

27 The Second Annual Innovation Summit

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The recent National Innovation Summit brought together 150 public and private sector leaders for a full day of intensive discussions in San Diego, California. I want to relate why the Council on Competitiveness convened this summit of chief executive officers, university presidents, labor representatives, Members of Congress, and governors. Why would we get 150 people together to underscore the fact that innovation matters, when it is so obvious? There are two main reasons. The first is that the time horizon of science is, in many ways, at odds with the time horizon of politics. There is a basic tension here, and that means that the case for science has to be remade year after year after year. Indeed, one of the great contributions of the American Association for the Advancement of Science is analyzing that case as it gets made time after time, year after year. As long as we have one-year budget cycles and two-year political cycles, the need to mobilize the science and technology community to make that case continues. In the final analysis, the real struggle in the competition for resources is between the long-term interests and time horizons of the scientific community and the shorter-term objectives of those responsible for the budget.

A second reason to hold an Innovation Summit is to change the mental maps of key policymakers. The mental map that shapes most economic policy-making is macroeconomic, but a lot of what counts in innovation is microeconomic. The challenge of expanding the mental map to include the issues that surround innovation is a very important one and another reason why the science, technology, and business communities have got to work together on these issues.

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It was extremely important not to make the case for innovation in Washington, DC. We chose San Diego, a hub of innovation, to stress that, while federal investment is very important, national wealth is not created in Washington. It is created in New Jersey. It is created in Chicago. It is created in California. It is created in Austin and all over the country.

A lot has changed since a similar event three years ago at the Massachusetts Institute of Technology, which was hosted by Charles Vest. The fiscal situation changed in a very important way. The economic outlook also changed. In 1998, the U.S. economy could do no wrong, but the outlook is much more uncertain today. And, of course, we had a change of power in the White House. All of those were reasons to hold a new summit.

What did not change was a sense of anxiety about long-term U.S. leadership in science and technology. I do not think the source of this anxiety was whether a new White House science advisor had been named, or whether the science and technology community can “play the system” effectively. A deeper driver is the real sense of crisis about the future of our science and technology work force. That has people concerned, deeply concerned.

Another key source of anxiety is the sense that science is increasingly removed from the everyday life of most Americans. Science is seen as something different, as a preserve. Citizens too often do not recognize the daily benefits they reap from science and technology research and innovation.

A third source of anxiety has emerged in the most generously funded part of the science enterprise—biotechnology. It is the awareness that our democracy must face very profound ethical issues over the rapidly developing capabilities to intervene in our lives, in our bodies, and in places where we have never been before.

In other words, there is a lot more to the prevailing sense of funk in the science and technology community than just the cyclical issue of the budget and U.S. economic performance.

We had a very productive day of discussions. A sense emerged that the ripest area for a major national initiative is the area of increasing the number of American scientists and engineers. A very lively debate about that issue, chaired by Shirley Ann Jackson of Rensselaer Polytechnic Institute (RPI), focused on whether the way to address this challenge is principally on the demand side (preparing students in K-12 more effectively and giving them incentives for going into science) or the sup-

ply side (giving universities a greater stake in increasing the number of technical graduates). On balance, summit participants felt that the increasing universities should be an important part of that national initiative.

We had a lot of discussion about increasing the participation of women and underrepresented minorities in the technical work force. Representative Constance Morella (R-MD), speaking on behalf of herself and Congressional Black Caucus chair Eddie Bernice Johnson (D-TX), announced an important initiative. The Council on Competitiveness will support the creation of a new group called BEST (Building Engineering and Science Talent) to work on that issue.

In the area of K-12 science education, participants had a general sense that a rich agenda is out there, much of it contributed by Senator John Glenn (R-OH) and his commission. It basically addresses finding the resources to hire and retain qualified teachers in science and math. It also addresses deploying technology more effectively in the classroom. And it includes universities playing a larger role in all of these issues. Senator Glenn participated in the summit and spoke eloquently about how the United States is being out-performed internationally in K-12 science education.

On the issue of resources, there was a prevailing sense that we have underinvested in the physical sciences. In addition, a very strong case was made, and supported by many people from industry, that it is time for us to benchmark where the United States stands internationally and to introduce new data to arm policymakers with facts. We ought to take a careful look at how the United States is doing in the disciplines and critical technologies that matter. While that will not have an immediate impact on this budget cycle, it could have an important impact down the line if it is done in an authoritative and fairly prompt manner.

Finally, Governor Tom Ridge of Pennsylvania and Governor Gray Davis of California made a number of important points. Governor Davis talked about California's quite extraordinary investment of \$300 million to leverage their university-industry relationships in frontier areas. Governor Ridge discussed how Pennsylvania is improving its environment for innovation in a number of ways.

The sense that there is a very powerful regional dimension to our country's national capacity to innovate was very profoundly at the summit. The Council on Competitiveness will join in a partnership with the National Governors Association on this issue. Our main resource will be professor Michael Porter of Harvard Business School, a founder of the Council and a seminal thinker on regional innovation. Our goal will

be to create tools and disseminate them around the country so regions can make the most of the decentralization of our economy and the innovation opportunities that arise from it.

The executive summary of the summit is on our web site at www.compete.org. We are going to integrate our findings into a national innovation agenda. I am enthusiastic that we can help a cause that I am sure the scientific community believes in.