommendation: *The University of Kansas should identify and emphasize research and innovation in areas in which we have great depth, which lend themselves to multidisciplinary study, and that represent emerging opportunities. KU should then actively recruit researchers with demonstrated excellence to enhance these programs. KU should involve KUEA, the State, philanthropic foundations, and other agencies to raise funds for the support of research and scholarship, particularly through the support of new faculty positions, faculty retention, and research programs and activities. Based upon this rationale, a strategic planning process would be implemented to establish priorities, goals and objectives, design an implementation plan, and secure funding to realize this vision.*

Background: KU's excellence in research is based upon the body of scholars who undertake such endeavors. As such, our research excellence is founded upon the resident faculty, new faculty called to service, and the internal support provided for these individuals. In order to build such a community of scholars, KU must identify and actively recruit individuals with national and international reputations in selected fields of inquiry. It is most prudent to identify areas of excellence and build upon them while simultaneously moving into fields in which KU would be remiss to overlook. When creating a new area of research excellence, it should not be done at the expense of an existing area of strength. The goal should be to maintain continuity of excellence and to take advantage of emerging opportunities.

A concerted effort must be undertaken to identify areas of scholarship in which KU already occupies a leadership role. The existence of a bedrock community of scholars within KU's ranks and a desirability among graduate and postgraduate researchers to participate in those programs serve as ideal criteria for measuring existing strengths. Such fields should be broad and, ideally, bring together faculty from diverse academic units and centers, reflecting the multidisciplinary nature of modern research.

Concomitantly, selected new and unique fields of inquiry recognized nationally and internationally as needed or emerging areas of scholarship should be identified and new programs established. To the extent possible, new hires should be coordinated so as to bring to KU two or more scholars in a chosen area, whose programs are synergistic and will collectively elevate our existing strengths, or whose scholarship bridges intellectual gaps between already recognized programs to create a unique environment for intellectual growth and research productivity. Hiring teams of researchers will represent the most effective means of advancing research in emerging fields not already represented among KU's areas of excellence.

Funding growth in research at KU will require new and innovative means for securing external monies through aggressive fund raising from sources, such as the State, foundations, and other agencies. This is particularly critical when designing attractive start-up, salary, and research packages necessary to recruit scholars with well-established programs.

Rationale: While KU strives for excellence across its entire faculty, in order to enhance existing strengths, build ties between already strong programs, and move into new and exciting arenas of international research, KU must aggressively seek and recruit those individuals with a demonstrated track record of research excellence. Such new growth can only be achieved if the means by which funds are raised to support research are expanded and revised.

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Recommendation 3: Communication

Recommendation: *Expand public communication efforts and create novel communication forums that will continually inform the state and nation that KU is a transformative leader in discovery and innovation. Pioneering modes of communication will be utilized such as innovative internet formats and advertising enterprises. The goal is to inform and impress Kansans, U.S. and world citizens, and the international community of scholars about the exciting research and accomplishments at the University of Kansas.*

Background: KU's public communication efforts must be expanded and broadened to include a new emphasis on emerging communication modalities. Researchers and department leaders need to rely on a modern communications office that can provide appropriate attention to new research information from our faculty and communicate this to local and national media outlets. An aggressive, pro-active approach is required in today's information-overloaded environment. The University needs to take command of its own communication with the community, state, and nation. The target audience for our novel modes of communication needs to include both the lay public and scientists in Kansas, throughout the United States and the world. This can only be done by taking a focused and original approach, aimed at building excitement about KU scholarship and creative endeavors.

One approach at novel communication is to use high-impact, stunning visual effects to highlight research at popular sporting events. Exciting research undertakings can be filmed and uploaded to sites such as YouTube for Internet users to watch. Research information can also be uploaded to other sites, including iTunes and Yahoo. This information must be eye-catching to compete with the vast amount of information people filter through daily. Websites serving all KU campuses need to be modern, user-friendly, and current. Research dissemination to academic peers can be enhanced by creating web-based open publishing formats.

In order to achieve outstanding communications for the new millennium, a number of changes need to be implemented as soon as possible. We need to expand KU communication offices, making them adept in state-of-the-art communication modes that focus on research activities. An adequate internal vetting procedure will be necessary to ensure that the information KU disseminates is accurate, verifiable, and ethical. We need to aggressively expand the direct contacts between KU experts in various fields and media reporters. We need to create forums between KU faculty and government officials to inform them of research initiatives and to aggressively make researchers available for consultation. We need to train faculty to discuss research in a way that the public can appreciate. Faculty need to be encouraged and supported in their efforts to speak and write about the public importance of their work and to share this with KU communication staff on a regular basis. We need to advertise KU research activities in novel ways on the internet, TV, radio, print media, and public events (i.e. sporting events) that will engage the population in exciting research innovation at KU. We need to provide the infrastructure to develop and support state-of-the-art websites throughout the KU system. The online publication and dissemination of KU research need to be expanded and supported.

Rationale: Support from private corporations, government entities, non-profit organizations, and private citizens for research at KU is more likely to occur if these supporters are personally excited about research at KU. Building enthusiasm for KU research requires an active, aggressive, innovative and sustained approach led by a fully funded communications office that is deeply knowledgeable about discovery and innovation at KU.

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Recommendation 4: Training

Recommendation: *The University of Kansas should generate enhanced support for graduate students to make us more competitive in attracting the best and brightest junior research scholars. To further set us apart, KU should develop more innovative and multidisciplinary integrated education and research programs across the campuses.*

Background: Faculty depend on high quality graduate students to leverage and build upon their research innovation. If we as an institution are to grow in discovery and innovation, we must have mechanisms available to attract the best and the brightest graduate students. Many of KU's top competitors are offering continuous full support packages that allow faculty to recruit the best students. While TA support has been an important source of funding for many graduate students, it can limit the student's opportunities for gaining research experiences in an unencumbered fashion supporting the goal of discovery and innovation. The ability to attract highest quality graduate students will also enhance KU's ability to recruit the highest quality faculty at all levels.

Some of the most exciting research and discovery is currently being pursued at the crossroads of traditional disciplines and these areas are attracting the best and brightest students. Today's competitive graduate students are looking for a unique training experience that will eventually set them apart from their cohort on the job market. Innovative and multidisciplinary approaches to training have the potential to accomplish this goal for the student. In order to support students' individual interests and training needs in these areas, we must develop innovative and multidisciplinary education and research programs across the campuses. Students must also be exposed to the cultures of different countries and be prepared to work in an increasingly flat and interconnected world.

Barriers for students and faculty to engage in creative educational programs, such as a multidisciplinary clinical scientist MD/PhD, must be broken down so that the requirements for students to engage in and create new opportunities are not overwhelming. Funding for these multidisciplinary efforts should be generated across traditional department lines to both recruit and support these cross-cutting students.

To succeed with this type of innovative educational approach, it will be crucial to consider the unique talents and needs of entrepreneurial persons, as they are not likely to approach opportunities and problems from traditional, academic vantage points. As such, it will be important to reevaluate currently accepted standards and credentials and determine appropriate criteria to use in selecting participants and rewarding their success.

Input from outside sources, such as industry, should be sought to develop innovative educational programs. Experiential learning opportunities such as internships should be incorporated into the curriculum at the graduate as well as undergraduate levels. Opportunities for faculty to periodically engage in industry and professional experiences should also be encouraged. Support for these programs should be sought from the related industries and professions. Participation in these nontraditional experiential development activities should be encouraged, recognized and celebrated.

Rationale: Outstanding research by faculty is best leveraged and supported by outstanding graduate students. The best and brightest students are guaranteed support from many institutions. These students must be attracted to KU through enhanced opportunities such as more innovative and multidisciplinary education and research programs that will speak to students' future needs.

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Recommendation 5: Collaboration

Recommendation: *KU should make major efforts to promote collaborative interdisciplinary research and creative activities involving its faculty and students. These efforts should include increased collaborations both within and between KU's campuses, with industry partners, and with other institutions around the world.*

Background: Much of the exciting research and discovery that is currently being pursued by scholars around the world is at the intersection of traditional areas of study and inquiry. While discipline-based research is fundamental to the university's research enterprise, interdisciplinary research is an increasingly robust source of new knowledge. Indeed, it seems that the largest unsolved problems of the world are complex with solutions that will require multilevel and interdisciplinary approaches to research and discovery. To compete internationally and maintain our status as a first-rate research and teaching institution, KU should create the necessary environment to foster collaborative and interdisciplinary research and scholarship that includes the varied perspectives available from the arts, humanities, computational sciences, social sciences, natural and health sciences.

KU should take several steps to enhance collaborative and interdisciplinary scholarship. KU should aggressively promote awareness of existing research and collaborative opportunities available on all KU campuses in areas like cancer research, neuroscience, social science and policy research, and the arts and humanities. New research programs that intersect traditional areas of scholarship should be established and KU should emphasize the recruitment of collaborative and interdisciplinary faculty when possible. KU should make further investments in infrastructure, cross-unit exchanges, and faculty development activities that support a vigorous exchange of ideas among faculty and students and academic and research units.

A concerted effort should be undertaken to identify and eliminate impediments to research collaborations as well as to identify ways the institution may encourage collaboration and interdisciplinary research, such as establishing regular shuttle service between campuses, developing websites that identify and promote collaborative research opportunities, establishing grant programs to seed exciting new collaborative and interdisciplinary research ideas, establishing new shared research facilities that promote interdisciplinary research, providing automatic cross campus access to online and on-campus library resources for students and faculty, and establishing enhanced video conferencing capabilities that effectively link all campuses.

Rationale: While there continues to be a great need for discipline-based research, the Task Force believed that the nature of research and scholarship is increasingly collaborative and interdisciplinary. It follows that to remain competitive as a leading research institution KU should remove barriers that exist for interdisciplinary research, enhance existing interdisciplinary relationships, and promote new collaborations between faculty and students on all campuses.

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Recommendation 6: Rewards and Recognition

Recommendation: *KU should develop a broader set of standards and metrics as the basis for recognizing, acknowledging, and rewarding faculty for discovery and innovation.*

Background: Kansas University systems that recognize accomplishments, such as the tenure and promotion process, should be broadened to reflect changes in how cutting-edge scholarship is accomplished, supported, and disseminated. The current, one-size-fits-all, system fails to recognize the rigors and the benefits to KU associated with an array of outcomes such as patents, partnerships with private industries, and research grants from non-traditional sources.

Scholarship is sometimes more quickly translated into the public domain with invention disclosures, patents, and licenses as opposed to publishing experimental results in research journals. In addition, collaborative research may be more effective in preparing students for the next generation of interdisciplinary employment opportunities. In a funding environment where interdisciplinary and translational research is encouraged, the scholarly and creative contributions of a co-investigator in a large interdisciplinary grant may be greater than a single discipline submission as the principal investigator. Likewise, the importance of the work by the co-investigator in promoting the mission of the University may be greater than the non-collaborative project.

Our reward system also needs to accommodate changes in research funding sources. For example, in the future there may be more research dollars funding academic biomedical research originating from foundations and societies as compared with federal sources. The quality of funding sources should be examined based on the rigors of the review process, not the actual source itself. Furthermore, the faculty time invested in novel educational experiences such as organizing internships, and private industry rotations should be rewarded as they create direct links to industry and non-profit organizations.

Rationale: A flexible and adaptive system that rewards accomplishments in scholarship and creative activities will enhance KU's ability to recruit and retain the highest caliber of faculty. The goal is not to lessen the standards for tenure, promotion, and other rewards such as merit salary increases, but to adapt our criteria in ways that are appropriate to the university's mission in a world where progress often depends on collaboration across disciplines and with entities far beyond the traditional confines of academia.