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**Appendix A: Guiding Principles**
Introduction

The inauguration of a new president is a symbolic event in the life of a university. The ancient regalia—the caps and gowns and hoods—serve to remind us that universities are enduring institutions. These emblems of scholarship have served to mark moments in the lives of academic institutions since the Middle Ages. It is a time for considering accomplishments, taking stock, and looking ahead.

At the same time that we look ahead, we must pause to consider the efforts and contributions of those who came before us. To express that sense of indebtedness, Sir Isaac Newton likened himself to a dwarf standing on the shoulders of giants, a metaphor he borrowed from a twelfth-century humanist and philosopher, Bernard of Chartres. As we look ahead, I must look back and acknowledge the contributions of all those who over the course of more than a century have worked to build a great university here in metropolitan Phoenix.

I must look back and acknowledge the contributions of my predecessors in the office of the president, beginning with those who guided the evolution of a territorial teachers' college to a state college, and those who led a state college to become a university. I must express the appreciation of the entire university community to President Lattie Coor, the dynamic leader who dramatically accelerated the development of ASU as a major research institution, and articulated its vital significance to the city and state. Not the least of his contributions over the course of twelve years has been the fostering of a close-knit ASU family. Arizona State University would not be the institution it is today without his inspiration and commitment.

Nor would Arizona State University be what it is today without the dedication and effort of more individuals than can possibly be named. Many here today have been partners in building this great institution. On behalf of the entire university community, I must express my appreciation to those many individuals who have given generously of their time, wisdom, and means to advance Arizona State University: civic leaders and state legislators, leaders in business and industry, directors of foundations and benefactors, and our colleagues from institutions worldwide. There are the students and faculty of the university today, and the alumni and emeriti for whom Arizona State University will always play an essential role. There are many whose lives have been shaped by this institution, and all of you have played a part in this noble endeavor. We are all a part of this journey.

Arizona State University has been integral to the social and cultural fabric of Arizona since 1885, and will play an even more important role in the development of our state as it assumes an increasingly important national and international role. Today Arizona State University is poised to become a world-class institution in what is emerging as a dynamic and vibrant world city—the two are inextricably intertwined. Arizona State University has established the capacity to become the leading public metropolitan research university for the twenty-first century, known for its excellence in teaching and research, its innovative interdisciplinary programs, and its direct social engagement.

As we begin a new chapter in the history of this institution, I would like to look beyond its current success. I would like to talk to you about transformation, and the further evolution of the American research university—what I want to call the new American university—and why Arizona State University is uniquely positioned to become such an institution.
A New American University

American research universities are the finest in the world. The breakthroughs in the natural sciences, social sciences, arts and humanities, and fields of technology that are the result of university research are too many to consider. The impact of university research, and university partnership with business and industry on the American economy is profound. The American research university has contributed enormously to the wealth and productivity of the nation.

Our cultural landscape, too, has in many ways been defined by the discovery and scholarship that takes place in our research universities. Through their graduate programs our research universities have been largely responsible for educating successive generations of our nation’s leaders in government, business, and industry, our educators, scientists, engineers, artists, and health care professionals.

But the American research university must not be static—it must be dynamic. In response to the demands and opportunities of a changing world, the American research university must evolve. In recent decades various possible models have been proposed for what many have termed “the new American university.” While each of these models offers insight and ideas, none go far enough to embrace the changes ahead. When I speak of the new American university, I do not refer to any usage except my own, and my vision for Arizona State University.

The new American university would cultivate excellence in teaching, research, and public service, providing the best possible education to the broadest possible spectrum of society. The new American university would embrace the educational needs of the entire population—not only a select group, and not only the verbally or mathematically gifted. The success of the new American university will be measured not by who the university excludes, but rather by who the university includes, and from this inclusion will come its contributions to the advancement of society.

I believe that Arizona State University is uniquely poised to become such an institution. Not only can Arizona State University surpass its existing excellence in teaching, research, and public service, I believe it can break the mold of the current model for the American research university, and serve as a bellwether in its reconceptualization.

The economic and cultural vitality of the State of Arizona is inextricably linked with the vitality of its universities. The transformation of Arizona State University will transform the State of Arizona, enriching it economically and culturally. But let us not limit our vision because the development of a new American university here in Arizona will have impact beyond the borders of our state.
WHY THE EXISTING MODELS ARE NOT APPROPRIATE FOR ARIZONA IN THE TWENTY-FIRST CENTURY

The Existing Models: The Gold Standard

The distinctively American model of the research university came into being in the nineteenth century when the German model of the elite scientific research institute offering specialized graduate training was “grafted” onto the traditional American undergraduate liberal arts college. Following the lead of Johns Hopkins University in Baltimore, fifteen American institutions came to define the American research university: some of them private, such as Harvard, Columbia, Cornell, Princeton, and Yale; others, state and land grant universities, such as the University of Pennsylvania, the University of Michigan, the University of Wisconsin, the University of Illinois, and the University of California; still others, new universities made possible by private bequests, such as Stanford, Caltech, MIT, and the University of Chicago. These institutions have produced the vast majority of Ph.D.s in the nation for the past one hundred years. Many here today are graduates of these elite universities, and very nearly everyone who has attended a college or university in the nation has been taught by faculty who are their graduates.

Such has been the influence of these fifteen institutions that, to this day, every university in the nation measures itself according to their standards. Make no mistake: these universities represent the gold standard—but, as I hope to explain, it is the gold standard of the past. These universities are considered definitive prototypes, and their disciplinary departments are the departments by which all others are judged. I think most would agree that academic departments tend to structure themselves to resemble the most highly-ranked departments in their respective disciplines.

As a consequence, academic departments tend to resemble one another across the nation, each more or less a pale reflection of some distant ideal. Although innovation is celebrated, and new interdisciplinary arrangements suggest that variation is possible, academic culture on the whole encourages each department of physics to compare itself to the physics departments at Caltech and MIT, each department of economics to compare itself to the University of Chicago, and each department of theater to compare itself to Yale.

Our nation’s research universities resemble one another in other respects as well. They are concerned with a certain academic profile in their student body. They have defined their academic excellence by the academic qualifications of their incoming students—an input-driven model. ASU will instead focus on outcome-determined excellence, that is, we will admit students with different interests and indicators of intelligence, even different levels of high school preparation. We will judge the success of our university by the success of each student on a case-by-case basis.

Without exception, our nation’s research universities have made considerable efforts to encourage diversity and recruit students from varied social backgrounds. Each undergoes continuous self-assessment in order to produce exhaustive demographic profiles of each entering class to demonstrate their successes year after year. Without question these initiatives have produced solid results. Yet, at heart, our research universities remain elitist institutions.
Without exception, our nation’s research universities have made considerable efforts to engage society—to reach out to their local communities. Each announces ambitious initiatives intended to persuade the socio-economically disadvantaged and underrepresented that they, too, are among the university’s constituents, that they, too, are stakeholders—that the university belongs to them as well. Without question these initiatives have made a difference in public perception and community involvement. Still our research universities sometimes seem like walled enclaves with little direct engagement with society.

We cannot hope to develop a university that is ubiquitously present, but we can certainly strive towards that objective, and reach out not only to our students, but also to the families that send us their children, and the families that don’t. The university cannot be set apart from society, concerned only with the education of the most intelligent children of its more successful families. Certainly we must accomplish that task, but in addition we must reach out across the broad spectrum of society, and seek to have an impact on the daily lives of people from all social strata.

There are other reasons—reasons having to do with the heritage of this state, changing demographics, and economic and environmental factors—why the traditional university model is not right for Arizona State University.
WHY THE EXISTING MODELS ARE NOT APPROPRIATE FOR ARIZONA IN THE TWENTY-FIRST CENTURY

The Cultural Landscape of Arizona: A Frontier Heritage

The American West has always been a place where the vaunted individualism of our national culture has received its most resonant expression—nowhere more so than here in Arizona. This is the West—the Southwest—a vast canvas of startling natural beauty, a broad landscape that has always drawn individuals with an independent streak, and it remains so today.

When the Thirteenth Territorial Legislature established a normal school in Tempe in 1885, Arizona Territory epitomized the frontier in our national consciousness. More than a quarter century would pass before Arizona Territory became the last of the 48 continental states to join the union. Because the state is young and its cities and institutions are not bound by the weight of tradition, because in many respects it is like an unfinished canvas, Arizona still epitomizes the frontier—the social, cultural, and political frontier. Its cities and institutions are not bound by the weight of tradition because they are still in the process of being created.

In the nineteenth century Arizona Territory epitomized the frontier to Americans crossing the continent, but for countless centuries it had been the land of indigenous peoples, and it remains so today. The Native American population in Arizona is among the most diverse and vibrant in the nation. In the sixteenth century the Spanish became the first Europeans to impact this land of ancient and highly successful cultures—the land that would become Mexico—and with the Hispanic population of our state increasing more rapidly than any other segment of society, it is clear that Arizona retains its ties to the great new cultures of Latin America.

The conviction that the United States is a melting pot has been an article of faith for generations of Americans. But the gradual process of assimilation that has brought both indigenous peoples and generations of immigrants into the American mainstream has been questioned. We are becoming a nation in which no dominant cultural paradigm prevails, one still in the process of developing its own uniquely American culture. It is perhaps a process that will never be completed. It has been said that America is a mosaic, and not a melting pot. It is far, far richer for that cultural complexity, a complexity that the university must embrace, a complexity that the university must understand, teach, and use to bring forth new perspectives and new ideas.
WHY THE EXISTING MODELS ARE NOT APPROPRIATE FOR ARIZONA IN THE TWENTY-FIRST CENTURY

Sociological Determinants: Changing Demographics

Like all great metropolitan universities, Arizona State University is linked intrinsically to its cosmopolitan setting. Here in metropolitan Phoenix, heart of the great American Southwest, a short distance from the Borderlands and the influence of the great cultures of Mexico and Latin America, and to the West, a short distance from the Republic of California and the Pacific Rim, we are uniquely positioned to address the needs of a population whose demographic is changing at a startling pace.

Not only is Arizona growing rapidly, it has become more diverse. The past decade, for example, has witnessed a 40 percent increase in the statewide population and an 88 percent increase in the Hispanic population of our state. One of every four Arizonans is of Hispanic origin. As has already happened in California, within the next twenty years there will be no majority population in Arizona. There is tremendous diversity in the population of Arizona, and with that diversity comes a high degree of differentiation—culturally, socially, economically, and in educational attainment. We must build a university that embraces that complexity. We must build a university that is able to engage all these groups.
WHY THE EXISTING MODELS ARE NOT APPROPRIATE FOR ARIZONA IN THE TWENTY-FIRST CENTURY

Economic Exigencies: Embracing Opportunity

At one time the foundational elements of the Arizona economy were cattle, cotton, copper, citrus, and climate. But in this era of rapid advances in knowledge, in a knowledge-driven economy, the key to economic development is economic diversification. Diversification is only possible with the presence of an educated work force—with the presence of what one cultural observer has termed a “creative class.”

In a recent study, Richard Florida, a Carnegie Mellon University professor of regional economic development, describes the emergence of a new social sector—more than 30 percent of the national work force—comprised of artists, musicians, writers, designers, architects, engineers, scientists, and others for whom creativity is an essential dimension of their livelihood. In this usage, creativity is a driving force in the growth of the economy, and almost without exception, I assume that education is a key determinant to inclusion in the occupations that comprise this group.

I think of members of the creative class as knowledge workers—in the arts and humanities, in the sciences and technology, in the professions, in business, industry, and government. There is a demonstrable correlation between the availability of knowledge workers in a local economy and its success. Knowledge workers comprise the educated and flexible work force that will allow a diversified economy in Arizona to flourish in the decades ahead.

A striking example is the economic growth associated with science and technology. Every year 60 to 75 percent of economic growth is driven by technological advances, and since 1990, nearly all major technological advances have been driven by fundamental academic scientific discovery. Universities produce the knowledge workers that drive the economy. If Arizona is to thrive, it must support institutions that promote the emergence of a strong class of knowledge workers.

Arizona must be a place where upward mobility over successive generations—call it the American dream—is still possible. Our K-12 school districts and community colleges play a fundamental role in the task of producing an educated work force, a work force that makes upward mobility possible. Our research universities must collaborate with our school districts and community colleges, and I see ASU as a driving force in this collaboration.

Our responsibility to our students begins long before they arrive on campus, and I want ASU to be an influence in their lives long after they have graduated. As I hope to make clear today, I also want ASU to be an influence in the lives of all those in our community—not only those who are part of our academic community.
WHY THE EXISTING MODELS ARE NOT APPROPRIATE FOR ARIZONA IN THE TWENTY-FIRST CENTURY

Environmental Limitations: Sustainability and the Future of Arizona

We are at a critical juncture in the evolution of our relationship to the environment, and universities must take the lead in addressing issues of sustainability. The sustainability of our region, our nation, and even our planet remains in doubt. We must confront the fact that we do not fully understand the implications of human impact on the environment, and are not adequately prepared to determine policies regarding the intersection of human and natural systems.

As citizens of Arizona we expect to enjoy a high quality of life. We expect clean air, sufficient water, and unspoiled natural beauty. But existing knowledge, technology, and policy will not ensure that our expectations are met. Arizona must develop its own insights and technologies to manage the desert, and its own policies to manage urban sprawl. We must find mechanisms appropriate to Arizona and the Southwest—a major research university has a special responsibility to seek solutions.

What will the Phoenix metropolitan area look like in fifty years? In 500 years? Arizona State University must do all it can to develop technologies and promote policies that will allow the natural beauty of Arizona to endure, even as millions of people move into the area in the years ahead. Arizona State University must make an institutional commitment to take the lead in addressing sustainability—not only in the decades ahead, but in the centuries ahead.
THE NEW GOLD STANDARD:
DESIGN IMPERATIVES OF A NEW AMERICAN UNIVERSITY

The lineage of our nation’s research universities is venerable, but their form today does not necessarily represent a final stage in their development beyond which no further evolution is possible. On the contrary, universities are complex organisms capable of marked regional variation and change over time.

In building a new American university here in Arizona, one has to rethink some of the basic design imperatives on which universities have historically been based. I wish to foster a different kind of university, one that is linked to its setting and the needs of our day, one that does not measure its success based on an historic and in many ways antiquated set of design elements. I wish to foster a university that is a function of its contemporary environment, rather than the replication of an entity that was derived in another setting and in another time.

I do not propose totally abandoning past design elements—many have been enormously successful. Rather, I propose various new design imperatives that reflect the needs of a world that in many ways has changed beyond recognition since the rise of the medieval universities nearly a millennium ago, and even the development of land grant universities 150 years ago. I propose these design elements to respond to the explosion in knowledge production, increased specialization in academic disciplines, the rise of new disciplines, and the collapse of disciplinary boundaries that has increasingly taken place during the past half century.

This morning I would like to outline the key design imperatives that I envision for Arizona State University that will enable us to become the leading public metropolitan research university in the United States. In each case I will outline the design imperative, present examples of what we have already initiated, discuss what we plan to initiate as rapidly as possible, and outline a broader vision for what we hope to accomplish.
THE NEW GOLD STANDARD:
DESIGN IMPERATIVES OF A NEW AMERICAN UNIVERSITY

DESIGN IMPERATIVE 1: ASU MUST EMBRACE ITS CULTURAL,
SOCIOECONOMIC, AND PHYSICAL SETTING

Every university is geographically situated. Every university has a place, and every university is a place. We must leverage our place, leverage our unique locale and its culture. We must leverage the cultural diversity of our locale, its economic and cultural heritage, its social dynamics, and its aspirations.

We must seek knowledge about our place, and learn from our experience here, in this place, and at this moment in time. We must also seek to contribute something in return. I envision a university that is deeply and intimately connected with its surrounding community, its metropolitan region, and the state of Arizona. Leveraging place means learning from local knowledge, and considering the local relevance of our research.

For example, if an ASU researcher examines urban sprawl in developing countries, I hope that she will consider the realities of our own sprawling metropolis. If an ASU faculty member is a specialist in medieval wall painting techniques, I hope that he will become familiar with the rock paintings of the American Southwest.

We must embrace our cultural, socioeconomic, and physical setting, and dedicate part of our energy, part of our insight, and part of our wisdom, always back to home, always back to the place that we are helping to build, always back to the place where our university is geographically situated.
Greater Phoenix 2100 Project

[Initiated and operational: 2002]

The policy decisions that we make today will determine the quality of our environment 100 years in the future. To think clearly about sustainability, we must understand the relationships between all the variables involving human interaction with natural systems—past, present, and future. Nowhere is this more essential than in an area such as metropolitan Phoenix.

Arizona State University is taking the lead in understanding the cultural, socioeconomic, and physical setting in which we find ourselves by learning how to plan ahead—in a 100 year time frame. An interdisciplinary team of ASU scholars is addressing the issue of environmental sustainability for the region by creating the first “atlas”—actually a series of interactive multimedia atlases—that will provide researchers and planners with a comprehensive look at all the factors that will determine our impact on the regional environment 100 years in the future.

The Greater Phoenix 2100 Project is compiling, synthesizing, and analyzing data on the past, present and future of cultural, economic, ecological, environmental, geographic, natural, and social factors, analyzing the interaction between the built environment and natural systems along multiple interconnected dimensions.

Not only will the Greater Phoenix 2100 Project bring precision and clarity to the critical issues of sustainable growth, it will serve as a prototype for scholars, analysts, and planners around the world. I am committed to making this project a major initiative of the university, and hope that as many as 100 faculty groups engage in this groundbreaking project.
Arizona Biomedical Collaborative

Another example of how we engage our cultural, socioeconomic, and physical setting is the Arizona Biomedical Collaborative. In a metropolitan region with a population that exceeds three million, a population, moreover, that includes a significant number of aging adults and families with inadequate medical care, quality health care is a major social issue. There has been periodic discussion of developing a medical school at ASU, but the University of Arizona already has an excellent emerging medical school. At this point I believe it would be redundant, and a duplication of resources, for ASU to launch a second medical school.

To address the significant local need for enhanced biomedical research and service, Arizona State University, in partnership with the University of Arizona, will develop complementary interdisciplinary research programs in what will be the major growth industries of the 21st century—biotechnology and the biosciences. We are already moving forward with the Arizona Biomedical Collaborative, an initiative that will prove groundbreaking in its scope, and will complement the academic programs and health care services of the medical school of the University of Arizona, and the scientific research taking place at the University of Arizona and Northern Arizona University.
DESIGN IMPERATIVE 2:  
ASU MUST BECOME A FORCE, AND NOT ONLY A PLACE

Arizona State University must be more than a place—ASU must become a ubiquitous presence and a driving force—in local neighborhoods, in the metropolitan region, and statewide. ASU must become an integral part of the community, and a lifelong presence in the lives of its alumni, as well as the general citizenry. I take it as an article of faith that ASU must become a presence in our local schools, but I also expect ASU to become a force in our government, in our museums, in our cultural institutions, in our homes, and in our retirement communities.

In an era of increasing specialization, universities can no longer be places where students spend four years and then leave when they are done. There was a time when the baccalaureate degree was considered sufficient education for a lifetime. Today, however, we must focus on the continuing relevance of the university in the lives of those within its compass.

From Window Rock to Scottsdale to Central Phoenix to Guadalupe to Superior to Yuma, ASU must maintain a presence and relevance in the lives of all of Arizona’s diverse communities. Where necessary, ASU should attempt to improve the quality of life in communities across Arizona. Where appropriate, ASU will use its resources to assist the diverse communities of metropolitan Phoenix. Where possible, ASU should find ways to bring our learning environments to the people of Arizona.
ASU On the Move!

[conceptualized; under design; prototype launch: 2003]

In a sense, all of our initiatives seek to make ASU a force, and not just a place, and we have already moved forward with various programs to bring ASU into the community. Among these is an innovative outreach program to deliver, package, and extend our community engagement initiatives called ASU On the Move! Building on the success of our Patterns in Nature van, the program calls for ASU vans, trucks, and buses to deliver mobile education programs to school children and teachers in metropolitan Phoenix and beyond.

For example, ASU will bring the excitement of our Mars imaging program to area schools. In an innovative program called Red Planet Express, a 45-foot trailer will be equipped with a miniature Mars landscape and a miniature Mars rover. Students will form Mars landing mission control teams and plan and execute missions. Mobile computer terminals and instructional materials wheeled into classrooms will facilitate instruction.

The program targets middle school students who frequently lose interest in science. Other programs, intended for children of all ages, include computer training for the children of migrant workers, a fully-equipped mobile newsroom that can bring print and broadcast journalism to life for students, and the Gammage Theater on wheels, bringing costumes, stage props, and make-up stations to facilitate schoolyard performances of plays.
ASU Digital Gateway

[conceptualized]

Arizona State University has taken the lead in developing innovative websites, many of particular interest to children in our schools. Some of our websites focus on scientific discovery, such as <http://chainreaction.asu.edu/>; others on inquiry, such as Ask a Biologist <http://lsvl.la.asu.edu/askabiologist/>; and, for students who would like to conduct ecological research in their own schoolyard, they are given an outlet as well at <http://caplter.asu.edu/explorers/>.

With a faculty and staff numbering in the thousands, and the number of pages linked to our home page <www.asu.edu> increasing at a rate of thousands per month, there are countless online resources of interest to almost anyone. The creation of the ASU Digital Gateway will aggregate and leverage the university's online resources for the benefit of the community.

ASU's online resources will serve the needs of teachers planning curriculums, and provide interactive tools for learning and online discussion. Students will be able to learn about research underway at the university, and even pose questions to our researchers. Parents will find our online resources equally valuable, and are certain to become more involved in their children's learning.
DESIGN IMPERATIVE 3: ASU AS ENTREPRENEUR

Research universities are powerful engines for transformation. Not only do universities train new generations of scientists, artists, educators, and leaders in business, industry, and government, university research enables entire industries to emerge and evolve. Research universities offer a considerable return on investment, and bring billions of dollars into their regional economies.

As we move—fiscally, psychologically, emotionally—away from the paradigm that Arizona State University is only an agency of the state government, we must move towards a paradigm that casts the university as an enterprise responsible for its own fate, an enterprise which the state government charters and empowers, and in which it invests.

We must commit ourselves to exploring the entrepreneurial potential of university teaching and research. ASU faculty members engage in path-breaking research, developing new learning tools and new products with commercial application, all of which have the capacity to generate new revenues for the university. ASU must capitalize on its knowledge content and intellectual property, expediting the transfer of knowledge and technology developed in our classrooms and laboratories to the commercial sector.

ASU must aggressively seek new revenue streams, fully exploring the potential of university research to bring a higher return on resources invested by the state. ASU must develop a competitive research infrastructure that draws faculty of national prominence. Leading scholars attract the federal funding that is currently available for research in such areas as the life sciences.

I would like to see ASU develop a reputation for its entrepreneurial boldness. The enterprise imperative must become a part of our culture. But moving from the agency model to an enterprise model will take many years to accomplish. Our approach is to begin immediately by investing in initiatives that help move us in this direction.
Arizona Biodesign Institute at Arizona State University

[conceptualized; designed; initiated; fully operational by December 2004]

At an institution-building level, we will press for the creation of programs and initiatives that drive our research enterprise to higher levels of scientific and economic achievement. We have launched the Arizona Biodesign Institute, a state-of-the-art interdisciplinary research program and facility that will be the cornerstone of our research infrastructure in this vital and burgeoning field.

This new enterprise will focus on designing new biodevices, biomaterials, biotools, biosystems, and bioinformatic networks, all intended to directly help people, and to lay down the foundation for new economic activity. This research institute will serve as the prototype for the building of a new entrepreneurial research spirit at Arizona State University, and will enable us to enter the international competitive field of bioscience, biotechnology, and biomedicine with a set of research teams, students, and research facilities that will allow us to become globally competitive in less than two years.

Catalyzing large-scale interdisciplinary research focused on designing and meeting human health needs, the researchers at the institute will pursue advances in fundamental science and engineering related to the design of critical biotechnology solutions. We will be focusing on two emerging areas of great contemporary importance: biologics and therapeutics by design, and nano-scale biologic systems by design.

The work of the institute will significantly enhance our ability to develop new classes of pharmaceuticals that will monitor and remediate environmental change, rehabilitate motor function disorders, and initiate start-up biotechnology companies. To carry out this ambitious research agenda, we will collaborate with the University of Arizona and Northern Arizona University.

At a regional level, the Arizona Biodesign Institute will contribute to the potential for a globally competitive and internationally recognized biosciences cluster in metropolitan Phoenix, adding depth to the regional technology mix and diversifying the state’s economic base. At an institutional level, the Arizona Biodesign Institute represents the movement of the research enterprise of this university from a slow-moving agency model to a fast-moving enterprise model.
DESIGN IMPERATIVE 4: PASTEUR’S PRINCIPLE

When Louis Pasteur, the eminent French chemist and microbiologist, conducted his varied research, his concern was always to solve a particular problem. Having discovered that germs were the cause of fermentation, he realized that they could also cause contagious diseases. Pasteur devoted his late career to the development of vaccines that have protected millions from disease. This approach to scholarship has been termed use-inspired.

Disinterested inquiry—research free from vested interest—has always been a hallmark of the academy, and many of the advances in research that are the touchstones of scientific and technological accomplishment are the result of serendipity. But I envision a community of scholars also guided by a focus on purpose. Prestige attaches to the creation of new knowledge, but is it knowledge that can be harnessed to a purpose?

The social outcome of research is not always considered in an academic culture that regards knowledge as an end in itself. Our concern is to contribute to our disciplines, but rarely do we consider what larger contribution we may be making to society. As one of the founders of the Center for Science, Policy, and Outcomes in Washington, D.C., one of my particular academic interests is the purposes of our research.

A research university is inherently committed to the principle that teaching is most effectively carried out in a context that encourages the creation of new knowledge—teaching and research are intrinsically aligned. But our scientific, technical, artistic, theoretical, and philosophical sophistication far outstrips our knowledge of the relationship between research and its outcomes. What we must begin to do—and what our current academic culture sometimes fails to consider—is the purpose behind our work.

It is not the role of university administrators to inquire whether or not research serves some purpose. I am simply saying that academic culture must broaden its view to consider the social implications of research, and I am saying that at ASU we might begin to set an example.

I could cite many examples of use-inspired scholarship taking place at ASU, but since I have alluded to Louis Pasteur and his work on vaccination, I will single out research currently underway in our department of plant biology. The leaders of this project realized that poverty and the limits of distribution technologies prevent the vaccination of much of the world’s population. As a consequence, the team is developing mechanisms for the delivery of vaccines for hepatitis B, smallpox, and other large-scale killers through genetically-altered tomatoes. Basic science that will lead to high social impact in a few short years. I call this approach to scholarship use-inspired.
Center on Religious-Based Conflict

[under conceptualization, planning, and design; anticipated launch: 2003]

An initiative intended to foster use-inspired scholarship is the Center on Religious-based Conflict that we will initiate in early 2003. The role of religion in conflict has become especially prominent with recent events and continuing disputes in Indonesia, the Middle East, India, Pakistan, and in our own nation, in New York City.

Religious-based conflict has occurred throughout the world during most of recorded history. It would be no exaggeration to suggest that religious-based conflict exists in our nation in areas as diverse as foreign policy, international law, teaching and learning in our schools, science and technology research and application, news coverage, and political ideology. The growing recognition of religion’s enormous role in conflict and public affairs around the world clearly indicates the urgent need for the creation of the center.
THE NEW GOLD STANDARD: DESIGN IMPERATIVES OF A NEW AMERICAN UNIVERSITY

DESIGN IMPERATIVE 5: A FOCUS ON THE INDIVIDUAL

Arizona State University is large, and because of our quality we are growing larger. It may seem counterintuitive to imagine that one of the largest universities in the nation could focus on the individual student, but in fact, size is irrelevant to an academic institution. In our case, as demonstrated by the quality of the freshman class we admitted for fall 2002, size is a consequence of the quality of the education we provide. What distinguishes us from other institutions is the extent of our capacity to attend to students as individuals.

Traditional assumptions about teaching and learning are no longer adequate. While listening to a professor lecturing—the “sage on the stage”—is certainly a critical component of a university education, it is but one element. Learning takes place around the clock, and not only in classrooms, laboratories, and libraries. As educators, we must take every advantage of both traditional methods and new approaches that make students an intimate part of the research process and the creative act, bringing an intensity to education that is often lacking. Regardless of our approach or methodology, I propose an institutional commitment to focus on the individual student.

I lament the fact that in most fields teaching methods have not changed over the past 30 years. We need to incorporate new findings on the processes of learning and apply these to our classrooms. We must take every advantage of the new media tools that are the product of the technological advances of the past decade. These allow students to learn individually and through collaboration with others, and to learn at their own pace, sometimes exceeding the parameters of the course.
Consistent with our commitment to focus on the individual is a commitment to enhancing the undergraduate experience with learning in small groups. It has been said that students sometimes learn as much from one another as they do from their professors. ASU will facilitate mechanisms to structure education in small clusters of students wherever practical. This does not mean no large classes—on the contrary, large classes can be among the very best. It means that these classes will be attended by groups of students who are connected—students who are learning together.

In addition to facilitating a focus on the individual student, we must ensure that those quintessential aspects of a university education—the excitement of discovery, the craft of scholarly writing, the precision of research, the appreciation for scientific method, the passion for a discipline—become increasingly embedded in the learning process.

In order to focus on the individual, Arizona State University must expand and contract and redesign all at the same time. On the main campus we need smaller and more focused programs, and we need more learning groups within those programs. At the same time we must grow as a university, so we must accelerate the development of new learner-centered programs on the West and East and downtown campuses, each with their own unique identity. In addition, we need to expand the size and intensity of our learning environment for our highest-achieving students so that they might infect us all with their irrepressible energy and enthusiasm. To do this, we will do many things, but the following three are being planned and will be implemented as soon as possible.
The Polytechnic at ASU East

[in conceptual phase; design phase: 2003; early implementation: 2004]

On the outskirts of Mesa, on the ASU East campus, we will build the nation’s first twenty-first century polytechnic. It will be a school focused on educating all of its students from the perspective of each having a high level of technical literacy, each being facile in the use of technology in their chosen field, and, finally, all being embedded in a technology-active directly-engaged campus learning environment.

At the Polytechnic at ASU East we will educate writers, teachers, engineers, technologists, business professionals, scientists, and a range of other specialists in how to think and solve problems from the perspective of experience-based learning and applications-based problem solving. This learning environment will prove to be unique and will attract students from across Arizona and the world to its practical style and its focus on the individual.
The “New College” at ASU West

[conceptualization phase]

In Phoenix’s burgeoning and diverse West Valley we will move the ASU West campus from its outstanding start as a regionally focused learning enterprise to one of the first truly interdisciplinary college campuses yet created in America.

With its own unique identity, the “New College” at ASU West will build from its already interdisciplinary basis to approach the education of all students in all fields in a connected learning environment. In this beautiful campus setting the watchwords for learning will be community focus and group learning across fields. This will allow for new thinking to be done, and new kinds of teachers, scientists, artists, and other specialists to be produced.

A professional degree from the New College will mark its recipient as broadly educated. Graduates entering the field of teaching, for example, will be recognized as grounded in literature, aware of history, and excited by politics and science. Because all of these are inextricably intertwined in the world, they will be connected in our learning environment.
Barrett Honors College Expansion

[conceptualization underway; design phase: 2003; review phase: 2004; early implementation: 2005]

One of the great successes at Arizona State University over the past decade was the high achievement of the students at Barrett Honors College. The academic profiles of Barrett students are comparable to students at our nation’s most selective institutions. With three Rhodes Scholars since 1995, nine Marshall Scholars since 1991, and students holding many other prestigious awards, Barrett students are among the most outstanding in the nation.

This model will be expanded at ASU in two principal ways. First, as a university-wide program, the Barrett Honors College will be enhanced, expanded, and refined. Second, we plan to build a new complex of buildings for Barrett on our main campus, a new residential college that will consolidate the learning environment and unique identity of Barrett. As a residentially-based learning environment, Barrett will become second to none, and offer the best and brightest students in Arizona a place to call their own.
DESIGN IMPERATIVE 6: INTELLECTUAL FUSION

Knowledge knows no boundaries. The core disciplines are but one element of our intellectual identity. The traditional disciplinary organization of universities may not be the optimal way to organize knowledge, or to organize the institution itself, or to teach students, or to solve the social, economic, and technological challenges confronting institutions in the regions in which they are located. Accordingly, I encourage teaching and research that is interdisciplinary, multidisciplinary, and transdisciplinary. I encourage the convergence of disciplines, where appropriate, a practice that might more accurately be described as intellectual fusion.

Programs that involve multiple departments and schools, that bring together scholars from different disciplines, have unique strengths. In order to overcome the limitations inherent in traditional scholarship, I would like to see ASU undertake strategic recombinations of complementary academic units to create programs that both maximize core strengths and facilitate the creation of new knowledge. ASU already has a number of such programs and schools, and has built a tremendous base of convergence, particularly in the sciences and the arts. These programs represent intellectual fusion at its best.

The motivation in creating interdisciplinary programs is not to eliminate disciplines as we know them, or to transform core fields, but rather to advance knowledge in the face of its rapidly changing nature, the explosion of new knowledge that characterizes the academy in recent decades. It is no longer adequate to neatly equate disciplines with departments. Rather we must think in terms of programs comprised of disciplines construed across departments and schools.

I recently heard a member of our political science faculty lament that no other department of political science can “out-Michigan Michigan.” In response I would suggest that we would rather wish to “out-ASU ASU,” and to build a department with its own unique strengths, and its own connections with other disciplines at ASU, focused on problems of regional importance. By encouraging intellectual fusion, both core departments and interdisciplinary programs at ASU will become greater than the sum of their parts.
Institute for Studies in the Arts Expansion

[conceptualization phase]

Creative expression is an essential aspect of our lives, and contributes to the cultural fabric of our community. Because fusion has been an important dimension in the arts during much of the past half-century, an institute dedicated to the study of fusion in the arts offers students and faculty members an ideal opportunity to examine its implications for and relationships with other disciplines—in the humanities, social sciences, natural sciences, and fields of technology.

Building on the innovative and renowned programs of our existing Institute for Studies in the Arts, the enlarged scope of the institute will bring together researchers from disciplines as diverse as dance, music, theatre, computer science, electrical engineering, bioengineering, the liberal arts, the biological sciences, education, and architecture and environmental design. The institute will offer a special focus on the relationship of the arts to developments in technology and new media. Our location in Metropolitan Phoenix offers an ideal opportunity to explore the creative ferment of a dynamic urban environment.
Another important example of intellectual fusion at Arizona State University is the reorganization of our biological faculties. Historically housed in three departments—biology, microbiology, and plant biology—ASU will launch a new School of Life Sciences. No longer encumbered by the artificiality of disciplinary boundaries, this new school will merge the talents of more than 100 life scientists, engineers, philosophers, social scientists, and ethicists in a new kind of teaching and research enterprise, one focused on advancing our understanding of nature while at the same time using that understanding to build better lives. The reorganization represents the collaborative effort of hundreds of faculty members from the three departments.

In the new School of Life Sciences, faculty will self-organize around the great questions of the day, students will move between faculty of various disciplinary backgrounds, developing research topics and learning in new types of inter- and transdisciplinary settings. Our enhanced new fusion structure will allow the Arizona State University School of Life Sciences to expand dramatically the range of problems and questions that our institution is able to address.
THE NEW GOLD STANDARD: DESIGN IMPERATIVES OF A NEW AMERICAN UNIVERSITY

DESIGN IMPERATIVE 7: SOCIAL EMBEDDEDNESS

As we seek to cultivate the excellence of our academic programs, I believe it is incumbent on us to examine their relevance to society—especially to our region—and to structure our programs in ways that not only advance knowledge, but wherever practicable, directly serve the needs of the people of Arizona, as well as the larger national and international communities.

Universities must meet the needs of their local communities. To pick just one example at the local level, ASU should take the lead in addressing problems in our K-12 educational system. Beginning here in Phoenix, ASU needs to find out what our local communities need, and ASU should be structured to meet those needs.

But there is a much broader social obligation that must be met. As members of an academic community, I believe we must share our expertise globally to help alleviate the host of problems that beset our increasingly complex world. We have a responsibility to consider not only the value and relevance of our research, but also its outcome. We must seek to make certain that the technologies we develop become available to the disadvantaged, and not just the wealthiest corporations and nations.

Much university research is necessarily esoteric because we are involved in the discovery of fundamental knowledge, a process that is arduous regardless of the field. ASU must be a university in which scholars consider the impact—the transformational effect—of their work on society. ASU must be a community of scholars—scientists, engineers, philosophers, artists, poets, historians—concerned with the impact of their work, giving thought to its possible role in a better society. We must integrate the advancement of knowledge with the transformation of society.

As members of an academic community, we must set an example of what it means to be a community. If we do not set an example of what it means to be a community, and lead the way to open discourse and the free exchange of ideas, then who will? We must be a place that is open to diversity of thought and culture and expression. In a sense, academic institutions reflect society in a utopian microcosm—certainly we are as varied and diverse, if not more so. And if we are not, we should be.

The university is a social incubator. We must engage the society evolving before our eyes. We must find new ways to embrace difference, and move ahead of social and intellectual currents. We must think through new ways to govern, and promote evolution in democracy and all our institutions. We must foster new conceptions in the arts and all spheres of culture, and all these things must be done in an environment of openness and free discourse.

What this means, then, is finding the mechanisms to think through the issues and complexities associated with problems as seemingly intractable as religious-based conflict, and fostering a social and intellectual environment which would allow a subject of that complexity to be addressed. In this sense, the university is a social incubator where all are free to speak, and all are free to learn, and all are free to speak and learn together in ways that could not elsewhere be imagined.
Addressing high school graduation rates

The university has a responsibility to improve high school graduation rates, and to increase the number of students, especially minorities, coming to and graduating from our university. The fact that the public high school graduation rate in Arizona is less than 60 percent, and that only 42 percent of Arizona high school graduates are enrolled in college, is clearly a call to action. And we plan to act, by becoming a greater force in the lives of the citizenry, particularly the underserved communities, and in early childhood education, putting more certified teachers in the classrooms, and providing more direction to leaders in education.
Arizona State University Downtown Phoenix Initiative

[conceptualization initiated]

Consistent with our objective to be socially embedded in our metropolitan region, Arizona State University seeks to enhance its downtown Phoenix presence and plans to transform its downtown center into a campus. The ASU Downtown Campus Initiative will explore options for the advancement of knowledge and societal transformation downtown and in surrounding neighborhoods. The presence of our existing downtown Center and the availability of land position ASU to become a key stakeholder in the revitalization of downtown Phoenix.

ASU plans to establish programs downtown in such areas as urban design, economic development and diversification, and education and training. The presence downtown of the state-wide genomics collaborative is another incentive for ASU to develop a campus.

ASU has the opportunity to enhance and diversify its profile in the community by developing an identity downtown. We hope to attract members of the creative class to our campus, and in so doing, encourage the economic development of downtown Phoenix. We hope that developing an academic center will also encourage residential development in this diverse and vibrant district of Phoenix. We hope to encourage new creative urbanism in Phoenix, embedding the arts into the planning process.

The Joint Urban Design Program, an outreach arm of the ASU College of Architecture and Environmental Design, is already a presence downtown. Through partnerships between the college and other units at ASU and other public and private agencies, the program fosters environmental stewardship, neighborhood and community development, quality of life, sustainability, transportation improvements, and a revitalized urban form. An example of the program's support for the community is the development of Arizona's Capitol Mall, a project that as it continues, involves the ASU School of Social Work as well.
Arizona State University American Indian Initiative

[conceptual design underway; programmatic design: 2003; program expansion: 2003-2004]

Arizona State University will gather and empower a large cohort of scholars focused on American Indian culture, social and economic issues. The cohort will lay the ground work for positioning Arizona State University as the leading academic institution in the nation in the heretofore undeveloped area of intellectual discourse in matters related to American Indian culture and its implications in the context of the broader American culture.

The presence of a critical mass of scholars encourages constructive dialogue and the evolution of a given sphere of inquiry. It is all the more essential in a developing field such as American Indian studies. The initiative will encourage scholars from a spectrum of disciplines to offer differing perspectives. Teaching and research related to American Indian culture has been underway at Arizona State University for decades, but the American Indian initiative will prove transformational in the development of the field, and confirm the university’s commitment to programs that are socially relevant.

Of particular interest to me is the discussion of enhancing cultural understanding and cultural linkages between the larger, broader general American cultural and the American Indian cultures of Arizona and the Southwest.
THE NEW GOLD STANDARD:
DESIGN IMPERATIVES OF A NEW AMERICAN UNIVERSITY

DESIGN IMPERATIVE 8: GLOBAL ENGAGEMENT

A moment ago I said that research and scholarship know no disciplinary boundaries. Nor does research and scholarship stop at border crossings. Global engagement is critical to the advancement of Arizona State University as well as metropolitan Phoenix and the rest of the state. Just as our cultures and societies are increasingly intertwined, so too are the economies of the world. In order to enhance global engagement, we must seek to understand it, and become increasingly aware of issues and developments around the world. We must develop tools to facilitate learning, and engage in dialogue to discern the myriad complexities of global engagement.

Universities have historically played a significant role in these matters, performing critical convening, training, and analysis functions. At present, Arizona State University is woefully underpowered in its resources related to global engagement. We must devote careful consideration both to the expansion of the global emphasis of many of our programs, as well as the expansion of the overall global engagement dialogue.

It is difficult to imagine metropolitan Phoenix growing to a city the size of London, as some predict, without substantially expanding its overall capacity to be linked globally. The mechanisms that are available to facilitate global engagement are numerous, but will take time to design and deploy. During the interim we will focus on building linkages with our international neighbors, as well as expanding the capacity of some of our existing programs to act on a global basis.
Arizona State University Pan-American Initiative

[conceptualized; in planning stages; project implementation and launch: 2003]

The ASU Pan-American Initiative is a series of programs to promote teaching and research in all aspects of Latino culture and society broadly defined as found in the Americas. We will enhance our study of the borderlands, deepening our understanding of these transnational communities, societies, and cultures of the American Southwest. Beyond the borderlands, we will engage in productive social, economic and cultural dialogue with Mexico and Central and South America.

The communities of the borderlands are uniquely advantaged and disadvantaged at the same time. Situated between two cultures, they exist in a social, economic, cultural, and political context that demands closer examination. Disciplines that may come to bear on this research include history, economics, political science, geography, sociology, both English and Latin American literatures, and may include scientific research addressing environmental and health challenges.

Turning our focus from the borderlands further south, Arizona State University will also develop an initiative devoted to engaging the nations and cultures of Latin America. We hope to bring new dimension to teaching and scholarship on Mexico and Latin America, particularly with an interdisciplinary emphasis not only on culture and society, but also on advancing technology, increasing scientific understanding, helping to reduce poverty, and promoting sustainable development. At the same time, we hope to discern new possibilities for global engagement, not only for the nations and peoples of Latin America, but for those of us north of the border. I am committed to these issues and hope to engage in collaborative teaching, research, and knowledge transfer with academic institutions in Latin America.
ASU Center on Asian and Pacific Rim Trade and Economic Development

[conceptualization phase]

Recent decades have witnessed the emergence of the Asian and Pacific Rim economies as a powerful force in the global economy. Increased trade with Asia and the desire to promote economic development in Arizona through globalization suggests the need for the proposed Center on Asian and Pacific Rim Trade and Economic Development. Given the growing importance of these economies, it is essential to develop a sophisticated understanding in economic terms as well as socially and culturally.

When one considers Arizona’s global connections, its proximity to Latin America suggests an economic orientation southward, and we are indeed advancing teaching and research in this direction through our Pan-American Initiative. Metropolitan Phoenix, however, is one of the largest American cities located near the Pacific Rim. As metropolitan Phoenix diversifies its economy, and in particular its high-tech base, increased trade with Asia is both inevitable and desirable. Through the center we can broaden opportunities in technology transfer and promote industrial research collaborations. The economic prosperity of our region may be tied to Asia and the Pacific Rim as well as Latin America.
Arizona State University College of Business

The Arizona State University College of Business is ranked among the top 25 business schools in the United States and clearly has the potential to emerge as one of the finest business schools in the nation. Its MBA for Executives program, for example, has been ranked eighth among public programs by Business Week, and it boasts many other distinguished programs. U.S. News and World Report, for example, named ASU's MBA Online Program the best online business program in the nation. Corporate clients include Deere and Company, Lucent Technologies, Intel Corporation, and ChevronTexaco.

But the internationalization of our business school will be critical to its further ascent. Our business school must provide students with a global perspective, informing teaching and research with an awareness of the world economy and business opportunities. The school already offers an innovative program in partnership with Motorola in Beijing. Based in Beijing, the ASU MBA High Technology in China Program brings together the strengths of our business school and the ASU College of Engineering and Applied Science. The program offers an immersion in high technology and international management.

Global engagement by the college means more than initiating exchange programs. We must assume a leadership position in international finance and economics, collaborating with peer institutions across the Pacific, across the Atlantic, and across the Gulf of Mexico. The ASU Center on Asian and Pacific Rim Trade and Economic Development will be relevant to the new international focus of the college. We must conduct research that will enable Arizona companies to devise internationally competitive growth strategies. We must reflect the world in which we live, and the way in which business is conducted around the globe.
CONCLUSION: THE NEW GOLD STANDARD

A moment ago I spoke of the fifteen distinguished American universities, institutions of such influence that, to this day, every university in the nation measures itself according to their standards. I said that these universities represent the gold standard, but a gold standard of the past. The new gold standard will be represented by the university that is inclusive, rather than exclusive, the university that is fully committed to its community, the university that directly engages the challenges of its cultural, socioeconomic, and physical setting, and shapes its research initiatives with regard to their social outcomes.

As we look ahead in this still new century, the world is more complex, and we can speak with less certainty than was possible in the past. Fifty years ago those involved in the academic enterprise enjoyed a buoyant optimism, and the possibilities that science and technology and art were seen to offer appeared limitless. Today we have come to suspect that the outcome of our enterprise is not without unexpected consequences. We are no longer unequivocal in our praise of science and technology, nor of our own cultural paradigm—even the hegemony of reason is suspect.

Yet where else but in the university is it possible to engage in such self-reflection, even when self-assessment leads to no facile conclusion? Where else are doubt and skepticism and uncertainty given the respect they are owed? In this sense, little has changed since Cardinal Henry Newman wrote in 1872: A true university is “a place where inquiry is pushed forward, and discoveries verified and perfected, and rashness rendered innocuous, and error exposed, by the collision of mind with mind, and knowledge with knowledge.”

I believe we should strive to become a true university, not a place for a few, but a force for many. There is much at stake. Our success affects the fortunes of the region, but, if we are successful, if we are able to create a true academic community in the fullest sense of the idea, then we may prove to have more influence than we suspected.

But I cannot do it alone. I ask you to join me in the task of redefining the American research university. I ask you to join me in the task of building the premier new American university—the university that sets the new gold standard. I ask you to join me in the task of building Arizona State University.
GUIDING PRINCIPLES

“My objective is to build a great university—a world-class institution—that will prove of lasting value to the state and nation in the centuries ahead. I envision a new American university based on four guiding principles.”

—Michael M. Crow, President, Arizona State University

1. Teaching is our prime directive
2. Scholarship is the pathway to better teaching
3. Creative expression in all forms is our highest goal
4. Openness and access to our learning environment
GUIDING PRINCIPLES

Teaching is our prime directive

My first guiding principle is that teaching is our prime directive. First, last, and always, those of us who are members of the faculty are teachers. In whatever capacity we act, regardless of our professional obligations, however we define ourselves, we are above all teachers. Whether in the classroom or laboratory or studio, whether serving on an administrative committee, delivering a lecture, or meeting with students during office hours, we are teachers. We teach through our words, but also through our actions, through the values we profess, through the decisions we make, through the ways that we interact with society. When I meet someone on a flight and they ask me what I do, I say I’m a teacher. Of the titles that I have held, there is none of which I am more proud. If you are a member of the faculty, I assume you are here because you also define yourself as a teacher. I cannot think of any role more fundamental to the purpose of a university.
GUIDING PRINCIPLES

Scholarship is the pathway to better teaching

My second guiding principle is that scholarship is the pathway to better teaching. If you are not active as a scholar, if you are not contributing new knowledge to your discipline, if you are not developing new approaches to pedagogy, your teaching will inevitably suffer. If you are not testing your ideas by putting them out there in the marketplace of ideas where others can evaluate your ideas and respond to them, in turn allowing you to respond and enter into a dialogue, the value and viability of your ideas is diminished.

There is no single conception of scholarship. It varies significantly between and among the different disciplines and intellectual cultures that make up the university. Scholarship takes as many forms as there are spheres of inquiry. For a scientist, scholarship is the discovery of a new chemical mechanism, the mapping of a new molecule, the discernment of an unknown aspect of a 500-year-old quest to determine whether or not planets orbit stars anywhere other than our solar system. For an artist, it is the creation of a new painting to express a personal vision, or the completion of a novel that addresses a complex ethical problem, or the orchestration of a new composition. For the literary critic it may be a reevaluation of a short story by Sandra Cisneros, and for an art historian the translation of a treatise on artists’ materials and studio techniques in seventeenth-century Holland. All forms of scholarship in the new American university are equal, and all forms of scholarship are considered significant expressions of the human spirit.

Scholarship is the means by which the institution is continually reinvigorated, but we engage in scholarship with the principal objective of being better teachers. You cannot teach chemistry unless you have the capacity to understand how chemistry is advancing, and you cannot understand that process unless you are helping to advance chemistry as a subject in and of your own right. We are better teachers if we are contributing to the knowledge base of our field. In fact, this is a crucial distinction that separates the university form of education from all others. University teachers are by definition scholars. The university is a setting for scholar-teachers to advance scholarship in given fields and to utilize their research as a primary form of teaching. There are obviously other forms of teaching in which scholarship is not a necessary component of the teaching process, but in a university environment, scholarship is an essential component.
GUIDING PRINCIPLES

Creative expression in all forms is our highest goal

Third, while teaching is our prime directive, creative expression in all forms is our highest goal. I draw no distinction between the creative expression of the artist and the physicist, or the musicologist and the long-distance runner. Or the poet and the computer scientist. Creative expression in all forms is our highest goal. Our objective is to provide a setting in which creative expression can take place, where important new poetry can be written and analyzed, or the work of a minor Jacobean playwright may be evaluated. Where kinship practices of preliterate societies in the Guatemalan highlands may be assessed, or the vortex dynamics of the atmosphere of a distant star. The new molecule, the new minimalist sculpture, the new defensive line formation in Sun Devil Stadium—these are all forms of creative expression, and I hold all forms equal. How could I not, as each are mechanisms through which the human spirit is expressed?

If some among us are elected to membership in the national academies, if others generate streams of revenue from the licensing of a new technology, or if owing to the brilliant performance of the Sun Devils we draw 55,000 fans to every football game, we may all well be pleased, but I would suggest that these are secondary returns to the intrinsic reward of creative expression itself.

As members of an academic community, we live in a privileged setting. In a sense, we are members of a privileged class. I am not suggesting that we live in an ivory tower, but to some extent we are sheltered from the mundane, complicated, and sometimes painful workaday world. In this protected realm, it is our responsibility, it is our job, it is our privilege to be creative. We should take this privilege to heart, and appreciate the extent to which we have assumed a special responsibility to all of society.
GUIDING PRINCIPLES

Openness and access to our learning environment

My final guiding principle is openness and access to our learning environment to all. If we sequester the scholarship and creativity that characterize our university, if we build walls around our campuses, we diminish our own potential, and the magnitude of our contribution to society. ASU has more than one campus, and the capacity—and the obligation—to offer opportunities to as broad a segment of the populace as possible.

Without exception, academic institutions profess a commitment to excellence. I believe we should take a commitment to excellence for granted, and demand more from ourselves. I believe we should recognize and champion diversity, not for the sake of diversity itself, but because our ideas and our theories and our practices and our analysis and our solutions to the problems of both the natural and social world are incomplete and inadequate. We have not yet found solutions to the problems of poverty and sustainability and the long-term viability of capitalism. All of these require new perspectives, and diversity may be the enabling catalyst. Diversity is the means to find mechanisms to expand our understandings of the natural and social world, and to expand our understanding of how to advance these in ways we cannot yet fully understand.

I believe we should find the mechanisms to be more than a place where faculty gather with students. I believe we must find mechanisms to project our knowledge, our willingness to be of value and to learn and to listen and to offer what we have to broader segments of society. I believe we should not build walls, but rather bridges, and while this is certainly a cliché, it is no longer a cliché if in fact one can see those bridges actually carrying traffic—the traffic of learners of all ages, from children in elementary school to retirees, somehow connected to the university and all that it has to offer.

By openness and access I do not mean opening the institution to people not prepared for college-level education. By openness and access I mean building a university that is linked to the K-12 educational system, linked to families, linked to the community to provide mechanisms to enhance the preparedness of students for college in an effort to increase the likelihood of their ultimate success.

Openness and access to our learning environment could be regarded as contrary to academic excellence. Let no one think that I am opposed to academic excellence. On the contrary, I am its champion, and will demand excellence from my new colleagues and our students. The building of academic excellence is the building of an environment where teacher and student can succeed together. And that is not a function of size.

Openness and access to our learning environment means opportunities for students once they are already at ASU. We live in a world that is changing rapidly and becoming increasingly global. A moment ago I spoke of the desirability of interdisciplinary collaboration in our research. Similarly, I hope to broaden educational opportunities available to our students. I would like to encourage students to explore disciplines outside their major areas. I would like to see physics majors to enroll in courses in musicology, and students in urban planning enroll in courses in Russian.
Because we live in a world characterized by an accelerated pace of advances in scientific knowledge and technological capability, I would like to see the building of new and broader programs intended to create higher levels of scientific and technical literacy, as well as higher levels of technological capability, even for those who do not happen to be gifted in calculus. I would like to see interested students from all majors enroll in appropriate courses in the School of Engineering.

Above all, I would like to see our learning environment accessible to all who are sufficiently prepared, with no financial barriers to students qualified to attend the university. Only then will we be able to speak of openness and access to all.