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EDITORIAL

Jobs, Technology, and Change

Last June, presidential candidate Governor Bill Clinton promised to create 8 million jobs. As part of an effort to achieve that goal, he has stated that his administration will seek to regain world industrial and technological leadership. On 18 September, a relevant policy statement was released entitled, *Technology: The Engine of Economic Growth.* Some of the initiatives mentioned in the 22-page document include a variety of efforts to encourage the private sector to increase their investments in research and development (R&D), plant and equipment, and worker training. Government would take many useful initiatives, such as giving tax breaks for R&D, fostering precompetitive technology development, and supporting industry-led consortia. Other changes involve redirection of efforts of the National Laboratories and better management of technology among agencies of the federal government.

The Democratic party in the past has been in effect antibusiness. Governor Clinton seems to take a different view. "In a global economy in which capital and technology are increasingly mobile, we must make sure that the United States has the best business environment for private sector investment. Tax incentives can spur investment in plant and equipment, R&D, and new businesses. Trade policy can ensure that U.S. firms have the same access to foreign markets that our competitors enjoy in the U.S. market." A further quotation states: "Although the United States has negotiated many trade agreements, particularly with Japan, results have been disappointing. I will ensure that all trade agreements are lived up to....Countries that fail to comply with trade agreements will face sanctions."

The small business sectors would be assisted in getting access to better technology. America's 20 million small businesses account for 40% of the gross national product and half of job creation. Some states have had extension programs to help them, but the U.S. effort has been small in comparison with those of Japan and Germany. The new administration document called for establishment of 170 manufacturing centers that would help small and medium-sized manufacturers to choose the right equipment and to learn new production techniques. Both large and small companies need to be aware of technology being developed in other countries. The document states: "...we must also develop a strategy for acquiring, disseminating, and utilizing foreign technologies."

In its discussion of federal laboratories, the technology document is less than enthusiastic. A notable exception is treatment of the National Institute for Standards and Technology. For that institution a doubling of the budget is proposed. But for others, the following statement is made: "America's 726 federal laboratories collectively have a budget of $23 billion, but their missions and funding reflect the priorities that guided the United States during the Cold War." A change in priorities is contemplated with federal laboratories previously engaged in defense research expected to engage in technology development for commercial usages. "Federal labs which can make a significant contribution to U.S. competitiveness should have ten to twenty percent of their existing budget assigned to establish joint ventures with industry." Later, the following appears: "Industry and the labs should jointly develop measures to determine how well the technology transfer process is working and review progress after 3 years. If these goals have not been met,...funds should be redirected to consortia, universities and other organizations that can work more effectively with industry for results."

The document mentions Vannevar Bush and his report, *Science—The Endless Frontier*, and its role in making the United States a world leader in science. However, it states bluntly: "Today the United States faces a new environment." The success of the Japanese industry in capturing U.S. markets is cited, followed by: "...it did so, not by devoting massive resources to basic research, but by stressing incremental improvements in existing technology, rigorous quality control....R&D results flow quickly around the world, but production know-how does not."

A final quotation: "I will give our Vice President Al Gore the responsibility and authority to coordinate the Administration's vision for technology and lead all government agencies, including research groups, in aligning with that vision."

Will the vision that is implemented be that expressed recently by Clinton, or that expressed earlier in a book by Gore?

Philip H. Abelson