

Fiscal Research Program

CREATING THE WORKFORCE OF THE FUTURE : A REQUIREMENTS ANALYSIS

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FRP Report No. 3
February 1998



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Foreword

The Fiscal Research Program of the Policy Research Center is pleased to present this paper dealing with a complex public policy topic of strategic importance to all of us as we prepare for future involvement in the global workplace. This is the third in a series of Research Papers by the authors focusing on the theme of workforce preparation. This paper builds upon earlier research in Great Britain and a recent sponsored study of best practices of workforce development in the Southeastern United States to develop a model workforce development system, including specifications and requirements.

The authors focus on raising public policy issues for discussion and debate. Sometimes they suggest answers based upon present practices and forecasts of future needs. However, they end without answering the question of who will provide the visionary leadership needed to pull together the diverse mix of current workforce development efforts to create a system capable of meeting future needs. Perhaps that question should be foremost in your mind as you read this report.

The global competition for work is real. The relationship between a consistent, adequate supply of high quality jobs and the standard of living most of us desire is also real. What is missing to some extent is a clear understanding of how best to prepare to meet these realities in our fast-paced environment where technology and competition continue to change the nature of the work we do and the knowledge and skills needed to perform well.

The Fiscal Research Program and the Policy Research Center were created to help provide answers to public policy questions by generating timely and relevant research. We intend to be active participants as our society deals with public policy issues involving workforce development. Please help us do so by giving us feedback about the issues and questions you would like to see addressed.

David L. Sjoquist, Ph.D.
Director, Fiscal Research Program

CREATING THE WORKFORCE OF THE FUTURE: A REQUIREMENTS ANALYSIS

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Executive Summary

Our previous research has led us to hypothesize that “*a global paradigm shift is underway involving work. Traditionally, people migrated to find life-sustaining/enhancing work; however, in the future, work will migrate to find a workforce capable of adding value.*” With employers demonstrating an increased willingness to relocate their enterprises, countries and communities are locked in competition to attract them. Those with workforce development programs capable of producing competent, flexible workers have a competitive advantage when it comes to attracting and retaining the type of work needed to sustain a high standard of living. This paper developed the specifications for a model workforce development system designed to meet future needs in a competitive global market and then derived the requirements to make the model operational.

The literature suggests that education and training programs are most productive when there is an *interaction of profit-maximizing firms and utility-maximizing workers who jointly agree to an investment in training*. Unfortunately, this is often not the case for a substantial number of trainees participating in publically-supported workforce development programs. Additionally, the cost-effectiveness of these programs is adversely impacted by administrative redundancies, overlapping jurisdictions, and a lack of coordination and cooperation. Building upon the literature and observations stemming from our recent study of best practices in workforce development, we issued 10 general specifications for an ideal workforce development system designed to meet future needs (Attachment #1 here). To move from general specifications to reality, we derived 15 system requirements and hypothesized starting points for implementation for each requirement from among five action priorities: Policy development, resource commitment, structural change, innovation, and attitude change. We acknowledged that for many system requirements all five actions are needed. The system requirements are listed here in Attachment #2 without hypothesized starting points and with them in Table 3 in the paper.

The paper concludes with recommendations for creating a matrix structure with inputs from the three major infrastructures currently involved in workforce development (*Education, Workplace, and Targeted Groups*) and charging it with responsibility for system development and integration. To be successful, this group would need to exercise power and authority far beyond that of usual commission charged with giving advice. The paper concludes the time is right to form true workforce development systems out of the array of programs operating within the three infrastructures and asks who will provide the visionary leadership needed to do so.

CREATING THE WORKFORCE OF THE FUTURE: A REQUIREMENTS ANALYSIS

"THE WORLD OF WORK and the complex economic systems which envelops it are undergoing radical and inescapable change. ...Workplaces and workers must change, as well as the critical institutions which prepare them for entry and re-entry into the world of work." (Smith-Mello, et al., 1996; p. xiii).

I. Introduction

Work, a common human experience, a psycho-social source of identity, and a major determinant of quality of life, individually and collectively, is undergoing extensive change. The drivers of change are many and diverse: for example, innovations in information technology that continue to create new forms of work while displacing others, a global marketplace made accessible by improvements in transportation and advances in telecommunication systems, and near-parity in the workplace for women in several parts of the world. With work, workforces, and workplaces undergoing change, it is not surprising that workforce development systems and programs are also changing.

Because of the centrality of work in our lives, there are many stakeholders with vested interests in the changes taking place. Individuals want meaningful work in the form of well-paying jobs in employment settings that offer the benefits and security needed for the quality of life they seek for themselves and their families. Employers want competent, flexible, affordable workers that can add value to products and services, thereby contributing to profitability and survival in marketplaces often characterized by volatility and competitiveness. Communities want an adequate,

secure supply of high quality work so their citizens can be fully employed at levels commensurate with their skills and aspirations. The prosperity that would result, in turn enables the community to afford the infrastructure and services associated with a high standard of living. In brief, any group concerned about the quality of life in the community has a vested interest in economic and workforce development.

Historically, people migrated to find work. For some it was a matter of basic survival, for others it was an opportunity to achieve a higher standard of living. While this practice still exists, an emerging trend is for employers in nearly all industries to relocate enterprises to achieve one or more strategic objectives beyond the search for cheap labor. The strategic reasons for new site locations vary, but the availability of a workforce capable of adding value often plays an important role in the decision-making process. The increased movement of jobs within and among countries led us to hypothesize that *“a global paradigm shift is underway involving work. Traditionally, people migrated to find life-sustaining/enhancing work; however, in the future, work will migrate to find a workforce capable of adding value.”* (Smits and Rushing, 1996; p. 54).

With employers demonstrating an increased willingness to relocate their enterprises, countries and communities are locked in competition to attract them. Attraction may take several forms depending upon the nature of the work and the strategic reasons for relocating the enterprise. For example, unskilled work may move for promises of reduced labor costs. But the skilled, high-tech jobs desired by many communities throughout the world require a competent workforce capable of changing as the technology changes. Therefore, countries and communities with workforce development programs capable of producing competent, flexible workers have a competitive

advantage when it comes to attracting and retaining the type of work needed to sustain a high standard of living.

In summary, the brave new world of tomorrow is shaping up to be a scene of intense competition for a vital scarce resource - high quality work. A state-of-the-art workforce development system provides competitive advantage for those seeking to attract/retain the types of work needed to sustain a high standard of living and community ambience. Less competitive communities are more likely to experience a decline in the number of high quality jobs, an outward migration of skilled workers, shrinking revenues, less ability to maintain infrastructures and services, and a reduced standard of living.

This paper attempts to sensitize the reader to the issues and public policy options community leaders and concerned groups face when making decisions about investments in, and the design of, workforce development systems and programs. It utilizes the following inputs and structure to accomplish its purpose:

- First, a brief synthesis of scholarly and practitioner literature regarding economic and workforce development is presented (Section II);
- Second, the authors summarize their observations from a recent study of best practices in workforce development;
- Third, the workforce development literature and information regarding best practices are used to develop a conceptual model of a workforce development system designed to meet future demand;
- Fourth, the conceptual model is assessed using a requirements analysis format to pinpoint the policies, infrastructures, resources, and systems needed to make it a reality; and
- Finally, the issues and tradeoffs involved in meeting the requirements specified for the conceptual model for workforce development are discussed in a format intended to stimulate additional deliberation.

II. State-of-the-Art Workforce Development

This section begins with an elaboration of the rationale presented in the introduction, discusses investments in training to increase human capital, explores the factors associated with leading-edge vs. declining workforce development capabilities, and concludes with an overview of the global context for workforce development. The inputs presented come from selected aspects of the scholarly and practitioner literature about work, the workforce, and workforce development.

Work and Quality of Life

The case for a “work/quality of life” connection for individuals has long been made by psychologists and sociologists, for example: Arthur, Hall, and Lawrence (1989), Lofquist and Dawis (1969), and Pallak and Perloff (1989). The scholarly interest in work stems from two major observations: First, work fulfills many human needs. At its most basic level, it helps to insure survival by providing the food, clothing, shelter, and other elements needed to sustain life; and from a psycho-social perspective, it provides one with an identity (physician, farmer, systems analyst) and a presumed social status, influences self-concept, and contributes to positive and negative affective states. Secondly, in most societies, a majority of adults spend from one-half to two-thirds of their waking hours engaged in this important, universal behavior. Moos (1989) provided a succinct overview of the psycho-social consequences of work:

...A job can provide structure for a person’s life, a sense of satisfaction and productivity that stems from completing meaningful tasks, a feeling of belonging to a valued reference group, a basis for self-esteem and personal identity, and a way to earn one’s economic place in society. But many Americans are employed [in jobs] in which they...feel isolated and futile. Work stress, job dissatisfaction, and a sense of pressure and frustration are common. (Moos, 1989; p. 9).

Work also has documented impacts on those closest to the worker, her or his family members (for example: Eagle, 1995; Frone, Russell, and Cooper, 1992; and Hoffman, 1989). Much of the attention has been focused on working mothers as their participation rate in the labor force rose from less than 10 percent in the 1930's to more than 60 percent in the 1980's (Hoffman, 1989). Another focus has been on the impact of mass unemployment on the mental health of the family and community (Buss & Redburn, 1983; Cobb & Kasl, 1977). Writing in the *American Psychologist* in 1982, then first-term U.S. Senator Donald W. Riegle, Jr. (D-Michigan), noted the following relationships between employment and health:

M. Harvey Brenner, a Johns Hopkins University sociologist, has studied the effects of long-term unemployment on the health of the population. He found that when unemployment rose one percentage point, suicides increased 4.1 percent, homicides 5.7 percent, deaths from heart disease, liver cirrhosis and other stress disorders, 1.9 percent, and 4.3 percent more men and 2.3 percent more women were admitted to mental hospitals. These alarming figures, compiled from analysis of 30 years of data, suggest a wide array of serious problems that may manifest themselves after a recession ends. (Riegle, 1982; p. 1184).

In summary, much evidence documents the quality of life implications of work for individuals and their families. As a behavior central to peoples' lives and one which occupies a large portion of their time, work impacts their lives on a daily basis both positively and negatively. Unfortunately, the relationship is somewhat less clearly defined at the community level.

The concept of "community" implies a level of interdependency where people are affected by what happens to others in their group. All communities have members whose capacity to engage in work is limited due to age, infirmity, or a lack of marketable skills. These less-productive members are sustained by a transfer of resources from the more-productive members. The proportion of members falling into each of these productivity levels determines the general quality

of life for the community at large. Problems with employment and workforce capacity often result in commissions, sponsored inquiry, and reports from which public policies and programs evolve in an attempt to influence the productive capacity of the group and therefore to attain a desired level of quality of life. For example:

Commission on Workforce Quality and labor Market Efficiency, U.S. Department of Labor, "Investing in People: A strategy to Address America's Workforce Crisis, 1989.

U.S. Congress, Office of Technology Assessment. "*Worker Training: Competing in the New International Economy*. Washington, DC: U.S. Government Printing Office, 1990 (OTA-ITE-457).

The relative roles and responsibilities of individuals, local, state, and federal governments, and employers are subjects of debate, but the notion of interdependency is accepted (otherwise there would be little debate). For example, on-going attempts at welfare reform at the federal and state levels are raising questions about the locus of control for various types of decisions and the amount of "safety" unemployed members of society should be afforded (for example: *The New York Times*, "Cutting Welfare Roles but Raising Questions," May 7, 1997; *Newsweek*, "One Family's Journey from Welfare to Work," May 26, 1997).

Public programs to build skills or provide job-finding assistance (for example: the Adult Education Act, the Job Training and Placement Act, and the Rehabilitation Act) incur costs and produce benefits. Questions of how much to invest in such programs, the minimum standard of living each member is entitled to have, acceptable ratios of costs/benefits, and the priorities for various types of programs serve as topics for debates in societies around the world. Logic suggests that investment decisions would be easier in good economic times when resources are readily available and more difficult during recessions/depressions when resources are constrained. However, in practice, the reverse is often true, that is, serious economic problems often bring about a *reactive*

willingness to invest in infrastructure improvements whereas *pro-active* investments during prosperity may be difficult to “sell” in a political sense.

Two additional factors influence investments in the infrastructures that support workforce development: delayed consequences and level of competition. Investments made by one generation are often likely to have more impact on the next generation than on the one making the investment decisions. Additionally, the level of infrastructure investment needed is, in part, determined by the level of investment made by one’s future competitors for work.

In summary, while successful involvement in work is seen as an important determinant of quality of life for individuals, communities, and nations, the components of the needed infrastructure for workforce development, the priorities for and levels of investment to be made, the quality of life to be attained, the roles and responsibilities of groups and individuals involved in the process, and the cost/benefits one may expect all serve as inputs for public policy debates.

Investments in Human Capital

If being able to add value through participation in the workforce contributes to improved quality of life, it is imperative to ask what contributes to meaningful involvement in the workforce. The consensus answer is “investment in people” (Heckman, 1993), that is, committing resources to the development of human capital so people have the knowledge and skills needed to add value in the workplace. Becker (1964) defined *human capital* as the *sum of an individual’s experiences and training*. According to the research, human capital assets may be influenced by many things “including education, training, on-the-job experience, and fit within the organization’s career

structure.” (Barney & Lawrence, 1989; p. 422). Investments in human capital may be of a general or of a specific nature:

General human capital includes skills, training, or education that possess value in virtually all work settings. Literacy is perhaps the best example....[It] allows an employee to engage in a variety of transactions that hold economic value within and across work settings. Specific human capital, on the other hand, includes skills, training, experience, or education that possess value in a restricted set of work settings. (Barney & Lawrence, 1989; p. 422).

Barron, Berger, and Black (1997) reported an extensive analysis of three national data sets dealing with the incidence and impact of training. Their principal findings may be summarized as follows:

- ...[T]raining generates productivity growth....On-the-job training also increases wage growth.
- ...[T]he data sets agree that nearly all newly hired workers undergo on-the-job training....[C]ollege-educated workers and workers in large establishments receive more training than other workers.
- ...[T]he wages of the least-educated Americans have declined while the wages of the most-educated Americans have increased.
- If employed, workers receive training; if not employed, these individuals will not accumulate human capital....Thus, if you want to raise the earnings of the economically disadvantaged, you should pursue policies that insure they are employed (pp. 185-190).

While their findings are interesting, it is their interpretation of them that puts the workforce development challenge in perspective.

In their opinion (Barron, Berger, and Black, 1997), the private sector training data they analyzed “provides little insight into the design of a government training program to stimulate investment in human capital” (p. 189). So why does training have such a positive impact in the private sector and yet provide so little guidance for public sector programs? In their words because

the results they examined came from “*the interaction of profit-maximizing firms and utility-maximizing workers who jointly agree to an investment in training*” (p. 189, emphasis added). Conversely, they argue that government programs attempting to reverse problems such as the decline in wages among high school dropouts and those with only a high school education are required to make immense investments. Citing the 1994 work of Heckman, Roselius, and Smith, the authors state:

[They] estimate that if training investments will provide a 10 percent rate of return, it would have required over \$212 billion (in 1989 dollars) to return 1989 high school graduates to 1979 wage levels, and it would have required another \$214 billion to return 1989 male high school dropouts to 1979 wage levels. (p. 189).

Barron, Berger, and Black (1997) go on to contend that the “literature indicates the cost estimates of Heckman, Roselius, and Smith are quite conservative.” (p. 189).

The huge costs involved with training less-educated Americans to the point of restoring lost wages is consistent with other data and opinions. For example, Nightingale and Haveman (1997) cite data showing that persons with less than a high school education are 4.9 times more likely to be unemployed than college graduates. Graduating from high school improves it to 2.7 times more likely to be unemployed than college graduates. In addition, there are vast differences in real wage changes from 1979 to 1989 by education level. Wages for all workers increased 5.7 percent, and for those with education beyond grade 12 by 10.8 percent, but they *declined* by -12.7 percent for those with less than a high school education. Similar results are reported by Houseman (1995) who concluded:

Assuming competitive labor markets, the only way to increase real wages of workers and avoid higher unemployment is to increase worker productivity. ...[M]any, including those in the Clinton administration, have advocated government programs to increase worker training....*To reverse the huge decline in real wages among less-educated, less-skilled workers in the United States through training, however, will be neither easy or cheap.* (Houseman, 1995; p. 18, emphasis added).

More recent U.S. Census Bureau education/earnings data were discussed by Ezell in a recent newspaper article (Atlanta Journal/Constitution, September 14, 1997). The data suggest the gap in earnings between the less-educated vs. the more-educated is continuing, perhaps accelerating. The lifetime earnings value of some high school (\$608,810) vs. high school graduation (\$820,870) vs. a bachelor's degree (\$1,420,850) suggests that the "only thing more expensive than going to college, is not going to college." (p. G-3).

Average Annual Income:

	Some High School	High School Graduate	4-Year College Degree
1987	\$22,242	\$26,148	\$39,341
1991	\$23,765	\$28,230	\$44,536
1995	\$25,268	\$32,708	\$52,949

In summary, economic and training data support positive effects from investments in training for the private sector where both the provider of training opportunities and the trainees seek to maximize its benefits and where the investments are disproportionately made in college graduates with strong foundations for new learning. Conversely, remedial public sector programs for the less-educated segment of the population face situations that are "NEITHER EASY NOR CHEAP."

III. Workforce Development Infrastructures and Capabilities

Workforce development infrastructures and capabilities are not created equal. As in the case of other evolving enterprises, there are "innovators, early adopters, late adopters, and laggards" to use Rogers' (1962, 1983) terms. In our recent study of "best practices" in workforce development (Fiscal Research Program, 1997), the expert consensus was that Wisconsin, Oregon and Washington

were innovators, and that several states could be classified as early adopters, including Kentucky and North Carolina. In this section, we profile selected workforce development innovators and early adopters. Since we conducted on-site interviews in Wisconsin, Kentucky and North Carolina as part of our data collection effort, these states serve as the primary examples for this section.

The Innovators. Wisconsin is recognized as a state committed to replacing welfare with work. The new W-2 (Wisconsin Works) Program that came on-line during September, 1997, is the culmination of a series of policy and legislative initiatives and infrastructure developments that began in 1986 when Wisconsin invested \$400,000 to pilot-test four Job Centers, early prototypes of today's one-stops. Today, a state-wide network of 67 Job Centers provides the physical infrastructure for the integrated, multi-agency services needed to launch W-2. In the words of Governor Thompson: "We believe that everyone is capable of some level of work, and W-2 will help participants move directly into work at the earliest possible time. This comprehensive replacement for welfare will demand more of participants, but in the long run it will provide independence and a future." (Thompson, 1996).

W-2's core feature is that it requires participation in one of four work options:

- *Unsubsidized Employment* - job ready unemployed persons are matched with the best available immediate job opportunity in the private sector.
- *Trial Jobs* (Subsidized employment) - short-term wage subsidies for skilled persons lacking work experience.
- *Community Service Jobs* - for persons who need to improve work habits and/or acquire skills before being able to enter private sector jobs.
- *W-2 Transitions* - sheltered employment and treatment for persons unable to perform independent, self-sustaining work even in a community service job.

W-2 represents the current evolution of a series of experimental reform efforts and infrastructure developments culminating in the *1995 Wisconsin Act 289*. The W-2 delivery system is part of the Partnership for Full Employment (July, 1996) operated by the Department of Workforce Development. The partnership is based on collaboration, not competition - that cooperation has employees from state agencies working together in shared space in Job Centers, often operating like self-managed work teams. At those Job Centers where supervision is provided, it may be by a person from another agency, even another sector.

Several of the core characteristics of the Wisconsin workforce development system may be summarized as follows:

Bipartisan Support: While Republican Governor Thompson has provided strong leadership for these reform efforts for three consecutive terms, the initiative was introduced by his Democratic predecessor. Similarly, the series of legislative actions leading to the present W-2 program has had bipartisan support. Perhaps the notable absence of the usual "turfism" on the part of the various state agencies involved in the effort merely models the political leadership of the state.

Infrastructure Investments: Wisconsin used its own resources to start its Job Centers, and later with Federal assistance, built a statewide network of centers.

Evolution, not revolution: With a long-range vision in place, legislation and program sophistication have evolved piece-by-piece in an atmosphere of continuous quality improvement. New programs are implemented and integrated, then corrected as-needed and tweaked to maximize benefits before moving on to the next innovation.

Local Empowerment: Local Collaborative Planning Teams (LCPTs) are responsible for planning and oversight of the Job Centers. The LCPTs included both public and private sector members.

Management by Standards: Statewide standards (Wisconsin Human Resource Investment Council, 1997), developed in a bottom-up manner by LCPTs, describe the five common program functions one must have onsite to be considered a full-functioning Job Center and specify the core services the Job Center must provide to job seekers and employers.

User-Friendly, As-Needed Services: The Job Centers promote “self-service,” but provide “lite services” and “case-managed services” to those who need them. Self-service is made possible by user-friendly automation such as JobNet, an information system for job seekers and employers.

For more than a decade, Wisconsin has been experimenting with ways to decrease dependency on welfare by substituting independence through work. The incremental experiments to date have produced impressive successes, but W-2 is the real test of the overall system. On May 18, 1997, the *Milwaukee Journal Sentinel* issued a special report on Wisconsin’s current welfare reform efforts using the following lead: “The nation watches as Wisconsin undertakes the greatest change in social policy in decades. Thousands of people, many on the dole for generations, face a harsh new world where they must WORK OR ELSE.”

Like Wisconsin, the states of Oregon and Washington are recognized for the success of their strategic planning to reduce welfare rolls and improve the capacity of their citizens to engage in work. For example, Oregon is credited with reducing its welfare case load by 41 percent over a three-year period, ultimately resulting in a savings of \$100 million a year in welfare expenditures. A recent federal review of its JOBS-Plus program is said to have found it to be an “exemplary model of public/private partnership aimed at promoting independence among welfare clients.” (*Full Employment*, 1997; p. 1).

Oregon is also looking to the future by carefully crafting a School-to-Work infrastructure that includes such features as:

- Career awareness at the elementary and middle school levels,
- Career exploration and counseling resulting in a Certificate of Initial Mastery in the 10th grade,

- Structured work-based learning opportunities for those who choose to pursue a Certificate of Advanced Mastery,
- Integration and coordination of academic and work-based instruction (classroom and on-site learning),
- Recognition of the achievement of skill mastery by business and post-secondary institutions, and
- Development of an infrastructure that includes employers, teachers, students, parents, local leaders, and labor. (Oregon State School-to-Work Initiative Report, 1997).

The State of Washington's contribution to our understanding of workforce development systems is its careful analysis of the criteria which define the ideal workforce training and education system. Like recent school-to-work initiatives, these criteria seem to be sensitive to a need to establish more formal relationships between education and work. The State of Washington criteria are presented in Table 1. As can be seen, the criteria add several core characteristics to the above list based upon Wisconsin's experiences. Specifically, the Washington criteria add the following dimensions:

- Ease of movement among education and training programs and to/from the workplace;
- Competency-based learning;
- Coordination with economic development strategies;
- Preparation for life-long learning; and
- Accountability for results.

Early Adopters. The potential list of early adopters would likely include 12-15 states. Since our previous research focused on the Southeastern states, we will limit our comments to Kentucky and North Carolina. Our principal criterion for "early adopter" status is a recognition by the state

that integration of programs and services designed to prepare and/or place workers was the *sine qua non* of a systems approach to workforce development. Kentucky began the process of integrating programs to form a system in 1990 when the General Assembly created the Cabinet for Workforce Development. North Carolina began forming a system in 1993 when Governor Hunt set up by executive order the Commission on Workforce Preparedness “to create a coherent and comprehensive workforce development system from approximately 45 workforce development programs in eight agencies.” (Governor’s Commission on Workforce Preparedness, 1995).

Kentucky’s long-term strategic plan (Smith-Mello, et al., 1996) emphasizes the criticality of basic education and argues that it is the state’s “primary public responsibility for workforce development.” It also describes the need to “engage stakeholders” and argues for a seat at the decision-making table for the private sector. Further, it urges the development of “a holistic strategy for workforce development” and describes three essential components:

- *Strategic Vision.* ...[T]he coordination of governance is essential. It requires a comprehensive, long-term, *interagency* strategic plan that establishes a vision, goals, strategies for their realization, and benchmarks for measuring progress.
- *Institutional Intelligence.* Across the board, policies and programs should be shaped by “institutional intelligence,” comprehensive quantitative and qualitative data that more precisely define and predict client bases, client needs, labor market conditions, economic conditions, program capacity, program outcomes, etc.
- *Resource Maximization.* ...Full utilization of distance learning opportunities could help close obstacles posed by rural isolation, inadequate transportation, and single-parent family responsibilities. Moreover these tools could enable participants to enter education and training at an appropriate level and progress accordingly.

These three requirements are useful additions to our list of core characteristics, especially since strategic vision, intelligence, and new technology help project present best practices into the future.

While Kentucky's integration at the top through its cabinet structure still faces the challenge of integration at the community level, it appears to be closer to becoming a system than the collage of programs in North Carolina where continuing executive orders are used to form commissions that "advise" and "coordinate." In fairness, North Carolina's interim approach was intended to begin the process and to move to a more formalized structure following an anticipated major federal block grant to the states which would have provided an impetus for integrating stand-alone programs into a comprehensive workforce development system. The National Governors Association in an *Issue Brief* (November 30, 1995) entitled, "State Workforce Development System Reform and Block Grants" urged states to prepare for what appeared to be an almost certain major change at the federal level. Now that such changes are declared "dead" for the near future, North Carolina and other states wanting to join the reform group are likely to move ahead on their own to create the formal structures that enable them to develop true workforce development systems to meet the education and training needs of their citizens.

Global Competition for Work. Interestingly, the December 5, 1995, executive order by Governor Hunt of North Carolina establishing Workforce Development Boards begins with the statement: "*WHEREAS, North Carolina needs a competitive workforce to compete in the global economy; and WHEREAS North Carolina must ensure significant improvements in the quality and quantity of its educational and training programs to attain and maintain a world-class workforce; and...*" (Executive Order No. 90). This statement seems to recognize the relationship between

workforce capabilities and attracting/retaining an adequate supply of high quality work in today's competitive global environment.

Earlier research by the authors (Smits & Rushing, 1994, 1996) looked at the impact of economic change in Wales and the use of Training and Enterprise Councils to prepare the workforce for new types of work. Historically, Wales was at the center of the industrial revolution and experienced a long period of economic stability. That period ended quite suddenly in the 1970's with the dramatic demise of its two major industries, coal and steel. The massive unemployment that ensued caused a substantial outward migration of workers and the challenge of creating new economic and workforce development strategies and systems to stem the crisis and prepare for a new future in a competitive, global economy.

With assistance from the UK and Europe, Wales began rebuilding its physical infrastructure (transportation, communication, education, etc.) and retraining its workforce while simultaneously embarking on a long-term effort to attract foreign investment to create jobs. In the beginning, its strategic advantages were limited to land, modest labor costs, and an available workforce with a strong work ethic. These advantages helped attract low-skill manufacturing and packaging jobs that reduced unemployment, but failed to provide the quality of life most regions of the country wanted and expected. Public policies and public investments in support of education and training eventually resulted in a workforce with excess capacity. However, they continued "training for stock" in the belief that a skilled workforce would help attract higher quality jobs.

Wales, a land mass approximately the size of Massachusetts with a population of 2.7 million people known for their friendliness and hospitality, was described by Linden and Rees (1992) as "a country that works." They noted that "In the business of attracting foreign investment, little Wales

has compiled a brilliant record.” (p. 279). Early recruitment efforts resulted in approximately 500 international companies locating in Wales, including 150 from North America, 140 from Europe, and 47 from Japan. Our inquiry into why these businesses came to Wales resulted in various combinations of four basic reasons:

- Market access to Wales, the United Kingdom, and Europe
- The strong Welsh work ethic
- The availability of skilled workers, and
- The quality of life in Wales.

In the mid-1990's with the bulk of the employment crisis behind them, Wales embarked on a new set of strategies that includes attracting a diversified portfolio of high technology jobs especially in the information, telecommunications, and financial management industries; and growing the foreign-owned businesses attracted in the 1980's and early 1990's. With the positive results experienced to date by foreign investors, the growth strategy has worked well, with manufacturing businesses adding distribution capabilities and distribution centers adding manufacturing components. The quest for a diversified portfolio of work is a bit more challenging, time-consuming, and expensive than broad-based recruitment efforts. But policy makers in Wales see diversification as insurance against the economic disaster that can result from the rapid demise of one or two dominant industries.

There are many economic and workforce development lessons to be gleaned from the Welsh experience. (See Smits and Rushing, 1994, 1996 for a complete discussion). However, for our purposes here, the principal ones are: *The role of “stockpiled” workforce skills in attracting new high technology industries to an area; the importance of a diversified portfolio of work to avert*

major economic downturns; and the relative ease with which businesses relocate their enterprises in the new global economy.

IV. Designing the Workforce Development System of the Future

The present workforce development efforts in many states seem to lack the integration required to classify them as systems. Even when there is cooperation among excellent free-standing programs that contribute to workforce development, many of the benefits of a system are lost. In this section, we explore the specifications suggested for a workforce development system capable of meeting the long-term needs of states, communities, and individuals. Admittedly, the proposed system is both ideal and theoretical. However, its major purpose at this point in time is to stimulate public policy discussions and the research needed to advance the implementation of future iterations of workforce development systems.

A Preliminary Review of Specifications

The systems viewpoint by definition looks at complex wholes, rather than fragmented components. Senge's (1990a, 1990b) very popular writings of a few years ago suggest that it is not easy for us to abandon our linear, reductionistic, mode of thinking. But he insisted systems thinking was the only way we could see the patterns of underlying structures that cause behavior and deal with the dynamic complexity which "arises when cause and effect are distant in time and space, and when the consequences over time of interventions are subtle and not obvious to many participants in the system." (1990a, p. 15).

Rather than attempt to review Senge's (1990b) complex book describing systems thinking or simply adopting the brief dictionary definition (Oxford, 1992) of a system being a "complex whole," we prefer the more functional definitions suggested by English and English (1958):

system: *n.* 1. the set of orderly and persisting interrelations between parts of a whole. 2. all the elements that work together to perform a given function. (p. 541).

Using "workforce development" as the "given function" to be performed, we will examine the relationships among the component parts that contribute to its accomplishment. In doing so, we acknowledge that each of these component parts treated here as subsystems may also be viewed as systems or functions in their own right.

Three major infrastructures contribute to the workforce capabilities. The infrastructure with greatest impact, complexity and cost is the *Education Infrastructure* with its many subsystems (public/private, elementary/secondary/higher/technical, continuing, remedial, etc.) and special programs. The most specific job-related training is probably provided by the *Workplace Infrastructure* where employers orient new employees, develop and maintain job-specific skills, and engage in a variety of long-term and remedial training activities to enhance performance.

We have chosen to label the third major infrastructure the *Targeted Groups Infrastructure* because it deals with categories of people deemed to need special assistance in order to enter or re-enter the world of work (e.g., displaced workers, persons with disabilities, welfare recipients, etc.). These special assistance programs require legislation, appropriations, and structures to implement them. As we conducted our best practices research, we were often told there were 150-160 such programs at the federal level and that many states were involved in 40-50 of them depending upon

their specific needs. With effort, we were able to identify approximately half of the stated number at each level.

The three principal infrastructures for workforce development are shown in Figure 1 in relationship to the end result of the overall system, workforce capabilities. Relationships among the infrastructures are designated by bi-directional arrows. This is somewhat misleading in that the flow between infrastructures is quite limited in some instances, or at least biased in one direction. For example, the social agencies that pre-dominate the *Targeted Groups Infrastructure* are more likely to place their clientele in the *Education Infrastructure* than the reverse. Even the flows to/from the *Education Infrastructure* and the workplace, in practice, often are not as balanced or smooth as one would expect. Another system weakness, not made explicit in Figure 1, is the lack of easy transitions within two of the three infrastructures, *Education* and *Targeted Groups*. For example, one of the hoped-for results of the recently adopted federal welfare block grant program that never materialized was better articulation of the programs we have lumped together in the *Targeted Groups Infrastructure*. In fact, the separately accountable agencies, with distinct eligibility criteria, budgets, reporting lines, etc., sometimes compete with each other rather than cooperate, and are often accused of counter-productive “turfism.”

At the community level, it is important to have a balance of available workers and capabilities and work requiring their levels and types of skills. In the absence of balance, employers may be faced with a lack of human resources to expand and/or compete effectively, or there may be a high enough level of unemployment to cause an out-migration of skilled workers. As shown in Figure 2, there are multiple factors that moderate the supply of desirable jobs at the community level. Clearly, workforce capabilities is one of the factors that help attract and retain desirable jobs.

But the community itself plays a part, as does the environment it provides for business, and the formal and informal efforts it makes to attract investments that result in jobs. Figure 3 combines the capacity of the workforce to perform in a manner that adds value with the community's capacity to compete for work in the regional, national, and global economies. Once in reasonable balance, the subtle interplay of requisite skills and desirable jobs is hypothesized, by us, to help maintain the balance.

If the ideal workforce development system has as one of its long-term goals achieving the balanced situation described in Figure 3, and if the relationships among its subsystems are similar to those described in Figures 1 and 2, we can begin looking at the general specifications descriptive of the underlying dynamic complexity (to use Senge's term) of the system. The information reviewed in Part II provides ten general specifications we postulate as desirable for future workforce development systems operating at the state/community level. The system specifications are presented in Table 2. Each general system specification, in turn, requires policies, infrastructures, resources, and/or actions to insure its functional viability.

Requirements Analysis

Here each general specification is analyzed in terms of implementation requirements in an attempt to make them more explicit. They are analyzed in the order in which they appear in Table 2. This order does not imply a priority or the importance given to a particular specification. For the most part, the order is dictated by the ease of summarizing the specifications imbedded in Sections II and III.

Customer-driven and Multi-sector. This general system specification contains two important requirements: First, *improved articulation between the public and private sectors*; and second, *improved methods of training needs assessment*. Too often, the communication between the sectors focuses on complaints by employers about the skill levels of entering employees, the issuing of calls for improvements in the *Education Infrastructure* and its programs, and requests from the public sector for private funding of projects deemed important by agency personnel but for which appropriations are absent or inadequate. As noted in Kentucky's long-term strategic planning document: "If the private sector is to become a full partner in training and education, it must be given a seat at the decision-making table." (Smith-Mello, et al., 1996; p. xix). But how is that to be done? Will elected public officials and appointed agency administrators delegate part of their authority and responsibility to private sector persons who are not accountable to the public? On the other hand, if employers are part of the customer base for workforce development services, if the workplace contributes to developing, maintaining, and upgrading worker skills (as Barron, Berger, and Black's data analysis contends), if they are an integral part of the system, and if they are expected to contribute resources to the overall effort, how can they be excluded from the decision-making process?

The second requirement for this specification is improved training needs assessment. Too often, the assessments used to promote legislation are not upgraded sufficiently to guide on-going implementation and management decisions, to shift program emphases, and if the need declines, to justify the downsizing or even the cessation of the program. Training needs assessment is an expensive and challenging task (Rosow & Zager, 1988) which must be conducted in a competent manner if the results are to be valid, and therefore useful. Additionally, training needs are dynamic,

with changes occurring as population demographics change and as new technologies enter the workplace. Can the customer needs that form the core of this system specification be met if they are unknown? Who will be charged with the responsibility to conduct these assessments and funded to do so? If multiple providers of education and training conduct these assessments independently, how will the information be shared and integrated so an overall system assessment is available for use?

Competitive Advantage. Three requirements result from this specification: First, *the workforce development system must be better than those of its competitors*; second, *it must be linked strategically to economic development*; and third, *it must be operationalized and customized at the level of the community*. The standard for competitive advantage via workforce preparedness is increasing as world-wide competition for work increases. As noted in Great Britain, maintaining competitive advantage may be required more than increased expenditures for education and training:

...If resources continue to be applied in routine ways when needs have markedly changed, then the new resources will not meet needs. They may even make matters worse. This is the *perverse policy syndrome*. (Bennett, Wicks, & McCoshan, 1994; p. 16).

Britain instituted structural reforms in an attempt to improve the competitiveness of its workforce and to obtain improved returns on its investments in education and training. A major structural reform empowered local communities to customize their workforce development activities to meet local needs and encourage economic development (Smits, Rushing, & Hind, 1996).

Providing competitive advantage through workforce preparedness raises a number of issues: Is competitive advantage desirable/equitable when communities within a state are competing among themselves for new businesses? Do states, or even the federal government, have an obligation to

maintain a level playing field among their constituents or should they encourage free-market competition and the creation of winners and losers? Should public resources be allocated to economically successful communities where they are likely to produce the best return on investment or to economically depressed communities where the needs are greater and more costly to meet?

Decoupling workforce and economic development systems is inefficient, may make each less effective, and arguably could be counter-productive in the long term. But these systems are relatively independent in most state structures and therefore lacking in integration at the community level as well. Interdependent programs and activities may be difficult to attain. As Senge (1990b) noted:

...“[S]tructure influences behavior” is a central principle underlying systems thinking, as is “policy resistance,” the tendency of complex systems to resist efforts to change their behavior. (p. 374).

If workforce and economic development systems are to be more integrated (structurally), who should take the lead in bringing about reform, the governor, the legislature, agency directors, or the communities in need of more integrated development?

Motivation to Maximize Outcomes. This system specification *requires a win-win situation for major stakeholders in workforce development outcomes.* The important finding by Barron, Berger, and Black (1997) that training produces demonstrable benefits when both the employer and employee are motivated to maximize outcomes poses a real dilemma for many public sector training initiatives. The provider, often an agency of government, has less of a stake in the outcome than an employer would have. The trainee, perhaps a recipient of some type of financial support secondary to dependency, also has less stake in a positive training outcome. But the message is clear, to get a level of motivated involvement in training that produces value-added outcomes, there must be

positive consequences associated with completing it successfully. One possible way to generate such outcomes might be to involve private sector employers earlier in the process (before vs. after training), setting up a condition where success in training provides the employer with an employee with demonstrated capacity to add value and gives the trainee a guaranteed job that is commensurate with the degree of success attained in training.

Foundation for Lifelong Learning. The requirement here is clear: *A comprehensive, flexible workforce development system must be built upon acquired basic skills.* Let's start with the assumed, perhaps demonstrated, causal relationships that improvements in basic skills increase the probability of mastering required skills later in life and decrease the relative costs (effort, time, money) of doing so. Illiteracy obstructs lifelong learning and that is one of the ways illiteracy is said to cost American businesses an estimated \$225 billion per year in lost productivity (Reese, 1996). Hollenbeck (1996) argues that workplace literacy training programs improve productivity, reduce turnover -- thereby preventing the costs associated with finding, hiring, and training replacements -- and reduce accidents in the workplace. Further, he contends that literacy training eventually leads to the acquisition of higher-level skills, which, in turn, result in higher wages: "An indirect consequence of the higher wages and non-wage compensation earned after training is higher tax payments. ...Society benefits from these additional revenue sources into the public sector." (p. 3).

But what are the most cost-effective strategies for improving basic skills? Is the answer greater resource allocations for elementary and secondary education? Improved teaching methods? Structural changes in how education is delivered? An awareness campaign and/or incentives to increase the number of employers willing to offer literacy training in the workplace? Coaching and mentoring by family, friends, and community volunteers?

Public Policies to Encourage Independence. The obvious requirement here is *to avoid a perverse policy syndrome where allocations of public resources to dependent persons adds to their dependency.* An affluent society such as ours has the resources needed to sustain its less productive members. The danger, however, is the reinforcement of dependency much the way *Behaviorism*, a psychological approach to changing behavior suggests it will. Present public policy debates (for example: *New York Times*, May 7, 1997; *Atlanta Journal/Constitution*, July 19, 1997; and *Green Bay Press-Gazette*, August 25, 1997, and Bartik, 1997) about how much welfare is needed and justified vs. how much is too much, and how to deliver it to avoid known problems, are likely to continue for some time as well-meaning leaders and advocates attempt to meet legitimate needs without creating a multi-generational way of life. Perhaps Wisconsin's ten-year evolution of policies intended to reduce dependency on welfare and its present W-2 program designed to replace welfare with work will provide other states with suggestions on how best to cope with this difficult set of issues.

Compelling Vision of the Future. This system specification calls for *leadership* in the way Bennis and Nanus (1985) used the term. These leadership experts contended that a compelling vision was essential to obtaining follower buy-in and long-term commitment, energizing goal-specific behavior, allocating resources, and seeing strategic initiatives through to completion. But who leads the workforce development system to insure that it becomes a cost-effective, strategically relevant resource? Elected officials subject to change at election time, or perhaps serving terms limited by statute? Business leaders or agency directors who may be accused of self-interest?

Infrastructure and Service Delivery. The requirements here are twofold: *First, to create an infrastructure capable of providing needed workforce development services; and second, a delivery*

system sensitive to customer needs. Unfortunately, at this point we know more about what has not worked than we do about what will work. We know that 40 or more independent programs targeted on different segments of the population and different workforce needs result in costly and unnecessary duplications of infrastructures, services, and administration. We know that a lack of integration at the federal and state levels results in fragmented services at the community level that are difficult for potential users to determine their eligibility and to obtain access to services. Recent widespread experimentation with One-Stop Job Centers suggests this is a viable model, but obtaining statewide coverage using this approach is problematic, especially in rural areas.

When persons using workforce development services encounter bureaucratic hassles or confusion and when they can not move with ease among programs as their needs change, they are less likely to persist in efforts to improve their skills. Even within subsystems as homogeneous as higher education, admission standards differ somewhat among institutions, degree requirements vary, and there are limits on the transfer of credits. While there may be logical explanations for each of these quality controls, persons attempting to use the system see them as impediments.

The current fragmented structure does not facilitate integrated strategies, the cost-effective use of limited resources, or seamless, customer-friendly services. Still worse, it does not authorize, or designate, anyone to resolve the problem. On the positive side, a number of states are innovating their structures, and their experiences may provide starting points for states that are later adopters.

Advancement of Knowledge and Skill. This system specification continues an earlier theme but adds the requirement that *the system provides opportunities for advancement.* One of the impediments to using the system at present is the perception that much of it is remedial in nature. Such a perception obscures the true, long-term value of a system in which individuals and groups

advance their knowledge and skills *pro-actively* in order to produce opportunities for advancement in the future. It is the pro-active nature of training, that is, seeing future benefits, that Barron and his associates (1997) said results in successful outcomes. The reactive nature of the problem-solving that takes place in the *Targeted Groups Infrastructure* (see Figure 1) contributes to the perception that public workforce development programs are only for those in trouble, not for those seeking to maximize their career potential. Do public workforce development programs focus too much on problem-solving at the expense of opportunity building? Is opportunity building for individuals seen as a public good?

Standards and “Institutional Intelligence.” The underlying requirements for this system specification are first, *to shift responsibility and control in the form of standards to stakeholders*, and second, *to develop criteria and information systems so a complex workforce development system can operate like any good business would using objective information to guide its decisions, coordinate its activities, and monitor its effectiveness and efficiency.* These are extremely important system requirements, let’s take them one at a time.

Local control, or at least fine-tuning, of workforce and economic development programs makes all the sense in the world because work is done at the community-level. But many of the resources used to conduct these programs flow from state and federal sources where designated agencies and leaders are held publicly accountable for results. Policy makers in Great Britain faced the same dilemma and opted for a structural change which allowed “local flexibility for government programs within a national strategy.” (Bennett, Wicks, & McCoshan, 1994; p. 24). Businesses face the same dilemmas as they centralize vs. decentralize their control systems. Since there are advantages and disadvantages to either approach, it is often a judgement call based upon a careful

review of strategic options and the structure best suited to implement the preferred approach. Are communities capable of making informed decisions about these complex programs and the standards by which they should be managed and evaluated? Are federal and state personnel located outside a given community capable of ascertaining what its needs and priorities are? Which approach (centralized vs. decentralized) works best for user involvement, cost-effective use of public resources, continuous quality improvement, long-term strategic planning, etc.?

The second requirement is no less challenging. Public programs typically have extensive paper trails tracking expenditures, services delivered, and the demographics of the clientele served. But the information generated is seldom disseminated to other agencies or used as “institutional intelligence” for coordinating interagency services. The development of a system-wide (among and within the three major infrastructures described in Figure 1) management information system is essential to having a true workforce development system. Once again, however, the questions of authority and responsibility come into play.

Accountability for Results and Infrastructure Development. The requirements here are for two types of accountability: *A comparison of actual outcomes to planned objectives, and evidence of attaining quality improvements and developing a long-term strategic plan.* The first requirement is currently met on a program-by-program basis, but the lack of comparable data systems does not allow comparisons among programs. Competent agency directors also engage in the second requirement but again within the scope of their specific programs. The challenge here is to be accountable as a management team across programs and infrastructures so workforce development as an integrated system is accountable for past accomplishments and for capacity-building to meet future needs.

The requirements discussed above are refined and made operational in Table 3. Each requirement is hypothesized to need implementation actions that stand out among the possible choices contained in the table; i.e., Policy Development, Resource Commitment, Structural Change, Innovation, or Attitude Change. In reality, most of the requirements underlying the system specifications need some action in each category. However, we have attempted to hypothesize the high priority starting points for action based upon our observations and experience. These hypothesized implementation starting points, too, are intended to initiate discussion. Readers will have other experiences and vantage points and will likely hypothesize a somewhat different set of priorities.

V. Concluding Statement

Our basic conclusion is that the three major infrastructures (*Education, Workplace, and Targeted Groups*) need to be integrated to form a workforce development system to meet future needs. But we are aware of the enormity and complexity of the task. It would seem impossible to pull three, large, diverse systems together to form a functional system that meets the requirements specified in Table 3. We hope this report will stimulate not only discussion and debate, but meaningful change. We conclude here by recommending a starting point.

Each of the three major infrastructures has a role larger than workforce development: The social agencies represented in the *Targeted Groups Infrastructure* provide countless needed support services to keep their clientele alive, well, and functional. The *Education Infrastructure* prepares people for many aspects of life, not just work; and, of course, the *workplace* exists to produce goods

and services, not merely to train its members. In fact, it is these larger roles that take primacy and make it difficult to focus on workforce development.

Therefore, we recommend a matrix structure of sorts that draws the essential workforce development components from each major infrastructure and combines them to form a system focused exclusively on meeting the workforce development needs of the citizens and communities it serves. This matrix structure (likely a board, cabinet, or commission) should be given meaningful (system) responsibilities and the authority to carry them out, and be held accountable for its decisions and actions. It should be charged with the task of system creation, then following approval by the appropriate oversight group or person, charged with basic operational responsibilities to get its mission accomplished.

This matrix structure must do more than give advice or provide oversight, it must discharge the responsibilities of the workforce development system. That means real control over appropriated resources and how they are allocated to programs and functions, real decision-making authority that enables them to manage programs and functions “co-owned” by the workforce development system and its home-base infrastructure, and real authority to operate as the change agent to improve the workforce development system.

Matrix structures are never easy to manage because by definition they have limited authority and must operate by persuasion (the visionary leadership described earlier), information sharing and cooperation. But they have the advantage of being able to change quickly as new needs arise, accommodate new stakeholders, and integrate functions across complex systems.

Perhaps the most difficult infrastructure to involve in such a system will be the private sector because such involvement will be voluntary and because employers are generally skeptical about

government's capacity to sustain initiatives. However, they have made commitments to a number of school-to-work initiatives currently operating in a majority of states and the White House is getting them involved in welfare-to-work initiatives (UPS,1997). And throughout our research here and in the United Kingdom, we have seen a strong willingness on the part of employers to get involved at the community level.

Perhaps the time is right and the needs are pressing enough to be able to form true workforce development systems out of the array of programs operating within the three separate infrastructures. We think so, but who will spark its development, who will provide the visionary leadership needed to bring it together in your state?

Table 1:
Criteria for The Ideal Workforce Training and Education System

1. Be customer driven - organized around the needs of students, workers, and employers;
 2. Be easy to find and enter, and be designed so that people can move easily among and between programs and the workplace;
 3. Meet the needs of all learners, including those who have been under-served in the past because of racial, ethnic, or cultural differences; gender, disability, or learning style;
 4. Provide support services such as career counseling, child care and financial aid to those who need them;
 5. Be competency-based, so that all students are able to master the skills and knowledge they need in as much or as little time as they need to do so;
 6. Be staffed by people who are prepared to teach a diverse student body, and who have relationships with employers that help them stay up-to-date on changes in their own fields;
 7. Be Coordinated with private sector training programs, with social and other services, and with economic development strategies;
 8. Be based upon full partnerships between (sic) business, labor, and training and education representatives;
 9. Promote the dignity of work and the value of workforce training and education;
 10. Rely on the best labor market information, so that people acquire skill that local industries need;
 11. Provide students and workers with a foundation of basic skills the equip them to be lifelong learners; and
 12. Be accountable for results, and committed to using outcome measures to continuously improve program quality.
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Source: Washington State's Comprehensive Plan for Training and Education, 1994.

Table 2
Specifications for the Workforce Development System of the Future

An acceptable workforce development system for the future must:

- Be customer-driven and multi-sector - organized around the needs of students, workers, employers, and the public.
 - Provide competitive advantage for long-term economic development so communities can attract and retain a broad portfolio of work capable of sustaining their desired quality-of-life.
 - Attempt to simulate the motivational conditions known to produce successful outcomes, i.e., *the interaction of profit-maximizing firms and utility-maximizing workers who jointly agree to an investment in training.*
 - Continuously improve the basic educational programs which serve as the foundation for lifelong learning in a world of work characterized by technological change.
 - Be grounded in public policies that encourage people to seek the dignity and independence afforded by meaningful work and discourage unnecessary dependence on public assistance.
 - Be built upon a compelling vision of the future that produces the buy-in needed to rise above partisan politics and program “turfism” so all stakeholders are energized to attain common objectives.
 - Have the physical, technological, fiscal, and human resources needed to provide comprehensive, timely, flexible/customized services to present and future job-seekers and employers.
 - Be accessible, seamless, user-friendly, and meaningful so people use it not only to solve problems but also to seek-out opportunities to advance their knowledge and skill and improve their job status.
 - Be managed via standards developed by stakeholders, “localized” to meet community needs, and coordinated via “institutional intelligence” to achieve the system attributes of synergy, effectiveness, and efficiency.
 - Be accountable for results, continuous quality improvements, strategic planning, and infrastructure development in order to meet both the present and future needs of its customers.
-
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Source: Literature and research observations reviewed in Part II of this report.

Table 3
Hypothesized Starting Points to Implement Workforce Development System Requirements

<u>System Requirements</u>	<u>Hypothesized Implementation Action Priorities:</u>				
The Workforce Development System of the Future Must:	Policy Development	Resource Commitment	Structural Change	Innovation	Attitude Change
Provide customer-driven services that are relevant, accessible, seamless, and user-friendly	*		*		
Be based upon timely, valid training needs assessments		*		*	
Generate synergy and articulation between public and private sector education and training programs	*		*		
Be linked strategically and operationally to economic development	*		*		
Must be customized to meet community needs and built upon community strengths	*		*		
Provide competitive advantage to individuals, employers, and communities	*		*		
Generate incentives to motivate positive outcomes from training				*	*
Be built upon a strong foundation of basic skills				*	*

Table 3 (Continued)
Hypothesized Starting Points to Implement Workforce Development System Requirements

<u>System Requirements</u>	<u>Hypothesized Implementation Action Priorities:</u>				
The Workforce Development System of the Future Must:	Policy Development	Resource Commitment	Structural Change	Innovation	Attitude Change
Employ state-of-the-art training methods and technologies			*	*	
Encourage and reinforce economic independence through work	*				*
Be managed by measurable standards agreed upon by stakeholders	*				*
Avoid counterproductive and costly infrastructure redundancies	*		*		
Develop stakeholder commitment and involvement through strong, visionary leadership				*	*
Generate and utilize “institutional intelligence” to help insure efficiency and effectiveness	*				*
Be accountable for results, quality improvements, strategic planning, and infrastructure development	*				*

Figure 1: Overview of the Workforce Development System Infrastructure

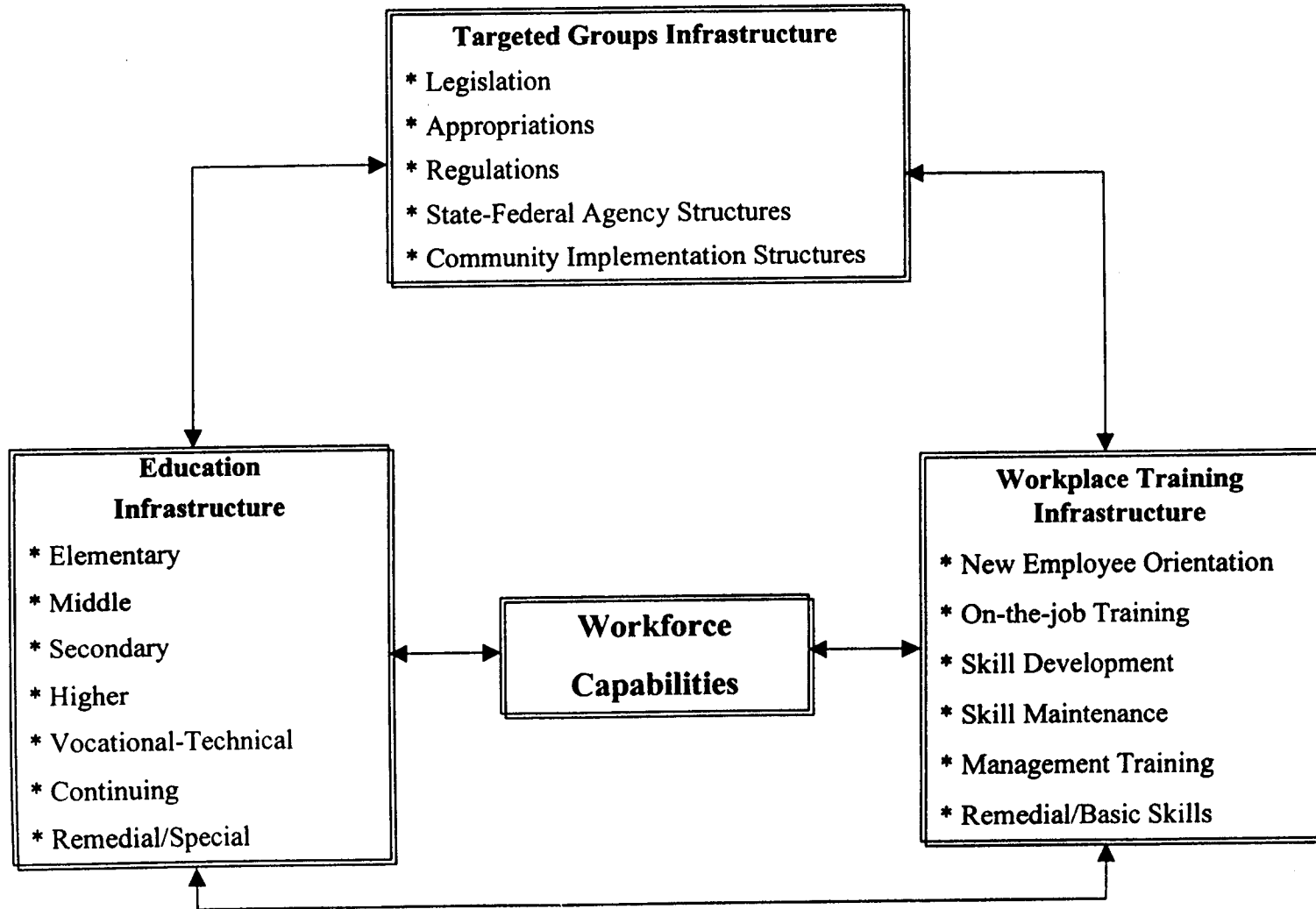


Figure 2: Community Capacity to Compete for Work/Jobs

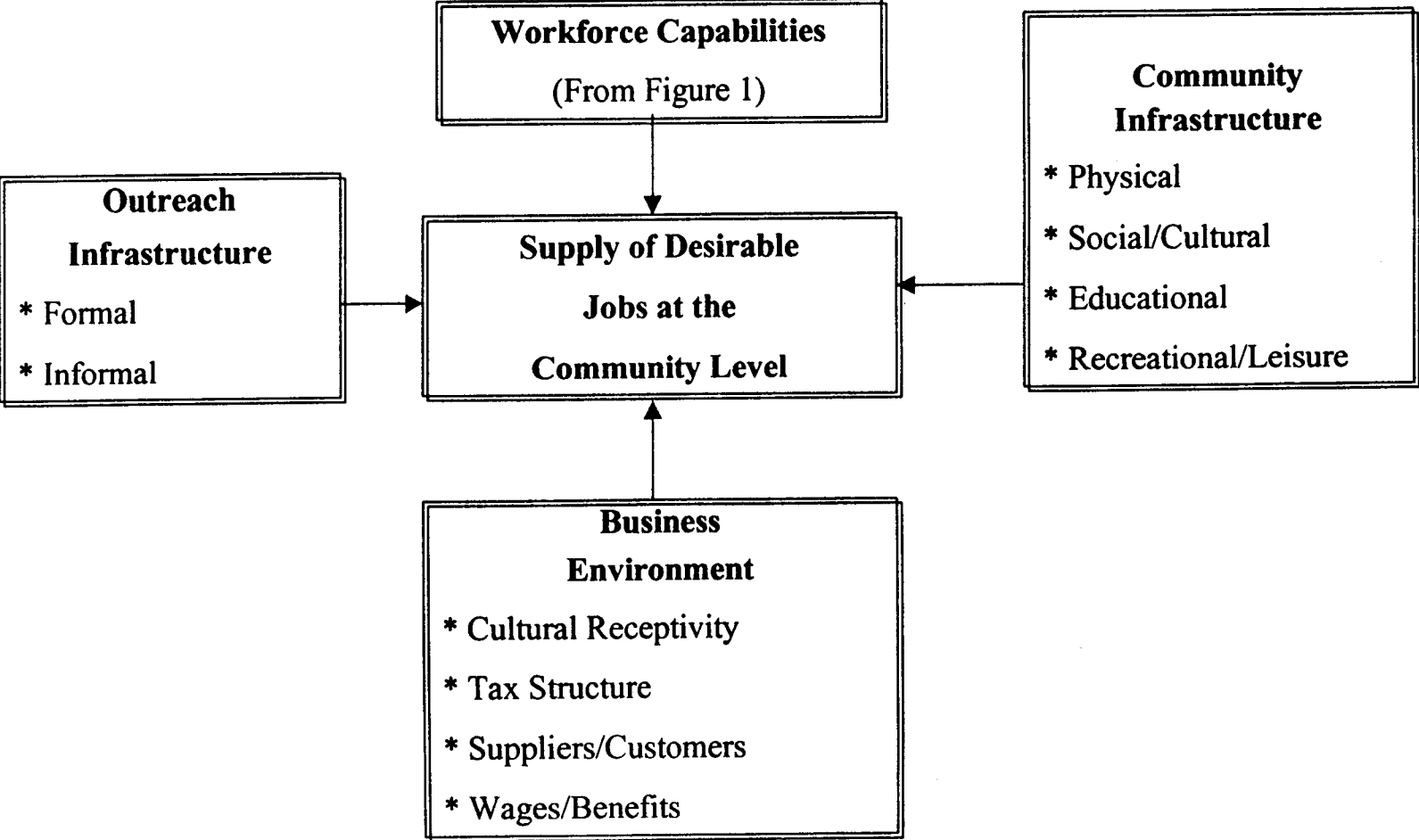
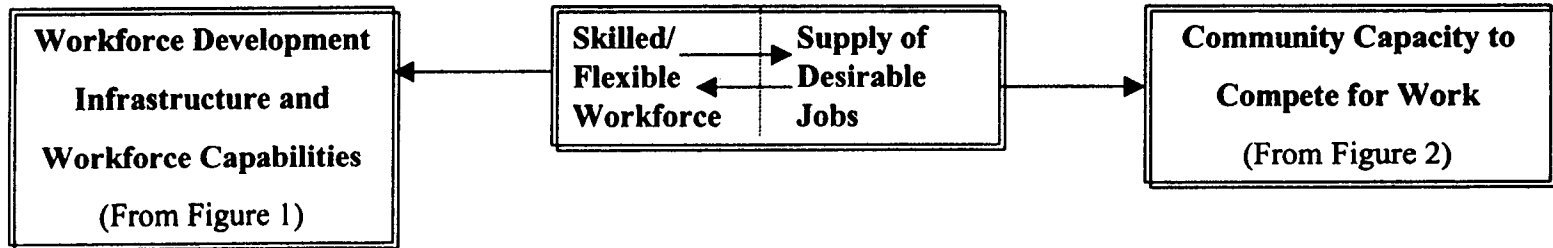


Figure 3: Maintaining a Balance in the Supply of and Demand for Desirable Jobs in the Community



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