

**Arizona University System
Technology and Research Initiative Fund (TRIF)**

**Proposition 301 Business Plan,
The University of Arizona**

**Access to Higher Learning:
The Online Content and Infrastructure Development Plan
(OCIDP)**

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Online Content and Infrastructure Development Plan

EXECUTIVE SUMMARY

Both the Arizona Partnership for the New Economy and the Governor's Task Force on Higher Education have recognized the critical importance of expanding education opportunities for the economic betterment of individuals and the improvement of Arizona's economy. The passage of Proposition 301 reflects growing consensus of opinion that high quality education at all levels, extended as broadly and deeply as possible, is a critical strategic investment for the state. The Online Content and Infrastructure Development Plan (OCIDP) will leverage Prop 301 investment to accomplish these public interests through activities complementary to the Arizona Regents University initiative, including development of online courses and programs but also addressing more fundamental requirements such as digital library development and technology infrastructure improvements.

Nationwide, a large majority of students enrolled in online courses are also enrolled for campus-based courses. The demand for these courses is not driven by distance from campuses, but by other obstacles to attending conventional classes. Arizona's heavily urbanized population has ready access to excellent universities, and the statewide system of community colleges puts site-based education within commuting distance of most rural areas as well. Additionally, the emergence of Arizona Regents University as a broker between and among institutions has made it as convenient as possible for students to take advantage of offerings from several different high-quality institutions. This expansion of online educational opportunity makes higher education more attractive and more feasible for citizens who face any obstacle to attending classes (time, distance, disability, family responsibility, etc.).

The *demand* for continuing education is greatest where population is most concentrated, but the *value* of new educational opportunity is most dramatic where population is least concentrated and site-based education least available. For this reason, as online opportunities expand, special attention must be paid to the delivery of electronic courses to rural areas, especially those that lack strong telecommunications infrastructure.

The University seeks \$5M over five years to support the development of online content and infrastructure. Preparatory to (1) a continuous program of Course and Program Development, three crucial investments will be made in infrastructure required for all UA programs: (2) establishment of a Distance Learning Support Team, (3) creation of Online Library Services for Distance Education, and (4) creation of a High Speed Link to Sierra Vista (UA South and Fort Huachuca).

Course and Program Development – Working with a variety of external groups, and often with ASU and NAU, academic departments and colleges at UA will develop new online courses and programs targeted at place-bound citizens of the state. These programs will be balanced between undergraduate and graduate/professional degree programs and between rural and urban constituencies. Academic programs selected for support under this initiative will address significant statewide needs, including workforce needs, and will build on the University's research strength and reputation for excellence. Some such programs will dovetail with the Arizona Regents University initiative; many will have benefits for workforce development.

Distance Learning Support Team – The Distance Learning Support Team will be employed to support development and implementation of tools and materials necessary for the expansion of effective distance education in the state of Arizona. The team as a whole will be available for assignment to specific academic projects and distance learning initiatives brought forward by departments and colleges. The team will work collaboratively with faculty and staff from a variety of units to meet the goals of departmental and grant-funded projects that expand distance education opportunities for across the state.

Online Library Services for Distance Learning – OCIDP proposes that the UA Library System provide document delivery services to distance users including faculty and students. This

expanding population of distance learners and educators is presently under-served. In order to support this growing population it is necessary to provide access similar to that available to on-campus students and faculty for completing research and course assignments. Additionally, an online reference section will be created to provide electronic references where possible.

High Speed Link to Sierra Vista – To assure that electronic courses are accessible away from campus, the UA must provide high-bandwidth connectivity to service areas with deficient connectivity. At present, one of UA's primary service areas, Southeast Arizona, has inadequate connectivity to support state-of-the-art distance education technologies. A preliminary plan approved by ABOR (March 2001) involved construction of a SONET radio link providing OC-3 capacity between UA Main Campus and Fort Huachuca. Subsequent analysis has shown that significant savings could be made without significant loss of function by shifting to leased optical fiber DS-3 land lines, and this plan reflects a corresponding change in technical design and projected investments. While substantial up-front investment must still be made in computer equipment, these up-front investments no longer include building or installation of freestanding equipment. All of the savings resulting from this change will revert to support of the project support team and course development efforts.

OCIDP's three infrastructure components will allow the UA to create a viable distance-learning program aligned with responsibility for Southeast Arizona and with its land grant mission of statewide educational outreach. Through OCIDP, distance learning can be made attractive to many individuals within Arizona who would not otherwise be able to benefit from our public investments in higher education. Through these paired investments in infrastructure and content, the great socio-economic benefits of increased education levels can be extended ever more broadly.

Online Content and Infrastructure Development Plan

TABLE OF CONTENTS

1. Core Vision/Product Description
 - 1.1. Brief Overview of Industry/Area Addressed by Initiative
 - 1.2. Mission/Goals/Values/Vision of College, University, and Department Responsible
 - 1.3. Products or Services Provided by the Project
 - 1.4. Positioning
 - 1.5. Competitive Advantage
2. The Market
 - 2.1. Choices Available to Potential Students
 - 2.2. Market Size and Trends
 - 2.3. Competition
 - 2.4. Suppliers to Programs
 - 2.5. Alternatives for Students
 - 2.6. Estimated Sales
3. Operational Strategies
 - 3.1. Development and Production
 - 3.1.1. Development Status
 - 3.1.2. Production Process
 - 3.1.3. Cost of Development
 - 3.1.4. Labor Requirements
 - 3.1.5. Expenses and Capital Requirements
 - 3.2. Marketing and Promotion
 - 3.2.1. Strategy
 - 3.2.2. Promotion Mix
 - 3.2.3. Advertising and Promotion Methods
 - 3.3. Project Management
 - 3.3.1. Organizational Chart and Description
 - 3.3.2. Advisory Board and Oversight
 - 3.3.3. Support Services
 - 3.4. Risks and Plans to Overcome Risks
 - 3.4.1. Legal Risks/Means to Minimize Risks
 - 3.4.2. Regulatory Problems/Means to Minimize Risks
 - 3.4.3. Political Risks/Means to Minimize Risks
 - 3.4.4. Business Risks/Means to Minimize Risks
 - 3.4.5. Competitive Risks/Means to Minimize Risks
 - 3.5. Sustainability
 - 3.5.1. Anticipated Funding Sources for Ongoing Support
 - 3.5.2. Timeline for Transition from TRIF Support
4. Goals/Metrics/Outcomes
 - 4.1. Specific, Realistic, and Measurable Goals
 - 4.1.1. ROI
 - 4.1.2. Technology Transfer
 - 4.1.3. Companies Relocating
 - 4.1.4. Work Force Contributions
 - 4.1.5. Specific Curriculum Innovations
 - 4.1.6. Partnerships/Collaborations
 - 4.1.7. Other
 - 4.2. Timeline For Achievement of Goals
 - 4.3. Early Proof of Performance

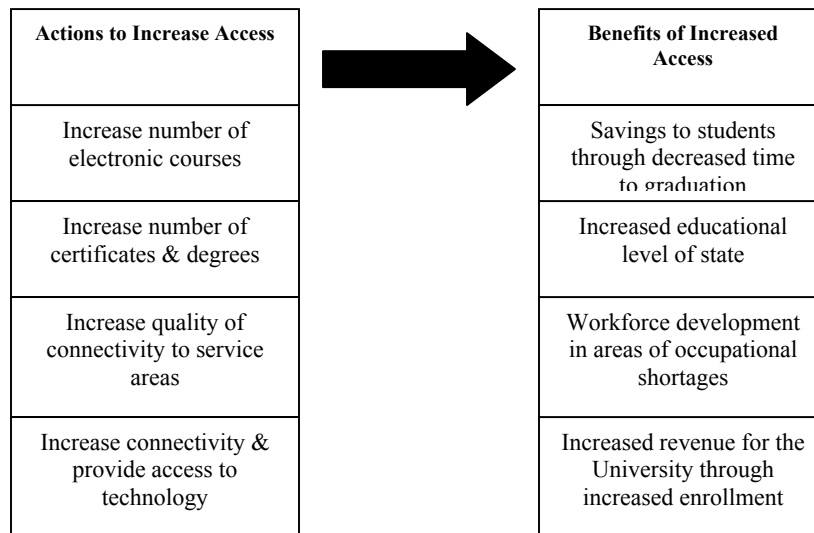
- 4.3.1. Implementation Goals for First Three Years
 - 4.3.2. Special Efforts to Produce Rapid Results
- 5. Pro Forma Financials
 - 5.1. Cash Flow Statement [not included, will be included when developed]
 - 5.2. Income Statement [not included, will be included when developed]
 - 5.3. Detailed Funding Request, Including Sources

Content and Infrastructure Development Plan

SECTION 1 – CORE VISION/ PRODUCT DESCRIPTION

1.1 Brief Overview of Industry/Area Addressed by Initiative

Access to higher education is a complex mix of availability, affordability, and applicability. Assuring access to university education requires expanding the total capacity of the university system (availability), reducing economic barriers to participation (affordability), and targeting more effectively those areas of study most likely to equip citizens for success in the New Economy (applicability). OCIDP will achieve this mix through specifically identified, designed, and marketed distance learning offerings and through associated improvements in delivery media. Actions intended to increase access and the resulting benefits are summarized in the diagram below:



A series of programs or program concentrations including a nursing PhD program and semi-conductor manufacturing certificate program will be developed sequentially, with development support consisting of temporary academic staff supplements and significant technical support awarded temporarily to various departments and colleges. The fields chosen for development will shift over time but for the first five years are expected to address known education and workforce needs, notably in engineering and technology, healthcare, and business.

1.2 Mission/Goals/Values/Vision of College, University, and Department Responsible

Mission - Create online educational opportunity for place bound adults by steadily expanding the number of courses and programs that can be delivered electronically, and take responsibility for assuring that the benefit of these investments can be realized by UA's primary geographic service area by improving telecommunications infrastructure between the UA and southeast Arizona.

Goals - The goal of this initiative is to increase the overall educational level of the State of Arizona by making higher education more accessible to those facing barriers of time, place, disability, culture, career, family obligation, or other circumstances.

1.3 Products or Services Provided by the Project

Products and services provided by the University to improve access to higher education include development of: (1) online courses and programs; (2) distance learning technical support services; (3) online library and reference services; and (4) high speed connectivity within Southeast Arizona (serving UA South and Fort Huachuca).

(1) Online Courses and Programs

Normally, academic programs will be funded for two- to three-year development cycles, with new initiatives identified yearly in areas of statewide need. With one exception, all of the initial projects are aligned with areas of need identified in independent reports such as the Board-commissioned Technology-Delivered Education Market Demand Study (1998) or the Governor’s Task Force on Higher Education (2000). The exception (Masters in American Indian Studies) has a strong economic rationale and high potential for contribution to other UA priorities such as increasing diversity of the faculty and the student body. Academic programs named as targets in the initial TRIF proposals to ABOR included the following:

- Online Nursing PhD program and Health Informatics certificate program
- Courses to complement Tri-University M.Eng. (e.g., Semi-Conductor Manufacturing Certificate sequence)
- UA South New Economy Major Concentrations
- Communication/Information Science Major
- General Business Major
- Masters in American Indian Studies

Beyond infrastructure investments described below, course and program development costs are almost entirely personnel costs, such as summer salaries for faculty and temporary technical staff.

(2) Distance Learning Support Team

- The Distance Learning Support Team will support development and implementation of tools and materials necessary for the expansion of effective distance education in the State of Arizona. The team will develop and facilitate academic projects and distance learning initiatives brought forward by departments and colleges and work collaboratively with faculty and staff from a variety of units to meet the goals of departmental and grant-funded projects that expand distance education opportunities for the state.
- Immediate recruitment efforts target 9-10 positions to create initial distance learning programs and curriculum. The Distance Learning Support Team will be a permanent addition to the UA community and will facilitate the maintenance of distance learning programs and aid in the creation of new programs. The core team will consist of the following positions:

Position	Pay Grade/ Hours	Responsibilities
Applications Systems Analyst, Senior	43/ 40 Hours	Support the development of tools and materials to be used in a distance learning environment
Assessment and Instructional Design Specialist (2)	Not Available	Lead the Prop 301 Team to develop tools and materials that support distance learning education environments
Computer Programmer (2)	23/ 40 Hours	Support the development of software applications appropriate for distance learning education environment
Media Specialist	22/ 40 Hours	Support the development of materials and the use of multimedia technologies appropriate for a distance

		learning education environment
Program Coordinator, Senior	42/ 40 Hours	Oversee the administrative activities related to a new instructional development initiative
Support Systems Analyst, Senior (2)	43/ 40 Hours	Assist the development of distance /distributed education programs and related user support activities. This position will take direction from project team leaders and will be responsible for the creation and evaluation of learning materials, interface applications, and the provision of end user consulting and training.

(3) Library Services for Distance Education

- Creation of a document delivery service to serve distance users including faculty and students resulting in access similar to that of on-campus students and faculty for completing research and course assignments. The resulting services include:
 - Supplying articles electronically to distance education students and faculty within 24 to 48 hours of request
 - Delivering documents to UA South and UA North students and faculty
- Necessary investments include hardware, software, and personnel
 - Software: Docutek Virtual Reference Librarian, a low cost commercial product with potential for extension to other online services
 - Hardware: A Network Server will be necessary to provide sufficient data storage for the document delivery service initiative.
 - Personal Services: Additional library staffing will be necessary to manage the document delivery service initiative.

(4) High Speed Link to Sierra Vista (UA South and Fort Huachuca)

- DS-3 connectivity from UA Main Campus to UA South via leased fiber land lines, managed by UA Telecommunications as a Wide Area Network.
- Capacity for high bandwidth traffic to Sierra Vista and Fort Huachuca, including two-way interactive video capability.
- Potential service to other public institutions and area businesses in Southeast Arizona communities, especially as partners of Arizona Telemedicine. Under the standard business model of Arizona Rural Telemedicine Network (ARTN), aggregation of service commonly results in cost savings to all participants. At present, the Sierra Vista area has too few participating organizations for immediate expansion of ARTN, but consideration has been given to accommodating future growth of ARTN along the new highspeed link.
- Equipment costs are for “edge devices” to attach to fiber lines and are currently estimated to total under \$120,000. Recurring operations costs will be structured as service fees payable to CCIT Telecommunications.
- Expected features and benefits of link include:
 - Improved bandwidth to support data access and distance (replacing decrepit microwave infrastructure and aggregating existing land lines).
 - Support for elimination of all existing separate DS1 links and associated costs.
 - Establishment of an aggregation point at UA South which will allow external network members to reduce the costs of links back to Tucson while contributing revenues to support the shared infrastructure.
 - Complete operational management service for the Wide Area Network with no request for FTE dollars.

The University of Arizona is a Research I institution, with rich scientific and cultural resources capable of supporting distinctive distance learning offerings. Even at a distance from campus, UA students can learn through primary analysis of scientific data, can operate instruments in remote laboratories, can examine objects such as archaeological artifacts, and can develop their own ideas in dialogue with first-rank scholars. Many unique datasets and collections are already available as digital objects through individual faculty initiatives, and several major interdisciplinary projects have demonstrated the value of designing instructional modules around these objects.

The UA positions itself as providing high quality education at low cost and takes pride in being a student-centered research university. Considered one of the best educations for the dollar in the country, UA is positioned to offer the same high quality-to-cost ratio in distance education as in site-based education.

The University is well positioned to extend its existing educational base to new beneficiaries, including citizens in rural areas remote from university campuses but also citizens in urban locations whose circumstances preclude studying on campus. The University plans to build on existing successes in distance learning, such as the Arizona Telemedicine Program.

1.5 Competitive Advantage

The University of Arizona is world renowned for its research and is built on a solid foundation of world-class researchers, professors, and adjunct faculty. The University of Arizona has the ability to design and implement programs contoured to the needs of Arizona's metropolitan and currently underserved rural populations.

The University of Arizona has a proven track record of leading distance-learning initiatives and telecommunication services. The University currently offers an MBA program through its state-of-the-art learning facility, Telesuite, which links students located in a Telesuite in San Jose to teachers located in the Telesuite facility on campus at McClelland hall. The Telesuite facility has been in place for three years and offers exceptional support for distance learning through strong site-to-site "telepresence." A robust interactive video network, the Arizona Rural Telemedicine Network, delivers health care services and professional education throughout and beyond Arizona, including many remote areas. The University of Arizona was also a founding member of the National Technological University and continues to be an energetic participant in video-based engineering instruction. As interactive web technologies have progressed, University programs have also developed in non-video formats, the leading example being the Masters in Information Resources in Library Science. Expert staff and facilities providing support for web-based instruction have expanded significantly throughout the 1990s, providing both resources and know-how to expand electronically delivered education.

Finally, through participation in Arizona Regents University, the University of Arizona leverages its core strengths with those of Northern Arizona University and Arizona State University, offering a diversity of opportunity unmatched by private distance learning companies, such as the University of Phoenix.

Content and Infrastructure Development Plan

SECTION 2 – THE MARKET

2.1 Choices Available to Potential Customers

Customers for the proposed services are prospective students, and the target population is Arizona residents. Many choices are available to anyone seeking higher education. A prospective student may choose to take courses from any of Arizona's tax-supported universities and community colleges, from an out-of-state public institution, or from a private college or university. Patterns of choice for these options are well-understood and highly predictable from year to year. Less well-understood are the new choices made available to students through the growth of electronically-delivered education. Not only can students choose to take entire programs and degrees online, but they can also choose to take some coursework on a campus and other coursework, often from another provider, via electronic means.

2.2 Market Size and Trends

Statewide demand for higher education is expected to rise sharply for the next two decades, simply through population growth. Our objective is not merely to draw students to distance education, but to draw students to higher education who might otherwise find the barriers to participation too high. To estimate market size, it is necessary to look not just at the pool of individuals likely to need higher education, but also to predict the number of individuals likely to take advantage of opportunities offered electronically.

The best available estimates of market size come from the Technology-Delivered Education Market Demand Study, a report commissioned by the Arizona Board of Regents. Data from the Market Study are now several years old, and the growing popularity of electronically delivered education means that all estimates derived from these data may be regarded as conservative. At the time of the study, it was concluded that:

- The potential market for distance learning courses in Arizona – in which course fees are paid by the individual – is 152,000 individuals.
- The potential market for distance learning courses in Arizona – in which course fees are paid by the employer – is 283,000 individuals.
- Reflecting the state's demographics, the largest number of potential students exist in Maricopa County, while the greatest degree of interest (% of potential students) would be in rural area of Arizona.
- Two-thirds of employers indicate a positive response to courses being offered on-site to their employees, and a majority have a positive response to programs offered by the three state universities.
- The principal areas of educational interest among potential students surveyed are:
 - Computer/Technology (18%)
 - Education (11%)
 - Business (10%)
 - Nursing (6%)
 - Science (5%)
 - Engineering (4%)
 - Psychology (4%)
- The primary areas of importance to employers are:
 - Computer/Technology (55%)
 - Business (16%)

- Communication (16%)
- Engineering (10%)
- Customer Service (10%)
- Education (teaching) (6%)
- More than two-thirds of potential students already have computers; 70% of those have internet access.
- Important considerations of potential students in choosing a distance program are:
 - Quality Faculty
 - Convenience
 - Affordable Tuition

2.3 Competition

Since the three Arizona public universities do not consider themselves competitors, the most significant competition for students (and potentially for teaching and technical staff) will be Rio Salado Community College and the University of Phoenix, a private for-profit company.

Rio Salado's lower-priced tuition makes their online courses attractive not only to distance students, but also to matriculated university students, and under our strong statewide articulation agreements, these courses are easy to convert to transfer credit for university degrees. Arizona University System courses, though more expensive per-credit than community college courses, remain very affordable and have marked advantages in quality of faculty. Although loss of student enrollments to Rio Salado and other distance providers means loss of revenue to the universities, an off-setting strategic benefit is that students who enter Arizona higher education through Rio Salado's extensive offerings are likely to demand degree completion options from the universities. On balance, competition from community colleges, including Rio Salado, is considered a positive contribution to the overall demand for university education. (See also Section 2.4.)

The University of Phoenix competes with the universities differently, since it offers baccalaureate and post-baccalaureate degree programs, with much lower probability of providing courses attractive to students enrolled at, or planning to enroll at, the public universities. With rapidly expanding online offerings and enormous flexibility in scheduling, the University of Phoenix will attract students the universities are unlikely to be able to attract, though the high tuition costs mean that the University of Phoenix is most likely to appeal to students whose costs are partly or fully paid by an employer. The company currently offers dozens of online courses in such areas as business, technology, education, nursing, and other areas of high employer demand. The University of Arizona can be considered to be in competition with the University of Phoenix in some of these professional areas, but has considerable differentiation from the University of Phoenix on both cost and quality. A distance learning degree from a world-renowned university like the University of Arizona is typically viewed as superior to those obtained at the University of Phoenix and similar private education entities, and the cost is very much lower for Arizona residents.

2.4 Suppliers to Programs

High schools and community colleges are traditional suppliers of students, and relationships with these suppliers are carefully nurtured through a network of high school counselors and community college transfer offices. However, as noted in the Technology-Delivered Education Market Demand Study, significant numbers of working adults can be attracted to electronically delivered programs that are career-related.

2.5 Alternatives for Students

Students taking advantage of courses offered through this initiative gain more than freedom from constraints of time and distance; they also have the possibility of choosing courses from several different providers (e.g., from Arizona State University and Northern Arizona University as well as University of Arizona). The strategic importance of this for any one provider is the clear

advantages it creates for partnering and collaboration. The value of our product is enhanced through our participation in Arizona Regents University, which supports cross-registration among the three universities, and through our extensive transfer and articulation agreements with the state's community colleges.

2.6 Estimated Sales

"Sales" take the form of enrollments in courses. While it is possible to plan the number of spaces to be offered (the maximum enrollment for each course developed), it is too soon to predict how many of these spaces will be filled by students new to the system. However, the rapid growth of enrollments in electronic programs such as the tri-University Masters of Engineering and the online Masters of Information Resources in Library Science suggests that courses developed in high-demand areas will attract enrollments.

Content and Infrastructure Development Plan

SECTION 3 – OPERATIONAL STRATEGIES

3.1 Development and Production

3.1.1 Development Status

The University of Arizona has begun releasing funds for academic program development to selected departments and colleges and has put the technical support team in place to assist them. A budget has been approved for the online library services project and work has begun. Circuits have been ordered for the high speed link to Sierra Vista.

- Academic Program Development – A grant for academic program development has been awarded to the College of Nursing for creation of the online PhD program. This grant bridges to and supplements a recently awarded grant from Arizona Regents University.
- Distance Learning Support Team – The Distance Learning Team has been created within the Faculty Center for Instructional Innovation, recruitment has been completed, offices have been assigned and equipped, and partnerships with two faculty groups have been established.
- Library Services for Distance Learning – The library has identified the necessary equipment and personnel needed to support this initiative and is beginning work on implementation.
- High Speed Link to Sierra Vista – After the decision to lease DS-3 lines versus purchasing and installing OS-3 lines, circuits have been ordered.

3.1.2 Production Process

“Production” for this initiative means the creation and delivery of online courses to students. The production process is governed by a protocol for collaboration between any faculty workgroup and the Distance Learning Support Team:

- Program approved by Steering Committee on advice from Learning Technologies Partnership
- Development agenda (courses, learning objects) negotiated between Support Team lead (Instructional Designer) and faculty collaborators
- Design and production tasks assigned and stewarded by Support Team Project Coordinator
- Commitment of Support Team to projects phased in and out as needed, with newly approved programs rotating in as previous programs near completion
- Responsibility for administration of course returned to originating department, supported by appropriate technical units such as CCIT, Multimedia Services, and Extended University

3.1.3 Cost of Development

The cost of online educational content is mostly attributable to personnel, including faculty and expert technical support staff. In general, to create time for course development, a faculty member must either be hired during summers or released from academic term duties through hiring of temporary replacement. Producing high quality coursework for electronic delivery, especially coursework that conforms with ABOR standards for learner-centeredness, typically requires a diversified team of technical experts to assist in planning, programming, and production. This requirement is handled through creation of a centrally managed Distance Learning Support Team that can be deployed to individual programs as needed. Capital costs for such a technical team would

be prohibitive without existing university information infrastructure, but the added costs for this team come mainly from high-end workstations and software licenses.

For infrastructure projects, substantial capital costs may be incurred, as with the “edge devices” (switches, routers) needed to operate leased fiber lines between UA Main and UA South or the network server needed for the library project. However, the major recurring costs for infrastructure projects are also personnel-related.

Details are available in Section 5 of the business plan.

3.1.4 Labor Requirements

As mentioned above a significant portion of direct costs to support OCIDP are personnel related. Specifically, expenditures will need to be made on temporary bases for faculty time throughout the five-year startup of OCIDP, and expenditures will need to be committed on a permanent basis for the Distance Learning Support Team, which will be 9-10 FTE at full strength. Specific positions for the Team are listed in Section 3.1.1, and total faculty and staff costs are provided in Section 5.

3.1.5 Expenses and Capital Requirements

The major capital requirements, as noted above, are for computing and network equipment. The decision to build telecommunications infrastructure by leasing fiber land lines instead of building SONET radio infrastructure for the long haul means that there will be low capital costs but significant operating costs due to the line charges. These costs appear in Section 5 as a component of “All Other Operating Costs.”

3.2 Marketing & Promotion

3.2.1 Strategy

The marketing strategy for OCIDP is differentiation. The University of Arizona, through OCIDP, will be able to offer significant value to customers in target markets including, but not limited to, rural areas of Arizona and career-immersed adults. UA certifications and degrees that will be made possible through this new infrastructure are highly differentiated from existing private entity players. The Distance Learning Support Team will be able to provide high levels of continued support to the maintenance of existing distance education programs and the creation of new programs.

3.2.2 Promotion Mix

A central strategy for attracting traditional undergraduate students to university courses is marketing to high school counselors and community college transfer officers. Through the University Admissions Office, this referral network is kept informed of all new opportunities and all changes in University enrollment strategy. Attracting students to graduate and professional programs requires other methods, including advertising in trade publications.

The promotion mix will utilize both the existing referral network and the many other existing channels for advertising, direct marketing, personal selling, and public relations. These channels are outlined below in Section 3.2.3.

3.2.3 Advertising and Promotion Plans

Each distance-learning program that is launched by the Distance Learning Support Team will be specifically designed to cater the needs of the target population. The specific

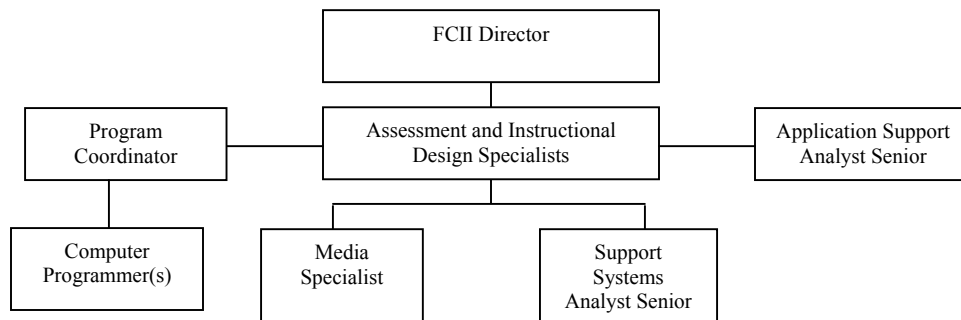
advertising and promotion tactics will be specific to those target populations. One of the initial programs to be launched from OCIDP will be a PhD nursing program. A related plan, the Educator Development Plan, demonstrates the types of specific advertising and promotion methods that will be implemented. Generally, the marketing strategy for OCIDP will utilize existing channels for advertising, public relations, and promotion. Among these are:

- Advertising:
 - Websites: distance education recruitment pages such as Extended University (<http://www.eu.arizona.edu>), Arizona Distance Learning (<http://azdistancelearning.org>), and Arizona Regents University (<http://aru-online.info>), and other recruitment sites such as the Graduate College (<http://grad.admin.arizona.edu/>) and UAInfo (<http://www.arizona.edu>).
 - Print: brochures, magazines, academic journals, newspapers
- Direct Marketing
 - Mailings
- Personal Selling
 - Yearly update meetings for counselors and public presentations in remote area locations selling specific programs and new capabilities of the technology base itself.
- Public Relations
 - Ad hoc forums

3.3 Project Management

3.3.1 Organizational Chart and Description

The Distance Learning Support Team will report to the Director of the Faculty Center for Instructional Innovation (FCII), a primary technology support site maintained by the Learning Technologies Partnership. The program coordinator will be the primary liaison between the technical staff and the faculty groups developing courses and programs for distance education, with guidance from the Learning Technologies Partnership. This coordinator will communicate directly with the oversight committee and with faculty groups to assure that the goals of OCIDP are being met. The day-to-day operations of designing new online courses/programs and maintaining/enhancing existing programs will be led by the assessment and instructional design specialists. Individuals hired into the media specialist, computer programmer, support systems analyst senior, and application support analyst senior roles will carry out the day to day technical activities needed to produce and deliver online courses.



3.3.2 Advisory Board and Oversight

Through the Director of the FCII, oversight for the Distance Learning Support Team will be provided by the Learning Technologies Partnership (LTP). The LTP is a permanently-funded alliance of support units with common interest in educational technology, reporting to the Vice Provost for Educational Technology and representing the University Libraries, the Center for Computing and Information Technology, the University Teaching Center, the Peter Treistman Center for New Media in Fine Arts, Extended University, Multimedia Services, and the Integrated Learning Center's Digital Media Resources Center. The Director of the FCII will make regular reports on behalf of the LTP to the Access Steering Committee (part of the TRIF management structure). The Access Steering Committee (selected deans and directors) will provide oversight for selection and prioritization of academic program directions.

3.3.3 Support Services

- University of University Administration – Office of the Vice Provost for Educational Technology, Distributed Learning, Extended University, University Libraries, and Center for Computing and Information Technology
- Northern Arizona University Administration – Northern Arizona Office of Distributed Learning
- Arizona State University Administration – ASU Office of Distance Learning and Technology
- Technical – Regional information technology consultants and advocacy groups including the Community Information and Telecommunications Alliance (CITA).
- Marketing – City of Tucson and University of Arizona resources
- Publicity – Arizona Daily Star, Arizona Wildcat, and others.

3.4 Risk & Strategy to Overcome Risks

3.4.1 Legal Risks/Means to Minimize Risks

[Not applicable; none known]

3.4.2 Regulatory Problems/ Means to Minimize Risks

Federal restrictions on financial aid are commonly cited as a problem for programs offered electronically, especially when students choose either a part-time program of study or a full-time program composed of offerings from two or more distinct providers. Students making such choices may fail to meet tests for financial aid eligibility under current policy, which requires full-time enrollment to qualify for most federal aid. While these restrictions are rapidly evolving toward more flexible financial aid administration, an important short-term strategy has been creation of a set of agreements for cross-registration within the Arizona University System, to allow students taking courses at several different institutions to meet standards for full-time enrollment.

3.4.3 Political Risks/ Means to Minimize Risks

Political risks associated with this initiative generally involve either intrusions of one university into another's geographical service area or opportunities presented unevenly throughout the state. Through Arizona Regents University, systemwide agreements now permit each of the three Arizona Universities to offer courses electronically within the others' service areas. At the same time, primary responsibility for each region in the state is distributed among the three universities. The University of Arizona, which has primary

responsibility for Pima and Cochise Counties, is including significant infrastructure support to Southeast Arizona as one means of assuring that this responsibility is met.

3.4.4 Business Risks/Means to Minimize Risks

The nature of OCIDP creates business risks, including assessing market demand, pricing, and competitive pressure. Once an infrastructure is developed, the majority of TRIF funding will be allocated to the development and launch of online courses and programs. The ability of OCIDP to continue operations depends primarily on the success of these individual courses and their ability to generate increased enrollments and course fees. Therefore, it is important that adequate marketing analysis be conducted to gauge as accurately as possible the potential demand for any course or program. These risks are minimized in the first three years through focus on programs with known demand, and they will be minimized over time through updated market analysis. In addition to choosing wise course and program development directions, the courses and programs must be positioned to compete as successfully as possible with active competitors such as the University of Phoenix (which is much more expensive than University of Arizona tuition) and Rio Salado College (which offers less prestigious credentials). The promotion strategies planned and outlined in OCIDP will sell the differentiation qualities of University of Arizona online courses to prospective customers.

TRIF funding is based on an allocation of sales taxes based on a fixed percentage. In troubled economies such as the one currently being experienced, consumer confidence is expected to wane and general sales to subside. However, in FY 2002 the sales tax revenue was not significantly affected by the slow economy and only fluctuated 3% from what was projected resulting in an overall affect on OCIDP budget allocation of only \$30,000.

3.4.5 Competitive Risks/Means to Minimize Risks

The greatest competitive risk to this initiative is that all providers will target the same prospective students. Among the three Arizona Universities, these risks have been minimized through establishment of Arizona Regents University as a coordinating mechanism. Competition with community colleges is minimized by concentrating on advanced and specialty coursework that takes greatest advantage of the strong faculty.

3.5 Sustainability

3.5.1 Anticipated Funding Sources for Ongoing Support

Increased enrollments generate revenue through collections (tuition and fees) and, under current financing methods, through legislative appropriations indexed to enrollment growth. Success in attracting new participants to higher education would result in an increase in General Funds, which can be allocated as a permanent funding source for the Distance Learning Support Team and for increases in faculty FTE associated with program growth.

3.5.2 Timeline for Transition from TRIF Support

Program development grants are for specified periods, typically two years, after which Departments and Colleges assume responsibility for incorporating online courses into their instructional budgets. The Distance Learning Support Team has a five-year sunset review planned, at which time it must shift to permanent funding or be discontinued. The decision on this will depend on success in building tuition revenues through enrollment.

Content and Infrastructure Development Plan

SECTION 4 – GOALS/METRICS/OUTCOMES

4.1 Specific, Realistic, and Measurable Goals

4.1.1 Return on Investment

[Not applicable]

4.1.2 Technology Transfer

[Not applicable]

4.1.3 Companies Relocating

[Not applicable]

4.1.4 Work Force Contributions

The continual increase of certified and graduated students in the pipeline will be an immediate outcome of OCIDP. Early program targets are graduate and professional degrees that may be completed in two years, so the first enrollments directly attributable to this initiative will occur in Fall 2003 and result in graduates no sooner than FY 2004. Initial projections are conservative and assume that each program brought online will graduate approximately 10-20 students per year.

4.1.5 Specific Curriculum Innovations

OCIDP will launch a series of online programs throughout the five-year period, based on proposals from departments and colleges, and representing significant curriculum innovations. During the first two years, the Distance Learning Support Team will assist the College of Nursing to produce an online Nursing PhD, which will be among the very first such degrees nationwide. The Team will also provide the technical and production support required for a very innovative collection of instructional materials being developed in conjunction with an NSF-funded Science and Technology Center in Materials and Devices for Information Technology Research. Besides helping to create new content for these specific fields, the Team will be developing new approaches and new technology, leveraging previous federally-funded projects like the Virtual Adaptive Learning Architecture (a software system for creating web presentations adapted to specific learner characteristics). Other programs will be rostered as these near completion and time is freed for new initiatives.

4.1.6 Partnerships/Collaborations

The tri-university partnership will be bolstered to fully leverage the potential of the infrastructure improvements that will create opportunities for boundless participation in the courses/programs brought online. This partnership will develop over the course of OCIDP and strengthen as more courses/programs are introduced.

4.1.7 Other

The ability for the UA to reach a broader market with its online course/program offerings will increase revenues to the UA from enrollment in these online programs. Cannibalization of existing on-campus programs is not believed to be a significant factor

as market research targeting courses/programs valuable to remote and special need communities are the initial focus of OCIDP.

4.2 Timeline For Achievement of Goals

The path from program proposal to the first graduation cohort has several distinct steps, some of which may overlap in time.

- i. Faculty recruitment and development: Enlistment of faculty in project and training in necessary skills for online teaching and learning.
- ii. Content development: course design, materials design, production, library collection development.
- iii. Student recruitment and launch: Recruitment must begin a year before students are expected to enroll, so this occurs simultaneously with content development.
- iv. First offering: initial offerings of courses, sequenced to minimize time to completion.
- v. First graduated cohort.

For a two-year program developed on a very fast track, the total time required to see results is a little over three years: 15-18 months in development time, followed by two years of active instruction. Since new programs are initiated as earlier programs are launched, graduation cohorts will cumulate over time. Bringing any new program online will produce an increase in graduates at some specified lag (for example, a two year lag for a Masters program).

4.3 Early Proof of Performance

The online Nursing PhD (which will require more than two years for graduation) began development work in Summer 2002 and expects to have "first-year" curriculum ready for Fall 2003 offering. The "second-year" curriculum must be in development simultaneously with the initial offering of the first-year curriculum. Student interest is already evident from inquiries and requests for admission.

Although the OCIDP is not expected to attract grant funding, the close integration of research and teaching means that investments in educational technology add to the University's overall competitive position in obtaining federal grant funds. Our ability to commit the Distance Learning Support Team to curriculum development for an optical materials research center helped secure a major federal grant. This grant will be reported as an outcome of the Optics initiative for FY 2003; it is mentioned here as an early indication that having a Distance Learning Support Team will in fact stimulate and support curriculum development activity.

SECTION 5 – PRO FORMA FINANCIALS

5.1 Cash Flow Statement

[Not applicable]

5.2 Income Statement (Resources and Planned Expenditures)

[Not applicable: "Income" is tuition collected into General Fund]

5.3 Detailed Funding Request (all from TRIF revenues)

University of Arizona

PROP 301 / TECHNOLOGY & RESEARCH INCENTIVE FUNDING REQUEST
Access to Higher Education

	FY 2002*	FY 2003**	FY 2004	FY 2005	FY 2006
FTE Positions.....	6.75	15.50	13.50	14.00	14.00
Personal Services.....	509,000	983,839	681,300	767,500	805,900
ERE @ 19.5%.....	99,255	189,691	132,900	149,700	157,200
All Other Operating.....	391,745	734,138	185,800	82,800	36,900
TOTAL OPERATING BUDGET REQUEST.....	1,000,000	1,907,668	1,000,000	1,000,000	1,000,000
TOTAL CAPITAL PROJECT REQUEST.....					
GRAND TOTAL.....	1,000,000	1,907,668	1,000,000	1,000,000	1,000,000

*revised 01/02 **revised 01/03
(carryforward)
