A Great Nation
How Americans can lead and prosper in a changing world
About the Technology CEO Council

The Technology CEO Council is the information technology industry’s public policy advocacy organization composed of chief executive officers from America’s leading information technology companies. Technology CEO Council companies generate more than $300 billion in annual revenues and employ more than 750,000 workers.

Founded in 1989, and formerly known as the Computer Systems Policy Project, the Technology CEO Council is dedicated to advancing policies that ensure and promote U.S. competitiveness through technology leadership. The CEOs regularly visit Washington to meet with policymakers about issues of importance to the nation and high-tech industry. We offer insights and recommendations through reports and white papers on issues having a transformative impact on society.

The Technology CEO Council is focused on public policy initiatives related to international trade, innovation, health care information technology, telecommunications, digital rights management, export and knowledge controls, and privacy.

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Americans need the courage to compete, the wisdom to make the right investments in our future and the political will befitting a great nation.
Executive summary

Americans, like people all over the world, approach the future with a curious mix of optimism and apprehension. We are hopeful that tomorrow holds new prospects for greater security and more prosperity, but concerned that we, our families or our communities might get left behind. And indeed, there are both extraordinary opportunities and formidable trials ahead for citizens of all nations.

The world is more open today than at any previous point in history. Such interconnectedness offers boundless potential to advance our own lives and, more broadly, the human condition. It also brings new challenges to be met and new problems to be solved. Certainly the pace of change will continue to accelerate, for better and for worse. Success — for individuals, companies and nations — will demand skill, agility, global insight and resolve.

The good news is that Americans possess these traits — and more. The challenges we face are neither unprecedented nor insurmountable. Older Americans overcame a great depression and world war, successfully navigating the final shift from an agrarian to

... an open, connected world offers boundless potential to advance our own lives and, more broadly, the human condition.
an industrial economy. Baby Boomers dealt with oil shocks, stagflation and a 50-year Cold War, advancing from the industrial era to the dawn of a knowledge economy. As the baton passes to a new generation of leaders, we can take comfort from our predecessors’ triumphs and draw lessons from their stories.

From our economy to our educational system, from energy to national security and health care, our biggest challenges can be addressed by leveraging our strengths and learning from our past accomplishments. There are several recurrent and critical basic themes in the American economic story:

- **We thrive when economies are open and inclusive.** The absence of barriers among our states enabled competition and economies of scale that gave the U.S. economy a huge advantage over all other nations, while trade with others powered explosive growth. Our openness to immigrants and beliefs ensured that the best, brightest and most ambitious came to our shores to create jobs, companies and wealth.

- **Innovation is the key to our prosperity.** Our relentless pursuit of better ideas, new frontiers, new companies, new cures and new opportunities has ensured constant renewal, reinvention and improvement. Our propensity for innovation ensured economic leadership and national strength.

- **Entrepreneurs are best at leveraging change.** By rewarding risk and facilitating competition, we cultivate a nation of entrepreneurs, giving us the talent to cope with changing geopolitics, technologies and global markets.

A great nation does not fear overseas competition. A great nation prepares its workers and companies to successfully compete in a global market. In doing so we not only ensure prosperity for future generations, but leverage global interdependence to bring deeper understanding among nations and improve the quality of life for those most in need of help. There is no doubt we can continue to achieve new prosperity, more inclusive and complete than any that preceded us — provided we have the courage to compete, the wisdom to make the right investments in our future and the political will befitting a great nation.
Winning will require skill, agility and fortitude.
Coming out ahead

As the 21st century begins to take shape, citizens all around the world are looking toward the future with a remarkably similar mix of emotions. We see this clearly as chief executive officers of some of the most globally integrated companies, engaging with workers, customers and leaders on every continent. Major changes seem more profound and frequent. In the developing world, citizens are excited by new opportunities to participate in the worldwide economy, hopeful they can break the cycles of poverty, fear and oppression that have plagued their families and nations. Yet they temper their optimism with the memories of past disappointments, and they question their ability to compete with the powerhouse industrial economies.

The citizens of the world’s most developed nations similarly hope for a better future, and with greater basis for confidence. Gains made over the past century — in health, wealth and standards of living — suggest an inexorable progression toward a safer, fairer and more prosperous society. Yet they, too, question whether they can compete in the years ahead. They fear the formula for past success will not apply going forward — and they worry that others may seek a greater share of the pie at their expense in what they perceive as a zero-sum world.
In 1984, Americans worried most about the threat of nuclear war with the Soviet Union and economic war with the seemingly unstoppable “Japan Inc.” The semi-global economy in which Americans worked did not include the billions of citizens in China and behind the Iron Curtain — either as customers or as competitors. Three decades of high-tariff protectionism in India had resulted in anemic growth, persistent poverty, economic isolation and the need to borrow heavily from the World Bank. The Macintosh computer had just been introduced, with an 8MHz CPU, for $2,500, and Michael Dell had just started selling customized computers directly from his college dorm room, but only 8 percent of U.S. households owned these relatively primitive PCs. The Internet was the domain of a few thousand researchers — but no e-commerce — and only 92,000 Americans possessed cell phones. Our economy had finally emerged from a tough recession, though unemployment remained at 7.5 percent. While a presidential candidate warned that our future workforce would be “selling hamburgers and sweeping up around Japanese computers,” the American economy was in fact poised for strong growth. The doomsayers were wrong, and our economy created more than 39 million jobs in the next 22 years, according to the U.S. Bureau of Labor Statistics (BLS).
By 1996, the Soviet Union had fallen. The billions of citizens in India, China and the former Soviet bloc were just beginning to integrate into the global economy — and they seemed eager to eat McDonald’s and drink Coca Cola. U.S. PC penetration had hit 36.6 percent, with desktop PCs much faster and cheaper than those of a decade prior, according to the U.S. Department of Commerce. While a much simpler Internet had only reached 8.8 percent of the population, according to Global Policy Forums/Nua Internet Surveys, two companies that had just gone public — Yahoo! and Netscape — were bringing a World Wide Web to tens of millions. More than 38 million Americans now possessed cell phones, though their coverage remained spotty and costs were relatively high. An economic recession had ended, and our economy was on the move again and set for explosive growth. U.S. unemployment was at 5.5 percent and would soon fall further, despite a two-time presidential candidate’s prediction that the 1994 NAFTA trade agreement would create a “giant sucking sound” of American jobs fleeing to Mexico. We created more than 18 million jobs in the decade following Ross Perot’s ominous prediction, according to BLS.
The pace of change has accelerated further, and the world is again being remade. More than 73 percent of Americans have PCs, which are, on average, one-fifth the price (in today’s dollars) and 400 times the power of the 1984 Macintosh, according to Nielson Media Research. More than 200 million Americans — and more than 1 billion people worldwide — have Internet access, while 219 million more use sleek cell phones with cheap rates that double as cameras, address books, text messengers and Web surfers. Every second two new blogs are created worldwide, with millions of citizens posting their own news, videos and ideas every hour. The 3 billion citizens of India, China and the former Soviet bloc are rapidly integrating into the global economy, both as consumers and increasingly capable competitors. While today’s unemployment rate of 4.5 percent is lower than the average for the 1970s, 1980s and 1990s, many Americans remain concerned about their economic future. And we are heading into an unprecedented turnover in global leadership.

Over the next two years, more than 40 nations — including the United States, Argentina, France, India, Russia, South Korea, Turkey and Vietnam, which alone represent more than 1.8 billion people and $23.2 trillion in Gross Domestic Product — will hold national elections, according to the 2006 CIA World Factbook.
There is good news here.

Such a future is within our reach. Learning how to win in this environment will require skill, agility and fortitude, but we have surmounted similarly daunting challenges in the past. Americans are well positioned to succeed in the 21st century. We possess the strengths, skills and attributes needed to continue leading the world over the next century, provided we recognize and reinvest in our comparative advantages. Identifying these strengths and leveraging them thus becomes the paramount challenge for our leaders in business and government — and the essential ingredients for proving ourselves worthy heirs to those who have built this nation before us.
We can only win if we choose to compete ...
only prosper if we decide to lead.
How did we get here?
To succeed going forward, we must first understand what has made the American economy so resilient and dynamic over the past century. We see several critical elements:

- **America’s economic strength has come from its people.** We have developed or attracted the best, brightest and most entrepreneurial people from around the world to our shores.

- Our culture offers a **good climate for innovators and investors.** Consumers are eager for new gadgets and medicines, success is rewarded handsomely and innovators are celebrated as cultural icons.

- America has **the most entrepreneurial business climate,** one promoting market-based competition, rewarding risk, permitting failure and with relatively easy access to capital.

- America boasts some of the **most advanced infrastructure** on the planet, from world-class federal labs to our telecom, energy and transportation systems.

- Americans have benefited uniquely from the sheer **size and lack of barriers within our market,** both among the states and with respect to the rest of the world.

- America provides an **honest and transparent government, with political stability and a broad respect for the rule of law.**

- People who can choose where to live are often attracted by America’s **high quality of life,** the result in large part of our democracy, freedoms, clean environment and leading health care innovations.

  There is no doubt we can continue to achieve new prosperity, more inclusive and complete than any that preceded us — provided we have the courage to compete, the wisdom to make the right investments in our future and the political will befitting a great nation.
Decades of changes
Trends, fears and realities

1984

**Geopolitical trends**
- **Fears**: Soviet missiles and Japanese competition
- Soviets in Afghanistan; Saddam Hussein an ally
- 1 billion Chinese unconnected to the global economy
- Crippled by high tariffs and low investment, India pleads for loans from the World Bank to remain solvent

**Technology trends**
- 92,000 U.S. cell phone users
- 8 percent U.S. PC penetration
- 0 percent of Americans on the Internet
- **What’s hot**: Michael Dell begins selling computers from his University of Texas dorm room; first Macintosh introduced.

**Economic fears and realities**
- “The only jobs our kids will get are selling hamburgers and sweeping up around Japanese computers.” — Presidential candidate Walter Mondale
- No Internet businesses or biotech industry
- 106 million U.S. jobs
- $5.8 trillion Gross Domestic Product (GDP)
- 7.5 percent unemployment
- 1,211 Dow Jones Industrial Average

1996

**Geopolitical trends**
- **Fears**: Domestic terrorists and NAFTA competition
- Timothy McVeigh on trial; Cold War ended
- U.S. firms export $11.7 billion in goods to China
- Japan amidst decade-long economic malaise; rising protectionist policies beginning to hinder Western European economic productivity and flexibility

**Technology trends**
- 38 million U.S. cell phone users
- 36.6 percent U.S. PC penetration
- 8.8 percent of Americans on the Internet
- **What’s hot**: Yahoo! initial public offering; Motorola offers StarTac, world’s smallest and lightest cell phone

**Economic fears and realities**
- “NAFTA will create a giant sucking sound of all of our jobs leaving for Mexico.” — Presidential candidate Ross Perot
- 127 million U.S. jobs
- $8.3 trillion GDP
- 5.5 percent unemployment
- 6,448 Dow Jones Industrial Average
Every decade brings new fears — and often very different realities, many of which create positive, unexpected and affordable benefits. Where will we be in 2020?

**Fears:** Al Qaeda terrorists and Chinese competition

- 3 billion new capitalists from China, India and the former Soviet bloc eager to trade with Americans
- U.S. firms export $41.8 billion in goods to China
- Rapidly aging populations and immigration restrictions threaten Western European competitiveness

**What’s hot:** Web 2.0, Internet protocol TV, video over cell phones, on-demand software; major Presidential candidates announce over the Internet

- “From a superpower to a third-world country, the United States is in rapid decline.” — former Reagan Administration official Paul Craig Roberts

- 146 million U.S. jobs*
- $12.5 trillion GDP*
- 4.5 percent unemployment*
- 12,477 Dow Jones Industrial Average*
  * Most current data and projections available

### 2008

- **Fears:**
  - Al-Qaeda terrorists and Chinese competition
  - 3 billion new capitalists from China, India and the former Soviet bloc eager to trade with Americans
  - U.S. firms export $41.8 billion in goods to China
  - Rapidly aging populations and immigration restrictions threaten Western European competitiveness

- **What’s hot:**
  - Web 2.0, Internet protocol TV, video over cell phones, on-demand software; major Presidential candidates announce over the Internet

### 2020

- **What will Americans fear?**
- **Which economies will thrive by embracing the world, and which will retreat and wither?**
- **What new technologies will give consumers the freedom to create and communicate?**
- **Which of today’s business leaders will be dethroned when they miss tomorrow’s “killer app”?**
- **What will the doomsayers foretell — and how wrong will they be this time?**
- **What new industries will have emerged from tomorrow’s innovators and entrepreneurs?**
A globally engaged America
What are the new dynamics of the economy?

While our historical advantages and successes persist and enable us to compete from an enviable lead, past performance is no guarantee of future returns. To successfully chart a course forward for any economy or nation, it’s important to understand the major structural trends impacting the 2008 global economy. We see three as most significant:

- First is a geopolitical trend. The world is more open and more integrated than ever before. For nearly six decades, America and its western allies fought against the global spread of communism. We called for opening markets, more democratic governance and greater global integration, urging other nations to liberalize their economies, renounce militarism and emulate the West. And we largely succeeded. Sixty-three years after the end of the Second World War, the nearly 3 billion residents of these nations are rapidly integrating into the global economy. Many are smart and hard working, and they are our new customers, partners, colleagues and competitors. Nations that seek to compete are opening their markets, improving their educational systems, investing in their infrastructure and encouraging innovation. While the United States accounted for roughly 70 percent of the global R&D investments in 1970, today our public and private sectors account for only about 45 percent, according to the National Science Foundation. By 2010 more than 90 percent of all scientists and engineers in the world will be living in Asia, assuming current trends, according to a 2003 projection from Rice University. And while we may have invented the Internet, just one of five Web surfers is an American, a ratio that will continue to shrink over time.

creates opportunities for all of us.
The second major structural trend is **technological**. From WiMax broadband to satellite to Internet protocol TV, amazing new technologies are shrinking the world, as networking and digitization enable real-time collaboration and interaction. Today people can do almost any job from anywhere, thanks largely to the higher quality and lower cost of global communications. For example, from 1980 through 2000, the volume of international telephone calls increased 2,022 percent, while the average cost per call fell 83 percent, empowering businesses to spread out globally, according to the Federal Communications Commission. The volume of data traffic has exploded even faster. Not only have these technologies enabled workers to serve global markets, they also have sparked a productivity revolution. While we know that this productivity growth enables more rapid improvements in a nation’s standard of living, it also accelerates the pace of workplace change.

The third major trend is **economic**: the increasingly fast-paced hyper-competition among firms in the global marketplace. Unlike any economic era in the past, businesses today face intense pressure from ever-faster followers — on pricing, quality and service offerings. While the upside for real innovators and ordinary customers is greater, so is the need to constantly improve and invent. We had become used to such competition among global firms in the “safe old world,” where America slowly traded lower-wage, lower-value-added jobs for higher-skilled, higher-end positions where it dominated.

But in the 21st century marketplace we find we are now competing for both the lower- and higher-end work, and there are no guarantees of success. And while we know competition has long benefited our nation and created more jobs in the end, when we are talking about our own jobs it still scares us.
It took 55 years after the commercial introduction of the automobile before 25 percent of the U.S. population owned cars. Electricity did not reach one-quarter of Americans until 46 years after its introduction. Telephones took 35 years, televisions 26 years and personal computers 15 years. Cell phones proved faster, reaching one-quarter adoption in 13 years, while the Internet took just seven years, and broadband reached 25 percent penetration in only six years, according to McKinsey & Company.

It has been estimated that about 90 percent of all scientific knowledge has been generated over just the last 30 years, by about 90 percent of all scientists and engineers who have ever lived — and now are living and working. Both the rate of generation of new technology and the number of workers globally engaged in science and technology may double again over the next 15 years.

With computer processing power and genomic data also doubling every 18 months or faster, it is no exaggeration to predict that there will be more change in the next 30 years than we saw in all of the last 100.
Americans have what it takes to thrive.
We Americans should view our nation’s past successes with great pride and great optimism. We enter the 21st century with the strongest and most vital economy in the history of the world. While we have many challenges ahead, there is no nation on earth with which we’d trade places.

At the same time we must recognize the need to pick up our game. Today’s American high school and college graduates face a much more competitive world than their parents or grandparents faced, in addition to billions more customers, collaborators and partners. And by accelerating the pace of change, the three key geopolitical, technological and economic trends will continue to demand vigilance and creativity.

To win, Americans must choose to compete. Choosing protectionism or isolationism — reducing our openness or global integration — would only accelerate a decline in our prosperity, equality and standard of living. By contrast, we must do a much better job of exploiting our core strengths to press our comparative advantage, specifically:

1. Leveraging our openness and inclusiveness
2. Exploiting our information-rich infrastructure
3. Accelerating our innovation excellence
4. Renewing our entrepreneurial spirit
By now we have all seen the power of the networked world. Global integration increases value and innovative capacity. For example, with 1 billion users, the Internet is exponentially more powerful today than it was at the start of last decade, when there were fewer than 1 million people online. Yet connectivity also can create potential risks: While a 1992 computer virus would cause only relatively minor disruption, 2008 viruses can cost billions and threaten critical infrastructures that carry more than $2 trillion in annual business-to-business commerce. Similarly, some businesses or workers fear more open markets (or borders), which could allow competitive challenges. The tug-of-war between security and connectivity similarly impacts the flow of good, services, information and people across borders and among companies, tempting policymakers to reduce American openness.
As recently as 2003, Greene County, N.C., located in the rural eastern part of the state, was ranked as the second most tobacco-dependent county in the United States. Generations of Greene County farmers harvested and sold flue-cured tobacco for decades, though this industry proved increasingly unsustainable as an economic base and opportunity platform for subsequent generations. Amid persistent poverty and educational underachievement — only 53 percent of high school students were proficient on state tests, and only about one in four seniors applied to college — Greene County leaders realized that they needed an economic future beyond tobacco.

Beginning in November 2003, a diverse team of stakeholders, including the county government, school and grassroots leaders, and social service providers, partnered with One Economy.com to respond to these economic changes. Investment began at the school level by bringing laptop computers to every student, beginning in sixth grade, and deploying an affordable wireless broadband solution for the entire county. Greene County launched a self-help Web site that includes non-tobacco agriculture options, an online marketplace, small business development information and career-building opportunities. The site is pioneering Web-based solutions for rural America through locally generated content, such as the “Greene County Marketplace” and “Pest Alert.” Fifty technologically proficient teenagers are working throughout the county to offer technology training to others, while faith-based institutions and community organizations are using a mobile training lab to train people on how best to use this new technology.

Since the start of this project, students’ SAT composite scores have increased by 41 points, high school proficiency scores increased to 78 percent and more than 80 percent of the 2006 senior class applied to college. Last year, 12 new businesses opened in Greene County after years of negative business growth.

Broadband access increased from 10 percent to 90 percent, with more than a dozen church and community buildings offering hot spots for free Internet access and free technology training. More than 350 residents, 40 percent of whom are senior citizens, have received free computer training. The county’s Web site (www.beehivegreene.org) is heavily trafficked. The community continues to add to the Web portal’s content, recently hosting a candidates’ forum and a place to highlight Greene County businesses online.

As U.S. Treasury Secretary and former Goldman Sachs Chief Executive Hank Paulson observed, “Our economy is the world’s strongest because it is built on openness — openness to people of all nationalities, openness to new ideas, openness to investment and openness to competition.” To succeed in the more competitive, more tech-savvy and more integrated world of the 21st century, America’s leaders need to work for greater openness — opening more markets around the world to U.S. producers, including more Americans in the digital revolution, and taking advantage of our natural inclinations to share, collaborate and empower.
Traffic is the common cold of economic loss. It’s a growing nuisance that most people must deal with on a daily basis. And while those extra 20 minutes waiting in a car may seem more annoying than consequential, the economic impact is staggering. In the United States alone, 3.5 billion hours of work productivity is lost annually and growing worse every year as traffic worsens.

Given how sophisticated our information systems have become, our efforts to analyze and adjust to traffic have been laughable. Helicopters, generic road signs and mass traffic reports define our anti-traffic systems at a time when industries use the most sophisticated satellite, navigation and tracking systems to manage their supply chain in real time.

Finally, however, we are starting to apply these information networks to our roadways. E-Z passes enabled with RFID (radio frequency identification) have dramatically reduced congestion at toll plazas. And now GPS (global positioning system) navigation in vehicles can be linked into networks that use sensors to track congestion and traffic patterns to transmit current information to drivers.

The network effect of aggregating and sharing information means drivers can receive alerts to upcoming congestion — and recommended routes for steering clear of it. Dash Navigation, a Silicon Valley startup, in late 2006 announced its plans to offer traffic management systems that are mounted to the dashboard. By alerting drivers to bottlenecks, these systems can reduce congestion, which mitigates some of the adverse impacts of traffic on the environment, and accidents caused by sudden slowdowns.

Besides the quality-of-life, safety and environmental benefits of traffic management systems, their economic impact can be significant by reducing this silent killer of productivity. If, for example, we cut in half the average amount of time a driver spends in traffic, we would add 1.75 billion hours of workforce productivity — the equivalent of 800,000 new workers to our economy.

Exploiting our information-rich infrastructure

From health care to national security, from education to energy, the systems that enable our advanced way of life generate vast amounts of data. This information is critical to our economy — enabling productive medical research, effective marketing and most efficient allocations of capital. But the reality today is that we vastly under-exploit this unique and critical natural resource, stove-piping data or squandering it by protecting it inadequately. As a result, we don’t know what we know and we miss opportunities for exponential gains in all aspects of our society. History has proven that when we
Accelerating our innovative excellence

America has been able to lead the world economically and as a force for peace and security in large measure as a result of our innovative excellence. From air flight to medical imaging to nanotechnology to the Internet, innovations have made Americans wealthy and the world a better place. They also have enabled American workers and businesses to compete in a world where they will not and must not pay their workers least. To maintain our position as the preeminent economy and to conquer the biggest challenges of the century ahead, we will need to further accelerate and tap our creative genius, expanding productivity, pioneering the next jobs and industries and creating new solutions to the global security, environmental and educational challenges. When we reward our innovators, we not only inspire new businesses and create jobs but define who we are as a nation.

How Do We Remain #1?

The Global Innovation Index ranks nations according to their innovation performance in eight categories. Maximum score is 7

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<th>Country</th>
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<tr>
<td>Germany</td>
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<tr>
<td>U.K.</td>
<td>4.81</td>
</tr>
<tr>
<td>Japan</td>
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<tr>
<td>France</td>
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<td>Switzerland</td>
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<td>Belgium</td>
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Source: INSEAD, 2007
The NASDAQ had cratered. The Internet bubble had burst. Yet in July 2001, Eli Lilly & Co.’s venture capital group launched InnoCentive.com, its first e-business operation attempting to use the “power of the Internet” to enhance scientific collaboration. Since that time the company has connected 120,000 registered scientists from 175 countries with nearly 40 companies seeking solutions to scientific problems, partnering with more than 59 research institutions and scientific organizations in Russia (35), China (20) and India (4).

InnoCentive lets companies post scientific problems anonymously on its Web site, seeking answers to challenges they cannot solve in-house. For example, in June 2005 Business Week reported on Drew Buschhorn, a 21-year-old chemistry grad student at the University of Indiana at Bloomington who came up with an art-restoration chemical for an unnamed company — a compound he identified while helping his mother dye cloth when he was a kid. Buschhorn got paid a reward for sharing the solution, and the company was able to forge ahead more rapidly with development of more competitive new products. Companies leveraging such collaborative, open innovation on an as-needed basis include such household names as Procter & Gamble, Dow Chemical and Boeing.

More than $1 million has been awarded over the past five years for solutions to roughly 110 challenges. InnoCentive officials suggest the overall success rate runs about 35 percent, compared with the 12- to 20-percent rate at which companies solve their own R&D problems in-house. Registered solvers on InnoCentive represent more than 60 different scientific disciplines. About 35 percent are located in the Asia-Pacific region, 26 percent in North America, 15 percent in Western Europe, and 9 percent in Eastern Europe and Russia. About two-thirds of all solutions have come from the United States and roughly a quarter from academia.

To do so, we must evolve our education system to fit the time. In the 19th century, that meant investing in agriculture research schools to develop new methods that multiplied the output of family farms. In the 20th century it meant supporting business, engineering and medical schools that developed new thinking on how businesses could be run, how products could be built and how medicine could extend the quality of our lives.

We must ensure that our students are learning the skills of the 21st century — interpersonal and collaboration, problem-solving and creative-thinking skills — that define the jobs of today.
The American Dream is alive and well

The overwhelming majority of Americans believe the American Dream is achievable for them — and they are optimistic about their future, according to a recent nationwide poll.

But they understand, perhaps even more than previous generations, that the American Dream won’t just be handed to them. They also said that for the United States to remain a competitive nation globally, we need to take advantage of our strengths: inclusiveness, an innovative and entrepreneurial spirit, and a vibrant infrastructure that has helped spawn so many technological breakthroughs. What is clear is that Americans can see beyond the daily headlines to a bright future, but they do not take it for granted.

**Do you feel that it is possible for you and your family to achieve the American Dream, or would you say it is not possible?**

<table>
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<tr>
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<td>It is not possible</td>
<td>17 percent</td>
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<tr>
<td>Not sure</td>
<td>7 percent</td>
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**Overall, would you say that your quality of life is better than your parents’, worse than your parents’, or about the same as your parents’?**

<table>
<thead>
<tr>
<th>Option</th>
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<tr>
<td>Worse</td>
<td>15 percent</td>
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<tr>
<td>Same</td>
<td>21 percent</td>
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<tr>
<td>Not sure</td>
<td>2 percent</td>
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**How important are these factors to U.S. economic competitiveness?**

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<thead>
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<th>Factor</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Taking advantage of our entrepreneurial spirit</td>
<td>87 percent</td>
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<tr>
<td>Taking advantage of our innovation excellence</td>
<td>87 percent</td>
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<tr>
<td>Taking advantage of our information-rich infrastructure</td>
<td>85 percent</td>
</tr>
<tr>
<td>Taking advantage of our openness and inclusiveness as a nation</td>
<td>64 percent</td>
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Source: Zogby International poll of 5,202 Americans, Dec. 18–22, 2006. The poll’s margin of error is 1.4 percent.
Renewing our entrepreneurial spirit

One of the toughest challenges for any leader is looking to the future and listening to the markets, especially when they demand painful changes. Business leaders trapped by the “innovators’ dilemma” remain wedded to existing markets and fading glory days, often missing new opportunities to better serve more customers and grow. Our system thrives because entrepreneurs are able to pursue these new opportunities and leverage changes in technology or markets to benefit the broader society and economy.

Innovation and entrepreneurship run hand in hand. Whether it was new systems for agriculture, cutting-edge precision manufacturing or assembly line advances, America’s drive to create and build new industries is at the core not only of our success, but our identity.

Policymakers similarly face the special appeals of antiquated industries that can no longer compete, or individuals who understandably oppose changes that benefit the nation but harm them. This is, of course, extraordinarily difficult, especially when safety nets fail to help those who are hurt by change through no fault of their own.

To thrive in the 21st century, policymakers must foster and nurture the entrepreneurial spirit that has lifted our nation for more than two centuries. That means pursuing policies to do the most good for the greatest number — policies that advance the value-proposition for all of their citizens, not just those who lobby loudest. That means ending uneconomic subsidies, removing protectionist barriers, reforming unsustainable entitlement programs and constantly revisiting regulations that hinder market flexibility. And it means creating incentives that encourage ordinary men and women to dream big dreams.

Our entrepreneurs have succeeded, and will continue to do so, if we give them the education and tools needed, a level playing field with minimal burdens on their ability to compete, and an economy and system that offers incentives and rewards for risk-taking.
It took shipping giant and supply-chain exemplar Federal Express 12 years after its incorporation to reach $1 billion in annual revenues. Wal-Mart had been in business for more than eight years and opened 40 stores before employing 1,800 workers. But Irvine, Ca.,-based Blizzard Entertainment reached both these milestones in a mere two years, leveraging a global platform and an innovative idea to change an industry.

In 2004 Blizzard launched “World of Warcraft,” perhaps the most successful video game ever, with more than 7 million subscribers today. By distributing its software for free and charging players for access to a global gaming community, Blizzard leveraged the same trends that have made Linux software the fastest-growing and most secure operating system, tapping a worldwide community of contributors (in this case, gamers) to create what no single company could do on its own. Such an open-source model also largely circumvents software piracy, a scourge of many U.S. software creators.

Blizzard’s success can largely be attributed to the cross-cultural appeal of its game, the inherent advantages of multiplayer gaming in a virtual environment and its ability to reach the more than 1 billion worldwide Internet users. The program runs on a number of servers customized for six written languages to keep up with current global demand: Chinese (traditional and simplified), English, German, French, Korean and Spanish.
It is, of course, impossible to know where our nation and our economy will be 12 years hence. Much will have changed, and many of today’s advanced technologies will seem quaint anachronisms. Yet it is a safe assumption that Americans will again face the future with the mix of optimism and concern, excitement and fear that has long marked our nature. Decisions made by new leaders in the United States and around the world will determine whether Americans worry about economic competitors in front of them or in their rear-view mirrors.

As a nation, we have always approached our challenges head-on. We have long known that we can only win if we choose to compete, and we only prosper if we decide to lead.
While developed nations like the United States face many important challenges, we can take comfort from an amazing track record over the past century. Despite the “wrong direction” lamentations of pundits and politicians who insist everything has been getting worse, Americans can point to extraordinary gains over the lifetimes of their parents and grandparents:

- In the 20th century Americans’ life expectancy nearly doubled, from 41 years to 77, thanks to extraordinary improvements in health care, nutrition, the environment, living and working conditions. (Gregg Easterbrook, *The Progress Paradox: How Life Gets Better While People Feel Worse*, 2003.)
- Fewer than 3 percent of Americans live in overcrowded quarters today, and fewer than 1 percent lack indoor plumbing. (Easterbrook, 2003)
- The typical American today has twice the purchasing power his mother or father had in 1960. (Easterbrook, 2003)
- Even as the number of cars has increased 68 percent since 1970 — and the number of miles driven has increased even more — smog is down by one-third and traffic fatalities are down by about 20 percent. (Easterbrook, 2003)
- In 1900, 40 percent of the workforce worked on farms and the United States exported about $900 million in agricultural products. Today less than 2 percent of the workforce is needed to feed our nation and export $56 billion. (Easterbrook, 2003)
- In 1940, more than half of the U.S. population had only an eighth-grade education, or less. Now, 85 percent are high school graduates, 53 percent have some college education and 27 percent are college graduates. (George Will, “Validation by Defeat,” *Newsweek*, Nov. 22, 2004).

And these gains have not come because Americans are working harder. To the contrary:

- In 1850, the typical American man’s workweek was 66 hours. Today it’s 42 hours.
- Similarly, in the mid-19th century the typical man spent 50 percent of his waking hours working (over the course of his life), while today that proportion is a little under 20 percent.