OUR COLLEGES AND UNIVERSITIES PLAY A KEY ROLE in ensuring that as a nation we will continue to lead the world in innovation, maintain our competitive advantage, and weave the fabric of our economic prosperity. Towards this end, I would like to propose three tenets that I believe we, as academic leaders, are obliged to foster in the institutional cultures of our respective schools. I propose that we must ensure that our institutions focus on perpetual innovation; on competitiveness and our competitive edge as a nation; and on the challenges associated with the societal inequality that is a consequence of our economic prosperity.

TENET 1: Our colleges and universities must focus on developing institutional cultures of perpetual innovation. We think of innovation as something that takes place in our research labs, but it must equally inform the institutional organizations and business models of each of our colleges and universities in their disparate settings. The world is changing rapidly and at an accelerating pace, and universities must serve as catalysts in that transformation. But in order to lead change we must change the way our institutions engage with business, industry, and government, and also how we interact with one other. Some institutions are already reshaping the way we think about the role of universities in economic development and innovation ecosystems.

TENET 2: We must constantly seek the competitive edge in innovation because our competitiveness as a nation is constantly under threat. Our nation is still at the leading edge, but that puts us in the most precarious position because we have the most to lose. While others can leapfrog, if we slacken our pace, we will no longer continue to lead the pack. Institutional cultures of perpetual innovation will ensure our competitive edge.

TENET 3: Prosperity in the United States is increasingly a double-edged sword. While our national prosperity—a product of the innovation we seek to foster—permits an ever-higher standard of living and quality of life for some, our very success also serves to increase the inequality in our society. The wealth gap in our country is growing as we speak, and as institutions that purport to separate the intellectual wheat from the chaff, our colleges and universities are arguably part of the problem. Yet if we choose to align our institutions accordingly we can become part of the solution.
The industries to which we provide the workforce and the economic actors that build on our innovations and discoveries are fully globalized. This is a truism, but it means that as state universities we too are being called on to work not just beyond the boundaries of our states, but also beyond the boundaries of our nation. Multinational corporations like Intel are making substantial new R&D investments abroad. Our universities are training workforces around the world. At Arizona State University, for example, we recently signed up to train the workforce for Target’s leadership in India, and we are educating executives and government leaders in China and Mexico and other nations. Meanwhile, our corporate leaders have themselves become global actors. Bob Johnson, former chairman and CEO of Honeywell Aerospace, in Arizona, is now the CEO of Dubai Aerospace Enterprises.

American universities are still the preeminent research and educational institutions in the world, yet new models for universities are emerging, and new institutions are being established that challenge the traditional structures and modalities of universities. This should incite us to push our own institutional and conceptual boundaries in positive and productive ways.

In China, Tsinghua University, in Beijing, has established a holding company, Tsinghua Holdings, that runs university businesses and technology transfer in ways that are far beyond what most universities in the United States have engaged and that return millions of dollars to the university each year. Tongji University, in Shanghai, is a proactive partner in the reshaping of Shanghai into a world city. Hong Kong University of Science and Technology, just sixteen years old, is deploying its significant resources to establish an Institute for Advanced Study that they hope will both model and rival the institute at Princeton University.

In Singapore, Nanyang Technological University (NTU) is a critical partner in the ongoing major economic transformation that the government is leading in that city-state. In Ireland, Dublin City University (DCU) is actively engaged in industry and in the transformation of Ireland from a manufacturing center for Europe to an R&D hub. And in Australia, Monash University is forging new kinds of internationalized campus experiences, with programs that seamlessly span three continents. These countries are also changing the way governments fund research and engage industry. Take a look at Singapore’s Economic Development Board and A*STAR, or at Ireland’s IDA and Enterprise Ireland to see how the global research environment is shifting.

Led by its universities, the U.S. has been and continues to be a research powerhouse, churning out new technologies and sharpening the innovative edge. Yet in our national and state-level investments in research and technology development we are placing an emphasis on human health to such an extent that we may hinder our ability to engage in many aspects of the coming economic wave. While we are focusing a lion’s share of our investments in human health, many other countries are advancing shift-making technologies that may well have broader implications for the way we do business and the quality of life for entire communities.

Given that the economic environment is shifting around us as we move to a knowledge-based skill economy—that innovation is ever more critical to economic success, that research is ever more global in character and in location, that jobs are moving around the world—the success of our universities is increasingly central to national and regional competitiveness. Yet all too often our universities are neither sufficiently recognized as wellsprings of innovation nor explicitly acknowledged. Success can be measured in multiple ways, and many of these are not the traditional indicators. This is part of what we can learn from our international colleagues, from our industry partners, from our communities, and from one another.

There is no question that the success of our economies and our communities is intrinsically interrelated with the success of our universities, yet the Council on Competitiveness, for example, barely mentions universities as contributors to national competitiveness. Their acknowledgement may be implicit, but we must move it to explicit. We must ensure that universities are recognized for their central role in our national success, not merely because we are concerned about getting the credit, but
to ensure that we will always be given the opportunity to provide the utmost service in the most effective manner. I propose that this newly forming commission engage this set of issues directly and from multiple angles, so that as institutions we gain a better understanding of how we weave the fabric of economic prosperity in our communities.

As the global environment shifts we need constantly to think and rethink how best to undertake and execute the primary elements of our mission, one of which is the production of human capital—people production—that is, shepherding the intellectual development of large portions of the national and international workforce that drives and determines our economic and social conditions. The individuals whom we produce through our systems of higher education—be they researchers, engineers, artists, teachers or any of the wide range of economic and social actors in our world today—are our leaders and comprise the fabric of our societies. We are responsible for the quality of their educations, yet we often do not assume sufficient responsibility for them as individuals.

So many of our public schools, for example, are failing and we, as the trainers of the teachers and administrators who staff those schools, are partially responsible. We should step up and shoulder that responsibility and, in so doing, figure out ways that we can improve our “product”—the teachers—and better equip them for the challenges of today’s classroom. We are still educating many teachers according to an obsolete model that reflects a bygone economic era. This will not do. We must instead engage proactively in the production of teachers equipped to teach in the STEM disciplines, for example, in ways that engage the student of today. These students will not stand—or rather will not sit still—for the obsolete model of teaching and thus often come away with less than they need to compete. We must produce teachers who have the necessary content knowledge and understanding of pedagogy, and who are more flexible, dynamic, and responsive.

Yet even while we make substantial improvements in our “product,” we continue to exclude a high proportion of the population from reaching their prosperity potential by excessive and sometimes arbitrary “culling,” thereby depriving countless individuals of opportunities to experience higher education and earn degrees. We need to make more of an effort to understand how to educate greater numbers of individuals successfully, but we must also educate people to be successful. This economic dimension is intrinsic to the societal mission of colleges and universities. Individuals deprived of higher education through lack of funds represent not only personal opportunity lost, but also the loss of societal economic prosperity. Individuals deprived of college educations will likely earn lower wages and generate fewer jobs than they would have as graduates. A lack of higher education is not only a personal loss; it is a loss for all of us, as a nation and as an economic system.

In our national innovation ecologies, colleges and universities represent keystone species, if you will. And if we are to accomplish our objectives as a commission, we must step up and take on the full responsibility-sets, challenge-sets, and engagement-sets that come with the job. We therefore wish to propose that the Commission on Technology Transfer be renamed the Commission on Innovation, Competitiveness, and Economic Prosperity (CICEP). In addition we propose that the commission be re-tasked to reflect this larger role. We believe that this more expansive name more fully captures the multi-modal, multi-faceted, multi-actor engagement of colleges and universities with the economic systems of which they are an integral part.

In order to stay ahead of the curve, we must maintain a focus on innovation in our discussions at NASULGC, and expand our tools and metrics to develop an understanding of innovation ecologies. We must change the value proposition we present and consider how more fully to engage society. We look forward to your feedback on the name, the new mission, and the tasks we have set ourselves.