

**REPORT OF THE
SECRETARY OF EDUCATION
SECRETARY OF COMMERCE AND TRADE**

**Feasibility Study And Implementation
Plan For The Virginia Quality
Confederation And The
Virginia Quality Institute**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



SENATE DOCUMENT NO. 30

**COMMONWEALTH OF VIRGINIA
RICHMOND
1994**



COMMONWEALTH of VIRGINIA

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December 15, 1993

TO: The Honorable L. Douglas Wilder, Governor of Virginia
and Members of the General Assembly

House Joint Resolution 600 and Senate Joint Resolution 330 requested the Secretary of Education and the Secretary of Economic Development study the feasibility and cost of implementing their recommendations made in response to House Joint Resolution 86 (1992) and to develop an implementation plan for the 1994-96 biennium which would include specific steps to achieve continuous quality improvement and enhance workforce development in Virginia. We have the honor of submitting herewith the "Feasibility Study and Implementation Plan for the Virginia Quality Confederation and the Virginia Quality Institute" in response to House Joint Resolution 600 and Senate Joint Resolution 330.

Respectfully submitted,

Handwritten signature of Karen J. Petersen in cursive script.

Karen J. Petersen
Secretary of Education

Handwritten signature of Cathleen A. Magennis in cursive script.

Cathleen A. Magennis
Secretary of Commerce and Trade

KJP/CAM/pfc
Enclosure

PREFACE

In response to HJR 600, the Secretaries of Education and Economic Development respectfully submit the following study and cost estimates which describe the optimum way to achieve continuous quality improvement and enhance workforce development in Virginia. The proposal calls for two state-wide quality initiatives, the Virginia Quality Confederation (VQC), and the Virginia Quality Institute (VQI), a dual approach to help Virginia's organizations to achieve world-class performance through quality and productivity improvement. The proposal was prepared with assistance from the Virginia Department of Economic Development, the Virginia Community College System, and the Virginia Quality and Productivity Center, a non-profit research and development arm of Virginia Tech. This document describes the goals and supporting activities of VQC and VQI, and addresses issues of funding and infrastructure.

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EXECUTIVE SUMMARY

Numerous studies have confirmed that Virginia needs an educated, highly-skilled workforce to meet the challenges of global competition. American production techniques, so effective at the turn of the century, are becoming outdated in the face of modern technological advances. The bureaucratic managerial model popular in the 1950's and 60's is too inflexible to effectively cope with today's rapidly changing, increasingly complex marketplace. In addition, American corporations are lured overseas by cheap and often productive foreign labor, a factor which undermines America's competitive edge.

In order to successfully compete in the global marketplace, Virginia needs to improve the productivity and skills of its workforce and establish high performance work organizations. Continuous improvement concepts such as Total Quality Management provide organizations with the tools to achieve those goals. Continuous improvement focuses on restructuring management practices to empower employees. It teaches companies to pay close attention to consumer needs and to continuously invest in worker training. Virginia's corporate giants are enjoying the returns on their investment in worker training and work reorganization, but many small and medium-sized firms have not yet adopted these reforms. Because the benefits of reorganization take several years to realize, small firms find it difficult to make the initial investment. Consequently, they continue to employ the outdated management practices that keep them functioning below their potential. A recent study by the Southport Institute for Policy Analysis entitled, The Missing Link: Workplace Education in Small Business shows that, while many small companies are interested in work reorganization and worker education, they lack the internal resources to effectively access and utilize "best practice" technology and processes.

Consequently, the Governor's Advisory Committee on Workforce Virginia 2000 recommended that the Commonwealth of Virginia should create incentives which encourage employers to develop training programs for their employees to assure their continuing development and to achieve higher quality production. In response to the Committee's recommendation, The Secretaries of Education and Commerce and Trade proposed several initiatives related to workforce development with special attention to the needs of Virginia workers who may be subject to layoff and dislocation, and to companies seriously affected by defense cutbacks or global competition. The recommendations were summarized

in House Document No. 41 which included consideration of tax credits, additional general fund support for community college courses and statewide training initiatives.

Due to economic conditions, the most feasible proposal at this time calls for the creation of the Virginia Quality Confederation (VQC) and the Virginia Quality Institute, (VQI), a dual approach that seeks to address the needs of small and medium-sized enterprises (SME's) by providing information and training in quality management practices. VQC and VQI will target all small and medium-sized companies as well as manufacturing defense contractors and subcontractors that will need specialized assistance as the national defense system continues to be downsized. VQC and VQI will also address the needs of the service sector and public agencies in the Commonwealth.

The Virginia Quality Confederation is a state-wide public-private partnership that would operate out of the Virginia Quality and Productivity Center at Virginia Tech. VQC would bring industry, government and academia together to assist businesses in their efforts to improve performance. VQC aims to support existing quality and productivity programs, facilitate knowledge and information sharing in the area of continuous quality improvement, ensure better integration of efforts across the Commonwealth, and where necessary, spark innovative initiatives.

The Virginia Quality Institute will foster the development of some 25 community-based training and resource centers across the Commonwealth. Each center will evolve based on the needs of local industry. The primary function of local Total Quality Institutes will be to provide affordable training for small and medium-sized companies in the principles of continuous quality improvement and high performance work organizations. The program would be developed over the next six years as a means of increasing the rate of performance improvement in manufacturing and service industries. The Institutes will be supported by the Virginia Community College system and by local chambers of commerce.

VQC and VQI can function independently, or work in concert to provide a comprehensive system of service delivery for Virginia's organizations. If approved, VQC and VQI will advance the adoption of continuous quality improvement practices by Virginia businesses and ensure long term organizational and workforce competitiveness.

CHAPTER I - INTRODUCTION

The manufacturing industry is especially vulnerable to economic fluctuations. Although Virginia's manufacturing base is diverse, some sectors depend heavily on defense spending, a market that is declining domestically, while others are vulnerable to low-wage foreign competition. Textile and lumber products, furniture and fixtures are expected to be especially vulnerable when the North American Free Trade Agreement (NAFTA) goes into effect. As Michael Porter points out in his recent book, The Competitive Advantage of Nations, a nation's prosperity depends on the ability of its industries to increase productivity. Businesses that do not keep pace with advances in products and processes will fall behind. If enough firms and industries, fail to remain competitive, the standard of living declines.

According to the Office of Technology Assessment (OTA) of the United States Congress, prosperity in the United States will be driven by growth in its manufacturing base. Manufacturing pays above-average wages, and manufactured goods, not services, dominate world trade. Manufacturing accounted for 16% of Virginia's Gross State Product and is the most important source of income and employment in rural Virginia.

Large firms account for most manufacturing employment in Virginia. The concentration of manufacturing in large firms is generally perceived to be unhealthy for Virginia's economy because the collapse of just one or two large firms would place an entire region in economic jeopardy. The state can encourage growth of small and medium-sized manufacturers by providing them with access to resources that they might not have otherwise. These resources include information and assistance concerning continuous improvement practices and workforce training.

The Governor's Advisory Committee on Virginia Workforce 2000: A Partnership for Excellence, recognized that the demands of a global marketplace necessitate a highly skilled workforce. In The Virginia Plan for Strengthening the Commonwealth's 21st Century Workforce, the Committee recommended that the Commonwealth should create incentives to encourage employers to invest in worker training to achieve higher quality production. This report has been prepared in response to House Joint Resolution 600 (HJR 600) and Senate Joint Resolution 330 (SJR 330) directing the Secretaries of Education and

Commerce and Trade to evaluate the feasibility and costs of implementing their recommendations for workforce development and continuous quality improvement and to propose an implementation plan for the 1994-96 biennium. The recommendations, presented to the General Assembly in House Document No. 41, are stated in Appendix B.

The proposal creating the Virginia Quality Confederation and the Virginia Quality Institute was deemed the most viable, because it provides practical solutions to the concerns expressed by the Committee on Workforce 2000. The Virginia Quality Confederation (VQC), and the Virginia Quality Institute (VQI), is a dual approach to help Virginia's organizations achieve world-class performance through quality and productivity improvement. The proposal is a joint effort of the Virginia Department of Economic Development, the Virginia Community College System, and the Virginia Quality and Productivity Center, a non-profit research and development branch of Virginia Tech. This document describes the goals and supporting activities of VQC and VQI, and addresses issues of funding and infrastructure.

Assuming both initiatives are enacted, VQI will (initially) fall under the Virginia Quality Confederation umbrella. The two entities will each serve as the other's customer and supplier. VQC will function primarily to optimize information sharing and resource utilization at the state level, while VQI represents more of a grass roots, localized community-based effort. By providing a mechanism for sharing resources and expertise, VQC and VQI will reduce duplication of effort at the state, local and regional level. Working together, they will be in a prime position to coordinate existing efforts and foster new initiatives throughout Virginia.

CHAPTER II - VQC PROPOSAL

In order to achieve its mission, the following goals and supporting activities have been established for the Virginia Quality Confederation. One of its major goals is to foster competitiveness through programs designed to increase the number of public and private sector organizations implementing quality management practices. VQC will achieve this by offering high-impact events and topical programs to stimulate networking/ information sharing and providing quality improvement education and training through educational products and services. VQC will also establish a resource center/ information clearinghouse to provide organizations with information on whom to contact for expertise in a given area. VQC will support and promote education and training programs in colleges and universities as well as providing in-house training for organizations.

Another major goal focuses on improving quality through cooperation. In order to achieve this, VQC will facilitate networking and information/resource sharing among Virginia's local and regional quality councils, and establish quality councils in communities where none exist. VQC will provide a forum for creating shared commitment, understanding, and cooperation with respect to quality improvement among Virginia's leaders in business, government, and education.

Finally, VQC intends to recognize and promote the quality improvement efforts of exemplary organizations. This will be accomplished by promoting greater awareness of continuous quality improvement among the general public and recognizing exemplary organizations with a prestigious awards banquet. The VQC will sponsor the United States Senate Productivity Award for Virginia and the Award for Continuing Excellence to recognize successful organizations in Virginia effectively implementing continuous quality improvement practices, and to share their successes with others.

The VQC organizational structure will consist of four main bodies. The VQC Advisory Council, a group of key leaders from business, government, and industry will provide guidance and strategic vision for the Confederation. The VQC Board of Directors will manage, supervise, and control the daily affairs of VQC. The board would be comprised of the existing Senate Quality

and Productivity Award Board, with the addition of up to five representatives from VQI and local/regional quality councils.

The administrative staff of the Virginia Quality and Productivity Center will serve as the administrative coordinators of VQC. The administrative staff will act as primary liaison with the Board of Directors, the Advisory Council, volunteer committees, regional quality councils, economic development offices, sponsors, members, and other stakeholders. The staff will coordinate the implementation of all VQC initiatives, including the resource center/information clearinghouse, conferences, education and training workshops, bi-annual assemblies, awards programs and others. Panels and Committees will provide additional direction and implementation assistance in specific areas of responsibility.

Initial backing by the Governor's Office and the General Assembly is crucial to the success of VQC. Start-up funding for VQC would come from state general fund appropriations, matching corporate support, in-kind contributions, awards process fees, and revenues from products and services. In order to ensure the Confederation is firmly established, long term funding commitments from both the public and private sectors are needed. Experiences from other states with similar initiatives suggest that a minimum of five years of funding be secured. Beyond five years, the goal is for VQC to be independent of state support.

This proposal calls for the General Assembly to charter the VQC, operating out of the Virginia Quality and Productivity Center at Virginia Tech, provide start-up funding, and authorize the acquisition of private funds through a designated foundation. In addition, political and financial support by the Governor and the legislature would lend exposure, visibility, and credibility to the effort. To facilitate VQC fundraising efforts during start-up, the Virginia Tech Foundation will be used as the funding agent. By its third year, VQC will have established an independent 501 (c) 3 corporation for this purpose. Both the Virginia Tech Foundation and the subsequent 501 (c) 3 corporation will enhance efforts to raise corporate donations by providing a tax deduction to contributing firms.

CHAPTER III - VQI PROPOSAL

The Virginia Quality Institute is an initiative to foster the development of community-based Total Quality networks across the Commonwealth. The Virginia Quality Institute will coordinate the establishment of a state network of Total Quality Institutes for the purpose of providing accessible and affordable training to the workforce of small and medium businesses and not-for-profit organizations. VQI could reach at least 150,000 workers in the first six years and can ensure that approximately another 37,500 are trained each successive year. Over the next six years, a network of 25 training and resource centers will be developed. VQI will utilize the capabilities of the Virginia Community College system, the Virginia Chamber of Commerce, the Virginia Quality Confederation, and the Virginia Quality and Productivity Center at the local level. Opportunities would exist for other colleges and universities to join the network as well.

Local chambers will provide support using their infrastructure and contact with business leaders. The Virginia Chamber of Commerce will provide similar support at the state level to foster individual efforts by the local chamber offices. The primary role of the state chamber will be to ensure the continued funding support of the executive office of the VQI and to promote funding of programs by local businesses through their local chamber.

The community college system will provide personnel, training resources and institutional support consistent with their charter. Selected business and government members of the VQC Board of Directors with additional participants from local Total Quality Institutes will form an Advisory Council to VQI staff.

Communities will be encouraged to form partnerships between local chambers of commerce and the community colleges to form Total Quality Institutes which will provide a comprehensive low-cost, effective program of quality improvement training services for small-and medium-sized firms. The Virginia Quality Confederation will provide direction and guidance to localities interested in forming a quality council. This proposal calls for the establishment of five new TQI's each year for five years with each center becoming self-sufficient by the third year of operation. These institutes will form a state TQI network that will be coordinated by the Virginia Quality Institute.

This proposal calls for the Virginia General Assembly to charter and fund the VQI under the Virginia Community College System, operating out of the Virginia Chamber of Commerce. The state will provide start up support and authorize the raising of private funds through a designated (501(c)3) foundation. To assist in the initial steps, this proposal calls for one of the existing local Total Quality Institutes to provide the core group from which a state organization will grow. This will permit the initial activities to be carried out prior to the completion of a fundraising drive and of the staffing process. The Virginia Peninsula TQI will agree to assist in this function with the help of executives on loan from other local networks.

Using seed funding from the state and matching grants to promote private industry to invest in continuous improvement training programs for their workforce, \$2 million total state investment over the six year period will reap approximately \$7 million in additional training investment by private industry. At the end of the six year initiative, private industry will be investing in continuous quality training at the rate of over \$2 million per year with minimal support from the state (\$80,000 per year to provide continued VQI staffing).

CHAPTER IV - BUDGET INFORMATION

Budget information for VQC and VQI is presented in Appendix A. Appendix A contains two sets of figures. The first budget describes the minimum annual investment required to support two strong programs. It provides for leadership to initiate the Virginia Quality Council and mount an annual meeting of Virginia industries to highlight "best practices" to stimulate the adoption of continuous quality improvements among Virginia's businesses. In addition, three quality institutes which have already begun, will be anchored, five new institutes initiated, and a statewide plan developed under the auspices of the Virginia Community College System.

In light of current financial difficulties, a reduced budget has been prepared that would allow for initial start-up. The second budget, about half of the initial proposal, provides staffing needed to initiate the Virginia Quality Council, to anchor three existing institutes, and to establish three new institutes but without state support. While this budget would support the plan through the initial stages, it will not allow Virginia's businesses to take full advantage of possible resources and it will not support the programs in the future. State support will be crucial to the survival of both programs.

CONCLUSION

The manufacturing industry is vital to Virginia's economic growth, and the current economic climate demands that Virginia's smaller manufacturers improve productivity in order to remain competitive. Smaller firms can accomplish this by incorporating new technologies into their manufacturing processes and by raising the skill level of their workers. The concepts embodied in continuous quality improvement focus on the human side of this equation. Continuous improvement practices aim to increase productivity by helping companies to develop a highly trained workforce and more effective management techniques. State economic policy, will have an important impact on the vitality of the industrial base. By investing in the Virginia Quality Confederation and the Virginia Quality Institute, state government can provide Virginia's organizations with access to information and technical assistance they can use to maintain or significantly improve their competitive posture and consequently, ensure a high standard of living for Virginia's citizens.

APPENDIX A

ANNUAL BUDGET

VQC

1994-95	Personnel	\$ 68,121
	Other	<u>29,770</u>
		\$ 97,891
1995-96	Personnel	\$ 71,527
	Other	<u>31,258</u>
		\$102,785

Funds one FTE position to coordinate VQC plus one major conference in addition to quality award.

VQI

1994-95	Personnel	\$141,049
	Other	<u>100,000</u>
		\$241,049
1995-96	Personnel	\$148,101
	Other	<u>100,000</u>
		\$248,101

Funds 8 VTQI's and VCCS coordination; 4 FTE personnel

	<u>1994-95</u>	<u>1995-96</u>
Personnel	\$209,170	\$219,628
Non-Personnel	<u>129,770</u>	<u>131,258</u>
	\$338,940	\$350,886

APPENDIX A

REDUCED BUDGET

VQC

1994-95	Personnel	\$ 31,422
	Other	<u>19,056</u>
		\$ 50,478
1995-96	Personnel	\$ 32,993
	Other	<u>20,008</u>
		\$ 53,001

Funds .45 FTE part-time position to coordinate VQC activities

VQI

1994-95	Personnel	\$ 73,360
	Other	<u>66,640</u>
		\$140,000
1995-96	Personnel	\$ 65,500
	Other	<u>49,500</u>
		\$115,000

Funds 2 FTE positions, anchors 3 institutes and starts 3 institutes with no VCCS coordination

	<u>1994-95</u>	<u>1995-96</u>
Personnel	\$104,782	\$ 98,493
Non-Personnel	<u>85,696</u>	<u>69,508</u>
	\$190,478	\$168,001

APPENDIX B

GENERAL ASSEMBLY OF VIRGINIA--1993 SESSION

HOUSE JOINT RESOLUTION NO. 600

Requesting the Secretaries of Education and Economic Development to study the feasibility and costs of implementing their recommendations for workforce development and continuous quality improvement and to propose an implementation plan for the 1994-96 biennium.

Agreed to by the House of Delegates, February 5, 1993

Agreed to by the Senate, February 23, 1993

WHEREAS, numerous studies have confirmed that Virginia needs an educated, highly-skilled workforce to meet the challenges of global competition; and

WHEREAS, the Governor's Advisory Committee on Workforce Virginia 2000: A Partnership for Excellence recognized the need for incentives to encourage employers to develop training programs for their employees to ensure continuous development and achieve higher quality production; and

WHEREAS, the Governor appointed a Workforce Virginia 2000 Advocacy Council to oversee implementing the recommendations of the Advisory Committee on Workforce Virginia 2000; and

WHEREAS, the 1992 General Assembly through HJR 86 requested the Secretaries of Education and Economic Development and the Workforce Virginia 2000 Advocacy Council to recommend incentives which would encourage employers to invest in workforce development; and

WHEREAS, the Secretaries of Education and Economic Development have prepared a response to HJR 86 and have recommended several initiatives related to workforce development and continuous quality improvement; and

WHEREAS, these recommendations propose development and financial support for continuous workforce education programs with special attention to the needs of Virginia workers who may be subject to layoff and dislocation, the creation of quality improvement programs, including a statewide Quality Council, and training in total quality management for small-size and medium-size companies; and

WHEREAS, additional information is needed concerning the specific steps necessary for implementation and the feasibility and cost of implementing the recommendations; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Secretaries of Education and Economic Development be requested to study the feasibility and cost of implementing their recommendations made in response to HJR 86 (1992) and to develop an implementation plan for the 1994-96 biennium which will include specific steps to achieve continuous quality improvement and enhance workforce development.

The Secretaries shall complete their work in time to submit their findings and recommendations to the Governor and the 1994 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

APPENDIX C

SENATE JOINT RESOLUTION NO. 330

Requesting the Secretaries of Education and Economic Development to study the feasibility and costs of implementing their recommendations for workforce development and continuous quality improvement and to propose an implementation plan for the 1994-96 biennium.

Agreed to by the Senate, February 9, 1993

Agreed to by the House of Delegates, February 23, 1993

WHEREAS, numerous studies have confirmed that Virginia needs an educated, highly skilled workforce to meet the challenges of global competition; and

WHEREAS, the Governor's Advisory Committee on Workforce Virginia 2000: A Partnership for Excellence recognized the need for incentives to encourage employers to develop training programs for their employees to ensure continuous development and achieve higher quality production; and

WHEREAS, the Governor appointed a Workforce Virginia 2000 Advocacy Council to oversee implementing the recommendations of the Advisory Committee on Workforce Virginia 2000; and

WHEREAS, the 1992 General Assembly through HJR 86 requested the Secretaries of Education and Economic Development and the Workforce Virginia 2000 Advocacy Council to recommend incentives which would encourage employers to invest in workforce development; and

WHEREAS, the Secretaries of Education and Economic Development have prepared a response to HJR 86 and have recommended several initiatives related to workforce development and continuous quality improvement; and

WHEREAS, these recommendations propose development and financial support for continuous workforce education programs with special attention to the needs of Virginia workers who may be subject to layoff and dislocation, the creation of quality improvement programs, including a statewide Quality Council, and training in total quality management for small- and medium-sized companies; and

WHEREAS, additional information is needed concerning the specific steps necessary for implementation and the feasibility and cost of implementing the recommendations; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Secretaries of Education and Economic Development be requested to study the feasibility and cost of implementing their recommendations made in response to HJR 86 (1992) and to develop an implementation plan for the 1994-96 biennium which will include specific steps to achieve continuous quality improvement and enhance workforce development.

The Secretaries shall complete their work in time to submit their findings and recommendations to the Governor and the 1994 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

APPENDIX D

**REPORT OF THE
SECRETARY OF EDUCATION AND THE
SECRETARY OF ECONOMIC DEVELOPMENT ON**

The Case For High Performance Work Organization

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



HOUSE DOCUMENT NO. 41

**COMMONWEALTH OF VIRGINIA
RICHMOND
1993**



COMMONWEALTH of VIRGINIA

James W. Dyke, Jr.
Secretary of Education

Office of the Governor
Richmond 23219

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January 5, 1993

TO: The Honorable L. Douglas Wilder, Governor of Virginia,
and Members of the General Assembly

House Joint Resolution 86 requested the Secretary of Education and the Secretary of Economic Development, in cooperation with the Workforce Virginia 2000 Advocacy Council, to develop recommendations regarding incentives to encourage employers to embrace and implement the workforce education recommendations of the Governor's Advisory Committee on Workforce Virginia 2000. We have the honor of submitting herewith the Committee on Worker Training of the Governor's Advocacy Council for Workforce Virginia 2000 report in response to House Joint Resolution 86.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'James W. Dyke, Jr.'.

James W. Dyke, Jr.
Secretary of Education

A handwritten signature in black ink, appearing to read 'Cathleen A. Magennis'.

Cathleen A. Magennis
Secretary of Economic Development

JWDJr/CAM/mm

Enclosure

ACKNOWLEDGEMENTS

A report prepared in response to House Joint Resolution 86 of the 1992 General Assembly by:

Committee on Worker Training of the
Governor's Advocacy Council for Workforce Virginia 2000

The Honorable William W. Bennett, Jr.
Sherman P. Parker
George R. Perry
Robert G. Templin, Jr., Chairman

The advent of modern communication and transportation has proclaimed a new age for the world economy. In this age, the American production techniques and know-how that were once the envy of the world are becoming outdated. U.S. and thus Virginia markets, long protected and isolated by two vast oceans, have been inundated by foreign products with higher standards of performance and quality while simultaneously carrying attractive price tags. Currently, more than 70% of American manufactured products face competition from abroad¹--a stark reality at a time when American productivity growth is at an all-time low.

Faced with a future in which additional advances in communication and transportation will continue to knit the global economy even tighter together, it is imperative that action be taken to remedy the trend of declining productivity. This Workforce Virginia 2000 Advocacy Council committee recommends that in order for Virginia to respond effectively to the growing global challenge, it must take positive action aimed at improving the productivity and skills of its workforce and establishing high performance work organizations.

Presently, Virginia's economy, like the rest of America's, exhibits primarily the low-skill, high-wage traits characteristic of a classical industrial-era mass production work model. Designed by Frederick Taylor and made famous by Henry Ford at the turn of the century, this model operates by assigning workers simple, well-defined repetitive tasks in a mass production environment requiring little need for an educated workforce. Decisions dealing with production strategy and work organization are made by a small group of educated managers and planners. Through a complex hierarchy of administrative procedures, this core directs the large, uneducated workforce.

¹Learning a Living: A Blueprint for High Performance, The Secretary's Commission on Achieving Necessary Skills, U.S. Department of Labor, Washington, D.C., April 1992, p.3.

The Taylor model made America highly productive during the 50's and 60's and has consequently defined the organization of "our schools, our offices, our banks and our hospitals."² However, this model of work organization has proven incapable of delivering the high product quality, flexibility, or the increased sensitivity to customer wants and needs that today's marketplace demands. The bureaucratic managerial techniques of the Taylor model are too inflexible to effectively cope with an increasing number of complex production steps. The resulting poor communication and supervision translate into lengthened production times and products plagued by defects.

Because foreign labor offers a cheaper, more efficient alternative to domestic labor, a high-wage nation like the U.S. "can succeed only by producing higher quality products, providing customers with greater product variety, introducing new products more frequently and creating automated systems which are more complex than those that can be operated in low-wage countries."³ To attain such a goal, Virginia and the U.S. must shift to a high-performance work organization--a work organization whose guiding principle "is to reduce bureaucracy by giving authority to direct workers for a wider variety of tasks."⁴

The cornerstone of a high performance work organization is the educated, highly-skilled worker. Convoluted production procedures requiring large managerial layers for implementation are replaced by workers capable of reaching decisions using their own judgement. In this arrangement, front-line workers assume tasks previously reserved for management; i.e., quality

²America's Choice: high skills or low wages!, National Center on Education and the Economy, New York, June 1990, p.37.

³Ibid, p.38.

⁴Ibid, p.39.

control, material control, and production scheduling. Tasks that previously required dozens of unskilled laborers are transformed into tasks carried out by fewer, highly skilled people managing manufacturing cells in a team-oriented work environment. The high performance work organization is applicable in some form to almost every industry. From manufacturing to banking, the benefits of reducing costs through streamlining operations and increasing quality through the presence of better trained individuals are significant.

Nevertheless, deterrents to reorganization are many. A large initial investment is necessary to reeducate workers and redesign their environments. Furthermore, many companies fear losing newly trained workers to other jobs. Together with the fact that the returns for reorganization typically take several years to realize, it is easy to see why the majority of small and medium businesses--especially those without surplus funds or competition that threatens their survival--would continue to pursue the older type organization.

Maintaining the status quo, however, is not the answer. Larger corporations located in Virginia, such as IBM, Xerox, Corning and Siemens compete on an international scale and are already enjoying the returns of their investments in worker training and work reorganization. As their standards of production quality increase, so too does the pressure on their suppliers to provide support equipment and services of comparable quality. Several state governments--most notably Texas' and Oregon's--are currently working in conjunction with large corporations in an effort to spread awareness and create opportunities for medium-sized and small businesses to pursue high performance work organization. Moreover, a recent study by the Southport Institute for Policy Analysis entitled, The Missing Link: Workplace Education in Small Business shows that, in fact, many small companies are interested in work reorganization and worker education. Two barriers to a first step, however, were cited by small companies: 1) a lack of

information to know whether a reorganization program would be valuable, and 2) ignorance of where to seek help.

Virginia is on the threshold of redesigning its education system. The thrust of these efforts must not be limited to school reforms. Industry and the rest of the world will not wait for 12 years while our schools produce a new breed of student for the workplace. Instead, "the advent of the computer, high speed communications and universal education is heralding a third industrial revolution"⁵ now, and we must seize the initiative accordingly by providing incentives and opportunities for workforce reorganization and continuous training and retraining to occur. If we do not provide clear paths for reorganizing work toward the creation of high performance organization and for worker retraining, Virginia is likely to witness continued stagnation in productivity, declining real wages, and a lower standard of living for more and more of its citizens.

Consequently, the Committee on Worker Training recommends the following steps be taken to create incentives which encourage Virginia employers to develop continuous training programs for their current workers at all levels to assure their continuing development toward world-class standards and to allow the workplace to take full advantage of employees' potential:

1. The Commonwealth of Virginia should develop and financially support continuous workforce education, training and retraining programs designed to assist Virginia companies in becoming more globally competitive high performance organizations through increasing the knowledge and skill of its front-line workers. Special attention should be given to the needs of Virginia workers who may be vulnerable to company

⁵Ibid, p.41.

layoffs and economic dislocations and to companies seriously affected by defense cutbacks or global competition.

2. The Commonwealth of Virginia should create tax credit incentives for small and medium sized businesses employing under 200 workers to invest in their human resources--especially front-line workers--through continuous workforce education, training, and retraining programs.
3. The Commonwealth of Virginia should support the creation of a statewide Quality Council which will work to create awareness of the principles of Total Quality and facilitate the flow of information and technical services needed to provide support to companies seeking to reorganize work and create high performance organizations.
4. The Commonwealth of Virginia should financially support the creation and initiation of a statewide network of Total Quality institutes which would provide training, at the community level, to small and medium sized companies in the principles of Total Quality and high performance work organization.
5. The Secretary of Education and Secretary of Economic Development should develop implementation strategies for the subcommittee's recommendations. These strategies will be for consideration in 1994-96 and should include foremost the estimated cost for each recommendation.