

Keynote

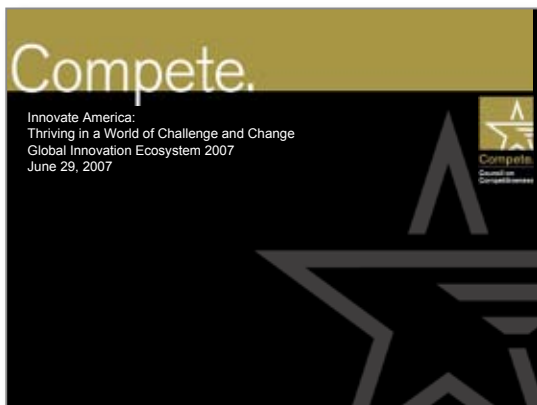
Innovate America: Thriving in a World of Challenge and Change



Speaker

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President, Council on Competitiveness

Summary



Slide 1

SLIDE 1—TITLE

Thank you for the introduction. Chairman Kurokawa, thank you for inviting me to discuss U.S. competitiveness, innovation, and the work of the U.S. Council on Competitiveness.

I want to talk about how we can collaborate on

competitiveness and deliver value to our citizens at large.

The Council on Competitiveness was founded in 1986, during a period of great anxiety in the United States about our country's competitiveness. For the first time since World War II, the United States faced a serious challenge to its global economic leadership, as foreign goods began to overtake American goods in the marketplace. This included high technology products that the United States had pioneered. At the same time, productivity growth was low, unemployment and inflation were high, and our standard of living was slipping.

Japan emerged as a formidable global market competitor in that period, challenging the United States especially in a wide range of consumer electronics and vehicles and also in new emerging products like flat-panel displays. This challenge motivated American producers to adopt new manufacturing and quality methods, many of which were pioneered in Japan; while Japan embarked on a long-term effort to build its indigenous science and technology capabilities and be at the frontier for the next generation of technological innovation.

I was delighted during that time as a US government official to work closely in the negotiation and conclusion

of the landmark US Japan Science and Technology Agreement, which I still believe it is probably the best document that exists in the global environment for how to collaborate and compete in the area of science and technology to create value for all parties involved. The market rivalry between the United States and Japan in that treaty demonstrated an axiom about the effects of competition and cooperation. That is, that this continuum makes companies more competitive and a country's economy more productive. Both benefited from this collaboration and competition.

My organization, the Council on Competitiveness is a private-sector innovation itself. It was an outgrowth of the Commission on Industrial Competitiveness, formed by President Reagan in response to the competitive and trade challenges of the 1980s. John Young, CEO of Hewlett Packard, chaired the Commission. That Commission's work – eventually known around the world as the “Young Commission” – on the factors that affect competitiveness, including the key role of government in establishing an environment in which companies compete, was groundbreaking. It was the first time the U.S. government had comprehensively addressed the issue of national competitiveness.

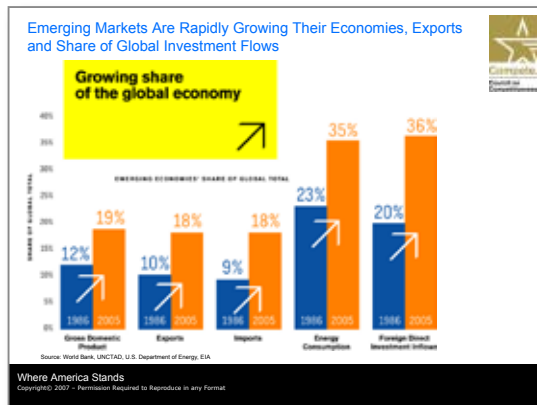
After President Reagan's Commission wrapped up its work, John Young felt that they needed to establish a group of private-sector leaders that stood up above their individual interests and concerns of their companies to really address this on a national basis in the long term. He founded the Council on Competitiveness as a private sector leadership organization to promote the cause of U.S. competitiveness. Today, the Council is the only group of corporate CEOs, university presidents and labor leaders committed to ensuring the future prosperity of all Americans through enhanced competitiveness in the global economy and the creation of high-value economic activity in the United States.

Our current chair is Chad Holliday, Chairman and CEO of DuPont. Our university vice chair is Wayne

Clough, president of the Georgia Institute of Technology. Our labor leader is Douglas McCarron, the president of the United Brotherhood of Carpenters and Joiners of America. Last year during our celebration of our 20th anniversary, we released a document called the Competitiveness Index, which I will discuss in a moment.

What is indisputable is that we face a global competitive landscape that has radically transformed. In fact, it is hard to fathom just how rapidly and how much the world we knew in the 1980s has changed.

The scale and pace of globalization over the past ten years, and the integration of the world's national economies are unprecedented.

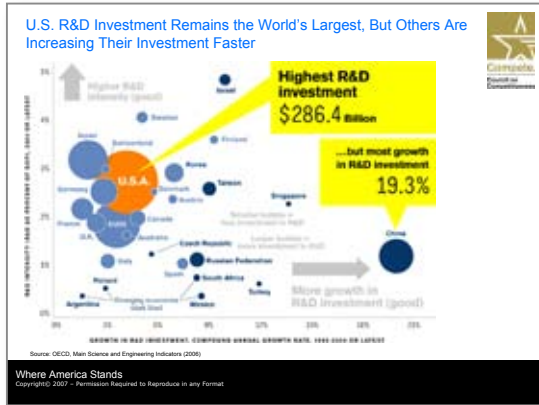


Slide 2

SLIDE 2 – EMERGING ECONOMIES GAINING SHARE

A major transformational shift is the rapid advance of emerging economies. In just one generation, emerging economies' shares of global imports, global exports, and foreign direct investment have nearly doubled.

As these countries develop, they increasingly seek to follow the path of the world's innovators.

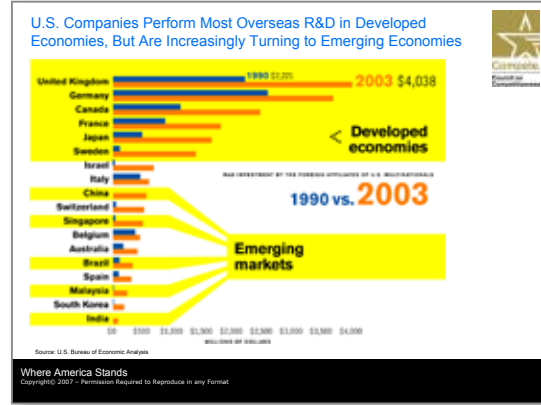


Slide 3

SLIDE 3 – MANY NATIONS INCREASING R&D INVESTMENT

Innovation's pivotal role in national wealth creation and a rising standard of living has prompted many nations to adopt innovation-based growth strategies. Governments around the world are boosting government spending on R&D, ramping up the production of scientists and engineers, and even offering incentives to bring back American-educated expatriates.

The United States still has the highest R&D investment. Japan is very much in that club of major investors in R&D. But the growth is coming from China as they develop into an R&D player and innovator. China's rapid development into an R&D-performing country is unprecedented in recent history. In a little more than a decade, China's R&D investments grew from \$12 billion to \$84 billion U.S. dollars. The OECD reported that this investment would put China in third place in R&D spending, behind only the United States and Japan. Its domestic high-technology production is estimated to be twice that of Germany, and nearly the same as Japan's.

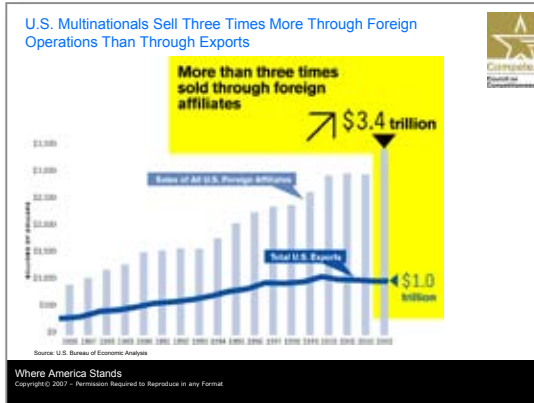


Slide 4

SLIDE 4 – CHINA FAVORED FOR NEW OFFSHORE R&D LABS

Emerging economies are increasingly the favored location for foreign direct investment in high technology and R&D, another key route for the acquisition of technical know-how.

The size, rapid growth, and growing sophistication of emerging economies mean they are prime markets for innovative products and services. According to one projection, by 2020, 80% of middle-income consumers will live outside of the industrialized world. Since multinational corporations increasingly locate at least some R&D near the markets they serve, this has raised concern in the advanced nations about the loss of R&D and technical capabilities to overseas destinations and the United States and Japan share this concern. What does the loss of advanced R&D and technological capabilities to overseas destinations mean to our own innovation capacities? We should not forget that these new global consumers are partners, competitors, demanding, powerful. We need to collaborate and work with them in the next generation of value creation.



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SLIDE 5 – FOREIGN AFFILIATE SALES THREE TIMES EXPORTS

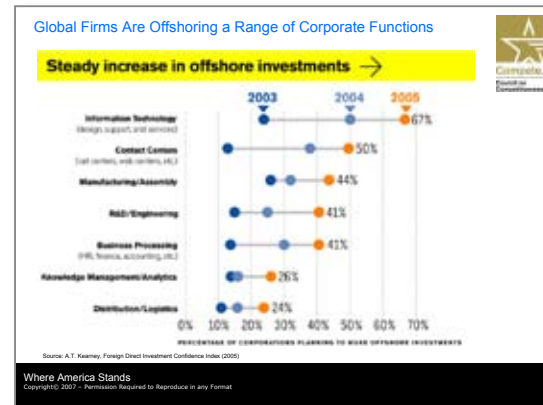
Twenty years ago, trade was mostly about goods that moved physically across national borders. But today, the geographic footprint of supply chains is complex, intertwined and global. U.S. and EU multinationals increasingly develop products and services, and serve customers through foreign affiliates and foreign business ventures. In fact, sales from foreign affiliates of U.S. companies are more than three times greater than all U.S. exports of goods and services.

As billions of people in emerging economies have entered global commerce, the globally available labor pool has risen fourfold. We do not believe there are any multinational corporations any more. They are global enterprises.

About half of these workers are educated, skilled, and ready for work. And everyday it is easier to ship work around the globe in bits and bytes. If work is routine, rule-based, if it can be digitized, and reliably codified, there's going to be a low-cost source of labor somewhere in the world to compete for that work and those jobs. As a result, for the first time, we see a true global labor arbitrage on a 24/7 basis.

New opportunities to reach consumers and talented workers in the developing world are driving the evolution of multinational corporations into truly global enterprises or optimizing their supply chains and operations for competitive advantage. What is the key challenge issue for

countries such as the United States and Japan? Where will high-value work be performed? Where will high-value investment be made? Who will be the players that will be the game changers for the next generation of wealth creation and prosperity?



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SLIDE 6 – OFFSHORING CORPORATE FUNCTIONS

Global enterprises are not only outsourcing, but also offshoring an ever-widening array of work—from software development to accounting to research—in a burgeoning global “trade in tasks.” As a result, a growing number of workers in high-wage nations are in direct competition with other workers around the globe.

Overlaying our turbo-charged global economic integration is the relentless, accelerating pace of technological change. The digital, biotechnological and nanotechnology revolutions are poised to rewrite the rules of production and services in digital code, genetic code, and atomic code. While advances in these fields will increase opportunities and unleash rapid progress in quality of life, in dealing with many of the global challenges that Dr. Kurokawa has described, they will also create profound and disruptive effects that will alter every industrial sector. I believe they will have profound impact on the balance of economic and political power and wealth creation.

Americans see the profound changes occurring globally, the new competitive realities, and once again feel

mounting anxiety over their country's competitive position.

The new competitive realities, and the resulting angst felt by the American people have driven U.S. leaders to act. In the United States, competitiveness has become a first-tier national priority for the first time since the 1980s. I am proud that the Council on Competitiveness has played a pivotal role in launching a new U.S. competitiveness movement.

In 2004, the Council began its National Innovation Initiative—15 months of intensive study and deliberation involving hundreds of U.S. industry, government, academic, and labor leaders, co-chaired by IBM CEO Sam Palmisano and the Council's Vice-Chairman, Wayne Clough. These leaders developed a national innovation agenda called *Innovate America: Thriving in a World of Challenge and Change*. We brought together from across the country leaders from industry, academia and government to understand what is 21st century innovation, how it has changed and what it means. Most important, we wanted to deliver a set of active recommendations that the private sector and government can act upon. The agenda seeks to strengthen the major foundations from which innovation rises—talent, investment and infrastructure.

This created new initiatives undertaken by companies, universities and leaders across the country. It built on the works carried forward by other groups such as the National Academy of Sciences. In 2006, President Bush launched his American Competitiveness Initiative. Those proposals are now being echoed in major legislation that is working its way through the Senate and Congress with the introduction of the "America Competes" act. A major initiative of the Department of Labor and department of commerce called WIRED (Workforce Innovation for Regional Economic Development) is another example of government investment under private-sector leadership to optimize our resources and strategies to build innovation at the regional level across our nation.

The innovation imperative has also become a high priority in America's state houses. The Council on

Competitiveness is working closely with the U.S. National Governors Association to implement an Innovation America agenda to help our fifty governors enact their own competitiveness agendas to drive innovation-based growth. Since education in the United States is a state-level affair, the National Governors Association agenda has a major focus on math and science education. But it also includes developing statewide strategies to build high-growth regional centers of innovation.

In short, our National Innovation Initiative has created momentum across the United States, and is driving leaders and Americans from all walks of life to act on many of the factors that affect the U.S. ability to compete.

A fundamental point for both United States, Japan and also for Europe, and even other nations, is that the advanced nations cannot, nor would we want to, compete on low wages, commodity products, standard services, and routine science and technology development. As sophisticated, technical capabilities develop worldwide, excellence in science and technology alone will not ensure our success. Lowering cost and improving quality is necessary, but not sufficient, and will not answer the new competitive realities either. Today, competitive pricing and high quality are merely the baseline for entry into global markets. In short, the only sustainable edge for us is innovation, the ability to take knowledge and technology and embed it in new and improved products and services to create new value. Countries like the United States and Japan must move quickly to embrace the rapidly emerging, high-value innovation or "conceptual" economy. The contours of this new type of conceptual economy have yet to be fully understood. But it is fundamentally different from the industrial or even the information or "knowledge" economy.

Information and, increasingly, technology are commodities in today's world. As a result, rewards do not necessarily go to those who have a great deal of information and technology. Rather, rewards go to those who know what to do with knowledge, information, and technology

once they get it.

This new system of wealth favors intuition, creativity, insight, risk-taking and judgment. What we are witnessing is a fundamental transformation of the sources of value, growth and competitive advantage. Innovation is a fundamentally human creative force. It has driven every juncture in the transformation and development of human civilization, from domesticated agricultural systems to the emergence of complex civilization, to the Industrial Revolution and all subsequent junctures.

Twenty years ago, the concept of innovation was seen as novel, but also encompassed science and technology that were embedded in hardware, products, and processes. But the birth of the Internet economy and its web-based businesses, novel approaches to service delivery, and high-premium lifestyle products and services are expanding our notions of innovation.

At the Council on Competitiveness, we define innovation as “I to the fifth power:” the intersection of imagination, insight, ingenuity, invention and impact. It is about the creation of new, transformational value.

Today, our prosperity rests with the capacity to unleash innovation in its many forms: in products, services, management systems, business models, design, marketing and new ways to work. Our success will be measured by our ability to transform industries, reshape markets old and new, stay on the leading edge of technology creation, and fuse diverse knowledge, information and technology to address global problems and challenges.

This new conceptual economy will favor nations that reach globally for markets, and those who embrace different cultures and absorb their diversity of ideas into the innovation process. It will be fueled by the fusion of different technical and creative fields, and thrive on creativity, artistry, leading edge and out-of-the-box thinking. This is what people in Japan called the nail that sticks out. This is the nail that you want.

The National Innovation Initiative crystallized an overarching framework for a nation’s ability to

innovate. It recognizes that innovation is not a simple linear progression from research-to-invention-to-commercialization. Instead, we have learned that innovation is a complex and dynamic phenomenon. It is best supported by a multi-faceted ecosystem, in which many elements of the economy and society interact to make innovation happen. This “innovation ecosystem” has rightfully taken center stage in Japan’s new “Innovation 25” initiative, and I commend Prime Minister Shinzo Abe and the Government of Japan for this very innovative and important initiative they have launched.

The NII recommendations are based on three platforms

TALENT	<ul style="list-style-type: none"> Build the Base of Scientists and Engineers Catalyze the Next Generation of American Innovators Empower Workers to Succeed in the Global Economy
INVESTMENT	<ul style="list-style-type: none"> Revitalize Frontier and Multidisciplinary Research Energize the Entrepreneurial Economy Reinforce Risk-Taking and Long-Term Investment
INFRASTRUCTURE	<ul style="list-style-type: none"> Create a 21st Century Intellectual Property Regime Strengthen America’s Manufacturing Capacity Build 21st Century Innovation Infrastructures

Where America Stands
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SLIDE 7 – NII RECOMMENDATIONS

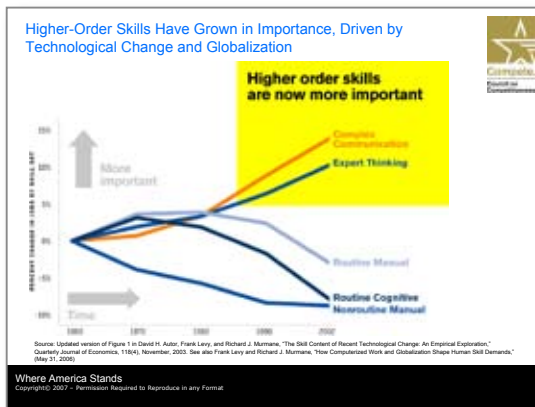
The National Innovation Initiative identified three vital elements of this ecosystem—talent; investment for both knowledge creation and risk-taking; and infrastructure, including the actions of government to create an innovation-friendly environment. Networks that connect these elements, and a national orientation toward innovation and risk-taking, enhance this ecosystem. Let me explore the importance of each of these three elements.

First, talent. People are the source of new ideas and creativity. High-value innovation requires not just the best scientists, engineers, and information technology workers. We must also be concerned with developing the best at creating new business models, the best market researchers and marketers, creative financiers, and the best designers and artists—all to fuel an explosion of ideas to meet the

needs of the world's discerning customers and solving overarching challenges of our day.

A truly cross-disciplinary team to drive high-value, game-changing innovation must span the arts, humanities, social sciences, business, design, marketing, and management, as well as the sciences and engineering. We need artists who think like engineers and engineers who think like artists.

One example is from Japan: animation and multimedia. This is an incredible way in which talent from all different fields is fusing, producing something that is of the highest value in the world. How we bring these different disciplines together to converge on problems and solutions is a challenge but also a necessity. DreamWorks Animation SKG is another example. They bring together in one room musicians, engineers, scientists, anthropologists and artists. They throw them together in the "cauldron of creativity" to come up with the magic that is embedded in the next generation of their product.



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SLIDE 8 – HIGHER ORDER SKILLS

We will also need higher-order thinking and skills among a larger portion of the workforce. In a global economy where routine tasks can and are increasingly automated or off-shored, creating high value comes from the ability to solve complicated problems, analyze diverse market needs, work in teams, collaborate, and communicate.

In the United States, we face a major challenge in

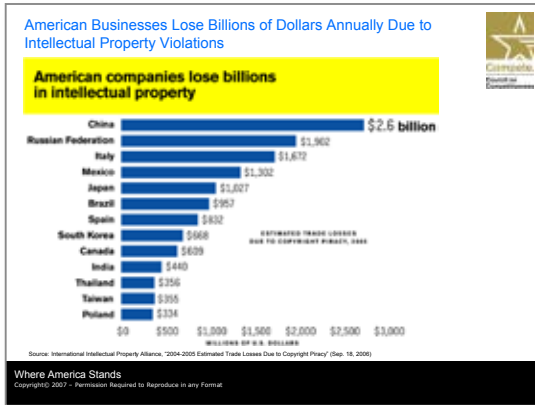
preparing our workforce for this new type of innovation and conceptual economy. We have an inferior secondary education system, and one of the reasons is that we do not pay for performance among our teachers. This is the only totally-unionized sector of our economy, and we are seeing the results.

The second pillar of an innovation ecosystem is infrastructure. Among the most crucial elements of infrastructure are national and regional policies that establish a business climate that supports innovation. As we know well, government economic and tax policies affect the cost and mobility of capital needed for investment in innovation. Trade policies play a key role in market access and a nation's openness to foreign investment in innovation, new businesses, and market development.

Of vital importance is the government's role in setting a nation's legal and regulatory framework. In this regard, a first rank enabling condition for innovation is the recognition, adoption, and enforcement of laws that protect intellectual property rights. Unfortunately, this is an area of continuing concern in some parts of the world.

Intellectual property forms the foundation of nearly every major innovative firm and industry based in the United States and Japan. But in a world in which R&D and innovation are carried out on a global basis, and in which value is increasingly derived from conceptual assets, protection of intellectual property is even more critical.

Unfortunately, rising losses due to intellectual property theft is a growing threat to both the United States and Japan.



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SLIDE 9 – COPYRIGHT THEFT

For example, estimates of U.S. losses due to copyright piracy of business software, music, motion pictures, entertainment software, and books in 2005 totaled more than \$17 billion. These losses amount to a tax on future investments, one that could stifle future innovations that would fuel growth for our countries.

One of the reasons why India has been successful as a software leader is that in the 1980s India made the decision to protect software as a copyrightable product. Had they not made that decision, we would not have seen the investment into India that builds on the workforce's creativity and skills – all of which have enabled India to become a world-class innovator in this arena.

Another example of disrespect for intellectual property rights is the Government of Brazil's recent declaration of compulsory licensing for an AIDS drug developed by Merck. This act sends the wrong signal to the research and investment communities worldwide. Not only does it signal that intellectual property is something that can be negotiated around price and access, but it also enters into the area of biofuels, given the impact of bioscience on all areas in this sector. The specter of other emerging nations acting similarly would have a chilling effect, because failure to respect intellectual property rights attacks the core incentive for investing in R&D and innovation.

A key aspect of China's development strategy has been to encourage, sometimes coerce, transfers of technology

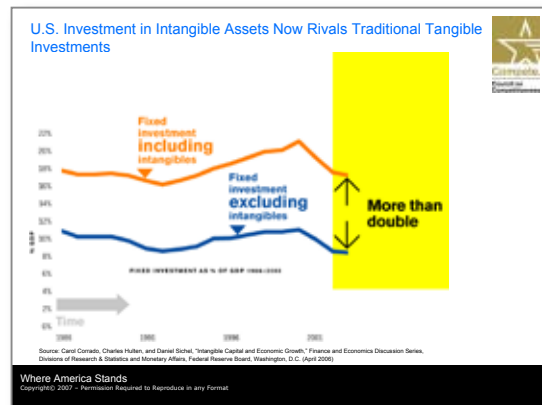
from global companies in exchange for market access. Yet companies are still investing, seeming to conclude that the market opportunities are so great that paying an entry fee in the form of intellectual property is worth it. There are different standards for safety and health, lack of high standards as in the U.S. and in Japan. We need to insist on the continuum of intellectual property and its relationship to standards.

When developing nations such as China, India and Brazil pirate, infringe, place compulsory licensing on or demand transfers of intellectual property, this is a direct hit on intangible asset creation.

Another area that is very important for the United States is that we have a very complex, burdensome tort and litigation systems. Tort costs now account for 2% of our GDP. This is a huge incentive against innovation.

The third major pillar of an innovation ecosystem is investment, particularly long-term investment.

This includes investment in the raw materials for innovation. For example, increasingly innovation occurs at the intersection of knowledge disciplines, emerging from the cross-fertilization and fusion of research. This suggests a need for greater investment in multidisciplinary research, in addition to research in fields that promise to transform entire industries and markets such as biotechnology, nanotechnology, and high-performance computing.



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SLIDE 10 – INTANGIBLE INVESTMENTS

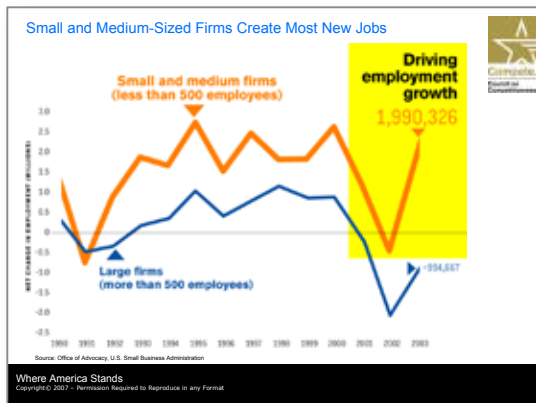
As knowledge and innovation have increased in their economic importance, so has the value of intangible assets—a strong global brand, talented employees, and a deep base of scientific research.

In the United States, an increasing share of GDP reflects the value of ideas more than material substance or manual labor. Signaling the rise of the conceptual economy, intangible investment in the United States has reached roughly \$1 trillion, about the same as the investment in physical assets. Intangible assets now rival traditional tangible investments, more than double. In a conceptual economy, this is where the value is being created.

But these intangible investments are not captured in either the financial accounts of U.S. companies, or the national income and product accounts.

We tend to value the things we can measure. And measurement tools inherited from 19th century industrialization are simply not up to the task of running today's conceptual economy. As we move deeper into an era of innovation-based growth, we must put in place measurement systems that value investment in intangibles.

Investment for the entrepreneurial economy is vital to reinforce risk taking and fuel game changing innovation. In the United States, entrepreneurship is a major driver of U.S. competitiveness due to entrepreneurial firms' role in job creation, productivity growth, and innovation.



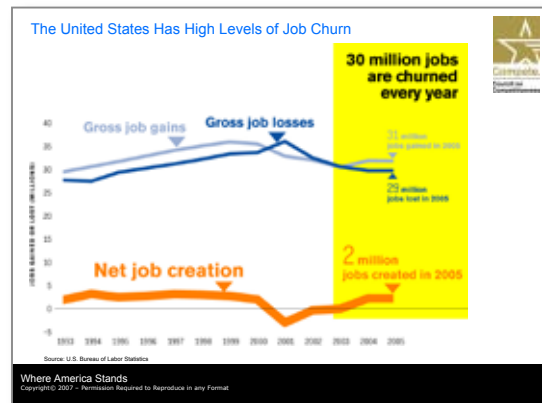
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SLIDE 11 – SMALL BUSINESS JOB CREATION

Small, young firms create most new jobs in the United States. From 1980-2001, the entire growth in net new jobs was attributable to firms less than five years old. Mature firms actually lost jobs in this period.

But research indicates that only a small percentage of high-growth entrepreneurial firms were responsible for approximately 80% of the total net new jobs created by entrepreneurs over the last 20 years. This is at the heart of the innovation ecosystem that we must nurture and develop.

Entrepreneurship is a major driver of U.S. competitiveness and generates a significant portion of U.S. productivity growth. Economies are revitalized through a process called “creative-destruction.”



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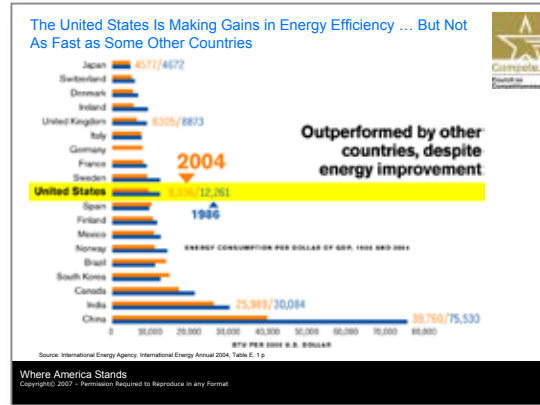
SLIDE 12 – JOB CHURN

Job churn is another area that is of tremendous importance for the innovation and conceptual economy. The United States exhibits a phenomenal capacity for creative destruction. Every three months, about one in twenty establishments open or go out of business. This dynamism creates a great deal of churn in the U.S. labor market. Over the past decade, an average of nearly 16 million private-sector jobs have been eliminated each year in the United States, an annual loss equal to nearly 15% of current non-farm private employment. Most of these job losses occur for a reason other than international trade.

Moreover, during the past ten years, the 16 million annual job losses have been more than offset by the creation of about 17 million jobs per year.

While this process drives an economy to ever-higher levels of performance, it can create hardship for individual workers. That is why easing the transition from one job to another is critically important. Pension portability and healthcare portability are key elements in this. We need a better safety net for workers in transition. Creative destruction among firms and a high level of job churn are absolutely essentially in the innovative, conceptual economy. Innovation and stability do not go together.

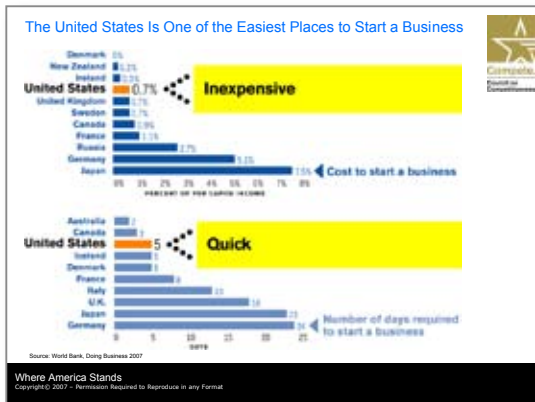
This is an area that Japan has a weakness, where you do not have the labor flexibility or the creative-destruction among firms, and high levels of job churn



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SLIDE 14 – ENERGY INTENSITY

I would like to shift focus to the areas of energy intensity, energy efficiency and energy competition. While the United States excels in entrepreneurship, Japan is a leader in this area. Energy and the need for sustainable development are critical for all the reasons we know: global climate change, energy demand, etc. This is going to be an area that will unleash tremendous innovation. We know the United States, within a next year or maybe sooner, will see some form of carbon management passed by the House of Representatives and Senate. Our companies are coming together around the issue of global climate change and energy efficiency. What is exciting is that with the opportunity to develop a balanced portfolio for energy (solar, hydrogen, biomass, nuclear), we will unleash a new generation of innovative capacity that will not only make our industries and firms more competitive, but will be of huge value to the global commons and global prosperity.



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SLIDE 13¹ – REGULATIONS FOR STARTING A BUSINESS

Regulations on starting a business are another example of the innovation ecosystem. Government actions can play a key role in the cost and ease of entrepreneurial activity such as starting a new business. Governments can help or hinder the startup of small and medium-sized firms that have the potential to grow and flourish. These types of regulations and environmental issues can be either assets or tremendous barriers.

¹ Embracing the Challenge of Free Trade: Competing and Prospering in a Global Economy, remarks by Chairman Ben S. Bernanke at the Montana Economic Development Summit 2007, Butte, Montana, May 1, 2007.



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SLIDE 15 – GLOBAL ENERGY DEMAND

Global energy demand is expected to grow by more than half over the next two decades. America is growing more, not less dependent on foreign oil. Half the world's known oil reserves are in the Persian Gulf, and the Middle East oil supply is increasingly unstable.

There are growing worries about global warming from fossil fuels, and pressure on advanced nations to do something about it.

Many facets of the energy problem are international. But there are major opportunities to answer the energy challenge domestically.

Japan offers an example. Endowed with few natural resources, Japan has long embraced business philosophies and methods that focus on energy and material efficiency, economy of design, saving resources by achieving zero-defects, and eliminating many forms of waste in production—the fundamental basis for just-in-time production. These practices have been highly successful and have contributed greatly to Japan's global competitiveness. Japanese homes, for example, use less than half the energy of the average American home.

The Council on Competitiveness has launched a groundbreaking initiative on the vital linkage between energy and U.S. competitiveness. Our Energy Security, Innovation and Sustainability Initiative is bringing business CEOs, public policy makers, higher education and labor leaders together to develop a demand-driven, public-

private action agenda to generate sustainable energy solutions that integrate productivity, innovation, and competitiveness. We let the energy producers and suppliers come to the table, but the work is driven by the users and consumers of energy, and not the suppliers. We do not want any one TECHNOLOGY path or technology solution to drive our policy work and understanding.

Our hope is to make an impact and drive action on dealing with the energy challenge both for our competitiveness and global prosperity, as we have made a big impact on the national innovation ecosystem with the National Innovation Initiative.



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SLIDE 16 (FINAL SLIDE) – COUNCIL LOGO

In closing, the United States and Japan face a competitive landscape like none we have seen before—crowded with global competitors who are rapidly improving their capabilities; markets that are, at once, fragmented yet global in scope; a flood of new technology transforming every product and service; and demand-driven markets that value innovation and creativity. Our historical advantages, such as the development and exploitation of science and technology, are under challenge as many nations develop these capabilities.

As advanced nations, our prosperity rests with the ability to create new forms of value and transformative innovations. That will require optimizing our entire societies for innovation—our investments, our policies,

and our infrastructure. It will require more of our people having the raw material to contribute to innovation—creativity, higher-order skills, and out-of-the-box thinking.

At a recent Council meeting, Roger Enrico, former CEO of PepsiCo and now Chairman of the Board of DreamWorks Animation SKG, a company that exemplifies the conceptual economy, talked about the importance of making big changes to big things. Change and progress, he explained, will never come if you don't free yourself from the tyranny of incrementalism. Dramatic results do not come from un-dramatic action, and they do not come from "tinkering on the edges. We must think big and do big things."

Innovation is a race with no beginning and no end. It's about risk and change. The world is not flat. It is round. It is a world of abundance. It will be through harnessing the talents of people throughout the world and collaborating that we will see a tremendous burst of prosperity and a higher standard of living for all in the years to come.

Thank you.