



**UNIVERSITY ADMINISTRATION SUPPORT PROGRAM
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**Research Management at Kent State University (KSU) – Experience for Tbilisi
State University (TSU)
UASP Case Study**

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Management Topic: Research Management
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Introduction and Methodology

Technical progress on the world, which has resulted in fast developing area of Technology-Based Economy, requires development of components and devices with improved characteristics to meet ever-increasing demands. The engine of Technology-Based Economy is science-based technology that leads to research and development institutions. Well developed research institutions, like as research universities, are a strong basis for economical growth and sustainability. Presence of recognized research universities is very crucial; universities generates new knowledge, intellectual property and technology for creating new companies and introducing new products in the marketplace. Universities attract and produce high qualified personnel which are needed for as an educated workforce for high-tech companies, and from the other side, companies wanting proximity to university centers as prime locations for enterprises.

The success of Research University highly depends on the conducted Research Management. Flexible and productive Research Management is one of basis point of modern university. As Head of Department of Scientific Research and Development, I focused on research management in my Case Study, based on the experience of Kent State University. Methodology of Case Study consists in comparison of research administrative structure and activities (*Research Administration, financial sources for R&D and its distribution, cooperation of universities and private enterprises, implementation of research results into practice and industry*) between Kent State University and Tbilisi State University, as well as includes concrete recommendations for problem solutions and ways for next development.

The Proposed Case Study was constructed using online and published materials, as well as using meetings and interviews with representatives of different administrative units and personnel, especially:

- Dr. Robert G. Frank, Senior Vice President for academic Affairs and Provost;
- Dr. Timothy J. L. Chandler, Senior Associate Provost;
- Dr. Sonia Alemagno, Interim Vice President for Research, Professor of Health Policy and Management;
- Dr. Satyendra Kumar, Associate Vice President for Research, Professor of Physics;
- Dr. Gregory B. Wilson, Associate Vice President, University Relations, Economic Development and Strategic Partnerships;
- Dr. Oleg D. Lavrentovich, Director, Liquid Crystal Institute, Professor of Chemical Physics;
- Dr. Mary Anne P. Saunders, Executive Director, Office of International Affairs;

- Dr. Ted R. McKown, II, Associate Director, Office of International Affairs;
- Lori A. Burchard, Director, Sponsored Programs, Research and Sponsored Programs;
- Richard J. Day, Executive Director, Corporate and Foundation Relations;
- Dr. Mary Ann Parris Stephens, Dean and Professor, Graduate Studies;
- Dr. Daniel F. Mahony, Dean and Professor, College of Education, Health and Human Services;
- Dr. John L. West, Professor of Chemistry, Liquid Crystal Institute;
- Paulette Washko, Manager, Research Compliance, Communications and Initiatives;
- Tom Bialke, Manager, Research Safety & Compliance;
- Vanessa J. Earp, Assistant Professor, Liaison Librarian for Education Libraries and Media Services;

Separately should be noted that Dr. Linda F. Robertson, Director of Gerald H. Read Center for International and Intercultural Education, did all her best for me as from viewpoint of working condition and cultural program, as well as for planning of necessary meetings.

It was my pleasure to participate in the Professional Advisory Board Meeting – “Entrepreneurism and International Education,” which was held at October 14-15 and organized by Gerald H. Read Center for International and Intercultural Education. This meeting allowed me to participate in the open discussion about Research and Education management aimed to suppose concrete recommendations for future work. I think accumulated experience during my stay in KSU and conducted meetings with colleagues will be very helpful for me, as well as for TSU to become leader Research University in the region.

KSU and TSU – Brief Overview

Since its founding as a teacher-training school in 1910, Kent State University (KSU) has become an engine for economic, cultural and workforce development in the region and beyond as one of the premiere Ohio colleges. This Ohio university also has earned acclaim for applying new knowledge to address the needs of the communities it serves and society as a whole through a vast array of continuing education courses and much more.

KSU now ranks the second (after the Ohio State University, one of the largest universities in the country) largest public university in the state of Ohio, moving up a spot from the number three position it had previously held. Increased enrollment at Kent State’s regional campuses as well as rising enrollment of international students and students among the AALANA (African American, Latino American and Native American) population have helped propel the university to now become the second largest in Ohio. For the fall 2010 semester, KSU reported 41,365 students, a 7.56 percent

increase in enrollment from the prior year and the highest recorded enrollment in the university's 100-year history.

KSU's eight-campus system, among the largest regional systems in the country, serves both the development of a true living/learning approach at the Kent Campus and the regional needs on seven other campuses throughout Northeast Ohio. Today, KSU has become an engine for economic, cultural and workforce development locally and internationally as one of the premiere Ohio universities.

Kent State is ranked among the nation's 77 public research universities demonstrating high-research activity by the Carnegie Foundation for the Advancement of Teaching. In addition to Kent State's enrollment growth, the university has recently received recognition from local, national and international organizations. *Times Higher Education*, a London-based higher education magazine has ranked Kent State as one of the top 200 universities in the world in its 2010-2011 World University Rankings. Kent State earned a coveted spot in the first-tier list of Best National Universities, appearing in the September issue of U.S. News & World Report in its 2011 edition of Best Colleges. The Liquid Crystal Institute, for example, conducts research that translates into technologies used globally in laptops, calculators and flat screen televisions. In 2010, the Centennial Celebration will honor Kent State University's 100 years of guiding students, providing vital resources to Ohio and producing graduates and research that have the power to change communities.

Since foundation in 1918, Ivane Javakhishvili Tbilisi State University (TSU), the first university in Georgia and throughout Caucasus illustrates scientific development in the country. For during the decades, the world renowned scientific-research schools have been established on the bases of TSU led by prominent Georgian scholars- Ivane Javakhishvili, Akaki Shanidze, Giorgi Tsereteli, Elefter Andronikashvili, Niko Muskhelishvili, Ivane Beritashvili and many others. As a result, TSU has become the world famous research center in many fields of study.

Many research projects are being carried out at TSU and the university closely collaborates with world leading universities and scientific centers. It is noteworthy the participation of the TSU physicists in ATLAS project carried out implemented at the European Organization for Nuclear Research (CERN, Geneva); And also in project FAIR (Facility for Antiproton and Ion Research) that is deemed to be conducted in Germany, the city of Darmstadt research center. It should be mentioned that ATLAS is the most wide scale expensive project in the history of humankind that ATLAS will learn about the basic forces that have shaped our Universe since the beginning of time and that will determine its fate. The aim of the Georgia's leading research university is to compete with the world famous scientific-

research institutes and centers in the world. It strives to constantly improve its capacity as in research as well as in education.

The TSU researchers publish over 800 scientific publications annually (Thomson base, 2009 data) and more than 100 scientific projects are carried out, and about more than 50 doctoral theses.

KSU Research Administration and Management - Division of Research and Sponsored Programs

Kent State's research excellence is embodied through its cutting-edge facilities, researchers, resources and partnerships. Graduate degree and undergraduate degree seekers along with faculty, staff, corporate sponsors, investors and legislators work together to create and pursue research programs that deliver data, products and programs that become part of local and world community.

The Research Management in KSU is carried out by the Division of **Research and Sponsored Programs**, headed by the Vice President of Research. The Division helps faculty and staff secure external funding to support their research and instructional and public service projects; External funding totaled over \$36,4 million in external funding this past year. Major institutes that operate under the aegis of Research and Sponsored Programs include the Liquid Crystal Institute and the Institute for the Study and Prevention of Violence. All other institutes and centers are inside of colleges. The external grant - the main source of financing for institutes, is paired with approximately 46% indirect costs are used for research and infrastructure development. Research management is fully decentralized and faculties have autonomy to carry out investigations. KSU has 9 colleges engaged in research:

College of Architecture and Environmental Design, College of the Arts, College of Arts and Sciences, College of Business Administration, College of Communication and Information, College of Education, Health and Human Services, College of Nursing, College of Public Health, College of Technology.

Notable that professor, who makes research and takes grant, can conduct fewer lectures in week than professor who only teaches. Such type of regulation varies from faculty to faculty, but very important for stimulation of research and useful for my home university.

Division of **Research and Sponsored Programs** of KSU also oversees Sponsored Programs Office, Office of Technology Transfer and Economic Development, and Office of Research Safety and Compliance. The Sponsored Programs Office provides all-round assistance to Principal Investigators in

preparation of projects for grant support and full maintenance during the projects performance; the Office of Technology Transfer and Economic Development facilitate commercial application of university-related research through patenting, licensing, promotion of start-up companies and outreach; The Office of Research Safety & Compliance provides legal assistance and support and has oversight of the following: Institutional Review Board (Research involving human participants); Institutional Animal Care and Use (Research involving animals); Office of Research Safety (Laboratory, Radiation, Biological).

The office of Graduate Studies oversees all university graduate programs, coordinates recruitment, oversees admission procedures, and maintains graduate retention activities.

My Department – Department of Scientific **Research and Development (R&D)** is a responsible unit for Research Management at TSU. Department helps faculty and staff secure external funding to support their research, promotes, supports and administers quality research activity at TSU. The Department is responsible for: Supporting of scientific researches by supplying the scientists with convenient conditions, providing them with the modern scientific information and encouraging domestic as well as international cooperation; integration of scientific research and education; administration of research grants; negotiating and administering research contracts; collection and reporting of research performance data; development of research related policy and advice to Senior Management; promotion and supporting of science commercialization; provision of support for new research management initiatives. Department of Scientific **R&D** controls and coordinates the research activity of its sub-units at the Faculties. TSU has 6 faculties engaged in research: *Faculty of Exact and Natural Sciences, Faculty of Humanities, Faculty of Medicine, Faculty of Law, Faculty of Economics and Business, Faculty of Social and Political Sciences.*

The main source for financing of research is external grants, with 8-10% indirect costs. Major institutes that operate under the aegis of Department of Scientific **R&D** include Institute of High Energy Physics and I. Vekua Institute of applied Mathematics. These institutes have basic financing from TSU for stimulation of research. Beside this, now we have a very difficult process at TSU, process of integration of 12 former academic institutes inside university – under management of Department of Scientific **R&D**. At this moment these institutes have basic financing, which in future will be significantly reduced, because finance should be conducted by submitted projects. Taking into account above mentioned, experience obtained from KSU is very important for me and for my home university. The future strategy for my department is a stimulation institutes with high scientific level and with potential of science commercialization. All other institutes should be integrated inside faculties. Also,

indirect costs should be increased, that will allow supporting new scientific groups with interesting projects and will help developing of scientific infrastructure.

One of notable activity of my department is *popularization of the science and scientific career prestige* for the young generations. On the basis of Department of Scientific **R&D** the successful project “**Junior University**” was established and implemented. Leading scientists and academic personnel of TSU deliver popular lectures for public school generation.

KSU Research Council

University Research Council (URC) is a motivating force behind research, scholarship, and creative activity. It is the Council’s charge to foster and stimulate research efforts and creative projects by providing financial support for the "extra" expenses of artistic and scholarly work. Applicants can receive from \$100 to \$2500 (\$3500 for projects involving undergraduate students) for materials, supplies, travel expenses, conferences, publication costs, and guest speakers. This academic year, the URC has already allocated \$50,350 of its \$85,000 budget for projects submitted at various faculties.

The URC promotes undergraduate student participation in research activities in two ways. Faculty advisors can receive awards of up to \$3500 for projects that include undergraduates. Students are not just washing the dishes and cleaning the labs. They are steeped in the process, working with their professors to contribute to their discipline’s body of knowledge. In addition, undergraduate students working under the guidance of a faculty advisor can receive awards of up to \$500 to fund research, creative or scholarly activities through the Undergraduate Research Scholars Program. By offering undergraduates the opportunity to actively organize, design, and conduct research, the URC assists too in student retention. The combination of in-class work with practical application enriches a student’s experience and encourages continued work in graduate school. It is a head start that prepares students for advanced performance in their studies.

Enthusiastic undergraduate students are not the only focus of the URC. The Council collaborates with the University Teaching Council and the Faculty Professional Development Center to assist new faculty in their teaching and scholarship. In addition, Distinguished Scholar Awards are presented annually to three KSU faculty members at the Celebration of Scholarship held in May. The event brings faculty together to learn about the university’s diverse scholarly projects.

In order to encourage such meritorious scholarship, the URC hosts an annual competition for summer and Academic Year research appointments. This year’s accepted proposals, which extend from theatre to biology, reflect the Council’s interest in the progress of all disciplines.

Existence of Research Council very crucial and experience of KSU will helpful for TSU in future. Such university unit can be used to implement the programs for professional growth, education and support of young scientists in collaboration with world-leading universities and scientific centers based on various types international relations (small internal grants; scientific exchanges involving students, aspirants and teachers; collaborative scientific researches; presentation of joint grants and fellowships; invitation of leading specialists for conduction of the lectures and seminars; organization of different type university, republic–level Olympiads and international conferences).

KSU Sponsored Programs Office

The Sponsored Programs Office is under Division of **Research and Sponsored Programs** and assists the Kent State University community in identifying and acquiring funding from outside sources for research, instructional, and public service programs. The office also authorizes and oversees administration of all sponsored projects, grants, contracts, and other agreements from government agencies, private industry, and non-profit funding agencies. The Sponsored Programs Office:

- Identifies external funding opportunities and facilitates interdisciplinary collaborations;
- Reviews proposals for compliance with application guidelines and university policies and authorizes submission;
- Conducts workshops on various grant related topics;
- Reviews, negotiates and accepts grants and contracts on behalf of KSU;
- Reviews and approves subcontracts for inter-institutional collaboration on awards;
- Approves requests for pre-award costs, budget revisions, no-cost extensions and other grant modifications;
- Advises on all aspects of proposal development and award administration;
- Administers the Ohio Board of Regents Research Incentive funding program for the University.

For ***Identifying Faculty and Staff Interests***, Sponsored Programs Office available to meet with faculty and staff to discuss research or other project interests and to suggest potential funding sources to support those interests. As they begin their university tenure, new faculty and staff should schedule an appointment with a member of the Sponsored Programs Office, who can search for relevant funding information.

Funding Opportunity Information. Sponsored Programs Office monitors a wide range of publications advertising funding opportunities and distributes notices to faculty that match their interests. They also

house a reference library containing information on the federal and non-federal programs that provide opportunities for support. Applications for these programs are also available in the office.

Electronic Newsletters: - Sponsored Programs Office Additionally produces electronic newsletters and distributes them to broadly targeted listservs. Newsletter categories are the Sciences, Social Sciences, Chemistry, Computer Science, Education, Business, Public Health and Arts & Humanities. Faculty and staff may request to be added to any of these listservs.

Community of Science (COS) Funding Opportunities Database™ - The Funding Opportunities Database™ currently contains over 25,000 records representing over \$33 billion in funding. Individuals can create and save up to five searches in the COS Funding Alert, specifying any combination of keywords and other search criteria.

COS E-mail Funding Alert matches funding opportunities with researchers' interests listed in the Expertise Database®, notifying these researchers weekly of available opportunities. Users can also specify what information they would like their alert e-mails to include, establish default search criteria that apply to each search topic, view archives of their weekly alert results, manage their COS keyword collection, and turn the alert e-mail feature on and off.

On the figures 1-2 Proposal Submission Activities are shown; Fund request distribution by College and fund request distribution by Activity Type.

FUNDS REQUESTED				
COLLEGE	Instruction	Public Service	Research	Subtotal
College of Arts & Sciences	3,175,754	1,715,100	94,044,658	\$ 98,935,512
College of Business Administration	-	-	673,086	\$ 673,086
College of Communication and Information	2,156,627	432,425	1,098,444	\$ 3,687,496
College of Architecture and Environmental Design	-	100,000	2,559,547	\$ 2,659,547
College of Education, Health, and Human Services	18,426,321	8,751,538	14,942,279	\$ 42,120,138
College of the Arts	18,480	-	-	\$ 18,480
College of Nursing	2,393,616	24,115	5,119,646	\$ 7,537,377
College of Public Health	754,854	4,585,047	18,083,686	\$ 23,423,587
Regional Campuses	2,373,689	8,401,953	4,976,048	\$ 15,751,690
College of Technology	-	199,980	7,456,833	\$ 7,656,813
Other Areas	4,243,585	2,484,388	18,550,716	\$ 25,278,689
<i>Totals by Activity Type:</i>	\$ 3 3,542,926	\$ 26,694,546	\$ 167,504,943	\$ 227,742,415
			<i>*Less Duplication</i>	11,253,954
			GRAND TOTAL	\$ 216,488,461

Figure 1.

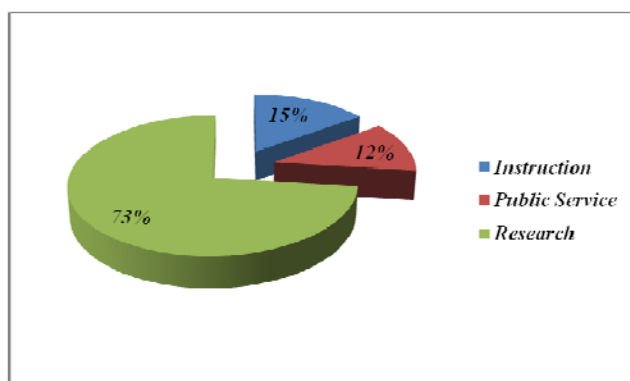


Figure 2.

In the Appendix 1 presented the distribution of grant&contract dollars awarded to KSU fiscal year 2009-10, by the unit, purpose, number of awards, dollar amount and percent.

Appendix 2 shows the summary of research funding from 2005-2010 by grant funding sources, their distribution by area and federal agency.

Such type of analysis very important for Research Management at the university, this allows to make

recommendations for future strategy and development. My department also publishes the annual report for research activities at TSU.

Proposal Assistance. Sponsored Programs Office provides technical advice to faculty and staff who are preparing proposals and assist with guideline interpretation, budget preparation, and adherence to university policies and to federal regulations. As agencies issue new regulations or revise old ones, they keep the University community informed, monitoring the proposals for the required adjustments. When time permits, Sponsored Programs Office also reviews and edits proposal drafts.

Application Forms: – Sponsored Programs office can help faculty and staff locate application packages and forms. Moreover, faculty and staff who wish to respond to a program announcement may request the application packet from the Sponsored Programs office. These forms are also available on agency websites, or increasingly, available on grants.gov for federal funding opportunities.

Proposal Preparation Guide is a resource for faculty and staff who are unfamiliar with the proposal preparation process. This guide is generic, serving as a reference. It is a general model of a proposal's essential components and should not be considered a substitute for agency guidelines. **Proposal Submission Process Flowchart** is a visual representation of the proposal submission process at KSU. **Institutional Fact Sheet** contains general information often required on a proposal's cover page. The Division of **Research and Sponsored Programs** updates this sheet periodically.

Proposal Transmittal Form is required for every proposal before submission. It must contain the appropriate signatures and must be submitted to the Sponsored Programs Office along with the proposal. The transmittal form contains the information essential for review (e.g., budget request, university cost share commitment) by the chair/director/appropriate dean. The appropriate chair/director/dean (to whom each Kent State employee involved in a proposed project reports) must authorize submission of the proposal. In the case of proposals submitted by regional campus faculty/staff, the regional campus dean and the Executive Dean for Regional Campuses are the proper

signatories. Regardless of the campus from which the proposal originates, the transmittal form is then reviewed for compliance and signed off in the Sponsored Programs Office. Beginning in 2008, all proposals designated as 'research' on the transmittal form must have a Research Discipline Designation Form on file as well.

Conflict of Interest Screening Form: - A Conflict of Interest Screening Form must be submitted to the Sponsored Programs Office with each proposal. A form is required for each investigator as well as any co-principal investigators, key personnel and other persons providing intellectual contributions on the proposed project. In completing the form, the individuals must disclose to the designated university official a list of significant financial interests (as well as a list of the financial interests of his/her spouse and dependent children) that could compromise the objectivity of the proposed activity.

PHS Assurance Form - As of May 10, 2006, the signature of the Principal Investigator is no longer required as part of a submitted application to NIH. Instead, an internal form will be kept on file by Sponsored Programs, documenting required assurances.

Pubmed Central Form - As of April 2008, NIH requires submission of all publications that are the result of agency-funded activities to be submitted to their publication clearinghouse, Pubmed Central. This internal form will be kept on file by Sponsored Programs acknowledging the PI's understanding of and intention to comply with this policy.

Award Administration. When the university receives a grant or contract award, Sponsored Programs staff review proposed agreements associated with the award and negotiates terms and conditions which are both acceptable to the principal investigator and, at the same time, satisfy university policy concerns. Upon accepting the agreement, Sponsored Programs staff:

- Assist the principal investigator in managing the award, and help to clarify agency regulations and policies;
- Advise on such matters as allowable costs, subcontracts, or revisions; and
- Help resolve administrative problems that arise during the course of the project.

To insure that they understand their responsibilities in managing their project, first-time investigators should meet with Sponsored Programs staff as early as possible.

Project Initiation and Project Administration. Upon acceptance of a grant or contract, Sponsored Programs staff request a new account from the Grants Accounting Department within the Division of Business and Finance. Throughout the life of the project, Sponsored Programs and Grants Accountants work together to properly manage the award.

Sponsored Programs staff prepares a spending plan for the principal investigator that translates the approved budget into codes from the University's accounting system. A Grant Budget Summary report showing the charges against a particular grant fund for a selected time period is available to run from Flashline > "My Action Items" in the Finance Reports box. The principal investigator can view

additional expenditure detail on the Financial Affairs website by entering the grant account number and selecting the month. Here the principal investigator can view the account statement, report of transactions, position control statement, and labor distribution report.

Post-Award Management and Responsibilities. Principal Investigators are responsible for the day-to-day direction and administration of their project and must comply with all University and agency policies and regulations. Sponsored Programs staff is available to advise and assist with all situations relating to the funded project including interpretation of University policy, agency regulations, and allowability of costs and/or activities. Sponsored Programs staff has expertise in the areas of cost principles, agency regulations, and compliance issues.

Principal investigators are also responsible for monitoring all expenditures charged to the grant account and insuring that those charged expenditures are allowable. To ensure the effective allocation of resources, Sponsored Programs staff can assist in interpreting Month End Financial Reports and, as well, in projecting expenditures to the end of the grant period.

Reporting Requirements. All funding agencies require submission of project technical and financial reports.

Technical Reports – Most agencies require an annual progress report and a final technical report. Principal investigators are responsible for preparing these reports. Sponsored Programs staff will transmit them to the funding agency on the investigator's behalf. As part of the requisite official grant record, the principal investigator must file a copy of all reports with Sponsored Programs.

Financial Reports – The grant accountant assigned to the project prepares the financial report based on the expenditures recorded in the account. Principal investigators have the opportunity to review the financial report prior to submission to the agency.

Project Closeout – After the project's termination date, no additional expenditures may be incurred. Funding agencies normally require the final technical and financial report ninety days after the project ends. The ninety-day period permits sufficient time for expenditures incurred before the end of the project to be liquidated and gives the principal investigator time to prepare the technical report. Patent disclosure, equipment disposition, and other required reports may be submitted after the termination date or with the final report. Grant/contract records are subject to annual audit; they must be retained for a minimum of three years from the date the final reports are filed.

Most of above mentioned activities annually performed by My Department – Department of Scientific **R&D** of TSU, especially assistance to TSU community in identifying and acquiring funding from outside sources for research and collaboration. Also, our function to making administration of all research projects, grants, other agreements from different funding agencies; conducting workshops on various grant related topics; review, negotiate and accept grants and contracts on behalf of TSU. We

review proposals for compliance with application guidelines and university policies to give authorize for submission.

KSU Office of Technology Transfer and Economic Development

The Office of Technology Transfer and Economic Development (OTTED) operate as part of the Division of **Research and Sponsored Programs**. Working in concert with the Office of Sponsored Programs and research entities of the university, OTTED carries out its mission of technology licensing, outreach coordination and economic development.

Research, technology commercialization and economic development are important to businesses and to society. KSU is an active participant and has a multitude of research programs, scores of patents and a variety of technology licenses that advance business and industry. Kent State has also facilitated several start-up companies and has assisted many businesses with improved products and processes. The OTTED serves as a resource for those wishing to collaborate with KSU. The office facilitates:

- Technology partnerships;
- Research collaborations;
- Entrepreneurship;
- Start-up companies;
- Economic development opportunities.

Key research and technology areas include:

- Advanced materials/liquid crystals/polymers;
- Biomedical sciences/biotechnology;
- Information technologies/software/linguistics;
- ISPV & Summa Collaborative.

A fundamental element of the university's mission is to enhance the quality of life of Ohio residents and the world through the results of its research and creative activity. A portion of its faculty-led research and its other creative activities result in intellectual property, including patentable inventions or copyrightable materials. The primary mission of the OTTED is to seek protection of the university's intellectual property and to make these results available to the public by actively seeking business partners, collaborators and licensees. A key to this mission is to seek ways to connect Kent with external groups and organizations through the outreach initiative, especially working with economic development organizations throughout the northeast Ohio region. This office also provides education, resources and assistance to Kent State University's faculty, staff and students in all matters related to identifying and protecting intellectual property.

Kent State researchers translate new ideas into product, prototypes and services with commercial potential every day. Technologies invented at Kent State are patented or copyrighted and licensed to existing or start-up companies for commercialization.

Kent State was recognized by the state of Ohio for its many university-related start-up ventures and also received an award for the "Best Technology Transfer Program" in 2001.

Available Technologies. Kent State's OTTED is the one-stop resource for licensing Kent State 's intellectual property and developing technology-based partnerships. Kent State innovations available for licensing include:

- Advanced materials;
- Bioscience and chemical/biochemical advances;
- Information technologies.

Economic development. The OTTED serves as a comprehensive resource for those interested in entrepreneurial ventures, providing leads to:

- Funding/venture capital
- Business management
- Space
- Service providers
- Technology
- Rapid prototyping
- Workforce training

Economic development is stimulated through effective technology transfer, which results today is: 27 licenses, \$3.2 Million income, 109 disclosures in 7 year, 17 university-related start-up companies, and well developed Centennial Research Park. This in turn leads to new products, new processes, new businesses, new jobs and even new industries.

How Does Technology Transfer Work? This is a process from science to product (technology), with following steps:

- Faculty, post-doctorates and, to a lesser extent, graduate students come up with an invention.
- The inventor(s) contact OTTED, and OTTED works with them to understand the invention.
- The inventor(s) complete an Invention Disclosure Form and Invention Abstract.
- A patent board, comprised of faculty, inventors, technology transfer experts and legal advisors, determines the inventions in which the university will invest. (It can cost \$5,000-\$10,000 to file a patent application, most of which are legal expenses.)
- OTTED conducts research to see if any similar inventions have been patented and how the technology may potentially fit into the marketplace.

- OTTED conducts market research and obtains leads from inventors about companies that may be interested in the technology.
- This often results in a licensing agreement, which allows a company to use the university's research. The company, in return, pays royalties to the university. Royalties are used to cover expenses, reward inventors and invest in further research. (The average length of time between signing a license agreement to use technology and getting the product to the market is six years.)

At KSU, strong community and corporate partnerships create one of the strongest research efforts in any Ohio university setting. Legislators depend on Kent State to develop technologies needed by our communities while corporations trust the university to present viable and reliable investment and development opportunities as well as commercial application through patenting, licensing and promotion of start-up companies and outreach. KSU partners: State of Ohio/Third Frontier; NorTech; JumpStart; Entrepreneurs EDGE; Local cities (Kent, Hudson, etc.); AlphaMicron; Crystal Diagnostics; FlexMatters; Summa Foundation.

My Department also periodically performs selection of research projects with the potential for commercialization. Results of selection are placed on the web. But activities and creativeness of technology transfer office is very important for Research University and creation of technology transfer office inside of Department of Scientific **R&D** is a one of main goals of TSU.

KSU Office of Research Safety & Compliance

The Office of Research Safety & Compliance (ORSC), part of the Division of Research and Sponsored Programs, has oversight of the following:

- Institutional Review Board (Research involving human participants)
- Institutional Animal Care and Use (Research involving animals)
- Office of Research Safety (Laboratory, Radiation, Biological)

Institutional Review Board (IRB). In order to protect the rights, well-being, and personal privacy of individuals, to assure a favorable climate for the conduct of scientific inquiry, and to protect the interests of the university, policies and procedures have been established for the conduct of investigations and educational projects involving human subjects. The Kent State University Institutional Review Board was established to implement these policies and procedures. All research using humans as participants conducted by KSU faculty, staff and students must be reviewed and approved by the KSU IRB in accordance with University Policy and Federal Regulations.

Institutional Animal Care and Use Committee (IACUC). The KSU Animal Care and Use Committee was established to fulfill its regulatory requirement to review all research, teaching and testing activities involving live vertebrate animals. It is the responsibility of the IACUC to review and approve, require modifications, or withhold approval of all activities related to the care and use of animals.

The ORSC assists University research units in maintaining regulatory compliance and identifying and managing biological, chemical, and radiological hazards in order to reduce the risk of harm to employees, students, property, and the environment. ORSC develops and oversees the implementation of comprehensive safety programs to facilitate the safe use of biological, chemical and radiological materials and to comply with regulations, but each research unit is responsible for implementing its own safety and compliance activities.

Laboratory Safety Training - Anyone conducting research or working in a laboratory that may be exposed to chemicals must take the OSHA Laboratory Safety Training class which is held during the first month of each semester. People beginning mid semester must make arrangements with ORSC to take the class.

Radiation Safety Training - Anyone that intends to use radioactive materials on campus must take and successfully pass the Radiation Safety Course, which is given each Fall Semester. People beginning other semesters or mid Fall Semester must contact the Radiation Safety Officer, to determine eligibility to utilize radioactive materials until the course can be completed.

Research safety unit is important for Research University. There are many physical, chemical and biological laboratories, as well as institutes at my home university, so experience and materials from KSU will very useful for me and for TSU for creation of safety regulations.

Liquid Crystal Institute – World-Known Example of Science Commercialization

The Glenn H. Brown Liquid Crystal Institute (LCI) is a center for basic and applied liquid crystal research and home to the Graduate Chemical Physics Interdisciplinary Program. Institute achievements include the discovery and characterization of new liquid crystalline phases and the invention of new types of liquid crystal devices. Active research collaborations with scientific centers and industrial partners in the United States and abroad provide exciting opportunities for applying today's cutting-edge research to tomorrow's technologies.

Established in 1965, the LCI has become one of the premier academic liquid crystal research centers in the world. This expertise was recognized by the National Science Foundation in 1990 when the LCI was designated as the headquarters of the Science & Technology Center for Advanced Liquid Crystalline Optical Materials (ALCOM).

Among LCI's major contributions was the invention of the nematic liquid crystal twist cell display, better known as the LCD Developed by Mr. James Fergason. While he was with LCI in 1967, the technology was patented in the United States in 1971 that has changed the face of the modern wristwatch and paved the way for liquid crystal readouts on calculators and numerous other devices. Today, LCI is at the forefront of research in liquid crystalline optical materials and has a strong foundation in basic research coupled with innovative application programs, especially:

- Hundreds of scientific publications;
- More than thirty patents and several licenses to industrial partners who are rapidly incorporates the technology in displays;
- An Industrial Partnership Program consisting of over thirty companies across the nation
- Collaborations with institutions throughout the nation and the world.

Annually LCI receives approximately \$5 million external funding for research proposals. LCI scientists always are in process to identify new areas of liquid crystal research and applications in communications and computing, as well as ways to expand applications to include biological systems and medicine. At LCI of KSU research promises to not only enrich students, but to enrich region, state and nation, both intellectually and economically.

Centennial Research Park – Accelerate Growth of High-Tech Businesses

Making way for a new era in focused, 21st-century research and economic development, Kent State unveiled a leading-edge research park in a former bus garage on the Kent Campus.

The research park will provide space and support for specialized companies to thrive and grow near the university and its partners. It will also provide research, internship and employment opportunities for Kent State graduate and undergraduate students. Faculty researchers from the Liquid Crystal Institute and other disciplines will be available for collaborative projects as well.

In addition, Kent State will use its entrepreneurial assets to aid business growth through its centers that specialize in technology transfer, small business development, business innovation and minority-owned businesses.

The anchor tenant of Kent State's Centennial Research Park will be the FLEXMatters Accelerator, a broad, public-private high-technology collaboration, designed to produce a new generation of advanced materials and promote regional economic development in Northeast Ohio.

The FLEXMatters Accelerator will work with local companies to develop and produce devices that are typically rigid on flexible polymer substrates. This collaboration will lead to production of liquid crystal-based flexible displays, eyewear, electronics and other devices. FLEXMatters Accelerator, the first step for the Centennial Research Park, arose from a partnership between KSU and NorTech, a technology-based economic development organization for Northeast Ohio that has been a catalyst in building high-tech regional collaboration.

KSU ranks fifth in the world and second nationwide among universities in the number of start-up companies formed per \$1 million in research expenditures. The concept of an "accelerator," rather than an incubator, came about because the facility and the Research Park will bring together researchers from universities and new and established companies to "accelerate" the region's ability to commercialize discoveries.

The initial phase of this project is funded by a portion of the Ohio Third Frontier Research Commercialization Project for the Flexible Liquid Crystal Film Manufacturing Alliance. Led by Kent Displays, the alliance joins AlphaMicron, Akron Polymer Systems and Sheldahl with Kent State and the University of Akron to develop and produce flexible liquid crystal displays and eyewear. The alliance is supported by an additional \$8 million in matching funds from the collaborators. All of the collaborators share the goal of developing locally the materials and manufacturing processes for the next generation of electronic optical devices.

Conclusions and Outline

Performed research at KSU in frame of IREX UASP, that allowed me take opportunity to familiarize with experience of Research Administration and Management (analysis of materials and documents provided by KSU, conducted meetings and interviews with representatives of different administrative units and personnel, with staff of Division of Research and Sponsored Programs, participation in the Professional Advisory Board Meeting – "Entrepreneurism and International Education"), leads to following conclusions:

1. The Research Management in KSU is carried out by the Division of **Research and Sponsored Programs**, headed by the Vice President of Research. The Division helps faculty and staff secure

external funding to support their research and instructional and public service projects; Division of **Research and Sponsored Programs** of KSU also oversees Sponsored Programs Office, office of Technology Transfer and Economic Development, and Office of Research Safety and Compliance. The Sponsored Programs Office provides all-round assistance to Principal Investigators in preparation of projects for grant support and full maintenance during the projects performance; the office of Technology Transfer and Economic Development facilitate commercial application of university-related research through patenting, licensing, promotion of start-up companies and outreach; the Office of Research Safety & Compliance provides legal assistance and support and has oversight of the following: Institutional Review Board (Research involving human participants); Institutional Animal Care and Use (Research involving animals); Office of Research Safety (Laboratory, Radiation, Biological). Major institutes that operate under the aegis of **Research and Sponsored Programs** include the Liquid Crystal Institute and the Institute for the Study and Prevention of Violence. All other institutes and centers are inside of colleges. The external grant - the main source of financing for institutes, with approximately 46% indirect costs, that are used for research and infrastructure development. Research management is fully decentralized and faculties have autonomy to carry out investigations. An internal regulation of research also varies versus faculties, taking into account faculty specifics, and this is very good. Only one suggestion from my point of view is that faculties should make reporting to Vice President of Research about scientific activities.

2. KSU Research Administration methodologically and practically supports of projects preparation, organizes interaction with local, state, and federal government, as well as provides technical support for the project fulfillment by the university research groups. Research Administration, namely University Research Council stimulates research efforts and creative projects by providing financial support for advanced artistic and scholarly works. These so-called internal grants are very crucial, that are given to young researchers and small research groups, which perform promising studies, but have not enough experience for obtaining external funds. Besides, the University Research Council promotes undergraduate student participation in research activities. It is a head start that prepares students for advanced performance in their studies.
3. Separately should be noted Community Of Science (COS) - the leading global resource for hard-to-find information critical to scientific research and other projects across all disciplines. COS is a source of valuable information, that allows scientists spend less precious time and money searching for the necessary information, leaving more time and money for own projects. The COS Funding Opportunities Database currently contains over 25,000 records representing over \$33 billion in funding. Individuals can create and save up to five searches in the COS Funding Alert, specifying any combination of keywords and other search criteria. COS E-mail Funding Alert matches funding

opportunities with researchers' interests listed in the Expertise Database, notifying these researchers weekly of available opportunities. Users can also specify what information they would like their alert e-mails to include, establish default search criteria that apply to each search topic, view archives of their weekly alert results, manage their COS keyword collection, and turn the alert e-mail feature on and off.

4. Research Administration sets an important accent to support generation of intellectual property that can lead to new products and processes, creates new companies (start-up companies) and research parks. Thus, KSU researchers translate new ideas into product, prototypes and services with commercial potential; technologies are patented or copyrighted and licensed to existing or start-up companies for commercialization. At present, 17 university-related start-up companies are functioning. An important stage of KSU research and economic development has become a newly created Centennial Research Park which will provide space and support for specialized companies to thrive and grow near the university and its other partners. By providing the location in which researches and companies operate in close proximity, Research Park creates an environment that fosters collaboration and innovation and promotes the development, transfer and commercialization of technology. Important and world-known example is the Liquid Crystal Institute - a center for basic and applied liquid crystal research and home to the Graduate Chemical Physics Interdisciplinary Program. Institute achievements include the discovery and characterization of new liquid crystalline phases and the invention of new types of liquid crystal devices. Started from elaboration of liquid crystal displays (LCDs), LCI staff is working to identify new areas of liquid crystal research and applications in communications and computing, as well as ways to expand applications to include biological systems and medicine. LCI collaborates with industries, both domestic and international, such as Samsung, Korea, as well as with local liquid crystal companies in Northeast Ohio.

Summarizing above mentioned following concrete recommendations can be formulated for my home university, to improve research management and productiveness of research:

- Future development of effective fund-raising, using different extramural sources for research initiatives, projects and innovations; Support to implement the joint research projects in collaboration with world-leading universities and scientific centers;
- Creation of Technology Transfer Office based on KSU experience, to facilitate commercial application of university-related research through patenting, licensing, promotion of start-up companies and outreach;

- Increasing of internal financial and material-technical support for applied research projects; creation of internal fund to support young researchers and small research groups, which perform promising studies, but have not enough experience for obtaining external funds;
- Creation of TSU Research Portal (On the basis of our Department under my leadership we already thought to create of unique Georgian Research Portal and some examples were discussed and investigated such as Estonian Research Portal); **I'm going to prepare proposal about creation of TSU Research Portal in the framework of a future project under the support of IREX.** Research Portal will improve the visibility of our research and the accessibility of our software. I think that scientific community as well as companies will profit from this, which, in turn, will provide new opportunities for international collaboration (COS is a very good example for this). The scientific portal will provide all relevant information in Georgian and English language. The portal will combine all information about scientists of TSU, their CVs, papers and abstracts of research projects. TSU Research Portal will be a strong basis to create unique Georgian Research Portal that will promote science in the county and abroad.

Acknowledgements

First of all my deep and special thanks to my host advisor Dr. Linda F. Robertson, Director of Gerald H. Read Center for International and Intercultural Education, who did all his best for me as from viewpoint of working condition and cultural program, as well as for planning of necessary meetings. She is very nice person, and we will continue collaboration in future.

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Special thanks to representatives of different administrative units and personnel whom I met. Those meetings and interviews about research management at KSU were helpful and productive.

I'm grateful to IREX-program which gave me this best opportunity to work at Kent State University and take really good experience, I would like express deep thanks to Darrell Kendall and Christina Jarymowycz, for conducting and managing of UASP - really nice and productive program, and who helped me during program to achieve goals.

**RESEARCH AND SPONSORED PROGRAMS
GRANT & CONTRACT DOLLARS AWARDED TO KENT STATE UNIVERSITY
FISCAL YEAR 2009-10
BY UNIT, PURPOSE, NUMBER OF AWARDS, DOLLAR AMOUNT AND PERCENT**

	-----Research-----			-----Instruction-----			-----Public Service-----			-----Total-----		
	#	\$	%	#	\$	%	#	\$	%	#	\$	%
ARCHITECTURE & ENVIRONMENTAL DESIGN	-	-	--	-	-	--	-	-	--	-	-	-
ARTS	-	-	- 1.00	36,045	0.57%		3.00	21,663	0.23%	4.00	57,708	0.16%
Office of the Dean	-	-	-	-	-	-	1.00	2,695	0.03%	1.00	2,695	0.01%
Art	-	-	-	-	-	-	-	-	-	-	-	-
Fashion Design & Merchandising	-	-	-	1.00	36,045	0.57%	-	-	-	1.00	36,045	0.10%
Museum	-	-	-	-	-	-	1.00	9,256	0.10%	1.00	9,256	0.03%
Music	-	-	-	-	-	-	-	-	-	-	-	-
Theatre & Dance	-	-	-	-	-	-	1.00	9,712	0.11%	1.00	9,712	0.03%
ARTS & SCIENCES	128.01	14,943,604	71.66%	7.00	2,618,195	41.63%	8.50	1,002,468	10.85%	143.51	18,564,267	51.02%
Office of the Dean	1.00	48,500	0.23%	-	-	-	-	-	-	1.00	48,500	0.13%
Anthropology	7.00	511,698	2.45%	-	-	-	-	-	-	7.00	511,698	1.41%
* Biological Sciences	27.77	3,246,021	15.57%	1.03	2,017,540	32.08%	-	-	-	28.80	5,263,561	14.47%
Biomedical Sciences	-	-	-	-	-	-	-	-	-	-	-	-
* Chemical Physics	17.65	2,154,773	10.33%	-	-	-	-	-	-	17.65	2,154,773	5.92%
* Chemistry	13.71	1,067,880	5.12%	0.34	90,498	1.44%	-	-	-	14.05	1,158,378	3.18%
Computer Science	8.00	525,625	2.52%	1.00	4,700	0.07%	-	-	-	9.00	530,325	1.46%
* English	2.00	2,375	0.01%	-	-	-	2.50	42,928	0.46%	4.50	45,303	0.12%
Geography	1.00	50,000	0.24%	-	-	-	-	-	-	1.00	50,000	0.14%
Geology	3.00	426,385	2.04%	-	-	-	-	-	-	3.00	426,385	1.17%
History	-	-	-	-	-	-	-	-	-	-	-	-
Justice Studies	-	-	-	-	-	-	-	-	-	-	-	-
* Mathematical Sciences	1.83	155,363	0.74%	1.00	142,892	2.27%	-	-	-	2.83	298,255	0.82%
Modern & Classical Language Studies	-	-	-	3.00	241,559	3.84%	-	-	-	3.00	241,559	0.66%
Pan-African Studies	-	-	-	-	-	-	-	-	-	-	-	-
Philosophy	-	-	-	-	-	-	-	-	-	-	-	-
* Physics	15.10	2,514,143	12.06%	0.63	121,006	1.92%	-	-	-	15.73	2,635,149	7.24%
Political Science	5.00	255,878	1.23%	-	-	-	6.00	959,540	10.38%	11.00	1,215,418	3.34%
* Psychology	19.95	3,885,114	18.63%	-	-	-	-	-	-	19.95	3,885,114	10.68%
Sociology	5.00	99,849	0.48%	-	-	-	-	-	-	5.00	99,849	0.27%

* Includes multi-disciplinary grants reported (as prorated) among multiple departments.
= Number of awards (prorated among departments where applicable)

	-----Research-----			-----Instruction-----			-----Public Service-----			-----Total-----		
	#	\$	%	#	\$	%	#	\$	%	#	\$	%
BUSINESS ADMINISTRATION	2.00	72,025	0.35%	-	-	-	-	-	-	2.00	72,025	0.20%
Accounting	-	-	-	-	-	-	-	-	-	-	-	-
Economics	2.00	72,025	0.35%	-	-	-	-	-	-	2.00	72,025	0.20%
Finance	-	-	-	-	-	-	-	-	-	-	-	-
Graduate School of Management	-	-	-	-	-	-	-	-	-	-	-	-
Management & Information Systems	-	-	-	-	-	-	-	-	-	-	-	-
Marketing	-	-	-	-	-	-	-	-	-	-	-	-
COMMUNICATION & INFORMATION	2.00	34,161	0.16%	2.00	133,500	2.12%	1.50	19,925	0.22%	5.50	187,586	0.52%
* Dean's Office	-	-	-	-	-	-	0.50	7,500	0.08%	0.50	7,500	0.02%
Communication Studies	2.00	34,161	0.16%	-	-	-	-	-	-	2.00	34,161	0.09%
Journalism & Mass Communication	-	-	-	1.00	130,000	2.07%	1.00	12,425	0.13%	2.00	142,425	0.39%
Library & Information Science	-	-	-	-	-	-	-	-	-	-	-	-
Visual Communication Design	-	-	-	1.00	3,500	0.06%	-	-	-	1.00	3,500	0.01%
EDUCATION, HEALTH, & HUMAN SERVICES	16.00	2,050,879	9.83%	12.20	1,545,942	24.58%	15.00	1,429,321	15.47%	43.20	5,026,142	13.81%
Office of the Dean	-	-	-	-	-	-	1.00	20,000	0.22%	1.00	20,000	0.05%
Center for International & Intercultural Ed.	-	-	-	1.00	159,799	2.54%	1.00	15,000	0.16%	2.00	174,799	0.48%
* Foundations, Leadership & Administration	4.50	271,388	1.30%	0.50	50,000	0.80%	-	-	-	5.00	321,388	0.88%
* Health Sciences	2.00	180,857	0.87%	0.50	99,640	1.58%	-	-	-	2.50	280,497	0.77%
* Lifespan Development & Educational Sciences	7.50	1,476,134	7.08%	4.50	799,209	12.71%	2.00	80,526	0.87%	14.00	2,355,869	6.47%
Research & Evaluation Bureau	2.00	122,500	0.59%	-	-	-	-	-	-	2.00	122,500	0.34%
* Teaching, Learning & Curriculum Studies	-	-	-	5.70	437,294	6.95%	11.00	1,313,795	14.22%	16.70	1,751,089	4.81%
* NURSING	2.85	262,834	1.26%	2.00	56,933	0.91%	1.00	24,115	0.26%	5.85	343,882	0.95%
PUBLIC HEALTH	19.80	1,536,274	7.37%	0.30	827,016	13.15%	23.00	1,054,990	11.42%	43.10	3,418,280	9.39%
* Biostatistics/Epidemiology/Environmental Health	0.60	13,077	0.06%	-	-	-	-	-	-	0.60	13,077	0.04%
* Social & Behavioral Sci./Health Policy Mgt.	1.00	1,000	0.01%	0.30	827,016	13.15%	1.00	34,991	0.38%	2.30	863,007	2.37%
* Institute Study/Prevention Violence	18.20	1,522,197	7.30%	-	-	-	22.00	1,019,999	11.04%	40.20	2,542,196	6.99%
REGIONAL CAMPUSES	1.36	134,317	0.64%	4.00	296,072	4.71%	45.00	1,699,232	18.39%	50.36	2,129,621	5.85%
Office of the Executive Dean	-	-	-	-	-	-	5.00	310,306	3.36%	5.00	310,306	0.85%
Ashtabula	-	-	-	-	-	-	10.00	51,425	0.56%	10.00	51,425	0.14%
East Liverpool	-	-	-	-	-	-	2.00	38,500	0.42%	2.00	38,500	0.11%
Geauga	-	-	-	-	-	-	6.00	37,125	0.40%	6.00	37,125	0.10%
* Salem	1.36	134,317	0.64%	-	-	-	-	-	-	1.36	134,317	0.37%
* Stark	-	-	-	3.50	243,036	3.86%	6.00	523,366	5.66%	9.50	766,402	2.11%
Trumbull	-	-	-	-	-	-	7.00	44,450	0.48%	7.00	44,450	0.12%
* Tuscarawas	-	-	-	0.50	53,036	0.84%	9.00	694,060	7.51%	9.50	747,096	2.05%

	-----Research-----			-----Instruction-----			-----Public Service-----			-----Total-----		
	#	\$	%	#	\$	%	#	\$	%	#	\$	%
TECHNOLOGY	2.00	17,912	0.09%	-	-	-	3.00	119,980	1.30%	5.00	137,892	0.38%
BUSINESS & FINANCE	-	-	-	-	-	-	-	-	-	-	-	-
Transportation Services/Airport	-	-	-	-	-	-	-	-	-	-	-	-
Campus Environment & Operations	-	-	-	-	-	-	-	-	-	-	-	-
ENROLL. MGMNT. & STUDENT AFFAIRS	0.40	8,718	0.04%	-	-	-	1.00	86,322	0.93%	1.40	95,040	0.26%
Campus Life	-	-	-	-	-	-	-	-	-	-	-	-
Recreational Services	-	-	-	-	-	-	-	-	-	-	-	-
Student Accessibility Services	-	-	-	-	-	-	1.00	86,322	0.93%	1.00	86,322	0.24%
* University Health Services	0.40	8,718	0.04%	-	-	-	-	-	-	0.40	8,718	0.02%
HUMAN RESOURCES	-	-	-	-	-	-	-	-	-	-	-	-
INFORMATION SERVICES	-	-	-	-	-	-	-	-	-	-	-	-
PROVOST'S OFFICE	-	-	-	1.00	23,500	0.37%	4.00	1,517,640	16.42%	5.00	1,541,140	4.24%
Office of the Provost	-	-	-	-	-	-	1.00	10,500	0.11%	1.00	10,500	0.03%
Office of International Affairs	-	-	-	-	-	-	3.00	1,507,140	16.31%	3.00	1,507,140	4.14%
Faculty & Professional Development Center	-	-	-	1.00	23,500	0.37%	-	-	-	1.00	23,500	0.06%
RESEARCH AND SPONSORED PROGRAMS	8.25	1,792,988	8.60%	2.00	237,327	3.77%	-	-	-	10.25	2,030,315	5.58%
* Liquid Crystal Institute	8.25	1,792,988	8.60%	-	-	-	-	-	-	8.25	1,792,988	4.93%
Research & Sponsored Programs	-	-	-	2.00	237,327	3.77%	-	-	-	2.00	237,327	0.65%
UNDERGRADUATE STUDIES	-	-	-	1.50	514,299	8.18%	3.00	971,561	10.51%	4.50	1,485,860	4.08%
* Undergraduate Studies	-	-	-	0.50	49,580	0.79%	3.00	971,561	10.51%	3.50	1,021,141	2.81%
Academic Success Center	-	-	-	1.00	464,719	7.39%	-	-	-	1.00	464,719	1.28%
UNIVERSITY LIBRARIES	-	-	-	-	-	-	1.00	60,300	0.65%	1.00	60,300	0.17%
UNIVERSITY PRESS	-	-	-	-	-	-	1.00	137,674	1.49%	1.00	137,674	0.38%
UNIVERSITY RELATIONS	0.33	626	0.00%	-	-	-	10.00	1,095,986	11.86%	10.33	1,096,612	3.01%
* University Relations	0.33	626	0.01%	-	-	-	2.00	420,000	4.54%	2.33	420,626	1.16%
WKSU	-	-	-	-	-	-	8.00	675,986	7.31%	8.00	675,986	1.86%
GRAND TOTAL	183.00	20,854,338	57.32%	33.00	6,288,829	17.28%	120.00	9,241,177	25.40%	336.00	36,384,344	100.00%

SUMMARY OF FUNDING

2005 - 2010

KSU

Appendix 2

	<u>2009-10</u>		<u>2008-09</u>		<u>2007-08</u>		<u>2006-07</u>		<u>2005-06</u>	
Dollars Awarded	\$36,384,344		\$46,323,361		\$32,425,410		\$32,629,145		\$26,618,553	
Grants/contracts received	336		429		392		407		456	
Average grant	108,287		107,980		82,718		80,170		58,374	
Type of project										
Research	\$20,854,338	57.3%	\$31,803,999	68.7%	\$18,444,358	56.9%	\$19,611,871	60.1%	\$14,777,603	55.5%
Instruction	6,288,829	17.3%	4,890,954	10.6%	5,344,256	16.5%	5,668,617	17.4%	5,582,692	21.0%
Public Service	9,241,177	25.4%	9,628,408	20.8%	8,636,796	26.6%	7,348,657	22.5%	6,258,258	23.5%
Federal Total	\$26,869,106	73.9%	\$21,620,056	46.7%	\$21,010,896	64.8%	\$24,276,768	74.4%	\$18,673,171	70.2%
Education	6,054,802		6,346,991		5,969,319		5,310,317		5,600,960	
NIH	5,059,225		4,901,294		4,673,639		5,945,441		2,967,510	
NSF	7,990,229		3,756,253		4,401,286		6,181,935		4,366,161	
IMLS	71,960		11,764		643,007		908,524		327,016	
Defense	1,442,508		1,647,632		1,958,239		1,758,529		1,178,924	
Justice	396,767		100,000		298,224		576,448		500,269	
NASA	4,987		15,013		0		30,000		89,940	
Energy	2,013,859		215,749		976,094		778,472		613,839	
Other Federal	3,834,769		4,625,360		2,091,088		2,787,102		3,028,552	
State Total	\$3,601,713	9.9%	\$19,784,691	42.7%	\$7,200,644	22.2%	\$5,557,192	17.0%	\$5,188,418	19.5%
Board of Regents	1,040,733		2,953,347		3,473,056		3,262,828		2,594,911	
Education	727,148		384,336		347,912		667,192		1,390,234	
Development	1,330,971		15,822,429		1,517,048		952,773		537,299	
Other State	502,861		624,579		1,862,628		674,399		665,974	
Nonprofit Institutions	\$4,987,825	13.7%	\$4,458,674	9.6%	\$3,098,037	9.6%	\$1,738,447	5.3%	\$2,149,727	8.1%
Private Foundations	1,672,667		2,362,800		1,257,869		1,067,645		1,591,662	
Associations & Other	2,717,818		1,464,961		1,292,135		667,604		522,745	
Local Govt, Schools	597,340		630,913		548,033		3,198		35,320	
Business and Industry	\$925,700	2.5%	\$459,940	1.0%	\$1,115,833	3.4%	\$1,056,738	3.2%	\$607,237	2.3%
Project directors/Co-directors										
Total	209		213		221		214		184	

7/30/2010