NATIONAL GOVERNORS ASSOCIATION

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WINTER MEETING

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PLENARY SESSION

J.W. Marriott Hotel

1331 Pennsylvania Avenue, NW

Saloon III & IV

Washington, D.C.

Saturday, February 24, 2007

1:05 p.m.

The meeting commenced, pursuant to notice, at J.W. Marriott Hotel, Saloon III & IV, on Saturday, February 24, 2007, in Washington, D.C., at 1:05 p.m., Governor Janet Napolitano, chairman, presiding.

P R O C E E D I N G S

(1:05 p.m.)

GOVERNOR NAPOLITANO: I'm going to call us all to order. Good afternoon, everybody. I'm Janet Napolitano, chair of the National Governors Association.

Welcome to the beginning of our 2007 Winter Meeting. A little procedure to begin: I need a motion for the adoption of the rules of the meeting.

GOVERNOR PAWLENTY: So moved.

GOVERNOR NAPOLITANO: All in favor?

(Chorus of ayes.)

GOVERNOR NAPOLITANO: Any opposed?

(No response.)

GOVERNOR NAPOLITANO: Part of the rules require that any governor who wants to submit a new policy or resolution for adoption will need a three-fourths vote to suspend the rules to do so.

So, if any of you have new policies, beyond those that have already been circulated, please get them to David Quam of the NGA staff by

5 p.m., on Friday.

We have a number of new governors who are joining us throughout the meeting. Let me just list them for you: From Alaska, Governor Sarah Palin; Arkansas, Governor Mike Beebe; Colorado, Governor Bill Ritter; Florida, Governor Charlie Crist; Idaho, Governor Butch Otter; Iowa, Governor Chet Culver; Maryland, Governor Martin O'Malley; Massachusetts, Governor Duval Patrick; Nevada, Governor Jim Gibbons; New York, Governor Elliott Spitzer; Ohio, Governor Ted Strickland; and from the United States Virgin Islands, Governor John DeJongh. Let's welcome the new governors.

(Applause.)

GOVERNOR NAPOLITANO: We are here today at this opening plenary to discuss the Innovation America Initiative that the National Governors Association has embarked upon as part of the chair's initiative this year. To do that, we will hear from two distinguished speakers, John Chambers, CEO of CISCO and Robert Rubin, former secretary of the Treasury, now with the Hamilton Project.

Before we do that, I thought I would thank a few people and then outline for us what it is this initiative is about. First of all, for this initiative to succeed, we brought together, not just governors, but leaders from academia and leaders from the private sector.

Many of them--in fact, most of them--are here with us this afternoon. There is NGA Vice Chair, Minnesota Governor Tim Pawlenty, and the Task Force governors have been Governors Kathleen Sebelius of Kansas; Matt Blunt of Missouri; John Huntsman of Utah; Ed Rendell of Pennsylvania.

We also have on the task force, Craig Barrett, the chair of the board of Intel; Meg Whitman, the president of eBay; Dr. Mary S. Spangler, the chancellor of Oakland Community College; Dr. Judith Ramele, the president of Winona State University; Dr. Wayne Clough, the president of Georgia Tech; Dr. Michael Crow, the president of Arizona State University; and Dr. Shirley Jackson, president of Rensselaer Polytechnic Institute.

In addition, we have on the task force,

not with us here today, Chad Holiday, the chairman and CEO of DuPont; Jamie Diamond, the CEO of J.P. Morgan-Chase; Kevin Turner, the COO of Microsoft; and John Thompson, the chairman and CEO of Symantec.

And I would like, on behalf of the governors and our staffs, to thank the task force members.

(Applause.)

GOVERNOR NAPOLITANO: I would also like to recognize Deborah Wynn Smith, who is the president of the Council on Competitiveness. We signed the Memorandum of Understanding with the council this morning to work together to pursue the innovation agenda, and we appreciate their participation.

So, those are the welcomes and the thank you. Now, what is this initiative all about? Well, in part, it's about imagining. I mean, we're so used to hearing our education system criticized, our economy worried about, but I think we also have to engage in the language of possibility.

Imagine, for example, having a medicine on your bed stand that is genetically and chemically

tailored to treat your exact illness. Imagine having clothing that automatically adjusts to temperature, so you don't ever have to carry an overcoat again-- or else you can move to Arizona.

(Laughter.)

GOVERNOR NAPOLITANO: Imagine a programmed cell that searches through your body to make sure your glucose levels are safe, spotting cholesterol buildups.

Imagine traffic systems, vehicular traffic systems, that are not dependent on vehicles as we know but on new types of vehicles that emit actually nothing into the air.

Imagine an education system where every child has an education program specifically tailored to him or to her and is taught by someone who knows not only what to teach, but how to teach it.

Imagine that world and imagine the capacities we build in the United States and as states.

Now, how do we get there? What is the language of possibility that we need to be using, and

what are the governors' roles in this?

The language we use is the language of innovation. In the United States, we have always led as innovators, and to maintain ourselves and to build the kind of future we want for the next generation, "innovation" has to be the key word that we use, and the governors must accept a call to action here.

We can no longer survive and thrive simply doing what we have always done. We're going to hear about that and some of the challenges we face from the speakers we've invited to this meeting.

I think we all know about it, independently, in our states, from what we see and experience every day. So our job as governors, as the leaders on education and economic development within our states-- in our states we serve as the hub of the wheel of a number of different aspects--is to bring those aspects together and to talk and persuade the people about the urgency of innovation and why it is that this needs to be taken on at every level so that by the end of our efforts everybody in America

understands that this is the innovation generation.

And that's what we're all investing in, and that's why we're investing in our schools, and that's why we're creating more capacity in computers and math and science, and that's why we need government, the private sector, the not-for-profit sector, to be combining their efforts together to get there.

This initiative to help governors lead that discussion, has three parts: The first part is something that we have talked about already, and that is the education, science, technology, engineering, and math association, the so-called "stem subjects" in our public schools.

What do we need to teach? How do we need to teach it? How do we develop the teaching capacity for that? How do we do that?

How do we do that quickly? This is not a subject to be studied; it is an issue to be confronted and dealt with now.

So we're going to be talking about so-called "stem education," but hopefully we'll get some

creative and innovative ideas about what ought to occur. If we're simply talking about teaching equations and formulas in a classroom, I'm not sure we're going to be exciting the next generation of students, or, indeed, preparing them for the world they're going to be entering into.

So, we need to talk about stem education as transformation--transformational education. So that's the first part of this initiative.

And there will be grants and so forth. In fact, we announced $3 million in grants this morning, from the Gates and Intel Foundations, to facilitate projects on stem education in the states, and you will be wanting to look into that.

The second part of this initiative deals with post-secondary education. This is a new one, in many respects, for the National Governors Association. We know we have these great assets in our states--our community colleges, our private universities, and our public universities.

We know that there is lots of research and creativity going on there, but it hasn't gone on in

the sense of being part of an overall strategy for a state, strategy for an economy, or tied into other things that we are doing.

So that's why we have invited these leaders from different areas of academia to join us, because this is an area that needs, I think, further work by the governors as to how these assets can better be employed as we move into the 21st Century.

So, K-12, stem, use and linkage with, and alignment of that with our higher education institutions; and then the third part of this is, then, how do we translate that into the workforce of the future?

What kinds of jobs, job creation, job creation capabilities, will we have--will we be able to grow and sustain--if we have a successful innovation agenda, beginning at the earliest grades in our schools?

The whole goal really is to move this country forward, to say, you know, we are at a critical economic time in the world. It has changed very rapidly in our lifetime; it has changed very

rapidly since many of us have been governors; and it is changing ever more rapidly every day.

As governors, we need to lead this charge because in our states our budgets are focused on public education. We have a great deal to do, particularly with the community colleges and public universities--but also with private institutions as well. . . . And work day-in and day-out with our private employers and businesses in terms of how we in-source jobs, not just competing against other states, but, indeed, around the world.

During the course of this meeting, we will be giving you a boatload of materials, all of which I'm sure you will read, but there is some really, really good stuff.

There's a call to action, which is what this is today; there will be information that we will give you later this afternoon, a state-by-state analysis of where you are. Where is your state in terms of some economic measures that maybe you haven't thought of before?

This is to help you begin to formulate your own framework that is state-specific to you, because, as you know, every state will have its own issues and will be starting from a somewhat different place.

We'll be talking about ideas for federal legislation. We know that both in the House and in the Senate there are bills in draft stage right now that we want to be working on with members of Congress and of the Senate, because that needs to move forward right now.

So those are just a few of the things that you will see and obtain. So that is the initiative-- Innovation America.

I think it opens up a world of possibility and opportunity for us. But I'll tell you, nothing is going to happen unless governors take the lead on this.

This is not a federal issue that's going to be guided out of Washington, D.C. It has to be led by you; it has to be led by the governor of Mississippi, by the governor of Nevada, by the

governor of Washington, all around this table.

We've got to lead this, and we cannot look back at our constituents, four or eight years hence, whenever our terms end, and say, we did a job for them unless we take this on now and in a serious, results-oriented way.

So that is what we are about this afternoon. That is what the breakouts will be about tomorrow. They will focus in the morning on stem and economic development.

We will have a plenary tomorrow, as well, that will talk particularly about math and science education, which is a challenge for all of us in how we develop the capacity for that. And, at the end, by tomorrow, we will finish up with a presentation by Frank Luntz, whom many of you know, who does polling and messaging and all of those sorts of things.

I asked him a basic question. I said, as governor, how do you talk to somebody about innovation without having their eyes glaze over? What are you talking about? It's kind of a new concept, a new--how do we bring this home and talk

about--what do people think about it already, and how do we talk about it with a perhaps more apt vocabulary than we're using today? That's how we'll finish up tomorrow before the traditional dinner at the White House with the president.

So, there we are; that's how we're starting. I welcome you all here and look forward to spending the next days together on this and on so many of the other issues that governors are dealing with.

So, we'll begin with our first speaker, and here's what we're going to do: We'll have our first speaker, maybe I will ask a question or two of him, then I'll introduce the second speaker, and then we're going to throw it open to everybody to ask any question of either speaker till the end of this session.

The first speaker is John Chambers. He has been the President and CEO of CISCO Systems, Inc., since 1995. He was recently named the most influential CEO in telecommunications by *Institutional Investor Magazine,* and the most

influential person in communications, by *Telecom Magazine*.

His other awards include the Smithsonian Lifetime Achievement Award and the Presidential Ron Brown Award for Corporate Leadership. Please join me in welcoming John Chambers.

(Applause.)

MR. CHAMBERS: It's an honor to be back with you again. I was here about five years ago, and at that time, it was a chance to really talk about technology, and everybody wanted to be a part of that, but many people were thinking about how does technology really play a role in terms of where you're going?

Today, I'd like to challenge you. Technology is not innovation. Technology enables you to innovate.

Trying to do something before there's the right market transition or tipping point, is like pushing a rock up a very steep hill; you can't do it. But when the tipping point is achieved, suddenly you

can do things you could not do before.

The governor challenged me yesterday, saying, John, kind of frame it not in a question of why should you do something, but why not? Now, this is where I basically continue to talk and you don't notice the distractions going on in the background.

(Laughter.)

MR. CHAMBERS: But, if, today, you agree with everything I've said, I have failed. My goal is to create what is possible because the limitation on most of the issues that we challenge ourselves as a state or a country--education, healthcare, public safety, infrastructure, etc.--are actually very much enabled, in terms of their solutions, by technology, and yet it is often the roadblocks, consciously or subconsciously, that we put in place.

I just returned from the Business Council down in Florida a week ago, and it would surprise you. The business leaders, as you would expect--we all think about how do we grow our top line, bottom line, how we get closer to our customers, how do we build in productivity and flexibility? But our public

policy issues that are most important to us, are

identical with what you've told us in preparation for this session.

And when you have that common opportunity in front of you, and you think about technology as how you enable these changes--and let me emphasize the word, "change." Change makes all of us uncomfortable; and if all you do is put in technology, you're going to be disappointed in the results.

And it enables your strategy. Everything I do at CISCO is enabled by my technology, and usually when I get in trouble is when I do a command-and-control mentality and don't build the process through technology. I get the short-term results, and then later on, it's just like where in each of the schools they're putting a lot of PCs out there, and you're going to be disappointed with what occurs.

I've talked to almost every government leader in the world on a global basis, not because we're particularly fascinating, but because they

understand the role that the technology, especially the Internet, will play in the future of their country.

And this goes from India to Australia, to Japan, to China, across North America, Latin America, France, Germany, UK, Eastern Europe, and almost all of the Middle East countries. And there is a common understanding today, that if you're going--regardless of your form of government--if you're going to be successful as a leader, you have to create jobs and economic stability.

The key to that is a basis in education. The second key is literally how you create an infrastructure. The old-order infrastructure used to be electricity and water and highways, and not to say that they aren't important because they clearly are, but the new-world infrastructure is about broadband.

How do you deliver services, education, job creation, etc.? Within that, you've got to have supportive government, and my view of governments used to be, the farther we stay away, the better it was, and, boy, was that naive.

Not only do we have the same objectives in

business, we have exactly the same challenges that must be addressed in a combination of collaborations.

But at the heart of things is this innovation agenda, and I cannot emphasize how important that is. Thinking out of the box and moving to where the next form of productivity will be--which will be in collaboration not in intervening transactions over the Internet, or getting an answer back, but how do you, together, solve problems? How do you create that within your administrations and within a loose coalition of organizations?

I'm going to walk you through a day of a person's life. I would say that the people in this room can largely determine whether that's a day in a person's life a year from now in your state or ten years from now. It won't be technology that's the limitation.

As you get up in the morning, you will immediately be able to log on in whatever format you want--through whatever device--to the news, to the

22 sports update, to the messages from your friends, etc.,

1 and it will come out in the format you want.
2 You will be able to see, how did your
3 White Sox perhaps do in terms of statistics? Did
4 they get beat by the Cubs or the Diamondbacks? How
5 did that go? My brother-in-law is going to send me a
6 clip about North Carolina beating Duke, which I hope
7 I don't see.
8 You will see it organized in the format
9 that you want. You'll immediately get updates in
10 terms of your searches, if you're in business or in
11 politics, about what are the key items you want to
12 see.
13 You will then be able to do your
14 healthcare monitoring, not by going to a clinic or
15 otherwise, but you'll collect that data at home, and,
16 I'm saying, way beyond blood pressure. Most of the
17 work you do in clinics will be done in the home in
18 the future.
19 You will be able to get an update; it will
20 automatically get prioritized by your doctors and
21 nurses, who will let you know if you've got an issue.
22 It maintains your consistent base. You'll be able to

see how your parents are doing, perhaps halfway across the country. Are they following their prescription or not? Do you need to punch a button and have an in-person, in-life experience where I can read your pupils in your eyes with my father to say, "Dad, how come you're not taking the medicine?"

Or the ability, all of a sudden, to punch another button and I can communicate with my operations halfway around the world, have a meeting with a customer or have a meeting with my own employees.

As you think about where that's going to go, each of us will have our own devices. Now, you can do everything I'm saying without leaving your home, if you decide to do so in the future, or you can literally rotate over to your car, and, as you go into your car, you might have gotten e-mails.

Well, you're clearly not going to read an e-mail or watch a video as you go to work, but the e-mail will automatically be translated into voice mail. I realize it's politically correct to say that this is a hands-off device, regardless of how you do it.

You will have the ability, literally, to look at it and say here's who I want to talk to, prioritize this, respond to it as we go forward.

I remember that I want to go to the ball game tonight with my dad. I basically purchase the tickets on the way; I can either have them electronically bar coded into the hand-held set that I have, or have them printed out of my printer at home or at the office, and as I go into the ball park, I can automatically upgrade the tickets as we move forward.

I can then have a series of meetings rotating around the world with my organization, as though they're physically in the same room, or I can physically go into work and implement the capabilities.

As you begin to think about stuff being delivered to your home, to your workplace, or your preference, where you are in the world, it could be delivered by mail or any other category. And what you will see, is a constant series of meetings and interactions and collaborations that make just

entering an order online over the Internet, or getting information back, like child's play.

The ability, literally, if you were to go to a ball game, as opposed to taking off a little bit early from work: I can look at the highway, figure out which way is the best way to go there. I can basically also figure out which other of the employees at CISCO may be going and ride with them, or meet my father there or my friends and go to the ball game.

By the way, as I go to the ball game, I can automatically get an update, if I'm running late, hear it on my capability and the device in the car. As I get out of the car, it rotates over to my either hand-held PDA type of device, or a cell phone, walk into the game and see it live.

By the way, I'll be able to do that exact same experience, sitting in a restaurant there, with visuals, and if I have a box seat in the ball game, I'll watch it from whichever angle I want, I'll do my own replays, I'll bet what the next pitch is going to be, the implementation.

I'll probably send a note to a friend, who, again, is rooting for the wrong team, take a video clip of that, shoot across the stadium or around the world.

The ability, literally, to think about where this is going to go in the evening, and say, when I return in the evening--especially if I haven't taken my spouse with me to the ball game--we'll already have it aligned in terms of her *Desperate Housewives* not overlaying my Duke basketball game.

We can watch *Gray's Anatomy*, if that's what she or I decide to do at that point in time, or we can watch *24*. I can also finish up the evening, if you had kids at home, in a way that I could then contact Australia or Japan, finish up the meetings there, do a video message for my employees for the next day.

Technology will not be the limitation here. And it isn't so important--the items that I just went through; it's what is capable of being done.

Think about what that means to education,

healthcare, public safety, etc.

Now, one of the basic principles that I'll challenge us with is that when we make movements in these areas, if we think about execution--without taking the step back and saying what is the overall vision, what is our differentiated strategy, because if it were easy to do, it would already be done--if you do it the way others have already done and they failed, you're going to get the same results, and then what are your execution measurements?

This is how I think about it in business, and I explore every idea, whether it's the company's strategy down that way, moving into new and emerging markets--which have grown at 40 percent a year for us, with the exact same profitability the U.S. has never been done before-- leader in multiple product areas or corporate social responsibility.

So, as we think through this, kind of frame it in terminology that we can talk the same language, think about what is capable in each area; what is the vision in terms of what can be done?

We all understand the vision in terms of

education. Education for education's sake, in fact, even degrees, may go away in the future. It's more a skill set we're after.

Does that skill set really give the skills for where the job needs to be created? West Virginia is an example, training people at West Virginia University for the FBI labs 20 miles away.

Specific job creation that is done in that way, not the way we were trained by the same textbooks. There are children who are now using what we're using, but a collaborative way of training that you see down in Mississippi, to where the capability in Mississippi for the teacher to present a context, you actually vote in terms of answers to questions she asks you.

He or she, in terms of teaching it, realizes that the students get what they're after, which students may need a little bit of extra help . . . a different form of education.

As you think about public safety, the ability to be adaptive is key because whatever we define and how we think it's going to occur, isn't

what's going to occur.

How do you really have the capability, much like you see in defense, for any warfighters; what they see, the ability to simulate that and put in into a database that you can gain access to with proper authorization. Same thing is true in public safety.

And how do you coordinate these various organizations with a common infrastructure? Now, you know where I'm headed with this. It's the ability to outline the vision of what we want to accomplish, whether it's infrastructure and highways, or green emission issues, or infrastructure in terms of broadband, and then seeing what is the differentiated strategy to get there, and how do you measure the execution and implementation as that occurs?

Now, often people talk very nicely conceptually, you feel good about it, and then you say, all right, give me one example, and they immediately hesitate. So, when I talk about these issues based on what I've seen done around the world, as well as in this country, and I'll use some

simple examples of it.

If you think about education--CISCO Network Academies--we have 500,000 students in the world: 167 countries. Out of that group, we've had two million graduates, and 91 percent of the graduates, when we surveyed over 30,000 of them a year, would say that they've used what they learned every day in their work or their entertainment.

Seventy-nine percent of those pursued more interest in IT, and 29 percent of them actually ended up with jobs in IT.

Jordan Education Initiative, almost an impossible task, a country that does not have any natural resources other than their own people, they have very enlightened leadership in King Abdullah and King Rhania.

The willingness of the World Economic Forum for 17 companies to come together at the forum: We were honored to take the lead in that, to partner with 17 Jordanian companies, 11 NGOs, not only to where the schools [were], but to develop computer games in math and science, for kindergarten, first and second

grades that teach them in Arabic . . . the capability to do that.

It's something that would be pretty nice for our own schools; wouldn't it?

And then to look at venture capital, how do you bring it in? How do you create the jobs that go with it, and in one of the most challenging parts of the world [with] a GDP growth of eight or nine percent?

The ability to say what is possible: And you begin to think about how this comes down to the Mississippi education initiative in terms of how a state really bounced back and the leadership at the governor level, at the superintendent of schools levels, and a willingness to try pilots to where you literally are going to encompass 30,000 students in the southern part of the state.

You think about how do you eliminate the digital divide with a wireless capability over it; you incent the teachers and others to do curriculum that is based upon the Internet; you allow the students who are sitting there to suddenly say, here is the testing that's going on. Do I understand it

or not? And the teacher can back up or go forward within it. You know where I'm headed.

The ability to rethink an education system, something that technology is not the limitation of. It's the question of why--here are all the problems, here's the challenge, and it's difficult--or why not?

The capability to think about it in terms of healthcare where Mr. Blair, literally, in the United Kingdom six years ago, said, John, I want you to help me with the healthcare system. I about passed out.

And he said, John, it isn't as bad as the U.S. And he put in place, a series, and I . . . I say this because all of us have a tendency to say why, including myself, as opposed to why shouldn't we go after it?

He put in place the beginning of an architectural approach, and I will tell you now, that out of the two-trillion challenge we face in expenses and healthcare in this country, technology can conservatively take out 15 percent of it, probably to

30 to 40 percent.

And if you combine that with the indirect cost for the 40-plus million uninsured we have in this country, there's more than enough money to pay for this if we just learn how to prioritize it and make some of the tough decisions that there are a lot of good reasons why the regulations were done originally. But how do you make it seamless across this organization?

How do you do that in a constructive way? I can tell you our global competitors are addressing that. Part of the reason the Europeans are--they're going to go bankrupt. In Italy, two-thirds of the people will be retired in 40 years.

We all understand what the implications are for the social system. And to have the courage to think out in terms of what you do this, when you talk around the world, Japan thought that broadband was the highway of the future. It's not by itself the solution. All they do is create the highways on it.

Their broadband capability to their

citizens is 20 times the speed at 1/20th the cost of our country. The ability, literally, to tie broadband to economic advantages, where Senior Minister Lee in Singapore, clearly understands.

He's going to put something called a gigabit to every home in Singapore. He's always been the leader. A gigabit is only about a thousand to 10,000 times faster than what we connect our homes with.

And that will change his healthcare system, it will create job creation, it will allow them, a nation of just several million, to compete in the new global environment in a unique way.

It's the same thing as you look down through it in terms of what is possible, and you look at what California, as an example, [is] doing. Being realistic on the challenge, but taking back an executive order and say, here's what we have to do, here's what we're going for from the task force on broadband, we're going to blow away the roadblocks, we're going to be realistic in terms of how we have to address that, and here's our execution model that

we're going to measure our success or not by.

And if you look literally at public safety and you begin to think across borders and capabilities, many of the countries in the world, whether it's Saudi Arabia, as an example, where we're building up a whole infrastructure for their cities they're building from scratch, are all based on a common network architecture, of which security is like the human body.

If you think about the human body gets attacked thousands and thousands of times a day by viruses, and yet it coordinates in a unified approach that causes you not to have to call a doctor or not to take a half an aspirin except as an exception.

It's that basic architectural approach in terms of what is capable, and you begin to take that in small steps. Virginia and North Carolina, as an example, Danville--on the border, using Virginia Tech resources--and the Department of Justice work together.

How do they just do basics on exchanging

information for some of the challenging elements they see in their community? They go back and forth across the border.

But it always starts if you have a vision of what is possible. What is your sustained differentiation, and, understand that if you don't do it differently than it was done before, you're going to get the same results.

And then how do you realistically measure the execution, and how do you have the courage to make mistakes? Because we will if we move into these aggressively.

The ability to literally think about this, now, you can say, John, that's nice, you talking to us as governors, how about in your own life?

This is exactly what we do at CISCO. You invest a dollar in us when we went public, it's worth $150,000 today. It's not too late to invest, even today.

(Laughter.)

MR. CHAMBERS: Many people said you can't move into new markets, basically you aren't going to

make money in these emerging markets. We said, let's make money and lead. We've gone up 40 percent a year in the emerging markets around the world, and they're as profitable as where we are otherwise.

Corporate social responsibility and good business doesn't tie together--nonsense. I learned that 15 years ago in China. They go hand-in-hand.

We're number one in corporate social responsibility, as measured by the State Department or our CEO counterparts of large companies in America. And you know what I'm sharing with you: reinventing innovation.

Innovation used to be you do it yourself. The definition of "innovation," to me, is if you're not in the first five in the market, you buy one of the first five or you partner.

Now, you say, John, simple strategy. Ninety percent of acquisitions in my industry fail. I've done 118. Seventy percent of them exceeded what we told the Board of Directors we would do.

So, it is the capability to stay on track in terms of vision, differentiated strategy, and

execution, that I think is key. Catching market transitions when they're ready, we could have never been a telephony player if it hadn't changed to using telephony over IP and if voice wasn't commoditized and--I wish I hadn't said this, but-- voice will be free. We said it 10 years ago, and it will be.

But it's realizing where this market goes, and seeing it not one year out, but three, five, and 10 years out, and how do you catch the transitions which will allow you to address the issues of commonality of healthcare or others?

And technology should be the enabler of almost everything you do. It will allow this next generation of productivity not on transactions, but a collaborative approach to everything we do.

We talked earlier about the stadiums. We did this purely as a way of keeping one of the baseball teams in our area. We said, let's move to the South Bay; we'll help you on the revenue generation, many of the other teams around the league pay three, four times as much for payroll as we did.

We looked at how we changed wiring that and generated additional revenues, literally, so that when I go into the stadium with my virtual ticket on my cellphone, I scan it through. I may decide there are other tickets available or I'll upgrade, sell my ticket back to somebody else.

As I walk through, I happen to like Diet Coke and I happen to like popcorn, and, unfortunately, I like donuts, and I can have whatever I want, delivered to my seat at the time that I want.

I'll sit there with the device, I'll communicate with other people within the group. If my son decides to propose to his--now his wife, thank goodness--he can do it on the scoreboard, screening that, of course, ahead of time.

As you exit, they'll tell you which way to exit, they'll tell you if there's a problem in the stadium, how to go out, whole bunch of new revenue sources to over 80 different applications to go with it.

And what we thought would be one stadium, now is going into 30 stadiums across the nation,

literally in six months, my point being, until you say what is possible and what's the business or governmental goal you're trying to do, then think out of the box on innovation.

We would have never thought about how you move a stadium to regenerating new revenues if somebody hadn't asked and said, we'll partner with you to get there.

Healthcare is probably the biggest challenge of all. You have the people who pay and the people who consume it and the people who deliver it are all different with different systems. You have to go back to a common medical record; you have to take this a step at a time; you have to blow away the roadblocks; but it's something that I feel personally very comfortable with that, at a minimum, you can save 15 percent of that two trillion dollars, at a maximum, perhaps 30 to 40 percent.

But you only do it if you don't develop solutions in silos. If you develop solutions that are architecturally integrated together, if you get the best minds together, who don't have a strong

opinion on a transaction, but say here is my definition of success, here's my vision, here is the strategy I want you to do, now show me how you're going to do it.

That type of opportunity, I think, is doable within the group. Now, you can talk about that conceptually. What we've seen, is, you break it down, you look at how it occurs, how easy is it to implement from technology or change, what's the payback, and you begin to add it up, and this is probably one of the more conservative estimates that I have seen.

But if you think about healthcare, starting with common prescriptions, your ability, you will eliminate over 100,000 deaths a year, if you just have the capability to match common prescriptions.

Yet, with most seniors, it scares you to death. They walk into the doctor's office: What prescriptions you on? They pull out a wrinkled sheet of paper because they've got them in different areas.

Your common medical record will automatically match that. Both my parents are doctors. They will tell you that no doctor knows more than probably 20 drug interactions well themselves.

But you begin to think about all of this, and caring for our aging population from home in an even more respectful way, being able for them to continue to live their lives, etc., and beginning to address this problem at the same time.

Government leaders around the world get this issue on broadband. The U.S. is clearly leading on IT implementation. We are woefully behind in broadband.

France, which had one-percent penetration two years ago when I talked to the French Senate, and they were already headed this way, and it was amazing, regardless of their political parties, their view on this. They now are at 20-percent broadband penetration, with a national policy on how to get there and a timeframe about how do they move the roadblocks apart to make that happen, and a realistic

view that when you're in this area what can be done.

Here's an idea: Not all the answers, but the concepts, have, literally what is your statewide policy on this? What are the roadblocks to get it to achieve?

Set an aggressive goal and the timeframes and implementation. Partner with business, and if they don't partner, give them a nudge the other way to encourage them to partner.

Blow away the 30,000 restrictions of local government that will prevent you from implementing this. Give them a reasonable return on their investments as they go through it.

Not necessarily these are the right answers, but thinking again in terms of what is possible--broadband to every home within a state, within a country, whether you say in four years, six years, or 10 years. And I would argue, when that occurs is largely what objective do we set and how hard do we go after it in terms of making it happen.

A phenomenon that's very important:

several of you asked me, saying, John, share with me,

what your fears are or what your opportunities are, or concerns about the other countries are moving.

World GDP is going to be in other countries other than the developed countries. It's been out of line for a hundred years, and now you're really watching what's occurred in the developing countries.

But, interesting enough, they aren't going to follow the U.S., in, say three, five, or 10 years behind us; they're going to jump a generation on their education, their infrastructure buildouts, and they clearly understand that globalization has a tremendous amount of very, very positive things, but it creates opportunities for them and for us, as well as challenges, if they address.

The ability, literally, to think about having a virtual meeting--now, think what this means. I'm not talking about videoconferencing; I'm talking about the capability, literally, to play Texas Hold'em across the table from somebody and see their pupils dilate when they get a great card.

What I'm really talking about are

different business models, the capability to meet with perhaps 10 of my top people in 10 different locations, where whoever is talking, rotates on the screen. And after they talk, literally, somebody else comes up.

The dominant PC keeps you in line along that line. It is probably 98 percent as effective as just the meeting we're having today; in fact, I'd argue, maybe even more because I can see the governors on the other side of the table much more effectively this way.

Now it isn't so important, the technology, and I'm not talking about just how you communicate with your key teams. Think about, as this goes to the home, as Moore's Law, doubling the price performance every 18 months, brings it to the home. What does this mean on how you deliver education, healthcare, etc., within it?

The point I'm making is that technology will not be the limitation. By the way, we, as a company, stepped up to next year, eliminating 10 percent of our carbon emissions just by how we use

this technology and change our business model, and at the same time touching our customers more often, not less, and at the same time, literally changing business models.

So, the $150 million is just an . . .. the real value is how I change my support structure and direction.

One other element that I thought might be of interest to you is that the next level of productivity is in collaboration. We were not trained in school for this. In fact, the reverse, we usually competed against the person sitting to our left and the person sitting on our right.

But collaboration, when taking to the efficiency--and, I think, governor, your challenge is to think about how the governors work on common issues is the next model. What I do now, is, I can take any two of my senior VPs, regardless of their function, put them over top of a new emerging market responsibility or a new industry moving to the consumer, or a challenge that I face perhaps with a competitor out of China, and then I put functional

groups, each person from each functional group as part of that team, and they have to speak for the whole functional group.

Now, you could say, simple concept. When I first did this six years ago, I did it with everyone kicking and screaming. The first two years were a disaster. I ended up having to pay my team on team work as measured by six of their peers. Two of my top VPs got no bonus one year because of it.

But today, this allows me to move across the front in multiple capabilities with efficiencies across multiple markets that my peers can't keep up with.

Now, there's the proof point in terms of concept. This is really, I think, how we address many of the issues that we're talking about today, or how we run our operations on a regular basis.

So, again, if you agree with everything I've said, I haven't done my job. Even when we changed the logo of our company, the vast majority of our senior team resisted it at first.

We had to communicate it, we had to take

steps, implement the vision and strategy. So my job is really to challenge you in terms of what is possible. I hope I've done that, governor, and I return it to you.

GOVERNOR NAPOLITANO: Thank you.

(Applause.)

GOVERNOR NAPOLITANO: Thank you, John, thank you very much for those remarks, and giving us some ideas on how we can get at this.

Let me now introduce our second speaker. Robert Rubin has been the director and chairman of the executive committee of Citigroup since 1999. Prior to joining Citigroup, he served in the Clinton administration as assistant to the president for economic policy, and the first director of the National Economic Council. He then served as secretary of the treasury from January of 1995 until July of 1999.

He also currently serves as the chairman of the board of the Local Initiative Support Corporation, the nation's leading community development support organization. He is the author

of *An Uncertain World: Tough Choices From Wall Street to Washington*, which was named one of *Business Week's* 10 best business books in 2003.

Mr. Rubin is a founding member of the advisory council to the Hamilton Project, an economic policy initiative at the Brookings Institution.

Please join me in welcoming Robert Rubin.

(Applause.)

MR. RUBIN: Thank you, governor. I'd like to start with a question for John. How do I invest in your company at the original price?

(Laughter.)

MR. RUBIN: I don't think there's an answer to that question. In any event, the governor asked me if I would discuss my views for a little bit, about the United States economy, the outlook, and the relevant policy issues, as a framework for everything that you'll be doing, which I am delighted to do.

Let me start by saying that I believe, as the governor and I were discussing before, that governors are in a position to play a central role in

meeting our nation's challenges, and I believe this is taking place at a time when our country, if you take a longer-term perspective, is at a critical juncture, with great opportunities but also critical challenges.

I speak a lot with major investors, with policymakers, with business people from around the world. And while there are quite different views as to the probability of various future scenarios, there is virtually universal agreement on the notion that this is a very complex time in global economic history with great potential but also serious risks.

Interestingly, if you look at global markets, that's not reflected; that notion of risk is not reflected at all. A very well-known European investor is a friend of mine. He said to me recently that the only undervalued asset in the world today, is risk.

I think that's right, but that view of the markets does not change, at least in my judgment, the realities, and I spent my whole adult life around

markets.

My comments will go to the longer term, which, in my judgment, is the appropriate perspective for policymakers. Let me make one brief comment as to the shorter term, say, the next year or thereabouts:

Clearly, there are risks, although most economists feel that there's a pretty high probability that we're going to have good economic times, good GDP growth during this period.

Having said that, the growth that we have today--and I'll get back to this in a few moments--is very much dependent on multiple levels of borrowing throughout our society, throughout our economy, and, at least in my judgment, that growth has massed unsound underlying fundamentals from the multiple imbalances that I just mentioned, to sub-optimal public education, which are very serious issues for our future and which, in my judgment, must be addressed if we're going to have the potential, the great potential that I believe this country has.

At the present time, at least in my view,

in terms of meeting those challenges, we are far, far from where we need to be on virtually every front without regard to the question of how you assign political responsibility.

To proceed, I believe that the global economy today is at a time of transformative change of historic proportions. My successor as secretary of the treasury, who then became president of Harvard, Larry Summers, one of the truly outstanding economists in America, gave a speech about a year ago or thereabouts, in which he said he thought the changes that are going on today in the global economy were probably the most important since the emergence of the United States over a hundred years ago, or perhaps even since the Industrial Revolution.

Tremendous technological change, the spread of market-based economics and productivity policies around the world, effective productivity policies, particularly, as John mentioned, in a number of the major emerging market countries, the reduction of barriers to trade and to investment, and, as a consequence of all of that, the emergence

of China and India as large potential markets--but, more immediately, as powerful competitors--creating historic change in the global competitive environment.

Our economy, the economy of the United States, has enormous strengths: A dynamic culture, flexible labor markets, a willingness to take risks, shear size, and I believe without question, that we could thrive in this transformed environment, particularly since a period of great change can be especially beneficial to an economy with the flexibility of ours.

Having said that, to realize that potential, we must meet hugely consequential challenges, and the other side of that coin is if we don't meet those challenges, I, at least, believe that at some time, we could have serious difficulties.

In that sense, the United States is at a critical juncture for the longer term, and how we deal with this critical juncture, will be enormously dependent upon how well our political system rises to

meet our challenges.

I believe, in that respect, that states and cities can play a major role in this response.

Moving forward, in my judgment, is going to require a political system in which there is a willingness to reach across party and ideological grounds to find common ground, a willingness to acknowledge difficult realities and difficult issues and difficult tradeoffs, and, finally, a willingness to make politically tough choices.

And I believe that our most fundamental challenge is to develop that willingness in our political system.

Let me expand for one moment on this global transformation. Firstly, there has been an enormous increase in the range of goods and services that are subject to trade, partly because of improved transportation, but predominantly because of modern communication technology of the kind that John was describing, with the consequence that, at least potentially, all knowledge-based activities that can be electronically communicable, are subject to

trade--legal research, reading X-rays, investment banking research, software development, and so much else.

Secondly, India and China have vast current or potential capacity. With one-third of the globe's population, they have rapidly increasing productivity due to effective policies and education elsewhere, and they have cost advantages that derive from that fact that, at least at the present time, we have non-market exchange rates.

It is true that China and India face their own enormous challenges, and it's certainly possible that they could falter, though that would be in nobody's interest, certainly not our interest, nor theirs.

But I've had the opportunity to spend a lot of time with private-sector and public-sector leaders from both countries, and, at least in my judgment, there is no question that they understand their issues, and they are committed to doing what it needed to stay on their current track.

All of this occurs in a United States

where median real wages--and you all, as governors, know this very well and know the issues that this creates--median real wages have been roughly stagnant for the last five years, and have grown very slowly for 25 of the last 30 years, the only exception being the last five years of the '90s.

Also, economic dislocation seems to have increased, and economic inequality favoring a very small tier at the top certainly has increased. The popular perception in our country, and, I might add, around the world, is to attribute those circumstances to trade.

The reality is far more complex, with technology being a substantially more important factor and a number of other factors being involved, as well.

I'll get back to trade in one moment, but first, let me say what I think we should do to be successful economically: To start, I believe economic policy, at the federal level and in the states, should have three objectives: Robust economic growth; broad-based participation in that

growth; and increased economic security achieved in ways that do not undermine the incentive to work.

And I believe that these three objectives are mutually enforcing. President Clinton used to say that sustained growth is the single most effect way of promoting broad economic growth and economic security, both because you have a large pie to split, and because of sustained tight labor markets.

And, on the other hand, broad income growth and increased security better promotes growth itself, partly because people, the workers, are the better empowered, have access to education, healthcare, and so much else; and, secondly, because sound economic policies around trade and market-based economics will not have sustained political support unless the great preponderance of the people believe they're benefitting from those policies.

As the governor mentioned, we started about two years ago, a policy project. This was a group of us--policy people, financial people, and academics called the Hamilton Project--what we have tried to do is to contribute to the substance of

this debate and also to stimulate public debate by developing, first, a broad-based economic strategy paper, which we issued about a year ago, and then by developing policies pursuant to that strategy, which we're doing on an ongoing basis with this year's focus on healthcare, education, and energy.

To realize the objectives I set out a moment ago, our nation, in my judgment, must meet challenges that I think of as falling into four categories: One, multiple financial imbalances; two, serious shortfalls in so many areas that fall under your purview as governors--education, infrastructure, basic research, energy policy, healthcare policy, inner city programs--which I view as an economic imperative, our social safety net, and so much else.

These are critical requisites for success, economic success for our country that markets, by their very nature, will not provide.

Three, cost/benefit imbalances in our regulatory and litigation regimes; and, four, international economic policy, which means trade,

immigration, and working with other countries to develop flexible exchange rate markets.

Let me focus on financial imbalances for a moment. Current economic conditions, as I said a moment ago, sit astride multiple imbalances in our economy. Addressing those imbalances is pretty much entirely the purview of the federal government.

Let me focus on our fiscal position first, amongst those imbalances. Federal Reserve Board Chairman Ben Bernanke said in testimony a few weeks ago about long-term fiscal matters with a special reference to revenues and to entitlements, and I quote, "We are experiencing what seems likely to be the calm before the storm," unquote.

And that storm, he went on to say, could severely undermine our economic well being. We're certainly capable of avoiding that storm but only through difficult decisions, decisions that are politically and substantively difficult but which should begin right now.

To start, the federal budget window, which is a 10-year window, as you all know, at the current

time involves projections of significant deficits, assuming that the ‘01 and ‘03 tax cuts are made permanent and assuming alternative minimum tax reform.

We could have and should have had surpluses during this period given the growth that we've had and given that we started the decade with substantial surpluses, which then would have better enabled us or better equipped us to face our entitlement commitments and the other imbalances that we face.

There's been some improvement recently in deficit numbers and in projected deficits, but that is predominantly due to unexpected tax receipts coming from high rates of corporate taxes and from the skewing of incomes toward high-bracket taxpayers.

Fundamentally, they do not change the fiscal picture. What they mean is with sound fiscal policies we could have been that much better positioned to face our other imbalances instead of having the deficits that we have today.

As to the other imbalances, the three

major entitlements--Medicare, Medicaid, and Social Security--are estimated to increase by 50 percent as a portion of GDP over the next 15 years. We have a *de minimis* national savings rate of roughly two percent, compared, for example, with China with roughly 45 percent.

Now, we have an almost unimaginable trade or current account deficit of about six percent of GDP, compared, for example, to an average of roughly 1.6 percent during the 1990s, and we have heavy overweighting, as Alan Greenspan has pointed out in his remarks, heavy overweighting toward dollar-denominated assets amongst foreign portfolio managers.

The combination of these imbalances, which is a relatively new phenomenon, is a deep threat to our economy. We have been sustained through vast inflows of capital from abroad, in part, motivated by a desire to support the dollar in order, in effect, to subsidize exports.

But that is exceedingly unlikely to continue indefinitely in the face of these

imbalances, though the timing of trouble, whether it's in the near term or years out, is impossible to predict.

The single most important action that we could take to address all of these imbalances and to minimize the risks associated with them, is to make politically tough decisions on revenues, on federal programs, and on spending, including entitlements.

The objective, in my judgment, should be to establish a fiscal path that systematically reduces the ratio of debt to our economy, that is to say, the ratio of debt to GDP, and leads to balance. And, in my view, at least, at the same time, we should make room for critical public investments.

Obviously, the pace and the specifics of this approach would require very difficult judgments and a whole host of tradeoffs.

Let me now turn to public investment and the other requisites for a successful economy that must be met by government. Here, I believe that states and cities can and should play a major role in meeting our nation's challenges, both in traditional

areas and in other newer and very far-reaching ways.

To begin, education is obviously absolutely critical to how we do in the global economy, and there you all are central to what happens, especially in K through 12.

Our public school system is almost universally viewed as being far from what it should be. I believe that states and cities can contribute enormously to educational reform and through demonstrating different approaches to dealing with these problems.

Our project, the Hamilton Project, put out a paper in April of last year in which we suggested different approaches to teacher selection, teacher award, teacher advancement.

We've also put out papers dealing with summer programs, but these are just some examples of the kinds of things that need to be done and are absolutely essential to whether or not our country meets what may be its single greatest challenge with respect to the years and decades ahead.

Healthcare is another area where change is

imperative, both with respect to efficiency and with respect to coverage. There's a tremendous amount that can be done, as John mentioned, with technology, and there are many other areas that need to be approached, and, obviously, states are now getting very much involved in that, in effect, providing in many ways, the leadership in our country.

Poverty alleviation is another area that's a critical economic priority and in which states have done a great deal in the past, but there's a great deal more to do.

Beyond these traditional areas, state and local measures to build around state and local strengths in order to promote economic growth may often in many ways be more effective than actually at the federal level.

This is something all of you know far more about than I do, but let me just make a few points, though, to set out the point: States can provide infrastructure; they can provide venture capital; they can provide pilot-project funding to catalyze new activities, maybe even new industries around what

may, in some ways, be our nation's greatest economic resource--our great universities, our great academic health centers, where, at the present time at least, we are unrivaled in the world.

The obvious example is the synergy between the private sector and Silicon Valley and Stanford, or the healthcare activities in biotech that have been built up around our academic health centers.

We can have pilot projects in states with large agricultural resources in order to provide alternatives to developing ethanol, alternatives to corn. If there's somebody from Iowa here, there's nothing wrong with corn, but there are also other ways of doing that.

(Laughter.)

MR. RUBIN: Programs to promote manufacturing around our agricultural hubs, and specialized technical education in our K-12--not K, but in our high schools, in our community colleges, and in our universities--to attract knowledge-based activities, especially to areas that naturally attract the kinds of people that those industries

need--our great cities, on the one hand, and our great outdoors, on the other hand, which have tremendous lifestyle advantages that some people value very highly.

While the federal government has to be involved in meeting many of these challenges, the more time I have spent on this question of how to promote economic growth in the context of this transformative environment, the more convinced I have become that states and localities are very well positioned to provide leadership on a great deal of much of what must be done, partly because they have local knowledge, and partly because they can demonstrate different ways of meeting these challenges, which then can become best practices for the country as a whole.

And, I might add, a way to buttress the strength of the states in this regard would be to have federal funding combined with local knowledge so that you get the benefit of federal fundraising, but local knowledge in terms of providing leadership on the use of those funds.

The governor has described her project, Innovation America, which seems to me an exceedingly thoughtful approach, which provides many very good ideas and analysis for states and cities to proceed along the lines I have just described.

Bruce Katz, at the Brookings Institution, has a very well funded undertaking called the Metropolitan Project, which similarly provides a great deal of very important analysis and information to follow up along these lines.

The governors' project also refers, and I quote, "to reducing regulatory barriers," unquote. Clearly, we must maintain appropriate regulatory regimes, and clearly we must have a litigation regime that allows . . . that provides for redress when wrong is done.

But it also seems to me that we have to focus very carefully on the cost/benefit excesses in both of these systems because they have become very serious deterrents to economic activity in this country.

If you step back and you look at

everything I have just described, I believe that it constitutes a powerful agenda for promoting growth and also for promoting increased incomes and job creation.

Let me make one or two brief comments on globalization and trade and the wind up. There is an understandable temptation in America today, because of the factors that I have mentioned before--stagnant median real wages and the like--to think in terms of creating trade barriers.

I think that would be hugely counterproductive. Trade liberalization has resulted in lower consumer prices, lower prices for our producers, lower inflation, and, I believe, has the benefits of comparative advantage and has driven American business to be more competitive.

I believe it has contributed very substantially to the economic well being of the great preponderance of the American people. Furthermore, if we had trade barriers, that could easily lead to retaliation and could lead to disruption of our currency.

What we need to do is to combine trade liberalization with an effective and powerful domestic agenda of the kind that I have described before, and the political problem, which all will relate to I suspect, very well, is that too often, those who support trade liberalization don't support the domestic agenda, and those who support the domestic agenda don't support trade liberalization. We need to bring the two together into one politics.

Let me conclude by saying that I focused on the challenges that face our country because I do believe that our future will depend on how well we address those challenges.

But as we think about our country, I think it is always very, very important to keep in mind that we have enormous strengths and that we have had a history of great resilience in rising to meet our challenges.

I believe that we can thrive in the years and decades ahead; I believe we can make change our friend and not our enemy, but to do all of that, our political system--and here, I believe, governors

will be absolutely central--must rise once again as it has so often in the past to address the tough issues of momentous times. Thank you all very much.

(Applause.)

GOVERNOR NAPOLITANO: Thank you both for those very thoughtful remarks. I'm going to throw the table open to questions and comments from the governors that are here. Yes, Governor Strickland?

GOVERNOR STRICKLAND: I would like to ask the secretary, how do you explain the difference in the savings rate of two percent in America and 45 percent in China? Could you elaborate on that?

MR. RUBIN: It's a very good question, governor. When I was at treasury, Larry Summers, as I said, was my deputy who had done a lot of his academic work around that, and I, and others, spent a ton of time on it, and I'll give you two comments, if I may:

One, I came away convinced, at least, that there's very little that we can do in that regard through tax policy; that, basically, savings are not much affected by what you do in the tax area.

Secondly, it is probably predominantly a cultural phenomenon, and so the question is how do you address a very complex cultural phenomenon? We had some ideas, but I frankly think it is very difficult.

One possibility would be, by the way, to make 401(k)s, IRAs, and all those kinds of programs, opt-outs, so that you automatically enrolled unless you opt out. Oddly enough, that little change can have a considerable behavioral effect.

But more fundamentally, I think it is predominantly a cultural issue, and we have to approach it in that way.

GOVERNOR NAPOLITANO: Governor Lynch?

GOVERNOR LYNCH: Thank you. I have a question for John Chambers. John, in other industries, the introduction of technology has the benefit of increasing quality, lowering costs, and also personalizing the products that are delivered.

Does that same analogy apply to the delivery of public education, not in terms of what we teach, but how it's delivered to our students?

MR. CHAMBERS: I think it's almost identical when you think about what is possible for public education.

We've seen this in every industry where we've addressed it. There's the up-front cost, which all of us understand, whether it's business or in government or education, that you must address, and then you could build off of it.

But education is probably one of the trickiest fields, and I'll give you an example of what we've seen at CISCO. We do these network academies that we shared with you.

In the network academies, 91 percent of the students use their skills every day after they graduate; 79 percent of them pursued more IT basis; 29 percent of them went into careers in IT.

And that was a program that just started in 1997. Its payback for the students was dramatic. We helped fund it. Once you got over that leverage point, we can now have 10,000 of them worldwide for the same price we did the first 500.

So we've learned how to scale effectively,

but what we, however, learned at the same time, is that curriculum--and this gives you an idea of how fast education is changing--what was just started 10 years ago, is obsolete today.

And we had to dramatically change the curriculum and break it into more manageable pieces. First of all, the students didn't want to take a course that they might not get an A in because that could affect what college they get into.

Secondly, for those that didn't want to pursue a career, long-term, in IT, they wanted IT basics.

Third, those who wanted to use it for small to medium business types of activities needed a different group, and we had to change that dramatically.

Until we changed the education, we changed from 120,000 students in the program in the U.S. to 67,000. We went from 18 percent of them being women, to 13 percent.

In Africa and the Middle East, the percentage of women is 25 and 28 percent, as an

example.

And the point that I'm making is that not only is it the up-front cost you have to address, but you also have to constantly change the curriculum to create jobs so when people see they take education they can draw the direct correlation to get a job after.

But your basic premise is absolutely right.

GOVERNOR NAPOLITANO: Questions? Governor Spitzer?

GOVERNOR SPITZER: Secretary Rubin, to a certain extent, it seems that the differential savings rates is helping us right now, in the sense that the 45 percent savings in China--to a great extent, those funds are flowing here.

My concern is, and my question is, if there comes a moment when that enormous pool of capital stops flowing in to subsidize us, what happens?

Then, secondarily, if I could, because, obviously, two percent won't be enough to pay for what you laid out in terms of an investment agenda,

how do we pay long-term for your second sort of category of education, healthcare, broadband, that John mentioned, those enormous public infrastructure investments, when that money supply dries up, when we have that fiscal imbalance that you talked of, which is, to a certain extent--and here's the question-- being driven by what you referred to very blandly-- and you hid the phrase in there--non-market exchange rates.

(Laughter.)

GOVERNOR SPITZER: It sounds very benign. What do we do about that as states, because we don't--unlike the Feds--print money?

MR. RUBIN: You're not supposed to.

(Laughter.)

GOVERNOR SPITZER: We could start.

(Laughter.)

MR. RUBIN: And, I guess, if you do decide that you want to do it, governor, they have some federal programs to deal with you.

(Laughter.)

MR. RUBIN: But leave that aside. No,

look, I think you've asked what is really a fundamentally very, very good question. I don't think it's the differential that's helped us; what's helped us is their enormous savings rate. We'd be better off with a higher savings rate.

Another thing we could do, by the way, we could--and the quickest thing we could do to help our savings rate would be to have the surpluses we really should have had during this period of economic growth because that translates right into savings.

Look, but you've hit on what in some ways is the nub of a very serious problem. We have benefitted enormously from the savings in China and other countries, but it's an ironic situation in which these emerging market countries, which, traditionally, you would have thought of as absorbers of savings, are actually heavily saving and exporting their savings to us, the richest country in the world.

It isn't going to go on forever. It may go on for a long time, may go on for years or it may stop tomorrow. I don't think there's any way to

tell.

But, fundamentally, at some point, I think it is almost inconceivable that that kind of situation can continue in the face of our imbalances. As I said a moment ago, the most immediate thing that we could do to try to address that is to have much sounder fiscal policy.

There is also always the risk in these kinds of situations--and hopefully this won't happen--but there's always the risk that instead of having a nice gradual adjustment there will be some kind of disruptive occurrence, and that will come from a lack of confidence.

The best way to buttress confidence--and this was after what we advised every other country in the world to do in the 1990s--the best way to buttress confidence is to have sound fiscal policy, so I think that really is imperative.

You asked the question of where the resources are going to come from. Let me just say that people like yourself, governor, the people who actually run this country, not private citizens like

me who go home and play tennis or something, are going to have to make some very tough decisions.

And my own instinct is to think that some way or another, you are going to need to have greater revenues than you have today, in order to meet the challenges that our country has, and I know that the politics of that are extremely difficult, but I think it's the reality of life.

We had a considerably higher percent of revenues to GDP all through the '90s, and while it was predicted that that was going to result in economic demolition, the fact is, we had the longest economic expansion in the nation's history; we had 22 million new jobs and one thing and the other.

So, it certainly did not undermine economic growth; quite the contrary.

On the exchange rates, that's a tough issue. I think Hank Paulson, actually, as Secretary of the Treasury, is doing a very good job. What he fundamentally is doing is trying to work quietly and effectively with the Chinese, and I think that's exactly the right thing, and I think what he is

doing is exactly right. The problem is that they are very focused on their own stability and protecting their exports; and so I think it's always going to go slower than we would have liked, but I think he's taking the right approach.

MR. CHAMBERS: Governor, if I could add to that?

GOVERNOR NAPOLITANO: Yes, John.

MR. CHAMBERS: When we were together five years ago, we talked about productivity, and in 1997, a decade ago, we said productivity, which had traditionally run at one to two percent a year, was not only too low, but it was sustainable at two to three percent, and three to five percent was very probable in well-run companies.

And the reason I bring this up: that is even more important than the savings rates. We outlined what most people would not agree with at that point in time, and yet all of us know that we have achieved unusually high productivity.

I would argue that not only can that be sustained, but actually increased. And if you

increase that, whether it's in your budgets within the state or within the country or within our own businesses, that determines where I keep my jobs; that determines the profitability.

We drive our own productivity at 10 percent a year. We are two to three times more productive than any of our large peers around the world. That's how we compete with our Asian competitors, and we don't get satisfied with that.

We've learned how to drive it further and either bring it to the bottom line or apply new resources and move jobs around within it. One of the toughest things to teach our company to do was moving the resources in one agency, if you will, using the terminology of government, to another, and creating an award system that rewarded people for doing that.

I actually think there's plenty of money in the system, and if we learn how to really continuously drive productivity and realign resources and teach people in terms of the skill sets that we would need in these areas, I think that might be the

biggest advantage we have as a country.

GOVERNOR NAPOLITANO: Governor Manchin?

GOVERNOR MANCHIN: If I might, to John Chambers, and for those of you who don't know, John is a native West Virginian who is born and bred and educated in West Virginia, and we're very proud of him.

MR. CHAMBERS: Thank you, governor.

GOVERNOR MANCHIN: As we say back home, he's a hometown boy who did well.

(Laughter.)

GOVERNOR MANCHIN: With that being said, John, knowing the challenges that we have in rural states such as West Virginia, you talked about broadband being the new infrastructure, in part, as the key. It's going to take a public/private partnership.

What . . . I know CISCO has been very active and aggressive in this. Is there more corporate America working with states that everyone's going to benefit by being wired, if you will, so we can compete on the global market? What access do we have

to that and how do we work with you, such as companies as CISCO?

MR. CHAMBERS: If you look at the requirement for broadband, I agree we believe what several of the states have done in terms of outlining a policy to get that to all of their citizens, some of the states will have more challenges, based on their density, and will have to use different technologies.

The second issue is, you've got to make sure there's enough competition, but not too much; and I believe there is enough with the consolidation that's going on with AT&T and Verizon and with Comcast and Time-Warner, etc.

Then you've got to say, what can I do to help these businesses--I'm sorry, these service providers build out faster within the state, and if you have a policy of predictability, I think it is something that is very manageable in the next three to five years.

If you were to say, do I think that every West Virginian could have broadband access five years

from now, who wanted to, I think, with the right policies and programs, that you can, and I think businesses will be willing to work together to do that.

GOVERNOR NAPOLITANO: Governor Barbour?

GOVERNOR BARBOUR: Thank you, governor. I just wanted to tell John Chambers and CISCO, thank you for the program that they have done in Mississippi, where they, after the hurricanes, came in and put in infrastructure technology to help a large group of our schools in the most affected areas.

And, Joe, in Mississippi, we would say that John is a hometown boy that done good.

(Laughter.)

GOVERNOR NAPOLITANO: Other questions? Governor Crist?

GOVERNOR CRIST: Thank you, thank you, Madam Chair. Secretary Rubin, you touched on the issue of ethanol production, and I hesitate to ask you this, because I'm sitting next to the Governor of Iowa.

(Laughter.)

GOVERNOR CRIST: But I'll do it anyway. Corn, obviously, has been used significantly, but, from a Florida perspective, we've thought a lot about the use of sugar and citrus wastes, and I didn't know if you had any comment or study that you could share with us about that.

MR. RUBIN: Let me ask you a question, if I may--by the way, you are my home state. I grew up in Florida, but you don't have to take pride in that.

(Laughter.)

MR. RUBIN: I don't feel offended, I just want to make the point.

(Laughter.)

GOVERNOR CRIST: You shouldn't be offended. I just didn't know that.

MR. RUBIN: I am told--and here is something that I don't know too much about and you probably know more than I do--that Brazil is now a substantial exporter of ethanol and they're using sugar cane.

GOVERNOR CRIST: Yes, sir.

MR. RUBIN: And that the problem that we have is that we have this whole set of subsidies and one thing and another built up around the sugar industry that is preventing us from being competitive in doing that. And I don't know if that's right or not, but that's what I've heard.

And, it seems to me, if that's right, that's the way you'd begin to address that.

GOVERNOR CRIST: How about the citrus waste, though? I mean, have you had a chance to see any studies related to that?

MR. RUBIN: I don't know about that. Cellulose is something that the auto companies, for example, are enormously focused on. I suspect that if you really want information, they could give you a ton of it.

GOVERNOR CRIST: Sure, thank you.

GOVERNOR NAPOLITANO: Other questions?

(No response.)

GOVERNOR NAPOLITANO: I have a question that takes us back to the initiative, and I'd like to

ask both of our speakers, in terms of--John, you laid out a very technology-savvy future for us.

What are the skill sets that the workers you need to sustain that future are going to have to have? And then, Secretary Rubin, you described a world economy that is in a very transformational stage right now, and what, in your view, is the single greatest mistake we could make at this transformational time?

MR. CHAMBERS: In terms of the skill sets that our students are going to need, I think we all understand the importance of math and science, but that really is just a basis of learning how to learn.

I think those are really the skill sets that are most important because what we do in our occupation will not only change two to three times during our career in our generation, it will probably change in our children's five to 10 times, so that's learning how to learn.

The second thing is learning how to really collaborate effectively together because I think that is a large part of the future.

Now, in terms of the technology, many of us around this room might be thinking, John, what are you saying to enable technology. I've got really developed keyboard skills and really understand the operating systems, etc.

The technology of the future, we, as vendors, whether it's Intel--Craig Barrett's here--or other people in the industry, will make this very easy to use. In fact, if it's complex, it won't get used.

You'll be able to take new technology devices to your home, rotating pictures that will basically show whatever picture you want off an electronic frame; you'll be able to not program that self, it will automatically, when you plug it in, tell your TV, do you want to add this to your devices? Yes, you will, and you'll download pictures to it.

The point that I'm making, is, we'll make these simple. They'll be converged, you'll communicate in whatever format you want, so it's more how to harness the power of the technology and how to

learn to change processes that I think the skills of the future need to be.

GOVERNOR NAPOLITANO: Mr. Secretary?

MR. RUBIN: I'm trying to think of a way to respond to a single greatest mistake that will enable me to say a bunch of things.

GOVERNOR NAPOLITANO: Subparts.

MR. RUBIN: No, I won't do that. I could do semicolons, but I won't.

No, I think that the single greatest mistake that we could make, would be -- and I said this in my remarks -- would be to fail to have a very substantial change in our political system's willingness to make very tough decisions, and, I think, in that respect, there are three that I would mention:

I do think that we've got to have a world-class public education system; I think that we have got to address our long-term fiscal situation; and I think we should not try to restrict trade.

GOVERNOR NAPOLITANO: Very good, thank you. Let's give our speakers another round of

applause.

(Applause.)

GOVERNOR NAPOLITANO: We're going to adjourn this session now. There will be an immediate quick session of the executive committee, and, as a group we will reconvene promptly at 3:00. At that point in time, we'll be starting to dive into state-by-state analyses of where we're at. So if you're not on the executive committee, I'll see you promptly back here at 3:00. If you are on the executive committee, I guess we're meeting right up here. Thank you all.

(Whereupon, at 2:25 p.m., the plenary session was recessed to proceed into executive committee, to be reconvened this same day at 3:00 p.m.)

NATIONAL GOVERNORS ASSOCIATION

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WINTER MEETING

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PLENARY SESSION

Grand Ballroom

J.W. Marriott Hotel

Washington, DC

Sunday, February 25, 2007

3:05 p.m.

The meeting commenced, pursuant to notice, at the J.W. Marriott Hotel, on Sunday, February 25, 2007, in Washington, DC, at 3:05 p.m., Gov. Janet Napolitano, chair, presiding.

P R O C E E D I N G S

(3:05 p.m.)

GOVERNOR NAPOLITANO: Let me call everybody to order, please. They gave me a gavel, so I'm going to use it. Very good, thank you all.

Welcome to the Plenary Session of the 2007 Mid-Winter Meeting of the National Governors Association as we continue to celebrate innovation and to explore what we need to do across our country to create an innovation-based education system and the resultant workforce.

We have several orders of business we'll take on first; then we'll dive into the program. The first order of business today, I think, is especially significant.

I am pleased today to recognize the first-ever recipient of the National Governors Association Public-Private Partnership Award. This program, established last spring by the NGA Executive Committee, was created to recognize NGA corporate fellow companies that have partnered with a Governor's office to implement a project or program

that makes a positive contribution to a state and its citizens.

This past fall, governors submitted nominations for a corporate fellow company whose work in his or her state demonstrated a significant investment at the state level.

I want to thank all the governors who submitted nominations, because the nominees were all uniformly outstanding. There was a volunteer selection committee, led by General Tom Browning, former commander of Luke Air Force Base and the current president of the Greater Phoenix Leadership of Arizona, who evaluated the nominations for sustainability, scope, and replication.

I want to especially thank General Browning and the volunteer committee for their work and their considerations. Without further delay, I'd like to introduce Michigan Governor Jennifer Granholm to the podium to present the inaugural NGA Public-Private Partnership Award. Governor Granholm?

GOVERNOR GRANHOLM: Thank you, Governor Napolitano. As the governor of Michigan, I am so

proud that this award really reflects what you were trying to do in highlighting innovation and partnerships between the public and the private sector, especially as it leads towards having young people succeed in science, technology, engineering, and math.

Ford Motor Company is just a great model of a corporation that is willing to invest in the next generation of leaders. They have created in Michigan and now in 20 states--my guess is that they are in many of the states who are represented around this table--something called a Partnership for Advanced Studies, where they go into high schools across the state of Michigan--we've got 20 such high schools now--with their partnership.

They will help to develop the curriculum that is relevant to the economy and to advanced manufacturing, particularly in the high schools, and they send in executives to help teach kids about what they are learning, again, to make it relevant for them once they graduate.

They give these kids scholarships to

college to ensure their success later on, and they also give them, often, a broad experience so that they can study in other countries so that their success is certainly usable by Ford and others, and they give them internships as well.

Ford has been a tremendous corporate partner for Michigan. Clearly, this is the home team, the home town governor describing a tremendous, tremendous company, but I'm so pleased that in this meeting where we are talking about competition and innovation, that Ford is the first recipient of this Public-Private Partnership Award.

So I'm going to ask Ziad Ajaklee and Cheryl Carrier, who represent both Ford and the Ford Motor Company Fund, to join me up here so that they can receive the accolades of the 50 governors of the country for their great investment in our young people.

(Applause.)

(Awards presented.)

GOVERNOR NAPOLITANO: Thanks to all. At your tables or at your places, you will see many

materials. I want to point out one specifically. There is a book called *Look Out, [College] Here I Come*.

I've asked Governor Easley to explain very briefly, what it's all about. Governor Easley?

GOVERNOR EASLEY: I going to do it from right here.

GOVERNOR NAPOLITANO: Then you need to turn on the mike.

GOVERNOR EASLEY: Let me just step up there. It will be easier.

GOVERNOR NAPOLITANO: Okay.

GOVERNOR EASLEY: I guess this is in my role as chair of Achieve, where we're trying to make sure that the governors and business, working together, get kids ready for college, and have access to college.

The workforce tomorrow, starts very young. One of the things we're trying to do, is, with *Look Out College, Here I Come*, is to get in kids' minds very early that college is achievable and needs to be achieved.

I think March 2nd is Dr. Seuss's birthday.

This book will be on the list of Read Across America, so when you get out there and put on *The Cat In The Hat*, they're going to take your picture when you do that.

(Laughter.)

GOVERNOR EASLEY: Read this book and make sure the kids hear it in the classroom. Thank you. It's small words, so you can use it.

GOVERNOR NAPOLITANO: I can use it myself, all right. All right, moving right along, there are two things that I want to bring to your attention: Yesterday, we announced that with the financial contributions of the Intel Foundation and Gates Foundation, we will open a challenge grant opportunity for all states to build effective S-T-E-M, STEM education agendas in their states.

These will offer funding for a STEM education center [a] network of centers to help redesign STEM education to improve a state's innovative capacity.

Now, we will award up to six state grants of up to $500,000 to support this work, so we thank

the donors for that, and ask you to be watching for details on how you apply for the grant.

I also want to take a moment to applaud the commitment of our friends at Scholastic, the global children's publishing, education, and media company. Scholastic is in the process of establishing a Web site for students and educators designed to be a national hub and a key resource of the Innovation America Initiative.

At your tables, you will find a one-page summary of this initiative in the Web site, and I think it's very exciting, and I want to thank our friends at Scholastic for doing that.

We hope to launch the Web site this summer when we're all in Michigan for the annual meeting, and when the new school year is on the horizon--and so that is ongoing work.

Now let us move to the program that we have for this afternoon for the plenary. First, I want to introduce our keynote speaker.

James H. Simons is president of Renaissance Technologies Corp., a private investment

firm dedicated to the use of mathematical methods. He was chair of the Mathematics Department at the State University of New York at Stony Brook, a Professor of Math at the Massachusetts Institute of Technology, and at Harvard University.

Dr. Simons is the founder and chairman of Math for America, a nonprofit organization with a mission to improve math education in our nation's public schools. Together with his wife, Marilyn, Dr. Simons manages the Simons Foundation, a charitable organization devoted to scientific research.

Dr. Simons's remarks will focus on the importance of improving student achievement in math, and how Math for America is engaged in that effort. Please join me in welcoming Dr. Simons.

(Applause.)

MR. SIMONS: Well, thank you, Governor Napolitano. I'm delighted and honored to be here.

Now, this gathering is devoted in innovation and competitiveness, and I'm here to make the following proposition: The modern economy is increasingly based on math and science.

We can't effectively compete in this new world unless our young people are well trained in these subjects. Regrettably, our public school teachers are increasingly deficient in their knowledge of these subjects.

The only solution is to attract and retain new teachers who are not so deficient. This may be fairly easily accomplished by the standard approach: Make the job of teaching math and science more attractive.

Now, I'm going to spend the next 15 minutes saying this all over again.

(Laughter.)

MR. SIMONS: So, I'll give you a little background on myself. I grew up in Massachusetts, went to public school, had great teachers there, some good math teachers, as well.

I always wanted to be a mathematician for some reason, even when I was a little guy. I went to MIT, I graduated early, spent one more year there in graduate school and went off to Berkeley to get a Ph.D.

Now, that was around 1958. In 1958, something very dramatic happened; Sputnik went up, and that managed to terrorize the whole country. It was perceived that we had a shortage of mathematicians and scientists; our defense effort was falling behind and something needed to be done.

Well, it was done. So, the National Defense Education Act was passed, and other programs were created, and these were meant [to], and, indeed, succeeded in, stimulating a lot of young people to come into these fields.

By a fluke, I think, I was the first person in America to get his Ph.D. under the National Defense Education Act, and got a nice letter from Abraham Ribicoff, who was the head of the HEW at that time, and so on. But lots of guys followed.

To give you a sense of how successful this program was, the year I got my Ph.D., 1961, there were fewer than a hundred Americans who got Ph.Ds. in mathematics. Ten years later, there were 1400.

Now, 1400 was a bit much. We didn't know how to place them all, but nonetheless, it shows the

power of a federal program, and, indeed, a lot more people not only in mathematics, but physics and electrical engineering and all those fields were coming in, and we built up our effectiveness there, and defense went pretty good.

So I was a mathematical researcher. I spent 15 years doing research in mathematics--if you can believe that--and teaching.

I had some stuff named after me. I was reasonably successful. I had a good career there. I even won a prize. All my work was theoretical.

Now, in the mid-'70s, for one reason or another, I switched into finance. That was a pretty big jump.

And while, as Governor Napolitano said, we use mathematical methods, we didn't at first. I got into finance, found managing money an interesting thing, started what today is called a hedge fund, but soon, seat-of-the-pants type investing and decision-making didn't seem as . . . it seemed that it could be improved, and we began to bring in some mathematicians and scientists and built models.

And then more people came in and we built more models. Then the business got better and better, and over the years, we have been enormously successful and made a ton of money--I have to confess.

(Laughter.)

MR. SIMONS: So that was . . . we even started giving some of it away, and, as Governor Napolitano mentioned, we have a charitable foundation devoted to basic research in math and science. My wife Marilyn, over there, heads that foundation, and it's been a pretty interesting career.

Now, a lot has happened since Sputnik went u p and the days of the National Defense Education Act. The world's whole economic engine now is not just defense, but increasingly based on math and science.

You know, from Genentech to Google to Goldman, math and science is becoming king. By "Goldman," of course, I mean Goldman Sachs.

Now, there at Goldman Sachs, these scientific types are called "quants," and some of you

may have heard of quants, but at Google, they're just called employees, because they're all quants. They don't bother calling them quants at Google.

And that's a wave of the future. I think it's THE wave of the future.

Now, in 1958, we were clearly under-prepared to compete in defense, and we got prepared. But now in 2007, we may be under-prepared to compete at anything, and that's a great concern.

So, while the U.S. is functioning and there are all these marvelous new jobs being created, who's getting them? Well, who's staffing these things?

Well, I'll tell you, they are not, by and large, native-born Americans. The vast majority of my own employees are from a whole panoply of foreign countries. Once in awhile, an American comes through the door, but not so often.

We use H-1 visas heavily to bring people in, and we're not the only company to use H-1 visas because there is a tremendous demand for them, as many of you know. So, we import people.

The country--we don't, but the country

also exports jobs, in the sense of Indian software or Chinese hardware; all these things that are technology-based, that, for one reason or another, we can't do in America. Now, it's true that it's cheaper in India to get someone to write software, but it won't be forever.

So, how long can we continue doing this? How long can we continue being dependent on people coming in and work going out, without falling behind from our leadership position?

Now, what's the story with these people who keep coming in here? Are they smarter than our folks? No, I don't think so. Sometimes I think so, but then I calm down and realize that's not the case.

(Laughter.)

MR. SIMONS: But they are better trained, better trained, without a doubt, because American schools are not doing their job.

Now, everyone by now knows that, by high school U.S. kids rank near the bottom. I saw a list when I first started looking at this, and it was a long list of countries in the western world and one

thing and another, and we were the next to last. We weren't the last. Cyprus was the last, so we at least beat out Cyprus, and Cyprus ought to pay attention, too, and do something about their position on the list.

(Laughter.)

MR. SIMONS: So this was kind of a shocking thing, so I thought, well, maybe, you know, we're a very heterogeneous society and so on and so forth; we have a mixture of people bringing down the average and one thing and another.

Well, guess what? It wasn't the case. Our top 10 percent weren't as good as their top 10 percent. It wasn't like this is a problem that only affects the disadvantaged and they bring it down; it's a problem for everybody--everybody in our country. We're not being properly taught, and we're not being properly taught in our schools.

So, I'm going to steal something from Al Gore and I'm going to quote--I'm going to state Inconvenient Truth Number Two.

So he doesn't have a monopoly on

inconvenient truths; here's another inconvenient truth: Increasingly, U.S. public school teachers of math and science don't know math and science. That's a truth, and it's terrifically inconvenient.

So, why not? Why don't they know math and science? Well, I'll tell you why not: The starting compensation for a fully-qualified New York City Math teacher with a master's degree is $48,000 a year.

Now, the starting compensation for a young programmer that comes into our company, a young programmer with the same kind of educational background supposedly, is about $100,000 a year, and it's more if they speak English, which isn't so often.

Now, on the other hand, in New York City, in 10 years, that same person could have aspired to receive $68,000 a year.

Now, at Renaissance, after 10 years, the sky's the limit, and even more, if you speak English.

So, well, what changed? How come? Well, in the old days, obviously, there were far fewer of these types of opportunities outside the classroom.

There just weren't so many businesses that depended on math and science, so it was easier to get some pretty good teachers in there, and, also, there were a lot of women who were good at math who wanted to work and there weren't many jobs available. They couldn't be engineers; they weren't allowed to be engineers and things like that so they were tracked and became math teachers, too.

Now, today, it's a different story. There's tons of good jobs for people who know math and science. They pay big salaries; they pay bonuses; they give you stock options, and maybe they even back-dated them, if you were especially lucky.

(Laughter.)

MR. SIMONS: So there's a world of opportunity outside teaching in the classroom that's open to people who know math and science. And, as for the women, well, as you can see by looking around you, today women can do whatever they want, and they certainly do, so that particular track is no longer available.

So, what has happened is that the

tradition--and we have a tradition in this country --of flat salaries across subjects, has basically thwarted the law of supply and demand, because we pay history teachers and English teachers and gym teachers and math teachers and physics teachers all the same.

But there isn't such a big demand for English teachers, for people who know English. I mean, we should all know English, but there's a huge demand for people who know math and who know science, but that's not reflected in their relative salaries.

Well, some people think--amazingly, some people think that knowledge of a subject doesn't really matter. After all, you get the pedagogy right and you get the curriculum right, well, then, anyone can teach that.

Well, common sense tells you that's not right. It doesn't matter how good the curriculum is; if you don't know what you're talking about, it's not very helpful.

It's instructive to recall, to any one of you that can recall--but, anyway, I will report how

we trained pilots in the Second World War.

The Second World War started and we only had a few military pilots and we needed a lot of them, right? We need to teach these kids to fly airplanes.

So, we started training, the Air Force started training people to fly planes. And they'd go through a class and they'd send them off to, you know, to fight after they were trained, except they held back the best ones.

Well, now, you might think the best ones . . . well, we send them over there to shoot down the Messerschmitts or whatever, but, no, the best ones are kept to teach the next crop. They didn't like it; they wanted to go and show how wonderful they were, but, nonetheless, they were kept, because it was reckoned that the best pilots would make the best teachers of pilots.

Now, obviously, there must have been some exceptions to that, but, by and large, that was their rule. After a while, those boys did get sent out, and new people came in.

Even more extraordinary, if you happened to become an ace, where you shot down five planes or whatever it took to become an ace, you were brought back from the field, stuck back in the classroom, and told to teach, because those guys who were aces, were tremendously inspiring teachers, obviously.

So, the Air Force wanted the people who knew the most about flying to teach flying, not the people who knew the least. So, how do we solve this problem? It really is a problem.

So, what do we do? Well, one approach is volunteerism and that is a partial solution, but it's not a complete solution. So, you give people scholarships, you exhort them, you appeal to their youthful idealism. What do you call it? Teach for America, and there are other various things.

Do something to get people to feel that this is a way that they can contribute to their country: to teach, often in underprivileged schools, but not always.

That's pretty good, because some people come in, but they stay a few years and then they go

get a real job because the job is simply not attractive enough to hold the kind of people who, on the whole, you want to stay in that job. So you can get them in, but they're just not going to stay, at least they're not going to make a career out of it.

So, you know, it works okay in the Army; in fact, it works great. They have recruits; they come in, they work for a few years, they get up to corporal or I don't know what, and then they go out and a new crowd comes in.

But you don't want to continually be turning over the colonels. I mean, you have to have an officer corps, you have to have a corps of officers and noncommissioned officers who are trained professionals who stay, and those folks can then deal with the turnover.

So you cannot solve this problem with just bringing in young people, having them teach for a couple of years, and then go off to Goldman Sachs.

So, the real solution to this problem, is to make the job of math and science teaching sufficiently appealing to both attract and retain a

cadre of outstanding professionals. That's what we have to do.

To do that, how do we make the job better? Well, the obvious way you make a job better, is to pay more, and, yes, we have to pay more. Somehow or other, we have to pay these folks more.

The other thing we have to do, is give them more respect. Create a situation where they get more respect. You know what? It is not so hard to do both.

We've started such a program in New York. Governor Napolitano mentioned it. It's called Math for America. Of course, it's a program based on private money, but I'm going to describe it a little bit, because it works.

It's four years old. Our director is here. Irwin Kra, wave your hand. He's over there somewhere. Anyway, the executive director is there.

So this is the way the program works: There's two entry points: You could be a new college grad, and let's talk about that first, the new college grad.

We take in 50 a year right now. The first thing any applicant does, he's given a test. He has to pass a test. It's a uniform test; it's created by the Educational Testing Service in Princeton. If you don't pass the test, you can't come in.

If you pass the test, you then get to the next stage and you're interviewed. If you're interviewed, and you look like you could be a teacher --and the test is, of course, a test of subject knowledge; it is not a test of anything having to do with pedagogy or any other damn thing; it's do you know mathematics?

By the way, this program is based only on mathematics; but, nonetheless, do you know the subject? Can you calculate the cosine of angle? Do you even know what it means? Whatever the questions might be, it's knowledge of subject.

So you pass that test, you pass the interview process, you look like you'd make a good teacher, and you're in, not having had, as these people typically haven't had, any math ed courses or any kind of that stuff.

They're injected into a one-year intensive program, at either Columbia, in this case, NYU, or Bard College. Which programs, are worked by us a little bit, but they are standard programs.

In one year, you get a master's degree, you get certified, and you learn all that stuff that they didn't learn in college.

And then you go off and teach. Now, what do they get? How do we get them to come in?

Well, we pay their tuition for that first year. We give them $28,000 as a fellowship, which is not so different from a typical graduate fellowship.

Then they get stipends on top of their teacher salaries. And what do they get? The first year, they get an extra $11,000. We pay that, by the way; we pay that; it doesn't come through the school district; we pay those.

It's $11,000 the first year, $14,000 the second year, $17,000 the third year, and $20,000 the fourth year, so, by the fourth year, they're getting a bump of $20,000 a year on their salary.

Now, I just told you what the salaries

were. They're not too terrific, and even that extra $20,000 doesn't make it all that terrific, but, you know what? It's a distinguishing thing, it's a nice amount of money, and it makes people quite happy.

At the same time, there's an ongoing mentoring; they get together, we have dinners, and there's a real *esprit de corps* that's developed among this group of people.

Now, there's another entry point, and both are important. And this [is] the master's teacher side. So, again, people apply who are already teaching. This is all for the New York City Public Schools. That's where we live.

And it's for existing teachers. They have to take the same test. Do you know the subject you're teaching? A lot of them don't, but some do, and they take the test, they get interviewed, and they become master teachers.

Of course, when I say that the average teacher doesn't know these subjects that he or she is teaching, it doesn't mean that none of them do, because some do. And these folks are great, and they

become our master teachers.

We give them a $50,000 grant over a four-year period, so it's, you know, it's a modest thing, but it's $50,000 to stay teaching--just stay in the school and teach and mentor the junior fellows that are coming up through the other route.

They become partners. There's a binding process, there's a bonding process, so that the younger people and the older people--not that they're so old, by the way, the older people, but the senior people--bond together and have created now, an increasing community of first-class math teachers in New York City.

It's not so big. We've only--this is only the fourth year we've been doing this program, but it's growing and it works, and we think those people will stay in the field, in particular, if the young ones can become master teachers after they finish their stint.

So this is great, but it's based on private charity, and I don't think private charity can provide everything America needs.

When we started Math for America, it was with two goals: One, to do something for New York City, and the other was to build a pilot program that the federal government could copy and make something that was national.

Now, I know I'm talking to a lot of state governors who have ideas of programs in their own states, but I'm telling you what our idea was, and it's not a bad idea, to make something a national program. We'll get to that in a second.

So that was our idea, that it was fine to do this in New York with limited funds, private funds, but it would be really fine, if, like the NDEA of 50 years ago, we could do that on a national scale.

So, what would it be? It would be to create a corps of mathematics and science teachers nationwide. We gave it a name, MSTC, Math Science Teaching Corps, the MSTC Corps.

And it would be the same principles as for Math for America. You take a test, blah, blah, blah, and . . . . But better than Math for America. You'd get

the respect of belonging to a federal program, to a federal corps of outstanding teachers.

Now, we have been selling this hard in this city that we're all sitting in. Schumer and Saxton introduced a bill a year ago, this MSTC bill, and it sort of sat there like a . . . well, in Yiddish, we would say a latke; it just sort of sat and didn't do much. That's not that I'm a Yiddish speaker, but I know a few words.

It didn't do much, but, on the other hand, it existed, so that was good. And it was a bill just along these lines.

The competitiveness bill last year, that Enzi and Alexander were working on, well, there was a lot of talk about possibly including it in that bill.

It wasn't, and that bill didn't go anywhere, but now, that bill, the competitiveness bill, is about to be reintroduced. This time, the co-managers are Kennedy and Bingamon, and we're talking to their staffs a lot, and there's a reasonable probability that this MSTC Corps will be, one way or another, attached to that bill.

We really have some good momentum going. It's taken a little while, but people are getting the idea. And we really are optimistic that this could happen.

It would be on a national level, exactly the kind of program that I mentioned, that we're doing in New York; it would be administered by the states.

My idea was that the federal government would pay it all--and we'll get to what it would cost, in a minute--but it probably will be the case that the federal government will put up money and the states will be asked to do some kind of matching, and the states . . . . The federal government would set the guidelines, the standards, and the states would administer it, so it probably would be a cooperative program.

Now, a full-size program, in my opinion, would provide that 20 percent of U.S. teachers in math and science that would be members of this Corps--20 percent. And that would cost $2 billion a year.

Well, $2 billion a year is a lot of money,

but that's what it would cost. There's actually a good chance. Now, I'll tell you, if something like this was put into practice, that 20 percent of the math and science teachers--that's 7th grade on through high school--math and science teachers were of the quality that I know we can attract with a program that has this much power to it, it would be transformational.

The teachers, of course, would be proud to be members. Parents and kids would be proud to have such teachers, and the country could be proud to be finally moving in the right direction.

Now, I'll leave you all with one final thought and say thanks. So, here's my final thought: I discovered the other day that our annual bill now for intelligence--whatever that is--is $45 billion. That's what we spend for intelligence.

Now, god knows what we get for that $45 billion. I won't say anything more about that.

But, for $2 billion a year, we could really make America intelligent, and I urge you all to communicate that simple thought to your

congressional delegations. Thanks very much.

(Applause.)

GOVERNOR NAPOLITANO: Before we move to our panel, let me ask if there's one or two questions for Dr. Simons. Governor Granholm?

(Discussion off the record.)

GOVERNOR GRANHOLM: What is the cost of the private initiative that you're doing in New York City?

MR. SIMONS: It's about--its on the order of $25,000, all-in, per person per year. That's about what it costs. It's front-loaded a little bit because of the tuition and the fellowship in the first year, then it drops down, then it builds up again. And if you carried it on at the $20,000 per year per teacher, forever, then add administration and it's $25,000.

So, there are--how many math and science teachers have we got in America?

MR. KRA: Four hundred thousand, okay, fine. So, if 20 percent of them, which I believe is 80,000, at $25,000 a head, I believe that's where we

get the $2 billion from. Another question?

GOVERNOR GRANHOLM: That's good math.

GOVERNOR NAPOLITANO: Governor Easley has one.

GOVERNOR EASLEY: We tend to think of high school as grades 7 through 12, and middle school as 5 through 8.

You mentioned high school, but you said 7 through 12. Is there something about getting them earlier that you think is important?

MR. SIMONS: I think it's extremely important. I'm not quite sure how to do it. I'm looking at the grades where we actually have people called math teachers or science teachers, and I think we certainly have that in 9 through 12, and I think we have that in 7th and 8th as well, typically-- maybe even 6th.

Wherever you have math and science teachers, this is where this particular program focuses. I have to say that the lower grades present a conundrum. I think there are solutions to that problem.

I know of a good one, but I don't know how practical it is. You know, in China, you have a math teacher for math, from the time you're in first grade, and they follow you all the way up. They have a coherent curriculum, and you just step out of class or she comes in or whatever it is, you have math teachers all the way up.

We don't have that system in the United States, and that is a solution to the problem, but it means one that has to . . . you really have to change the way business is done, and so I don't know.

Obviously, you don't need to know as much math to be a first-grade teacher as you do to be a 12th-grade teacher of math. But, you know, it's amazing. I mean, it is a problem in the lower grades.

I interviewed all the teachers in my son's fancy-schmantzy private school about 15 years ago because I was worried about math. And the principal of the school said, “Oh, it's great; math is great here.”

I said, okay. He said, talk to the

teachers. So I did. So I started with the first grade. I figured I'd start with the first grade.

So, this was a typical response: You ask a teacher, well, tell me about how you're teaching math, and they'll giggle a little bit. "Well, you know, math is really not my favorite subject, right, not my strong point, math." That's a typical response.

(Laughter.)

MR. SIMONS: But, fortunately, we have Ms. Schmertz down the hall here, she has all the rods and the staffs or whatever the heck it is, and if we have a problem teaching math, we turn it over to Ms. Schmertz.

Now, imagine that that woman said, well, reading is not really my strong point. Reading isn't your strong point and you're teaching first graders? What are you doing there?

But for her to say, well, math is not my favorite subject, it was like a little joke between us. Well, okay, it's mildly amusing, but it's not.

(Laughter.)

MR. SIMONS: But it's not encouraging. It wasn't encouraging. So it's a problem, governor; its a real problem in the lower grades, and I don't have the answer.

GOVERNOR NAPOLITANO: Let's take one more question and we'll move on with the panel. Governor Bredesen?

GOVERNOR BREDESEN: Well, I know you've only had it going for four years, and it's believable, certainly, that that kind of content now that you're talking about, would lead to better results. Do you have any evidence at this point, that, in fact, you're producing children out of high school with bigger skills, better skills in this area?

MR. SIMONS: Well, we're starting to try to measure that, and the answer is, of course, that we don't have any kind of definitive evidence, except the obvious thing that it's better to know something than to not know something when you're proposing to teach it.

However, what we are finding, is that the

principals are now asking for our people to come in and teach in their schools, so someone thinks we're doing things right.

GOVERNOR BREDESEN: Math SATs?

MR. SIMONS: Well, you could measure SATs, but you need a reasonable number in order that you can, and you have to make sure you're making the comparisons right, and, oh, well, this class is not the same as this class.

This is not an easy thing to do with small numbers in early days, but it's an article of faith. It's better to know what you're teaching, than not to know what you're teaching.

(Laughter.)

MR. SIMONS: Okay.

(Applause.)

GOVERNOR NAPOLITANO: We're going to turn to the panel and open up to the panelists and Dr. Simons, as well, for questions. There's the cherry pie from Michigan, very good.

We're going to have a panel now on three topics. The panelists are each going to address them

very, very briefly, then open it up to the floor.

The three topics are: The value of comparing a state STEM education system to those of top-performing nations on international assessments, something we talked about this morning at one of the breakout groups; how to build STEM teacher capacity; and how to engage students in STEM early, and sustain interest.

Our panelists are William Schmidt, a Distinguished Professor at Michigan State. He previously served as National Research Coordinator and executive director of the U.S. National Center. Dr. Schmidt will speak about the role of international studies and STEM reform.

Next will be Dean Kamen, who is an inventor and entrepreneur and a tireless advocate for science and technology. As an inventor, he holds more than 440 United States and foreign patents, many of them for innovative medical devices that have expanded the frontiers of healthcare worldwide.

Among his proudest accomplishments, founding FIRST, For Inspiration and Recognition of

Science and Technology, an organization dedicated to motivating the next generation to understand, use, and enjoy science and technology. Mr. Kamen will speak about the importance of engaging in STEM early and the role of innovation in education and the economy.

Next, we have Maryanne Rankin, who has served as Dean of the College of Natural Sciences at the University of Texas at Austin since 1994. As Dean, she has led several successful programs for undergraduates, including the UTeach Program for math and science teachers, the UT Discovery Learning Initiative, the Texas Interdisciplinary Plan, and the UT Austin Freshman Research Initiative.

Dr. Rankin will speak about the role of UTeach at the university at Austin, in improving teacher recruitment and preparation as part of building capacity for improved STEM teaching and learning statewide.

Mr. Schmidt?

MR. SCHMIDT: Thank you for this opportunity to address the governors on this, what I

think is a very important issue.

As Governor Napolitano said, I want to put my comments in the context of the international context and ask how we're doing with respect to that. I want to assure you, though, as I begin this, that the problems that you read about in the newspapers that have been alluded to, are real; when, in fact, in 2004, we tested a sample of U.S. students and found that of the graduating class of 2004 in high school half of the students would fail an item that simply asked them to find how much ribbon it takes to wrap a simple package.

This is not the kind of mathematics that's required of the ever-increasingly technological economy, but if they can't deal with that, they surely cannot deal with anything more complex.

Professor Simons has already addressed the issue of the economic implications of this. Clearly, these kinds of lack of skills will impact on how the states could compete internationally, and how the nation, as a whole, and the threat to the very standard of living that we have always assumed

will go up, when some economists tell us that that will go down in the next generation.

But there's another side to this issue. That is the individual students, the individual children, our children, the resource that's the most important resource in the nation's history.

By simply not allowing them to compete because they no longer compete with the children sitting next to them in school, but with the nation's students, as well as the students from all other countries. Given the technological advances of the economy, these children are . . . we are putting them at a disadvantage.

This, then, makes this more than an economic issue; it makes it a moral issue of what we are doing to the future generation of children in our society. What about the solution?

You all know and share the understanding of that problem. The solution from this international work, is twofold: First, we know that one of the single most important understanding for the differences among nations in their performance,

that, again, Professor Simons alluded to. By the way, it's not just Cyprus, it's also South Africa that performed below us. Not much difference, right?

But, basically, the differences show up because those nations that perform the best have higher expectations for their students. They demand more of their students. They move in more rigorous fashion through the early part of the curriculum, so that by the end of 8th grade, these students are some two years ahead of where our students are in the very mathematics they're studying.

We don't make that up in high school. This is why Europe and other countries, view the first two years of our university training as basic high school catch-up from where those nations are at that point.

Essentially, we can learn that the curriculum is a very important component of this, but also we know that the teachers--and this has been alluded to--are very important in all of this. It is the subject matter knowledge that teachers have. I think it is more than a hope that, in fact, those

who know can teach better than those who don't know the subject matter.

I'll have more to say on that in one moment. But those two being the anchor points to what I'm about to say, I'd like to give you four suggestions of what kinds of actions states might take:

First of all, I would hope that the governors would lead the effort in this nation to develop a set of internationally benchmarked gold standards that would help states move in the direction of having rigorous, challenging, coherent standards for all students.

All states have standards. The question is, how challenging are they? How rigorous are they? How well put together are they from a coherent point of view? Do they progress in a logical fashion?

These are questions that can best be addressed when one looks at a gold standard. This is what the business community does. They benchmark themselves against the rest of their competition and the rest of our competition is the rest of the world

and how they prepare their children for the 21st century. Basically, that development of that set of standards, would be very important.

From the rigorous point of view, I've already suggested to you that we're two years behind. Seventh and eighth grade in this country is about arithmetic, fractions, decimals; it's about rocks and body parts in science. The rest of the world is studying physics, chemistry, algebra, geometry, and biochemistry.

We learn the parts of the eye; they learn how seeing actually occurs. That's the nature of the difference we're dealing with.

But it's not just how the rigor goes; it's also about how the courses and the topics are put together in a coherent fashion.

The first slide I want to show you--I have two quick slides. The picture says what I want to say, so much better than I could.

(Slide projected.)

MR. SCHMIDT: If you look, there's a list of topics. I don't expect you to read them down the

side. Across the top are eight columns.

The purple area is the sort of sequencing of topics across the grades in the top-achieving countries of the world. Notice that it's a fairly structured sort of prediction, that those topics at the bottom, which are more demanding, are covered only after the elementary topics are first covered.

Why do I point this out? It seems ultimately logical, that that's how you'd organize a set of standards. I'm now going to show you the next slide, which basically takes that exact slide and now does it for 20 of your states.

(Slide projected.)

MR. SCHMIDT: In this slide, I think you can see that there are dots everywhere, suggesting that the curricular philosophy of most state standards is: you teach everything everywhere, because then somehow, somebody will learn something somewhere.

(Laughter.)

MR. SCHMIDT: I suggest to you that that is hardly an adequate curricular philosophy for the

development of standards. So, the gold standard could help states to develop this.

Secondly, if we were to develop that, we need to find means by which to encourage states and districts within states to actually teach to those standards. They not only need to be in existence, they need to be implemented.

We need to worry about state variation as well as variation within states. I'm working on a set of analyses now that show very clearly that across states the opportunities to learn mathematics are not equal. They're not even close to equal; they are very different.

That means, what state you happen to live in arbitrarily determines the nature of the mathematics and your future chances and your future choices. Not only that, but within states we have the problem across the districts and the school buildings within the state that those standards are not necessarily all implemented, even when there are state standards.

We need to move to an enforcement

mechanism that encourages, if not in even stronger words, makes that happen.

I think the notion of local school boards controlling the curriculum of schools is an anachronistic idea that has come and gone and needs to be buried once and for all.

Those people do not have the expertise, the knowledge, to determine what children need to know in order to face the 21st century.

Thirdly, I think, especially as we move to high school, we have to have more requirements for children, less choice, less arbitrariness. We simply seem to worship the notion that children should have lots of choices.

It has never made sense to me that we allow 13-, 14-, 15-year-olds to make choices that affect the rest of their lives when they don't have the knowledge nor the understanding of the consequences of those choices of what mathematics they happen to take.

So, we need less choice; we need more requirements to achieve a more equitable system.

You know, in the United States one of the most serious threats to the vision of No Child Left Behind --no matter what you may think of the mechanics of it, the vision is right; we should leave no children behind.

The greatest threat to that is the fact that we do not address this issue that all children within this nation are not given the same sets of opportunities. We help to create the gaps. We sit and look at and act bewildered by it, when, in fact, that's part of the way we have structured our educational system.

So we need to simply focus on this and beware of one thing: The names of courses do not tell you what's in the course.

The American educational bureaucracy is very good at inventing variations of something called algebra. We found in one urban school, 40-some courses for high school mathematics. I defy you, while you're sitting there, to figure out what 40-some courses would look like. They are mainly all kinds of varieties of algebra.

Finally, the last point--and it leads directly into the next talks--and that is that we need to deal with the preparation of our teachers in a more adequate fashion. They need more rigorous mathematics if they're going to teach 6^{th}-, 7^{th}-, 8^{th}-grade or higher mathematics.

Professor Simons is absolutely correct on that, and it's not just a hope and a wish. Actually, internationally we're now doing a study that shows that that's the reality.

If there is a curriculum gap in K-12, guess what? There's a huge one in the preparation of these teachers at the university level.

These teachers in other nations have a serious, deep background in mathematics, but that's not enough; they also are taught how to bring that to children through various educational aspects of the delivery of the content.

So those are the four things I humbly suggest to you, and I thank you for listening.

(Applause.)

(Slides projected.)

MR. KAMEN: Greetings. First, I'll tell you that, unlike all the other speakers, I have no credibility or credentials in the world of education, but I entirely agree with what Dr. Simons had to say.

It's sad that there is nowhere near enough competence among the science and technology community that are teachers to deal with all the kids. We try to take a slightly different approach.

At least there are tens of thousands, in fact, hundreds of thousands of scientists and engineers out there that are not only capable in terms of their knowledge, but love the field. That's why they do it professionally.

And we don't expect our gym teacher to be Shaquille O'Neal. The gym teacher is there to supply the basics.

We have a culture that gets what it celebrates, and kids in our country are obsessed with sports and entertainment because they are huge industries where kids see the best of the best.

But they never see the best of the best of science and engineering. That's one of the reasons

that the teachers don't get the kind of respect that the coaches do.

So, about 15 or 16 years ago we decided that we were going to take a slightly more radical approach and say we've got this huge resource of scientists and engineers, and I know that if you created the environment where they could, maybe outside the curriculum-- the way you have after-school events happen--if they could become involved with the kids, not as a threat to the teacher, not in any way to be judgmental, but we ought to create the equivalent of the Olympic Committee.

Private companies sponsor all of our Olympic athletes. They're volunteers. Let's create the Olympic Committee of smarts; let's get the scientists and engineers and inventors of this country working together in a fun, exciting, sports-type of environment--because our country is obsessed with sports and entertainment--and show kids, particularly women and minorities, that science and engineering is for everybody.

So I have a very quick--because I only

have a few minutes--I'm going to give you the fastest review of the growth of this Super Bowl of Smarts activity that we put together, and this is--I won't spend any time on it--this is: you should read these books if you haven't. It's a statement of the problem, and Dr. Simons said it very well.

But there's an assumption that changing it is all about supply and demand. I think that's wrong in our culture. Supply, you've got it all. We should fix testing, curriculum, teacher quality, merit pay. There's no end; it's all there.

But what do we do about demand among kids, particularly women and minorities, to give a damn about learning science and technology? And if they don't care and our culture doesn't make this stuff seem accessible and exciting, it doesn't matter how good your schools are, they don't even go.

So, as to demand, here's all the solutions to demand that I knew of: There are none. Nobody thinks science and engineering is for anybody but nerds, and math is certainly not something women can do.

So we figured we'll make it more exciting. So we said it's not about supply and demand. Our problem in this country, where you have a free culture to do whatever you want--including nothing even as a kid--we'll make it about demand and supply.

We formed, FIRST. The word, "education," is not in the title. It's for inspiration and recognition of science and technology. In 1992, we kicked off the season, and just like the presidents of this country seem to throw out the first pitch in the baseball season and they bring the kids to the White House if they win the Super Bowl, we asked the then-President Bush—41--to come and kick it off.

Here he is in Manchester, New Hampshire, the first year. We convinced 23 companies that they should--and these are little companies from across the United States, little ones like Boeing, General Electric, General Dynamics, Intel, Motorola, Xerox, Johnson & Johnson--23 companies, each to adopt a school and bring the kids to see what science and technology can do, work with them in a sports-like environment.

We said, come back six weeks later, after we gave them all a kit of parts, and they would compete in this robotics competition. Why six weeks? It's the length of a high school sporting season, but they got to see the real Shaquille O'Neal of the world of science and technology, something that could inspire them so they'd show up as excited to be in math class as trying to get on a basketball team.

This is the year 1992 in that high school gym in Manchester. This is six weeks after the president kicked it off; every person in the world that had ever heard of FIRST was right there.

We did the competition, and five years later, after doubling and redoubling every year, we had a few hundred teams. We had to move our finals out of New Hampshire.

This is Epcot Center at Disney, 20,000 kids: They were building us, by that fifth year, temporary arenas that looked like the Olympic Village.

Over the next five years, we kept doubling and redoubling, and this is what we look like at the

tenth year. We outgrew any temporary arena and our final--six weeks after we gave out the kits in January--we took over the Houston Astrodome. We had almost a thousand teams there, sponsored by around a thousand companies.

Last year, we took over the home of the 1996 Olympics, the Georgia Dome in Atlanta, and we had about--this is the pit area--we had almost every major technology company in the United States participating, and, again, using the sports model, we realized, in the fifth year, we were going to run out of giant companies that could not only adopt schools, but at the end of the six weeks, take the kids, the parents, the teachers, the mentors, put them on airplanes [and] fly them to these events.

That's expensive. But the volunteer engineers don't keep track of their dollars. We just had to get rid of the fly-'em–around-and-put-them-in-hotels, and the same way as in sports, you don't go to the Super Bowl with everybody, only the few winners.

So we said, let's get some of these giant

companies that became believers in the outcomes of what was going on and have them sponsor regional events in the sixth, seventh and eighth weeks. And in the ninth week, we would take you to the Georgia Dome.

So, by the way, you'll notice--I hope you'll notice--that they are all women on that team. Thirty-eight percent of all the kids this year were women and minorities. By the first year, as I said, there we are in Manchester, New Hampshire, and by the fifth year, we had two of our little companies agree to try to regionalize this event, so that all companies could get involved to make this available to all schools in all the inner cities of the country.

And the two little companies that did our first regionals were Johnson & Johnson, the world's largest medical products company there in New Jersey, and a little company called Motorola in Chicago. Each one of those regionals had about 50 high schools and 50 corporate sponsors that were local.

By the next year, we had doubled. We

still have those two regionals, plus another 37 cities--little cities like New York, Detroit, Chicago, Los Angeles, San Jose, Cleveland, Seattle, Houston, Orlando, Atlanta, etc.

We now have teams from every state in the United States. Last year's numbers looked like this: We had 1133 high school teams competing in 33 cities, and this year it's 37 cities and about 1400.

We have now a program for the younger kids that's equivalent to Little League, and we had last year 7,500 schools; this year, we have 10,600 schools; we had 300 qualifying events.

Again, as Dr. Simons pointed out, we need our aces, and I can tell you that by making this thing fun we have 45,000 engineers around the United States that volunteer their nights and weekends for the six weeks to give kids an opportunity to do something that you couldn't change the education system in this country to adopt or pay for for the next decade or two, and it changes these kids' lives.

You could say that I'm a zealot, so I'm giving you some very quick outcomes out of a 100-page

study that cost a few hundred thousand dollars that was funded by the Ford Foundation. Brandeis University did it; I'd be happy to give you the actual complete study.

But out of that study, not done by us, but here's some basic data: Fifty-percent are more of the kids in peer-equivalent schools around the cities of the United States, 50 percent are more likely to go to college if they've been in one six-week program of FIRST; three times more likely to become an engineer; nine times more likely to be involved as a freshman.

This is independently developed data by Brandeis. They are four times more likely to pursue careers in engineering, two and a half times more likely to volunteer in their communities.

The women were 300 percent, not three times, not three percent, but 300 percent more likely to pursue technology in college; and among minorities: 150 percent improvement in what they choose to do with their careers.

Here is some simple data--but I'll run

out of time--on East Tech High School in Cleveland: They were going to close that place. It's almost entirely minority. It's now a magnet school out there because of the FIRST Program, and you can ask their principal and you'll get that fact.

What does it cost? It costs you almost nothing, because you don't pay for passion among 45,000 volunteers. And so, in the end, including everything in, it's about $75 per student to change the outcomes of these kids' lives compared to the $6,000 to $12,000 a year that you pay and don't have any metrics, or the $500 billion we're spending in this country on K-12 education.

Every school that we've collected data from says it's about $75 per student.

These are the kinds of companies that support the teams. We have two thousand of them now.

Last year, we gave out $8 million in scholarships at the nationals when we went to the Georgia Dome. This year, on April 12th through the 14th, we have our finals again at the Georgia Dome and we'll be giving out $12 million because a couple

of hundred of the teams are university sponsored.

I will just remind all of you that education, no matter what you call it, no matter what programs you put together, the days of it being filling the buckets so that somebody can work on an assembly line, are over, and as the poet said, Yeats, "It's not about filling a pail; it's about lighting a fire."

This sports event lights a fire, and it may be more applicable to people who have to worry about governing and education. A guy who sometimes got it right a few thousand years ago, Aristotle, said, "All who have meditated on the art of governing mankind have been convinced that the fate of empires depends on the education of youth."

And you people, I hope, are worrying about this future. I can tell you that if you ask, from the East Coast, our Governor Lynch, who has been very supportive, to Governor Lingle, who flew 15 hours to come to the kickoff in January, Governor Granholm, who's challenged to have every school in her state participate, and Governor Cacieri, who actually did

it this year--but if you have a state somewhere between our Governor Lynch and Governor Lingle, you probably have teams already, but you need to do more to give this opportunity to everybody. Thanks.

(Applause.)

MS. RANKIN: Hi, I'm Maryanne Rankin from the University of Texas. I really appreciate the opportunity to tell you about our program.

Like Dr. Simons, we feel very strongly that the shortage of qualified, inspiring math and science teachers is the foundational, fundamental cause of America's declining competitiveness.

In 1997, we initiated a highly-successful teacher preparation program for math and science majors at the University of Texas. Prior to the initiation of this program, we had very few math and science majors becoming certified to teach.

It was usually a fallback or last resort choice for those students, and even those that were getting certified, I think, usually did not go on to teach. And this is the case in most research in universities.

With the UTeach Program, we've doubled the number of math majors and increased by six times the number of science majors being certified. Enrollment now is at about 470 students in the program, Steady State, and we have about--the program has been in existence almost ten years now, although it was a pilot in the beginning of those years--we have about . . . we will have about 400 graduates by the end of this year. Ninety-two percent, currently, of our graduates are teaching, and of those that have been out five years or more, 82 percent are still teaching.

This last statistic is, I think, one of the most important because the attrition for new teachers, as you all know I'm sure, is extraordinary, and with UTeach we're training teachers who stay in the classroom at least for this long.

The quality of our UTeach students is very high. They have high SAT scores, high grade point averages, double the retention in our program of normal students in our college, and a high

participation of minority students.

Many of our students have assumed leadership positions in their schools, such as department chairs, directors of curriculum, AP teachers, even as early as their second or third year of teaching.

The Gathering Storm report noted this program as a model program. Earlier, the National Research Council of the U.S. Department of Education also cited it.

We've had a lot of interest from institutions across the country and across Texas who want to create similar programs. California has begun an initiative at the behest of Governor Schwarzenegger based on the UTeach model that will be statewide and the largest of its kind in the nation.

The key elements of the program that are different and that make it special and that we think are responsible for its success include, first of all, the employment of outstanding experienced high school and middle school teachers as instructors,

advisors, and mentors in the program along with regular science and College of Education faculty.

Replacement of the traditional general education courses with new pedagogy courses focused on how you teach math and science, how students learn math and science, how you teach to diverse learners in different educational settings, how you use technology, and also a research experience.

We also aggressively recruit the students. These are math and science majors, now. We recruit them to go into teaching and to try teaching experiences in field-based courses. There are field experiences where the students are actually out teaching every year of the program.

And these draw the students into the program and keep them in it. The program can be completed in four years, with certification, rather than five and a half, as was the case in the past.

Internships for students are also available, and these are paid with private dollars. They get the students into a setting, another kind of teaching setting, and we have scholarships for those

who are good performers.

The other thing we do, which is extremely important, and I think, something that we all need to pay attention to is we support the students, once they are teaching, and this goes along with some of the things that Dr. Simons' program does.

We mentor them with master teachers and we also provide a master's program in the summer so that we keep in touch with them and keep supporting them as teachers in the field for two to five years after they have graduated. We help them get established as successful teachers.

I very firmly believe, along with Dr. Simons and others here today, that to teach science and math well you have to know the discipline. Science and math teachers need to major in the discipline they'll teach.

In the mid-'80s, Texas passed legislation making this mandatory; thus, as Dean of a College of Science at a major university I had the right--the responsibility--to take a hand in teacher preparation.

If we hadn't had that law, I wouldn't have

had an easy path to that, and we wouldn't have UTeach at the University of Texas. Thirty-one states have such a law; 29 do not. I think that's something that needs to be addressed.

UTeach has exploded the myth that high-performing math and science majors in a major research university aren't interested in teaching as a career. They are interested, but we have managed to kill that interest.

They actually are very interested and maybe go on to become the strongest, most successful teachers, but it takes a challenging program in place that captures their interest and keeps it and is relevant to retain them, to attract and retain this kind of student.

So, these kinds of programs need to be put in place. Not everyone who knows math and science, can teach it, and we can't just throw out the pedagogy courses. Courses in pedagogy are important, but they need to be focused and relevant, and they need to address different kinds of learners in different kinds of learning environments.

Scholarships are important, but they're not the whole solution. You have to have good programs in place.

The way to make a difference, I think, in teacher training quickly is not to throw money at many new programs but to identify programs like UTeach that really work, that can be taken to scale, and to replicate those and replicate them faithfully.

We're working with Tom Luce, the former deputy secretary of education, to provide funding to replicate UTeach nationally. A UTeach replication program is also part of the competitiveness legislation that Dr. Simons mentioned.

And I would be happy to work with any of you all who want to explore the possibilities for this kind of replication effort in your states, to do so.

We feel very strongly that this is the path to providing many more highly-trained math and science teachers very quickly.

The other thing I want to emphasize, is the importance of putting in place, strong mentoring

for new teachers. We are training lots of teachers that leave almost immediately, and we need to fix that.

So, that's mentoring and working with school districts to get teachers established in successful environments. Then, of course, improving teacher pay, will have a huge effect.

Thanks for your attention.

(Applause.)

GOVERNOR NAPOLITANO: What we're going to do is take a few quick questions because we are running slightly behind schedule. I'll turn to Frank Luntz, but I think our panelists and Dr. Simons will be around for a few minutes for individual questions from governors, as well. But let's take a few quick questions before we go to Frank Luntz. Tim?

GOVERNOR PAWLENTY: Dr. Schmidt, you addressed this in our breakout group for this morning, but for the benefit of all, could you just quickly comment on the concern that perhaps our comparisons to international students aren't apples-to-apples? I know you have a view on that, and I

think it would be helpful for the governors to hear it.

MR. SCHMIDT: I'd be delighted because this is one of the myths that we've created in America to sort of soften the blow of those comparisons.

All of those studies are done with the strictest of statistical standards, sampling standards, so that in effect all those comparisons are reasonable comparisons. All the nations, in order to be included, had to have sampled their entire population.

This is not about cherry-picking the best and putting them up against our heterogeneous population; it simply isn't true--these are fair comparisons.

GOVERNOR PAWLENTY: Good, thank you.

GOVERNOR NAPOLITANO: Other questions? Yes, Governor Lynch?

GOVERNOR LYNCH: I'd just like to say, that as governors, we're always looking to find practical and pragmatic ways to implement a number of

the initiatives that we discussed, and I think that what Dean Kamen has talked about, really, with Project FIRST, is such a wonderful way, not only to get these kids excited about science and math and technology, but also to teach teamwork and leadership and innovation.

And my question, dean, is what support can you give governors who want to try to expand their programs in high schools throughout their states?

MR. KAMEN: Well, I wish I was smart enough to know what I could ask all of you to do to get you involved. I'll bet that there are many states that have some great FIRST teams, but you don't even know it.

I was talking to the governor of Alabama, who said, well, I don't know what FIRST is, but we have this great program at Huntsville. Well, that's our program.

(Laughter.)

MR. KAMEN: I would say that FIRST is thrilled, if you, as a governor say, hey, I want to

leverage all the engineers in my state by finding an easy way, a fun, exciting sport that will bring them into the schools in a way that isn't threatening to the teachers, because it's extracurricular and it brings the best of the best and leverages it and doesn't cost much and changes kids' attitudes.

If any governor wants to work with FIRST, you tell me that you want to get involved and we'll send somebody there. We've got, as I said, 37 cities this year, holding events.

I'd encourage you to go to our Web site, get to an event. It's astounding, and I would literally beg all of you to come to our nationals. Once again, we're taking over the Georgia Dome for a celebration of science and technology for kids that most of you would think would never get into this stuff.

Dr. Simons, we have nearly 100 teams from New York City, and we're taking over the Javits Center. We outgrew the Columbia Field House last year in our fourth year of New York City regionals. I hope you'll be there next weekend.

Every weekend in March, we have eight or nine cities around the country until we get our 37 finished at the end of March, but if there's a governor in this room that is willing to try to figure out how to bring your business community together and bring your academic community together, we've made it simple and easy. It's fun, it works, and we will work with you to put FIRST in every one your schools.

I think that ought to be a goal. People laughed at that when I said it 15 years ago, that we'd be like the Olympic sports; and now we use an Olympic stadium.

The idea that somehow Americans think all kids should have an opportunity to be on a football team or a basketball team or cheerleading squad as part of growing up, but yet somehow they don't have the right to meet real scientists and engineers and professionals in the 21st century is perverse.

We'll make it as much fun as all the other things they love in our culture. We can help you do it; you've just got to help us.

GOVERNOR NAPOLITANO: Very good, thank you to the panel, very much.

(Applause.)

GOVERNOR NAPOLITANO: Also, I have been to the FIRST competitions in Arizona. They are amazing, and they really open up your eyes to the experiential part of math and science that so often is lacking; so, it's just great.

I'm going to ask Governor Granholm to come forward.

(Pause.)

GOVERNOR GRANHOLM: Thank you, Governor Napolitano. A quick commercial: After hearing about all of this great stuff, you'll want to make sure that you send a message that the other part of life is important, too, which is the part where you get to enjoy pieces of the country that maybe you've never been to.

Well, in the summer, this summer coming up, the 99th NGA Summer Meeting will be in Traverse City, Michigan. If you've never been there to Traverse City, it is a magical place.

We are surrounded in Michigan by the great blue jewels of the Great Lakes. In fact, I often brag about the fact that Michigan has more miles of shoreline than any state in the country except Alaska.

We have more golf courses per capita than any state in the country, and you'll be enjoying the Grand Traverse Resort, which has been designated as one of the top 50 resorts by Conde Nast. This is a fabulous place.

Of course, we'll be working very hard.

(Laughter.)

GOVERNOR GRANHOLM: But when the day is done I know that you will want to enjoy everything that Traverse City has to offer. So you've been bribed a bit with a little bit of bribe-berry, with the cherry pies that you are all eating, but, in fact, we want to make sure that you and your staffs know that this is the tart cherry capital of the world--Michigan is.

And if you--we can't send a pie home with you on a plane, but you can order one through

the great stand that's out in front, and we will send it your office just to give you just a little flavor.

Michigan is also known for its blue-ribbon wines. We have wineries up near the Traverse City region, and you will also--I hope your detail has picked up the gift that is in your room, a small bowl, which is actually made out of sand and copper, sand reflecting the dunes that are on the shores of Lake Michigan, and copper, because Michigan is also copper country for the ore, for the copper mines that are up in the Upper Peninsula.

So, just imagine the end of the day, as you're sitting in an Adirondack chair with the sun on your face as you look out over the Bay and with your toes in the sand, and holding some of Michigan's vintage wine.

(Laughter.)

GOVERNOR GRANHOLM: My husband, Dan, and I look very much forward to welcoming you to Traverse City, Michigan, this summer. Thank you.

(Applause.)

GOVERNOR NAPOLITANO: And you're right; we will be working very hard. Thank you, Jennifer. The concluding speaker today is Frank Luntz. I want to give him time to get into the program so I'm not going to give the full bio. Many of us know and have worked with Frank on a number of communications issues.

And here is why Frank is here: When I first conceived the notion of having innovation as a theme for governors, it's not the easiest thing to get your arms around. It has different parts to it, and it's a phrase that has a different meaning to many.

Then, how do you go out and talk about it with people who don't sit around and talk about public policy ideas or education all the time? We needed to somehow focus and see, well, where are the American people on this, and how do they understand it, and what are the things that move them?

And so the National Governors Association retained Frank to do some polling and some focus groups so that we would be better equipped to talk

about and communicate, and, therefore, motivate people to the sense of urgency that innovation has within it.

So, Frank, I'm going to let you take it away.

(Slides projected.)

MR. LUNTZ: Thank you. The only reason I wore this suit is that I celebrated a birthday 24 hours ago, and my mom didn't believe that I actually owned a suit; so, Mom, you can see that I can dress up.

(Laughter.)

MR. LUNTZ: And I do want to say that as a political person who deals with elections--in fact, I'm going to stand back here, because I've got a lavaliere mike on--as a political person who deals with elections, and I'm standing in front of America's governors here, I now understand how Dr. Kevorkian feels at an AARP Convention.

(Laughter.)

MR. LUNTZ: This initiative, innovation, is essential. You've heard about the process and

they've talked about some of the elements of how to get young people involved.

Governor, your effort was so perfectly timed because the American people right now have a sense of anxiousness--nervousness--about where we're headed, where we're going in the future.

You didn't know this when you got me involved in this, and I didn't even know that I was going to get involved. If you look at the back of *Words That Work*--and there are 21 words for the 21st Century--"Innovation" is number six.

It's one of the most powerful concepts right now. And I will return the book back to you because I don't want to have your security people come hunt me down. I've seen them already.

Vermont people are really nice, but don't mess with their security people.

(Laughter.)

MR. LUNTZ: Innovation is about the future. Innovation is about dreams and imagination, and, Governor Napolitano, what you have done here is that you have transcended ideological politics;

you've transcended partisan politics.

As I'm about to show you, the American people believe that this is so inherent in a successful future for the country, and they are looking as you, as governors, as the persons to lead this.

So if I can just bring it up now, I'm going to walk through some of this data very quickly, and I will invite you . . . I will answer any questions that you have, either during this session or afterward, and I will also thank the five governors when we get to the results, for participating in this.

Some of you are about to see yourselves projected on the big screen, but I can assure you that you all did very well.

(Slides projected.)

MR. LUNTZ: Even with the employment that we have today, even with economic expansion and development, a minority of Americans think that the economy is headed in the right direction.

A majority believe that it's pretty

seriously off on the wrong track. And when we ask this question, to me, this is stunning: Sixty-two percent of the country believes that they're better off today than they were five years ago, and yet only 32 percent, a third of Americans, believe that America itself is better off.

This is one of those cases where the grass is greener in our own yard and it's pretty brown in everybody else's. We are very afraid of the direction of the country, and we are looking towards state leadership, rather than federal, to fix it.

If there's one thing that startled me; it's this slide right here. And I'm going to ask the governors to do something for me, and if the CSPAN cameras can try to catch this.

If you can't, for those of you who are sitting around this table, in fact, for the entire audience, if you'd be willing to do this for me, how many of you, by show of hands, believe that you've got a better quality of life today than your parents did when you were their age? How many of you think your quality of life is better? Raise your hands and

keep them up for one moment, because I want the cameras to be able to pan the room.

(Show of hands.)

MR. LUNTZ: It's virtually everybody, and it is everyone around this table. Now, raise your hands if you truly believe that your children's quality of life will be better than yours when they get to be your age, raise your hands for that.

(Show of hands.)

MR. LUNTZ: Very, very few, including a minority of the people sitting around this table.

That's what innovation is about. That's why the American people responded so favorably when we did this polling--the idea that the next generation can have it better with innovation.

Last question, again, for the governors here. I just want to give one number for you all since I know that you're political in some of the stuff that you do.

The average governor's approval rating right now--this is how I get myself fired and never invited back--the average governor's approval

rating is 62 percent. I'm just curious, how many of you governors have a higher-than-average approval rating; if you could raise your hands.

(Show of hands.)

(Laughter.)

MR. LUNTZ: I applaud you for your honesty.

(Laughter.)

MR. LUNTZ: So, let's take a look at the building blocks of innovation. When you ask people what matters or how they differentiate and how they interpret innovation, number one are computers and laptops.

And it's not just the big computer that they have at home; it's the ability to take a computer with them on the plane; it's the ability to be mobile wherever you go, computerization, followed by the Internet--and we'll going to talk about broadband in a moment.

When you ask them what type of innovation they think of first, it's technology more than anything else. And as the CEO of CISCO said,

technology itself isn't innovation, but it makes innovation possible.

When people . . . when the American people think of technology and they think of science and they think of all the opportunities that are in front of them, it changes their outlook; it makes them more positive.

And if you don't give them a positive way to look at the future, then they tend to do things that are very negative. They tend not to invest; they tend not to experiment; they tend not to attempt to grow, and so this is about restoring faith and confidence in the future.

Where do they want innovation more than anything else? This blew me away. We didn't expect healthcare to come up as even with education, but education and healthcare are the two focal points of innovation, and I would add one more, a third one, which is public safety, because, in the end, that's about security.

Education is about the future, healthcare is about the present, and public security, public

safety, is about all the time; it's about now and in the future.

Okay, now, I'm going to start to challenge you all. The number one solution in terms of the economy, for Republicans, at least what's going on here in Washington, which is not necessarily what goes on in America, is about giving tax incentives to small businesses.

The number one solution for the Democrats in the economy, is about raising the minimum wage. Look at the data: More than tax relief, more than minimum wage, encouraging and supporting innovation in our schools and businesses, is what the American people believe will best bring about a positive change in the economy.

They see this as the solution. When we ask them to evaluate how well the political and business leaders have done in terms of promoting innovation, it's pretty close among . . . when they evaluate the politicians.

About half think they've done well and half think that they haven't done well. Business

leaders score better.

But if you look at that bottom set of numbers, in terms of education, that's where innovation has not been succeeding. And this is the good news for you all: So many governors have decided, starting with Arizona, to take the school system and challenge the way that things have been done up until now.

The public is anxious for it; they are welcoming it, and innovation transcends all the ideological battles that so often take place when you all try to take on the education establishment.

Innovation, in essence, is a protection, because the public believes that, with innovation, their kids will get the skills they need, the knowledge they need, and the experiences they need to succeed in the 21st century.

This is not about us versus them. So often when we talk about innovation, it's us versus the Chinese or it's Utah versus Alaska, versus Rhode Island, versus Connecticut. That's not how the public views innovation.

They see innovation as everybody wins, from the youngest in society to the oldest. If there's one statistic in the polling that we did that should frighten you all, it's this one right here: Less than one-third of Americans believe that we have the most innovative economy right now. That means that two-thirds do not.

They see us as being the most powerful, dominating China and Japan, but in terms of innovation, we're barely ahead of the Chinese and Japanese, and when they're looking ahead 20 years from now, only a third believe that we will be the most innovative.

And I will tell you one thing: The public absolutely connects our ability to innovate with our ability to grow as an economy and to grow as a society.

This it not in our politics here, but there is a political component. With innovation, the public will trust you when it comes to education, the workplace, the economy, healthcare. With so many of these issues, if you frame it in terms of innovation,

they will have faith in the other things that you do, because they will believe that you are focused on the future, not just on the present.

The number one reason why the public doesn't think that we're the most innovative is because they see other countries more committed to education, more committed to schools and their youth. This was an open-ended question and one out of five chose that--well above anything else.

The linkage between education, innovation, and our expectations about the future cannot be broken; it is so deep; it is so powerful. Just ask any mother or father what they think about their children.

If they believe that their kids are getting an innovative education, they will be favorable, they will be optimistic about the future. If they don't see innovation in the schools, they will not.

And in terms of why we won't have the most powerful economy; then, again, innovation is even a bigger number.

So now let's talk about language and building a better tomorrow today. This is about building; this is about creating.

Imagine and inspire. Governor, you--and you're going to see it in a moment, because I think we've used this clip of you--but you talk about imagining the future so often in your presentations. That's exactly what the public does every single day.

The words "imagine" and "inspire" capture what we hope for, and it's very positive, very futuristic. If you ask them, which is a higher priority to them, it's the education system more than the economy, by two and a half to one for the reasons I've expressed because the economy is still about today and education is about tomorrow.

In terms of the priorities, the three pillars that the NGA has set forth for this year, improving science and math in the K-12 level, beats supporting business and beats universities; but, by the way, even the university comes ahead of business.

Let's not lose sight. We always talk

about K-12, but let's not lose sight of the role that innovation has in our colleges and universities because the public hasn't lost sight of it.

Here are two numbers that ought to frighten you: On the left-hand side of that pie, whether the nation's schools have gotten better or worse over the last ten years, by two to one, it's worse today than it was 10 years ago.

Even when you ask them about their own community schools, it's split 50/50, better/worse.

Now, think about it. If you're a parent and you say that your own schools are worse now than they were 10 years ago, what does that say about your confidence in the future in terms of the education that your own kids are receiving?

And if there are two numbers--and you will notice that I have not done the statistics here, because, in the end, communicating innovation is not about statistics; it's about something much broader. It's imagination.

These are the two statistics. If you want to change education, the two numbers that you all

need to know--and I apologize that you guys are looking at my better half or my better side, but I just realized that, that you all sit here and you look at everybody's backsides. Why are you sitting here? Why don't you move?

These are the two statistics that matter the most: The fact that 70 percent--and you're still sitting there.

(Laughter.)

MR. LUNTZ: I won't ask--well, if you work for governors, then maybe you're used to seeing this side of people, you know; who knows.

(Laughter.)

MR. LUNTZ: Seventy percent of all 8th-graders are not proficient in reading. That freaks people out, because they know the consequences of that.

And the other one is the fact that there's a student dropping out every 29 seconds. We are talking about universities that we want all of our kids to graduate from college. What about the fact that there are 1.1 million of our children that are

not graduating from high school? That's why this innovation component is so important.

I need to spend one moment on broadband because the public sees broadband as being essential to the 21st century of opportunity, of being connected, of the child that has the opportunity to get to any library across the globe, to see any country across the globe.

Broadband is at the core of what we dream about the future, because it enables people to, and I quote, "Get connected, not just to the world, but to the future."

So, any broadband initiative that you're going to be supporting in your states is going to make a difference, and I don't have to mention to you, broadband and the role of that in terms of delivering public safety, as well, the idea of being able to communicate information in a nanosecond.

Also important--and I know that some of you are from the heartland. I've learned that that's the phrase that I'm supposed to call it. Even I use words that work.

By two to one, the public says it's not trade legislation or trade restrictions that will make a difference in terms of improving the economy; it's encouraging more innovation and education, manufacturing, and technology. That's two to one.

And, by the way, Republicans and Democrats agree that innovation is more powerful than trade when it comes to fixing the challenges that we face economically.

And when you define the benefit, when you talk about what innovation really means, 300 million Americans appreciate it. There's not a single person in your state that will not get connected with innovation.

Check out these numbers: You guys know that you can't get 90 percent of Americans to agree on anything at any time. But 99 percent say that if we fail to innovate as a country, our economy will be left behind, and 88 percent say that our kids will be left behind.

The only challenge I have to the governors is that I hope that every one of your

colleagues here are engaged in this process, because the public is asking you to be engaged in this process and they think that you guys are the ones to lead.

If you take a look at the results: one-third of Americans think the federal government should play the major role in innovation; two-thirds think it should be a state role. This is absolutely something that they don't see coming from Washington; they see it coming from Harrisburg; they see it coming from Phoenix.

And when we ask them whether the governor --we compared this, the governor, the business leaders--they see that this is a state issue, by better than 2:1, and the governor, even more than your local business leaders, are the ones.

They look to you. If this room here represents the American people, they would be asking you today, tonight, as you gather in the White House, think of what you're going to do to instill a sense, an ethic of innovation in everything that you do.

And this is the only slide I'm going to

read to you. If I told you that this was a state-by-state effort conducted on a national scale, and that it will require some additional government funding to schools, colleges, and businesses, to promote long-term innovation, "require additional government funding," I put that in there to knock down the support.

Everyone knows that additional funding is more taxes, but 85 percent of Bush people said, yes, let's do it; 94 percent of Kerry voters said yes, let's do it. You name me another issue in America today that transcends partisan politics like this one--we are so divided into red states and blue states, we can barely . . .

I'm surprised that this side of the room isn't shooting paper clips at that side of the room.

(Laughter.)

MR. LUNTZ: Except that there are 10 times as many people on this side of the room, and you all would get hurt.

(Laughter.)

MR. LUNTZ: This is the one issue where no

one is shooting at anyone. They're all asking for your help.

So what I'd like to do now--and this is focused on the future--if I can roll for you, if you guys can queue it up, I want to show you instant response.

These are dials. You may have seen this on *The West Wing*. I actually got to write one episode of *The West Wing*, and it was this technology. And people--these were swing voters. They're holding these dials in their hands. They're about the size of a remote control, and they turn it up, if it's what they want; they turn it down if it's what they don't want.

We had a number of your colleagues, including some in this room right now, who agreed to participate in this effort. The higher that you see the dials go, the more the people want it. If it crosses a 70, it means it's a home run.

You're going to see some of your colleagues cross an 80, because they want it so badly.

Last point: The red line represents Republicans; the green line represents Democrats, and let's roll that tape, please, and, on occasion, I will tell you to stop for one moment.

(Videotape shown.)

MR. LUNTZ: If we may pause for a moment, that power of innovation as the solution, stands out, because it's the one thing that the public sees. Everybody is invested in it and everybody benefits. That word, "everybody" and "all," is so powerful in this communication.

Whether you've got the challenges that Pennsylvania faces or the opportunities that Utah faces, let me show you another example. This involves education. It's Governor Huntsman, then some other language on education innovation. Let's roll it.

(Videotape shown.)

MR. LUNTZ: Pause it, please. A love for learning, a passion for learning, could you imagine how great it would be in this country if kids were actually passionate about going to school, passionate

about what they were learning, passionate to challenge themselves?

That phrase, "the passion for learning": we had moms--and I know you're married and you've got all that kind of stuff, but we have moms who wanted to marry you at that point.

(Laughter.)

MR. LUNTZ: They were looking for someone who actually wanted to instill a sense of passion in their children. That's what's powerful.

Let me show you this next segment. It's also effective communication when it comes to innovation and education. Let's roll it.

(Videotape shown.)

MR. LUNTZ: Look at those lines. I was just saying, look at those lines. Keep it rolling.

(Laughter.)

(Videotape shown.)

MR. LUNTZ: That's a governor who knows how to communicate. Of course, that's not actually a governor; that's my staffer sitting over there somewhere.

(Laughter.)

MR. LUNTZ: Some day, you know, when this is done and they all leave, you can have a seat at this table; you can sit in Governor Barbour's seat and he'll never notice.

It's not just about education; it's also about the economy. And I want you to hear some very powerful words from Governor Pawlenty, and when it comes to the economy of opportunity, that's what they're looking for. Let's roll it, please.

(Videotape shown.)

MR. LUNTZ: Write it down: Our advantage means that we're number one. Innovation, invention, creativity, automation, productivity, these are powerful words that transcend the red line and the green line. Never do politicians speak where both Republicans and Democrats agree; it doesn't happen anymore.

We can't even go out for dinner, because usually, between the appetizer and the main course, food ends up on everyone. We haven't learned to cooperate on innovation. There is no differentiation

between Republicans and Democrats and between the 21-year old and the 81-year old, because everyone defines innovation their own way.

Governor Napolitano, when you communicate right here, the consequences of failure, this is perfect language. Let's take a look.

(Videotape shown.)

MR. LUNTZ: If we don't innovate, we're going to die. Is there something you want to tell us?

GOVERNOR PAWLENTY: I've talked enough about that.

MR. LUNTZ: You are much too young. What this is about . . . this is about the future. Governor Sebelius, when you talk about your children, you personalize innovation in a way that people can feel it, and they understand it.

By the way, we conducted these interviews, using innovative technologies, so that I wasn't in the room with her when I was asking her questions. She was holding up--you'll see in a moment--the language is perfection, because it is personal, it is

human, and, most importantly, it is aspirational.

For those of you . . . I see a few people taking notes. The power of innovation is that it helps people. It allows them to inspire and aspire to things that are greater. Let's roll this section.

(Videotape shown.)

MR. LUNTZ: Constant improvement is what innovation is all about. I have two more segments for you. One is on the need to be specific. Innovation cannot be a generic concept; you've got to tell them what you mean when you're communicating innovation. Let's roll this clip.

(Videotape shown.)

MR. LUNTZ: By the way, that is every parent's dream and every child's nightmare.

(Laughter.)

MR. LUNTZ: If you want to turn off young people to innovation, just tell them that their parents are going to be able to track them wherever they can go. But here's the good news about innovation:

My Blackberry has not worked a single

moment in this hotel.

(Laughter.)

MR. LUNTZ: Obviously, innovation has passed and left the GW Marriott behind--and now watch the microphones fail.

One last clip, and this is a challenge to every governor here about why the public elected you and what they expect from you. Let's hear from Governor Rendell.

(Videotape shown.)

MR. LUNTZ: Off the charts, that's what the American people are asking of you.

(Slide projected.)

MR. LUNTZ: Don't just lead them today; make a difference for them tomorrow. This Innovation America Initiative is the right strategy at the right time for a country that is prepared and eager to enter the 21st century in an aggressive and successful way.

Governors, please, they support you, they back you, they will encourage you. Take the lead and I promise you, the American people will follow. This

has been an honor. Thank you very much.

(Applause.)

GOVERNOR NAPOLITANO: I know that we have run a bit over, but let me ask if there are any quick questions for Frank. I know he will be around, as well, to talk with us all.

(No response.)

GOVERNOR NAPOLITANO: It's amazing to get those kinds of numbers. The revenue question is very significant and to be shared, I suspect. Thank you very much, thank you all for today.

We will break. I believe there is an NGA reception, and then, of course, the dinner at the White House. Thanks to all. Go forth and innovate.

(Whereupon, at 4:50 p.m., the plenary session was adjourned.)

NATIONAL GOVERNORS ASSOCIATION

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WINTER MEETING

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PLENARY SESSION

J.W. Marriott Hotel

1331 Pennsylvania Avenue, NW

Grand Ballroom

Washington, D.C.

Tuesday, February 27, 2007

10:15 a.m.

The meeting commenced, pursuant to notice, at J.W. Marriott Hotel, Grand Ballroom, on Tuesday, February 27, 2007, in Washington, D.C., at 10:15 a.m., Governor Janet Napolitano, chairman, presiding.

P R O C E E D I N G S

GOVERNOR NAPOLITANO: Let me call us to order, please. Thank you all very much.

Welcome to the closing session of the 2007 NGA Winter Meeting. For the past several days we have focused on the theme "Innovation America." I want to thank the governors, their guests, and all of the many speakers and experts and others who have provided their insights to us for ways in which we can strengthen the capacity of the states to compete in an increasingly global economy.

I also, before we get into the substance of this morning's agenda, want to personally thank the National Governors Association Executive Director Ray Scheppach and all of the NGA staff for all of the work they do. Sometimes it is easy to overlook the vast quantity of work that is done behind the scenes in advance of these meetings, particularly when you have 50-some odd governors, many of whom are brand new, and make sure that everybody has what they need and is properly prepared and ready to go once they hit Washington, D.C.

As the chair, I know the other governors join me in wanting to thank the staff for the superb work they do.

Today we are joined by a distinguished United States senator and a member of Congress who will speak to us about the federal role and the upcoming federal activity in the issue of innovation. Both are leaders on this topic in the Congress. We appreciate them taking time to come join us here this morning.

On Saturday the executive committee of the National Governors Association voted to endorse a package of federal proposals to focus on the role of governors and states in crafting meaningful and transformational reform to make us more competitive internationally. The governors' concepts have three parts:

One, enhancing and aligning educational resources and promoting STEM education--science, technology, engineering and math--in our schools.

Second, modernizing workforce programs to better serve the needs of business.

Third, promoting innovation and job growth through regional public-private partnerships.

It is our hope that by engaging in this federal discussion our Congressional partners will work with us in developing legislation that indeed transforms the way governors and states address the needs of our 21st-century economy. It's about transforming the very way we educate our children, the very way we link in higher education, and the very way that we do business, with the goal of maintaining our role as a global leader in innovation.

To that end, let me first begin. I think what we will do is hear from each of our federal colleagues, then take whatever questions there are. Our first speaker is Representative Bart Gordon, dean of the Tennessee Congressional delegation, chairman of the House Committee on Science and Technology.

Congressman Gordon has been a national leader in efforts to foster United States economic competitiveness. He introduced the first legislation in the House to implement key recommendations for

scientific research and education from the National Academy of Sciences Report, rising above the gathering storm. He has worked to improve the education of science and math teachers and to attract more science and math majors to the teaching profession.

Chairman Gordon, thank you so much for joining us today.

MR. GORDON: Thank you, governor, for your kind introduction; also for your hospitality when I was in Arizona three years ago. I'm glad to see my former colleague Ernie Fletcher here. Looking at the roster of governors, it's almost like an alumni association. So I'm glad. And I admire your promotion.

I don't see Bill Richardson here today, but I saw him on TV the other day. I noticed he got a haircut. So that means he must be running for something.

(Laughter.)

MR. GORDON: I hope you will all give Bill my best.

Just a few weeks ago I was at Governor Bredesen's inauguration with Senator Lamar Alexander. And I sat next to our new senator from Tennessee, Bob Corker. I was talking to Bob. I said, "You know, Lamar has been governor, has been senator, he's been secretary of education, he's been president of the University of Tennessee. Have you ever asked him what he liked the best."

Without hesitation Bob said, "It was being governor."

I understand that. It's really a place that you can get something done. Fortunately, you're the percolator of good ideas. We hope that you will keep that percolation going, and your successors will embarrass us to do some hopefully good things on the federal level.

Governor, when you said--when you mentioned that I was the dean of the Congressional delegation, I can't help but relate--this is an absolute true story. Lamar and I are not only friends but have been working together on these competitiveness issues and some other things for a while. I was over at his office a while ago, and he

introduced me. He said, “This is Bart Gordon, he's the dean of our Congressional delegation.” He quickly added, “Dean doesn't mean he's the smartest but has just been here the longest.”

(Laughter.)

MR. GORDON: I am smart enough to know that my soon-to-be six-year-old daughter could very well be a part of the first generation of Americans to inherit a national standard of living less than their parents, a complete reversal of our American dream. I don't say that for hyperbole. I really do have that fear.

That was part of the reason that Lamar and Jeff Bingaman joined in, I guess it was about two and a half years ago, and asked the National Academies to do a report on the competitiveness of America in the 21st century. They brought together a very stellar group of individuals. It was chaired by Norm Augustine, former chairman and CEO of Lockheed, Martin-Marietta, Craig Barrett from Intel, and a variety of other academic and professional business folks that came together. They produced a document

called *Rising Above the Gathering Storm*.

There's a Web site for you to pull this up. I have given this to your press folks. And this is an executive summary. Even members of Congress can get through this, so I know you can too. I think it's very illustrative of what we need to do. The bottom line of the report came back and said that America is in a real race for competitiveness in the 21st century and that we're on a losing track. And then they made some recommendations.

The major recommendations were that we're going to have to boost our math and science skills and we're going to have to do a better job of developing renewable energy. This was before the price of oil spiked. And so as you look into really the recommendations--and I know you have talked a lot about the STEM education in math and science so I'm not going to go into that to a great extent, but maybe give you a little better idea of what you might expect on the federal level.

The purpose of this is not a matter of let's spend more money on science and math and be

good in science and math. If the purpose really is if we're going to be competitive in the 21st century, our students have got to be able to enter into a workforce in a much more competitive way.

Right now there are almost seven billion people in the world; half of those make less than two dollars a day. We certainly don't want to try to compete in that way. So what we've got to do in America is: My daughter has got to be able to make 50 widgets by the time someone somewhere else can make one widget. Not only that, we've got to make the widget-makers and invent the widget-makers.

When you look at the problem day after day you see these really depressing statistics. Just last week there was a report that came out that 40 percent of America's high school seniors can't pass a proficiency test in math. I saw something the other day where only Cypress and South Africa among the industrialized countries had lower math skills than we do.

What's more depressing is the longer our kids stay in school, the worse they do. And so you

wonder, okay, how did this happen and what do we need to do? They looked at smaller classroom sizes. Yes, that would probably be beneficial. Would more equipment? Yes, that would probably be beneficial.

But the real problem is that 52 percent of the teachers in this country--and I would say and probably in any one of your states--of math have neither a certification nor major to teach math. Ninety-two percent of the physical science teachers have neither a major or certification to teach that course. They may be good teachers, but it's hard to teach and inspire if you're not really full integrated into the subject.

And we have noted scientists come before us all the time. And I frequently ask them what was the key to them getting involved. And almost inevitably most of the time it will be a teacher; sometimes it will be an incident like Sputnik or whatever. But that's so much the case.

I think my father is a good example. My father was a farmer. He went off to World War II. And when he came back he went to TSU on the GI Bill

and got a degree in agriculture. That's what he wanted to do: He wanted to farm. My mother worked in a cafeteria. And then I came along. She wasn't able to keep her job so my father had to get an additional job. So he applied for a teaching job and he was the last person hired at Severna High School. Since he was the last person hired, yep, you probably guessed it: he was assigned to teach high school science and coach girls' basketball. I'm not sure which one he knew the least about.

So it really wasn't fair to him or to his students. And I think that's typical of a lot of good, well intended teachers that are put in a difficult situation. We've got to do something about that.

What I did is I didn't want to have a Democratic bill or a Republican bill; I wanted to try to get something done. And so I took the recommendations really precisely out of this *Rising Above the Gathering Storm* and put them in legislation. Lamar and the folks in the Senate have done something similar. I'm just going to give you a

general idea of what I'm talking about because this won't be the final product. But you'll know generally the direction that we're going.

First of all, what I'm recommending is that we provide scholarships, competitive scholarships for 10,000 students each year that will go into math, science and education and agree to teach for five years. That's important. That needs to be a part of what you do because half of our teachers retire or stop teaching before five years. It's important that we get them over that hump with mentoring, and hopefully also with this financial incentive.

At least in our bill we'll also be providing financial incentives for the states and the universities within the states to help develop these curricula that integrate both the science and math and the education. But that will help the intermediate or the more long run.

But what we need to do sooner--while we have a lot of good teachers like my father out there that need to come back to the school in the summer to

get their certification, to hopefully get their ability to teach AP courses, get their masters--we want to provide stipends for 250,000 of those teachers to come back each summer and be able to get those elevated classes.

I know that many states have already gotten involved with the math and science special academies. I know Mike Ross, who is a member of Congress from Arkansas, when Governor Clinton at that time proposed this math and science idea he thought it was great. So he was the lead sponsor. I talked with Mike just the other day. His daughter got accepted. So now that his daughter has left home as a junior to go to this school he's not quite as excited about it.

(Laughter.)

MR. GORDON: But he said his daughter thinks it's the best experience she's ever had. And I hope you all will give that some consideration. Certainly we want to be a part and try and provide some incentives in that regard.

Again, there will be hopefully some

financial incentives for the best and brightest--
5,000 scholarships a year for really our best and
brightest who want to go into pure math and science.
Most of what we're trying to do is just get our work
force up. But we certainly again, besides operate
the widget makers, we also want to be inventing those
widget makers.

This gives you a flavor of the type of
things we want to try to do. And I understand you
put a paper together too. So we want to see what
you're doing.

The other thing--and I'll quickly let
you know about that--the other recommendation was
energy dependency. We have to be able to do a better
job of developing energy independence and renewable,
clean energy sources. They made a recommendation,
which is more of a federal recommendation, but I want
you to know because there may be a role for you.

I think most of us are familiar with
something called DARPA, which is an advanced research
agency within the Department of Defense. That's
where the Internet was developed. That's where

stealth technology was developed. It's really an area where they try to take away the red tape and allow them to really go into cutting edge research, knowing that most of the things won't be successful but when they hit, they hit big.

What we're going to try to do is do something within the Department of Energy similarly, an ARPAE, where we're try a peer review and take the seven or eight best, most likely cutting edge alternative renewable energy ideas, and just crash on them: public sector, private sector, our national labs, our universities. I would suspect you're going to have resources in all of your states that might be a part of this, and you should be watching to plug in because this needs to be really a national effort.

If we hit with a couple of these--and I'm sure we will--then not only will that help us with energy independence, but it will also again provide additional new high technology jobs that we're going to need for those folks you're going to educate to be able to take, and there will be exports for us also to use.

I don't want to talk too long, but I'll give you one more sort of a pet bill that I'm doing in Congress that I think might be beneficial for you on the state level.

When we start looking at energy independence, it's really going to take new technologies to do that. It's going to take some time to get those developed and implemented. In the interim to sort of slow things down really conservation is our best way to do.

And on the federal level, obviously the federal government is the biggest user of energy in the nation. And I suspect that the state government is the largest user of energy within your individual states. So we can be models, and we really can have an impact.

But I suspect you've got the same problem at the state level we have at the federal level: If you go to an agency and say, “Use more efficient light bulbs or insulation,” or whatever it might be, they'll tell you, “Well, our budget is so tight that we can't really afford to do anything else.” I think

there's a couple of things you need to do.

Certainly . . . and I'm trying to put on every bill that goes through Congress that any time a new building is built or any time there is a renovation what they have to--not do but--look at are the various energy conservation ways to do that.

The other thing is I want to try to set up a revolving fund so if the Department of Education says, “Well, you know, we don't have enough money to do any kind of renovations or new light bulbs or whatever because we're trying to pay for these education programs,” we can have a revolving fund that will let them make a proposal. Then from that proposal it's fairly easy to determine what kind of energy savings will be.

What you'll find is with bulk conservation it's going to pay off in three, four, five years, maybe more. Then they ought to be able to amortize some of their electric bills, gas bills, whatever it might be, their savings to pay back and have that revolving fund. It's just one way, but again, I think that as a nation and as states we've got to be

leaders in this.

I saw just yesterday where the post office made an experiment. They were using electric cars to deliver the mail, and they found that although they were more expensive to buy that they were less expensive to operate and to maintain, and so they were quickly paid off.

I think we should--again, you all have big fleets. There's a lot of ways to think about that. I suspect that with the good ideas percolating up from the states you will be able to help us in a lot of ways.

With that, let me just say thank you for inviting me to be here. I look forward to being a partner with you.

And now I will yield to the introduction of the elder statesman from Tennessee, Lamar Alexander.

(Applause.)

GOVERNOR NAPOLITANO: Thank you, Mr. Chair.

Let me now turn to the introduction of the

elder statesman.

Senator Lamar Alexander of Tennessee is no stranger to this organization, and indeed to this issue. As chairman of the NGA from 1985 to 1986 his initiative, “Time for Results,” focused on education reform.

Senator Alexander is the only Tennesseean ever to be popularly elected both governor and United States senator. He also served our nation as the United States Secretary of Education. While [he was] governor, Tennessee became the first state to pay teachers more for teaching well, and he started Tennessee's Governor's School for Outstanding Students.

Senator Alexander currently serves as the third-ranking Republican on the Health Education, Labor and Pensions Committee and serves on the Senate Appropriations Committee, the Environment and Public Works Committee, and the Senate Rules Committee.

Please join me in welcoming our former colleague and friend, Senator Lamar Alexander, back to the NGA.

(Applause.)

SENATOR ALEXANDER: Thank you, governor.

Bart, ladies and gentlemen, it's a privilege to be here. It was former governor and former United States Senator John Ashcroft of Missouri who said that a senator who would say he preferred being senator to governor is a senator who would lie about other things.

(Laughter.)

SENATOR ALEXANDER: I feel very privileged to be a United States senator. I hope I'm doing some good. But there's nothing that quite compares with the privilege of being governor of your home state. Bart's done a terrific job, not just of leading in the House of Representatives on this issue but in outlining the bills that are before you. So let me come at it from a different way. Let me tell you three short stories.

Alex Haley told me one time that if I announce that I'm about to tell a story someone might listen, rather than if I say I'm about to make a speech. So here are three short stories. Here's

what the stories are about:

One, about the Washington forces that have their feet on the neck of states that are trying to help our country deal with competitiveness and what you can do about it.

Number two, how the report *Rising Above the Gathering Storm* actually started--how it got started and how you can do the same thing in your own state.

Number three, the saga of what has happened in the last 25 years concerning the most important obstacle to helping our country be more competitive and what you can do about that in your home state.

Let me start with the Washington forces that are on your neck. These are called unfunded mandates. And nothing made me madder when I was governor than to have some congressman come up with a big idea, put it into law, hold a press conference, take credit for it, and send me the bill. And then that congressman, when I was governor, that congressman would usually be home at the Lincoln Day

dinner or the Jackson Day dinner in the next month making a big speech about local control. Happens all the time up here.

And I'm sorry to say that we Republicans who got elected in 1994 promising never to do that are just as bad as the Democrats, and sometimes worse. Let me give you an example of how this affects competitiveness.

Here's a chart--and I left one for each of you. But it shows this in summary about the effect of one Washington set of mandates on your ability to fund higher education. Since 2000 state spending on Medicaid, which I'm sure all of you struggle with, is up 57 percent over about a five-year period. That was done last year. State spending on higher education during the same period, up 10 percent.

In other words, state spending on Medicaid was up five times as much as state spending on higher education. *Rising Above the Gathering Storm* says that higher education is the second most important area that needs priority in our country if we want to

be competitive; the first is K through 12. Tuition at four-year public universities was up 52 percent, five times as much as state funding for higher ed. Total federal funding for post-secondary education was up 81 percent.

The bottom line is what's been going on and what the governors have grappled with in the early '90s and what I grappled with, too, in the '80s, was Medicaid costs are up. It made it harder to find enough money for colleges and universities. That meant tuition costs went up. But federal spending, contrary to some belief, continued to do up at a pretty rapid rate.

When I left the governor's office of Tennessee 20 years ago, 51 cents out of every state tax dollar went for education. I'd worked for eight years and got it from 50 cents to 51 cents. Sixteen cents went for health services in the state government. Today for Governor Bredesen, 40 cents instead of 51 goes to education, and 26 instead of 16 goes to health services. That's the result of federal requirements concerning Medicaid.

That's not the only such program. We all know about the program for children with disabilities from the 1970s. That's a continuing struggle for states and for communities. But then there are some others, too, and they just keep popping up. The Internet tax debate two years ago basically was having Congress tell you you couldn't put a sales tax on telephone calls made over the Internet. Maybe you want to do that or maybe you don't. But my feeling was that that was your decision.

And it is an unfunded mandate to tell you instead of having a sales tax you ought to have, for example, an income tax, or instead of having a sales tax on telephone calls you ought to have a sales tax on food. That's an unfunded mandate.

There are a combination of statutes with federal court consent decrees. That sounds very dull until you get to about the third or fourth year of your governorship and you find out that you've got federal courts running six of your departments and you can't get it undone by the time you get out of office. It adds to costs because it's a relationship

of consent decrees and federal statutes. Senator Prior and I have a bill to try to change that.

More recently real ID. This was a law that could only have been passed by congressmen who had never been to a drivers license examining office.

(Laughter.)

SENATOR ALEXANDER: And which would turn all of the drivers license examiners in all fifty states into CIA agents trying to identify who is legally here and who is a terrorist. It's a preposterous proposal. The only reason it is law is because it was stuffed into an Iraq appropriations bill which the Senate had to accept. It will cost the states up to $11 billion over the next five years.

But that's not the worst part about it. It's not the right way to deal with identity theft. That should have been done in the proper way. Senator Collins--well, I'll talk about that; there is a whole series of examples.

What can you do about these? One, I'd shoot the enemy that's closest to you, starting with

the real ID. Senator Collins of Maine has a bill that would put it off for a year while we can fix it and figure it out.

Internet tax, those are some real dollars. The original proposal would have cost Tennessee three or four hundred million dollars in sales taxes each year. I told Haley Barbour in Mississippi it was two hundred million; finally got his attention on it. I called some governors and they thought they were doing me a favor. I was trying to do you a favor because it was going to take away your tax base.

The consent decree legislation needs your support. My final suggestion would be on that: just do it yourself. I got active in consent decrees because Governor Bredesen called me himself. That makes a difference.

Second, how *Rising Above the Gathering Storm* got started. That story is pretty simple. In China, President Hu assembled the National Academy of Sciences in the Great Hall of the People last July and he told them that over the next 10 years they will put four percent of GDP in China into

innovation. They will recruit Chinese professors from American universities. They will improve teaching in math and science. And they went about it in China, and they're very serious about it.

Here Senator Bingeman and I, Bart and others, just walked down the street to our National Academy of Sciences and said, “Please tell us exactly what to do to keep our brainpower advantage in priority order. Give us 10 things.” They gave us 20.

We've been working for two years and I hope within the next couple of years Senator Reid, the Democratic leader, and Senator McConnell, the Republican leader, will introduce in the Senate America Competes legislation that will include most of this.

My suggestion to you is that you scour for things that you can do in your state. Bart mentioned several of them. The summer programs for teachers of math and science, the scholarships for teachers such as the UTeach program in Texas, where they're in the chemistry department and you recruit them to be

chemistry teachers and you pay them for five years after they teach. The summer Residential Academy for Math and Science scholarships and graduate fellowships. They're all there.

The price tag is 10 billion a year, but that seems to me pretty cheap when we're spending two billion a week on Iraq. We spent 70 billion last year on hurricanes. We spent 350 billion on debt. And if we don't invest in science and technology for job growth, we will not have enough money to pay all of our bills.

What else can you do? I can give you one example. I was in East Tennessee last week and Eastman Chemical Company announced that it is going to spend a million dollars in partnership with East Tennessee State University to have two-week summer programs for existing math and science teachers of the kind Bart mentioned so they can improve their skills in teaching math. It's low cost, big impact; exactly what the report said needed to be done.

The private sector is eager to help.

Finally, I think if I were governor today

I would walk down to some version of the National Academy of Sciences in Tennessee and say, “This is what they said about the country. Tell us the 10 things we need to do about our state, and I'll hand it to the legislature and we'll try to do the same thing.”

Finally, the third story: What would you suppose is the single biggest obstacle to American competitiveness? Well, I've got my candidate for that.

In 1983 as I was beginning my second term as governor, I looked around and asked this question: How many states are paying teachers more for teaching well? The answer to that question in 1983 was not one state was paying one teacher one penny more for being a good teacher. You could make more money by staying around a long time; you could make more money by going back to school, but not for being good.

The women especially whom we relied upon to be our teachers were getting very attractive offers other places and they were leaving. So were many other talented people because the salary

schedule was like this.

You read in the paper that teachers leave after five years. One reason is the salary schedule is like this. It seemed to me to be obvious to change it. Well, it's harder to do than one might think. Many of you have tried. But if you look around and ask that question today: how many teachers in your state are being paid more for teaching well the answer would be not very many at all. Why is that? Because it's not easy to do to find a fair way to do it.

Another way to do it, there's a secret alarm that goes off at the National Education Association every time anybody tries this. And they send more troops in to stomp this out than Bush is sending into Baghdad. There's something visceral about this with the NEA. It was true 25 years ago; it's true today. It makes it difficult for a single state--and particularly a single school district-- to do something about it. But I think about it this way:

I've seen all these education plans. I've

been to all these meetings. Education in my opinion boils down to the parent and the teacher and principal, and everything else is about five percent. We'll have a hard time with a better parents' bill. I've never figured one out. So we need to work with teachers.

And why not find a fair way to reward outstanding teaching? Jim Hunt worked on it a long time. Others have tried. The only way I know to do it is for every single governor to try over the next four years to try to have at least one successful effort to find a fair way to reward outstanding teaching, to teach men and women to keep them in the classroom.

Those are my stories. And in summary, one, call your senator. Read him or her the tenth amendment and stop the unfunded mandates. That will help competitiveness.

Number two, have your own *Rising Above the Gathering Storm* report in your own state. That will help competitiveness.

Number three, go to work in your state to

try to find one fair way to pay outstanding teachers and principals more for being good teachers and principals. That may be the single most important thing you could do to support our effort to encourage competitiveness.

Thank you.

(Applause.)

GOVERNOR NAPOLITANO: Thank you, Senator.

At one of our sessions yesterday I was looking at the chart. One of our colleagues, Brad Schweitzer of Montana, said, "You know, governors have three central functions: We educate, we medicate, and we incarcerate." I'd like to say we also innovate. That is the purpose of our initiative.

But to the extent that the costs of Medicare or whatever go up, our ability to invest in education has concurrently gone down. Your chart illustrates that quite well.

Let me open up the floor to questions or thoughts from any of the members.

Governor Heineman.

GOVERNOR HEINEMAN: I'll direct this to Senator Alexander. But, congressman, feel free to comment.

We talk a lot about innovation. But one of the things we need to innovate in this country it seems to me is the educational governance structure, particularly as it relates to K through 12. I say this as someone who tried to reward good teachers by making my wife--who is a former teacher in elementary school and principal--the first lady of Nebraska by winning an election.

But the fact of the matter is we believe --quote--in "local control." And probably two-thirds to three-fourths of the governors in this country do not control their department of education. I wish I did in my state.

Is it time to take a look at that issue where we have a better opportunity. A third of my budget goes to K-12; 17 percent goes to higher education in the state. That half of the budget I literally have zero control on how it's spent.

Do you have any thoughts for us? Maybe in

Tennessee you have control of the department of education and you're in great shape.

But how do we wrestle with that governance issue if we're going to innovate, because my sense is the business community understands this, governors understand that we need to make these changes. But I'm not sure totally that the K-12 establishment appreciates the need to change in order to complete in the 21st century.

SENATOR ALEXANDER: Thank you. I had exactly the same impulse. I spent most of my time as governor trying to do a number of state initiatives and trying to back off the number of federal initiatives that I thought were in the way. The conclusion I came to at the end of the day, which I still believe, is that you can primarily make schools good community by community.

I've found that there are more state regulations impeding education than there are federal regulations. The tactic I eventually used was going to all 132 of my school districts and trying to challenge them to set high standards and make their

schools better. It's a lot less of a headline than a master teacher program or a governor's school or a computer program, all things I tried to do statewide.

But in the event what I found out was that the communities that really wanted excellent education had good schools, and the communities that didn't, didn't. So I had to try to find a way to challenge those communities to set higher standards for themselves.

GOVERNOR NAPOLITANO: Other questions?

Governor Fletcher.

GOVERNOR FLETCHER: Thank you. Chairman Gordon, good to see you again. Congratulations on your new leadership role.

Senator Alexander, thank you for being here.

The question I've got, when you look at the energy bills that may be coming forward, and initiatives, as we look at becoming more energy independent we have biomass, renewable resources, conservation, some nonconventional means. But we additionally have a significant amount of coal. And

with the new technology there is the possibility now of utilizing that coal as liquid gas as well as electric production in a much more environmentally sound way without releases of greenhouse gases that would cause a problem there.

There is a conflict as you look at the extraction of coal with some folks. I just wondered, with the new face of Congress, what the legislation regarding energy you think will look like. We did a report on the Southern States Energy Board, when I chaired that; that looked at becoming energy independent by 2030 with some tax incentives and other policies to help promote some clean technologies.

I'd like to hear what you think may happen as we are moving legislation through. We know it's going to be critical that we have some good support for legislation on the federal level as well.

Thank you.

MR. GORDON: This is obviously very important to our country. Competitiveness is important to us for national security for so many

reasons. The good news is it's a high priority in Congress.

I think Lamar and I have discussed this a couple of times. I think we share a common view in that there's not a single magic button here. It's going to be a combination of clean coal, of nuclear, of--Lamar, one of his less favorite is wind, but that's probably going to play a role--some places geothermal. It's going to have to be everything.

I think that certainly Congress recognizes the role of coal. But it also . . . on the science committee we have combined the energy subcommittee with the environmental subcommittee because you really can't talk about energy without talking about the environment now. So I think you're going to see quite a bit of an investment in clean coal technology.

We're at a point . . . we have a pay-as-you-go budget process, which I think is good but it makes things more difficult. The good news is that at least in the House--I think in the Senate also--some of the tax benefits that were given to the oil

companies have been rescinded. Now it hasn't gone through the full conference. But if we can get that through then we're going to have a pot of money to do something with.

My feeling is--a lot of folks' feeling is--at $50-plus a barrel they don't need those tax incentives. So if we can bring that money back and use it sort of as a trust fund, then it's going to be money that we can use to invest in clean coal technology and other kinds of technologies, as I mentioned earlier. It is not the energy sources today that's going to get us out of this; it is those things that we're going to invent or improve in the next few years.

So I'm optimistic.

SENATOR ALEXANDER: May I add to that?

Ernie, the Natural Resources Defense Council is one of the leading environmental groups in America. Their preferred alternative for dealing with global warming and clean air and energy independence is a coal-based solution that also includes carbon recapture, which is a technology

that's not as well developed as it needs to be.

California has just adopted a state rule that all of the energy that's sold in California from coal plants has to meet the standard of an IGCC plant or a coal gasification plan with carbon recapture.

I would say I think there are only three places to get enough energy to deal with global warming, clean air, and energy independence in our generation. One is conservation; two is nuclear; and three is clean coal. All the rest of it is relatively insignificant, in my view, because we use 25 percent of all the energy in the world.

The best thing that could happen to Kentucky or anybody who wants to use coal, which is 50 percent of all our energy in the country, is tough standards in sulfur, nitrogen, mercury and carbon. That will force technology that will permit us to use coal for most of our energy.

GOVERNOR FLETCHER: Just one follow-up.

One of the things we've looked at that would be very helpful as some of these new technologies are looking for financing is having a

market for some of the fuel, coal to liquid and even the biomass. DoD is obviously a big purchaser of fuel. There has been some discussion of looking at what they might do as providing a market for some of this, which would reduce their dependence on some areas that obviously have to do with our national security.

Is there any movement in that area?

MR. GORDON: One of the proposals--and I don't know how far it's going to get--that is somewhat of a variation of that is that we use some of the abandoned or future-abandoned military bases where we can develop a refinery that will be what you might call an expandable refinery in capacity and that will provide energy for our military. But if there was an occasion where the private sector refineries were done or if it caused a spike, that those could be expanded and help fill that gap.

It would certainly seem, if you're going to do that, the next logical step would be to go into these kind of new technologies and combine those two things. That is in the early stages of discussion.

But that would be a way to combine those things.

GOVERNOR NAPOLITANO: Governor Douglas.

GOVERNOR DOUGLAS: I thought, Congressman Gordon, you made an excellent point earlier. Our commitment to competitiveness needs to also have the outcome of creating more better-paying jobs to build the economy to provide opportunity for the young people and those who are young at heart in our country. That's what we're focusing on in our state. Building energy, environmentally related entrepreneurial opportunities to create new energy systems, we have designers, installers of the alternative systems.

You mentioned creating companies that deal in hazardous wastes, brown-field reclamation systems, air pollution control, to use the commitment to energy independence and environmental sensitivity. That's obviously long and deeply seeded in Vermont to create more jobs on a competitive basis. So I appreciate your making that connection.

I want to ask about the competitive legislation and whether it might be used to address

another challenge. Senator Alexander presented this very helpful and stark comparison of where the financial commitments have been since Medicaid and healthcare spending is really pressuring all the states as well as the federal government.

Is there a way to use the competitiveness strategy that you've outlined toward making healthcare more affordable or containing costs and creating opportunity there?

SENATOR ALEXANDER: That's a very perceptive comment, governor. I believe that the challenge of competitiveness; that is, how do our American companies compete with companies around the world? Automobile companies, for example, but any company, that that challenge will finally push us--to use a phrase used a lot today--to create a tipping point for forcing us to deal with transforming our healthcare system.

For a long time we've had pressure from the number of uninsured Americans to transform the system. That hasn't been enough. We've had the rising cost of healthcare. That's gotten to be a lot

of pressure.

Now we have the costs that our companies simply can't compete with companies in other parts of the world if they're bearing too much of the burden of healthcare costs. So the challenge of competitiveness will force us, I think, to transform our healthcare system. When we do, we can then bring the spending for healthcare under more control and that will free up more money for K through 12 and higher education in the states.

MR. GORDON: If you don't have enough controversy at home right now, let me give you an idea how you can be controversial and get something done quickly.

Obviously the fastest growing part of probably your budget and business's budget, individuals' at homes budget is healthcare costs. If you look within that, the fastest part of that is pharmaceutical costs.

We have a situation right now where most of the pharmaceuticals are developed in this country and produced in this country. Yet, there's a law that

says that if that company ships from overseas to Canada, to Mexico or whatever, they can't ship them back in.

So the rationale--the excuse--is safety, but I think that can be taken care of. The rationale is, well, we have to make a profit in this country because they're forcing us to sell these drugs at lower prices elsewhere. If we don't make a profit then we can't make more good drugs. I think that makes sense. But I don't know why we have to shoulder all that.

If we were to, in Congress--and if you would help get your members of Congress and senators to--do away with that ban on re-importing drugs what will happen is you're going to see; it will be like the water table. We won't have to because the cost of drugs in Mexico, in Europe and Canada and elsewhere will come down. It will be a water table because if they know we can ship them back in they won't charge the higher prices because we can get around it. That's how you can get some action right away.

GOVERNOR NAPOLITANO: Governor Douglas.

GOVERNOR DOUGLAS: Governor Pawlenty and I are smiling at each other because we had a conversation with the FDA on this very topic a year or so ago as border states. There are some others here.

We understand that. And a lot of people are crossing the international border to get the drugs they need in Canada. And it would seem that that kind of reform would be very, very welcome. We're with you.

GOVERNOR NAPOLITANO: Governor Minner.

GOVERNOR MINNER: Back to the energy saving, I'll tell you just a couple of things we've done in Delaware.

My secretary of transportation decided if he were to use those higher cost but less maintenance light bulbs in all of the traffic lights in the state that we would save money. It sounded good, and I said, “Go try it.”

The first year the ones that he . . . as he replaced bulbs he was putting in the light the cheaper producing energy for a light for us was;

you know, it made the difference because you only had to replace the bulb every seven years. Most of them, you had to replace the bulb every three years. His first year he purchased bulbs and everybody was changing and they were repairing lights and we saved half a million dollars. That was about one-third of the lights in the state.

Now some intersections have fewer lights, some have more lights. But you can bet that people in six turn lanes know which way to go. He decided he would look at it, continue doing it, and it would eventually save the state two million dollars on our electric to run those traffic lights throughout the small State of Delaware. If you think of that, what might it do for some of the larger states if they tried that same thing?

The other thing we tried to do was try to get people more aware of working to save energy. We actually last year started a program, and we deliberately used the libraries because I like to have more people use the libraries and I think it's good for us. But we sent a letter to every residence

in the state and we told them, “Here's your coupon. Stop by your library. We will give you two energy-saving light bulbs.”

I didn't think probably a lot of people would go. We had to order three times to have enough light bulbs. Those are the kind of gimmicks, if you want to call it, that we've done in Delaware to sort of make people more aware.

Then we did a book telling them 10 energy tips. See what's happening in your own home. Do an energy audit. How can you save energy? We did the same thing with a different book for businesses. It has been very effective. I will tell you that even I learned that extra refrigerator that I have in my basement just for the holidays when I need more things around costs me $13.95 a month. Now I only plug it in on holidays instead of all the time.

Those kind of things, if we could just educate people that they could do, could save a lot of energy. So we're continuing to do that. And I just want to say as a little postscript that our libraries have been much busier since we've gotten

people into the libraries. So it has a double-purpose, just as I thought it would.

But it's simple things, like changing your light bulbs and your traffic lights, maybe putting a flasher after eleven o'clock at night on a highway where you know you don't have that many cars, little things like that that we don't think about. But they make a difference.

My secretary of transportation was one of those innovators, if I can call him that. He thought of these kinds of things, and it was very beneficial to our state.

GOVERNOR NAPOLITANO: Thank you very much.

I just gave up cooking, so that helped.

(Laughter.)

GOVERNOR NAPOLITANO: Governor Carcieri.

GOVERNOR CARCIERI: I'll second what Governor Minner said. We did the same thing, put LEDs in all the traffic lights. We're a small state also and saved a half-million dollars the first year.

I want to come back to the issue that Representative Gordon and Senator Alexander addressed

on math and science education. I commend Janet for making innovation the feature of this. And yesterday we had all science and math education. And Tim hosted a panel, I hosted a panel.

I spent my career . . . I'm a product of the Admiral Rickover generation. Anybody who was any good in math and science--and I'll date myself now --but you were going to be an engineer because the Russians had more engineers than the United States did. There's probably no person that had more impact on education and higher education in math and science in the '50s and '60s and on than the good Admiral.

I agree completely. I think there's a huge sense of urgency about this. And I'm frustrated about how we communicate that and how we drive it because there is absolutely no doubt in my mind.

In Rhode Island we're the home of the new naval weapons center. And when I sit with the scientists there their biggest fear--and it's the nation's repository for undersea warfare technology; it's the brainpower for all of our nation's capability in undersea warfare and technology--

their biggest fear right now is replenishing the scientists that are retiring and that are leaving and getting young people in. I don't know of anything more important.

Now I must say that I taught high school mathematics for two years when I got out of college. But I don't think there's anything more important right now than driving more teachers into math and science and rewarding them.

We had a great presentation the other day by Jim Simons, his Math America project. And I guess he's been making the rounds down here about what he called MSTC, which is the Math and Science Teacher Corps, almost a Peace Corps kind of initiative. It seems to me we need a PR effort here to light a more vigorous fire under this. I really think it's at the core.

When I was in my business career before I did this we had plants in Asia, in China, Singapore, Taiwan, you know, we were all over. This was in the '80s. I came back and I said, “Guys,” to our operating people, “you've got to get over there.

They're going to eat our lunch from a business standpoint because they understand what's at risk."

So it's more how can we add fuel to this fire, and how can we support you and get this legislation through and get the funding in place because the kind of supplemental stipends you're proposing I think are spot on.

GOVERNOR NAPOLITANO: Who wants to go first?

MR. GORDON: Let me just say again we totally agree with you. There's a couple of things you can do.

You need to be talking to your state representatives, your United States senators and congressmen and getting this on the radar to help us. When you talk about overseas, what we're facing now is in India, China, places of that nature, it's a double whammy. They still have a two-dollar-a-day labor. Plus they are making this enormous effort into innovation. So they've been able to combine it. You could help us in that way by getting us more votes.

But let me make a suggestion to what you might do also on the local level. The head of the university system from the University of California came to see me about a year or so ago. What I have found is that the National Business Roundtable, as well as all of your state business roundtables, their number one priority this year is math and science education. So they'll be partners.

What this person did is he went to his business community in California and said, "Okay, you tell me what's the curriculum that we need to develop for people that you're going to hire. You explain that to me. I will make the investment in developing those programs if you will be able to make the investment in scholarships and things of this nature." Again, it goes back to the teacher.

But I think you can go to your business community because money is so much of the whole works. I think you can get additional resources there for your own programs that can hopefully merge into what we're going to be doing.

SENATOR ALEXANDER: Governor, I appreciate

your passion. I think 80 percent of what can be done about competitiveness can be done by governors rather than here in Washington. Let me say why.

We're going to continue to fund the programs that we have up here. The chart I just showed you showed that while state spending for higher education was going up 10 percent, federal funding for post-secondary education was going up 80 percent. Half of the students at your colleges and universities have a federal grant or loan to go to college. We spend 30 billion federal dollars on research at universities every year. We fund 36 national laboratories. And over the next 10 years the federal government will probably increase--will probably double--funding for the physical sciences. So there's broad support for that, and will keep growing more.

But the priorities, according to this report, are K through 12 and higher education. But those are yours. We don't run those up here. Ninety percent--sometimes we think we do, but--90 percent of the funding for K through 12 is state and local.

A 30-year budget is education. And most of the funding outside of scholarships is by states. So if you want summer programs for math and science teachers, they ought to be state programs. If you want a state academy for math and science students, it ought to be a state high school. If you want a ten-month school year or an extra hour a day for math and science, you can do that. If you want to pay teachers more for teaching well, we can't do it from here; you'll have to do it from there.

My thought would be that I'm going to be in the forefront of trying to do everything we can from here; but I think most of it has to be done from there.

There are more great public universities that are state universities than are private universities. The bulk of what needs to be done a governor can do, which I salute you for having this as your subject here because I think you're right on track.

GOVERNOR NAPOLITANO: Thank you, senator.

As you see, as we work together on

legislation that's moving through the Senate and the House, grants to states in order to help get the federal funding down to the level where it needs to be to get out to where it needs to go is part of our whole process here. You're absolutely right. As you know, the former governor and others, this K-12 stuff happens at the state level. We need to get the funding down to where it's actually going to take place.

Any further questions?

Yes, Governor Ritter.

GOVERNOR RITTER: Senator Alexander, back to your comment about the real direction in energy is going to be nuclear, coal-based, and conservation. There is a considerable effort to look at renewables as a part of that, and certainly in our state some investment in wind power; some would relate to solar power. But the governors from sort of the coal-based West have talked a lot about coal gasification.

We had a meeting yesterday with the Speaker of the House, Speaker Pelosi. We just talked about how, while we think that has to be part of how

we go forward, there's a lot of concern about whether the technology is there yet, concern about the capital outlay necessary to build it out. And really the federal government being probably best suited to build something to scale that really gives us a sense about our ability out west to utilize the coal from the mountain states and to do the kinds of things necessary to sequester the carbon.

Really, we believe that the answer probably is going to have to come from federal funding that's to scale, and that helps us build it out. But no state really there is able to fund the project; to provide the kind of gap funding that's going to be required to build it out. We just make that point.

I just think that as coal states we're concerned about how we utilize that resource and going forward and doing it in an environmentally sound way. Coal gasification is a part of it. But we think we need federal help to do that.

SENATOR ALEXANDER: Thank you, governor. The Energy Act of last year has some loan guarantees

and some encouragement. There is consensus, a bipartisan consensus, in support of what you just said. And you're correct, the carbon recapture part of coal gasification is a technology that is an incipient technology. It's not as developed yet as it needs to be.

GOVERNOR RITTER: Thank you.

GOVERNOR NAPOLITANO: Thank you, all.

Thank you representative . . . Governor Palin, I'm sorry.

GOVERNOR PALIN: Real quickly, governor, thank you. And a followup to Governor Ritter's comment.

The sources of energy domestically supplied that will lead to a safer United States without reliance so much on the foreign sources-- where do you see in a national energy plan and a national security plan plugging in the trillions of cubic feet of natural gas that some of our western states are blessed with, Alaska especially?

Do you see steps taken there towards permitting natural gas pipelines, other means of

transporting and monetizing, and finally commercializing the natural gas supply?

SENATOR ALEXANDER: I'm all for that. I just put in a little plug so that the governor is aware of this.

The permission that the Congress gave to lease 181 in the Gulf of Mexico took one out of every eight dollars for new natural gas drilling and used it to automatically fund the state side of the Land and Water Conservation Fund, which is for city parks and other things, which I would hope the governors would support. I think we haven't talked about it.

We should use our natural gas; it's clean. The cost of it is probably going to be too high for new power plants. It may prove to be attractive for transportation alternatives. But we have plenty of demand for natural gas today, but at eight, nine, or 10 dollars a unit it's probably too high for companies to build new power plants. It's too valuable to use to make electricity, in other words.

GOVERNOR NAPOLITANO: Thank you all.

Thank you, senator. Thank you, Mr.

Chairman. We appreciate your being here.

(Applause.)

GOVERNOR NAPOLITANO: Before we adjourn for the morning we're going to swiftly move through some voting.

Governor Heineman, will you move the report of the Economic Development and Commerce Committee?

GOVERNOR HEINEMAN: I will.

When we met yesterday we adopted amendments to four existing policies and two new policies. They were unanimously approved. And on behalf of the EDC Committee, I move to adopt these six policy positions.

GOVERNOR NAPOLITANO: Is there a second?

VOICES: Second.

GOVERNOR NAPOLITANO: All in favor say aye.

(Chorus of ayes.)

GOVERNOR NAPOLITANO: Any opposed?

(No response.)

GOVERNOR NAPOLITANO: Governor Perdue,

will you move the report of the Education and Child Welfare Committee?

GOVERNOR PERDUE: I'm trying to lobby Congress, Madam Chair.

(Laughter.)

GOVERNOR PERDUE: If it's okay with the Chair, I've got a 45 minute report on our meeting yesterday.

(Laughter.)

GOVERNOR PERDUE: I'd like to issue it at this time.

We had amendments to two existing policies yesterday. Under Education and Child Welfare, Number 13 was the High School Reform to Lifelong Learning: Aligning Workforce and Post-Secondary Education, similar to what we've been talking about here today.

ECW Number 15, the Principles of Federal Preschool-College P-16 Plus Alignment, and then the reaffirmation of one other policy, ECW-1, Governors' Principles to Ensure Workforce Excellence, I think, Madam Chair, all these go to your issue of competitiveness, innovation. And I would move that

we adopt all of these at once.

GOVERNOR NAPOLITANO: Thank you, Governor Perdue.

Is there a second?

VOICES: Second.

GOVERNOR NAPOLITANO: All in favor.

(Chorus of ayes.)

GOVERNOR NAPOLITANO: Any opposed?

(No response.)

GOVERNOR NAPOLITANO: Very good.

Governor Douglas, will you move the report of the Health and Human Services Committee?

GOVERNOR DOUGLAS: I'm happy to.

The Committee met yesterday and focused on children's health. We heard from Secretary Leavitt, with whom we met at the White House as well, and Congressman Pallone of New Jersey, who is chairman of the relevant Health Subcommittee in the Congress. We focused on SCHIP.

As you know, Madam Chairman, you and I and others have sent a letter to the Congress urging continued support for that program. I hope we'll be

able to get some success there.

We approved amendments to 11 existing NGA policies. We are pleased to forward them for your consideration. I move that they be approved.

GOVERNOR NAPOLITANO: There's a motion. Is there a second?

VOICES: Second.

GOVERNOR NAPOLITANO: All in favor say aye.

(Chorus of ayes.)

GOVERNOR NAPOLITANO: Any opposed?

(No response.)

GOVERNOR NAPOLITANO: Governor Lingle, will you move the report of the Natural Resources Committee?

GOVERNOR LINGLE: Thank you, governor.

The Natural Resources Committee focused its attention on energy issues yesterday. We heard from U.S. Secretary of Energy Samuel Bodman. We also heard from two members of the investment community who shared their ideas on state and federal policies that could help drive clean energy investments. We

heard from Jim Hecker, a partner at Vinson & Elkins, and Alexander Ellis, III, general partner of Rockport Capital Partners. Our chairman, Governor Huntsman of Utah, led a great discussion. He also let us know that in April he's going to be hosting an energy summit in the State of Utah and is inviting everyone to come.

There are recommendations to adopt, seven policies, all without any changes. And we recommend at this time the adoption by the NGA membership on these revised policies.

As the chair of the committee, I move adoption.

GOVERNOR NAPOLITANO: There's a motion. Is there a second?

VOICES: Second.

GOVERNOR NAPOLITANO: All in favor say aye.

(Chorus of ayes.)

GOVERNOR NAPOLITANO: Any opposed?

(No response.)

GOVERNOR NAPOLITANO: Governor Pawlenty,

would you please move the Executive Committee report?

GOVERNOR PAWLENTY: I will.

The Executive Committee moves the adoption of one new policy, EC 2, which relates to the Real ID issue. It also includes amendments to four existing policy positions, EC 7, which is a response of the federal-state partnership, EC 10, relating to the political status of Guam, EC 12, relating to the streamlining of the state sales tax systems, and EC 13, removing Governor Napolitano as the chair.

(Laughter.)

GOVERNOR PAWLENTY: The Medicare drug benefit and the reaffirmation of existing policies, EC 6, which is settlement of funds, and EC 14--your favorite.

GOVERNOR NAPOLITANO: Is there a second to the motion?

GOVERNOR PERDUE: Madam Chair, I recommend we decouple all these and discuss them one at a time.

(Laughter.)

GOVERNOR NAPOLITANO: Yes, you would. Which one would you like to discuss first?

GOVERNOR PERDUE: I second whatever you need.

(Laughter.)

GOVERNOR NAPOLITANO: This is a governor who gets it.

All right. It's been moved and seconded to adopt the Executive Committee report. All in favor please signify by saying aye.

(Chorus of ayes.)

GOVERNOR NAPOLITANO: Any opposed?

(No response.)

GOVERNOR NAPOLITANO: Is there any other business before the body?

(No response.)

GOVERNOR NAPOLITANO: With that, I will entertain--I don't think we even need a motion.

On behalf of the NGA and as the chair, I hereby declare the 2007 mid-winter meeting adjourned. Thank you all very much.

(Whereupon, at 11:25 a.m., the winter meeting of the National Governors Association was adjourned.)