

## Aligning Albemarle: Vision 2023

### Education | Economic Development | Business

*The need for investing in human capital is more critical today than ever before because of an enlarging gap between the knowledge, skills, and abilities available in the human capital pool and the workforce requirements needed in a competitive global, knowledge-based economy. (Nolan, 2007)*

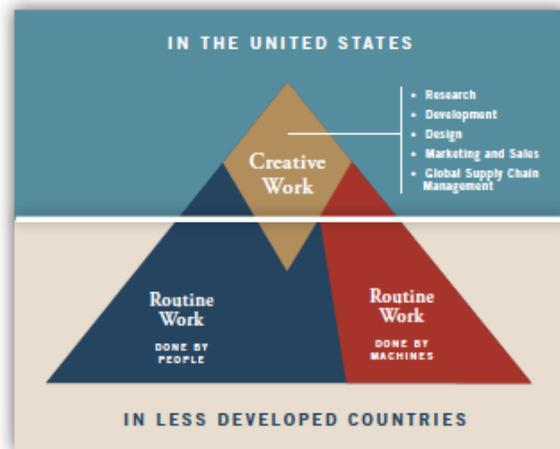
### A New Economic Reality

While no one can predict the future, today's economic and demographic realities suggest the opportunities and challenges that will face America in the years to come. "The U.S. economy has already undergone dramatic changes in the latter part of the twentieth century. The extension of product and labor markets has expanded global competition, and the infusion of technology has been widespread across all sectors of the economy. Both of these forces have affected the structure of jobs and the way we work, fueling increases in educational attainment and the demand for skill." (Carnevale & Desrochers, 2002)

"Our ability to compete as a nation—and for states, regions and communities to attract growth industries and create jobs—demands a fresh approach to public education. We need to recognize that a 21st century education is the bedrock of competitiveness—the engine, not simply an input, of the economy." (2002)

Further, sectoral shifts are currently changing the nature of work, and the Great Recession has aggravated this already challenging trend. "The United States is increasingly a knowledge-based society where workers produce services using analytical skills. The changing economy offers tremendous opportunities for American workers in high technology, in the new clean energy economy, in health care, and in other high-skill fields." (Economic Report of the President, 2010) Notably, the labor market is also changing. "The prototypical American career once involved working for a single employer for many years, backed by a union that bargained for steady wage increases and for a pension that promised a stable, guaranteed income in retirement." Now, however, "fewer than one in seven workers belongs to a union, and most people can count on changing employers several times over their careers." That trend is also expected to continue. (2010)

#### PROTOTYPICAL U.S. INDUSTRY *in 10 years if all goes well*

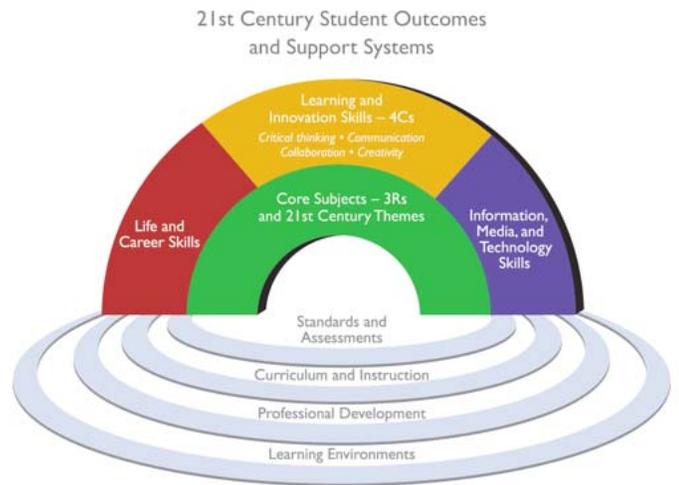


## Education and Skills in a Knowledge Economy

The economic shift has also changed the kind of education and skill necessary for competitiveness. “General reasoning, problem-solving, and behavioral skills as well as a positive cognitive style are increasingly needed to supplement the narrow cognitive and occupational skills sought in a more directed work environment.” (Carnevale & Desrochers, 2002)

“Beyond the assessment of reading, mathematics and science, the United States does not assess other essential skills that are in demand in the 21st century. All Americans, not just an elite few, need 21st century skills that will increase their marketability, employability and readiness for citizenship” (Partnership for 21st Century Skills, 2009) , such as:

- Thinking critically and making judgments,
- Solving complex, multidisciplinary, open-ended problems,
- Creativity and entrepreneurial thinking
- Communicating and collaborating,
- Making innovative use of knowledge, information and opportunities,
- Taking charge of "financial, health and civic responsibilities.



“This is a world in which a very high level of preparation in reading, writing, speaking, mathematics, science, literature, history and the arts will be an indispensable foundation for everything that comes after for most members of the workforce ... Moving from America’s tests to the kinds of examinations and assessments that will capture these and other qualities at the level of accomplishment required will entail a major overhaul of the American testing industry” (Tough Choices or Tough Times, 2007)

*In addition, knowledge of foreign languages, cultures, and global markets will become increasingly important for future graduates entering the U.S. workforce.*

(Cassner-Lotto, 2006)

“Findings indicate that applied skills on all educational levels trump basic knowledge and skills, such as Reading Comprehension and Mathematics. In other words, while the “three Rs” are still fundamental to any new workforce entrant’s ability to do the job, employers emphasize that applied skills like Teamwork/Collaboration and Critical Thinking are “very important” to success at work . (2009)

## The Looming Postsecondary Education Gap

“America is slowly coming out of the Recession of 2007—only to find itself on a collision course with the future: not enough Americans are completing college. The Georgetown University Center on Education and the Workforce (2010) shows that “by 2018, we will need 22 million new college degrees—but will fall short of that number by at least 3 million postsecondary degrees, Associate’s or better. In addition, we will need at least 4.7 million new workers with postsecondary certificates. At a time when every job is precious, this shortfall will mean lost economic opportunity for millions of American workers. Over the past three decades, higher education has become a virtual must for American workers.” (Carnevale, Smith, & Strohl, 2010)

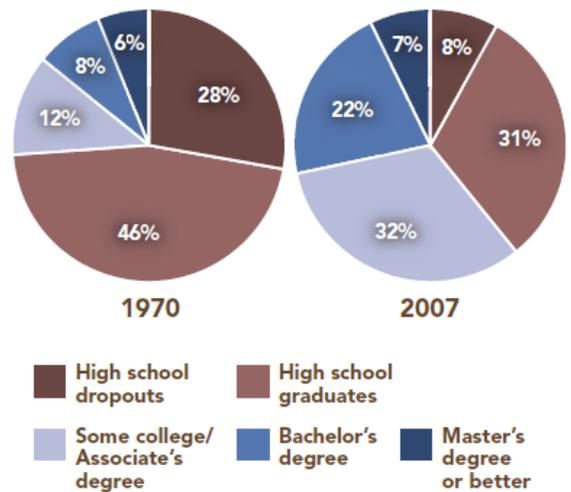
*Postsecondary education has become the gatekeeper to the middle class and the upper class. (2010)*

“Between 1973 and 2008, the share of jobs in the U.S. economy which required postsecondary education increased from 28 percent to 59 percent. According to our projections, the future promises more of the same. The share of postsecondary jobs will increase from 59 to 63 percent over the next decade. High school graduates and dropouts will find themselves largely left behind in the coming decade as employer demand for workers with postsecondary degrees continues to surge.” (2010)

“A swiftly rising number of American workers at every skill level are in direct competition with workers in every corner of the globe. If someone can figure out the algorithm for a routine job, chances are that it is economic to automate it. Many good well-paying, middle-class jobs involve routine work of this kind and are rapidly being automated.” (Tough Choices or Tough Times, 2007)

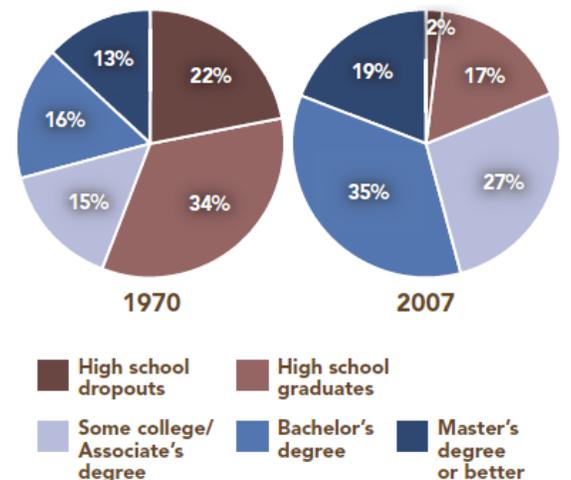
Increasingly, the middle class is composed of workers with postsecondary education and training. In 1970 only 26% of the middle class had postsecondary education. Today, 61% need postsecondary education.

Source: Authors’ analysis of March CPS data, various years; Center on Education and the Workforce forecast of educational demand to 2018

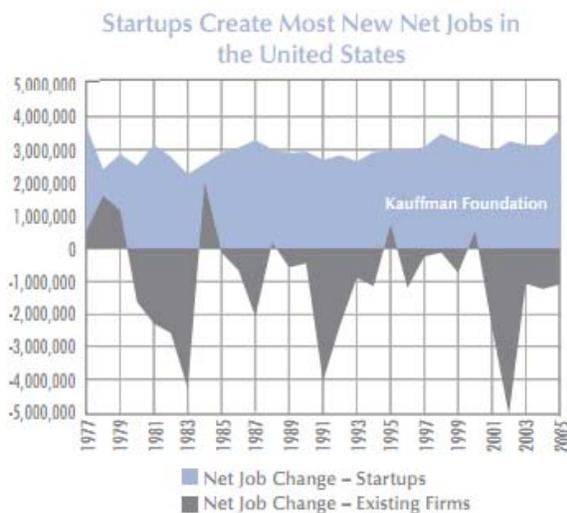


Increasingly, the upper class is composed of workers with postsecondary education and training. In 1970, only 44% of the upper class had postsecondary education. Today, 81% have postsecondary education.

Source: Authors’ analysis of March CPS data, various years; Center on Education and the Workforce forecast of educational demand to 2018



## Job Creation in a Knowledge Economy



The Kaufmann Foundation analyzed data between 1977 and 2005 and discovered that, on average, new firms add 3 million jobs annually, whereas older companies lose 1 million jobs annually. This means, essentially, job growth in the U.S. is driven entirely by start-ups. “And it’s not just net job creation that startups dominate. While older firms lose more jobs than they create, those gross flows decline as firms age. On average, one-year-old firms create nearly one million jobs, while ten-year-old firms generate 300,000. The notion that firms bulk up as they age is, in the aggregate, not supported by data.” (Kane, 2010)

Saras Sarasvathy, U.Va. Darden professor and internationally-recognized expert on entrepreneurship, finds that successful entrepreneurs engage “effectual reasoning”—that is, they do not begin with a specific goal. Instead, they set out “with a given set of means and allow goals to emerge contingently over time from the varied imagination and diverse aspirations of the founders and those who they interact with. Effectual thinkers are like explorers setting out on voyages into uncharted waters”. (Sarasvathy, 2008) They begin with three categories of means:

1. Who they are—their traits, tastes, and abilities
2. What they know—their education, training, expertise, and experience
3. Whom they know—their social and professional network

Thus, many of the same skills necessary for successful job performance in a knowledge economy, are, interestingly, the same skills necessary to *create* those jobs.

## Economic Impact of Education

In the 2010 report, *The High Cost of Low Educational Attainment*, OECD researchers assert, “There is one message: past experiences suggest that there are enormous economic gains to be had by OECD countries that can improve the cognitive skills of their populations. Moreover, the gains, put in terms of current GDP, far outstrip the value of short-run business-cycle management. This is not to say that efforts should not be directed at current issues of economic recession, but it is to say that the long-run issues should not be neglected. (OECD, 2010)

What’s more, “if the United States had in recent years closed the achievement gap between its educational achievement levels and those of better-performing nations such as Finland and Korea, GDP

in 2008 could have been \$1.3 trillion to \$2.3 trillion higher. This represents 9 to 16 percent of GDP.” (McKinsey & Company, 2009)

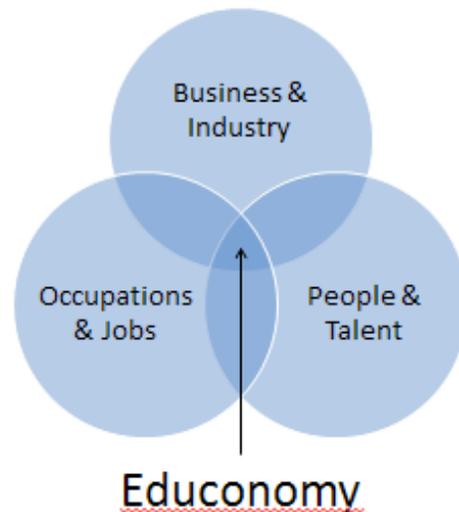
More locally, Segedy reports that, from the perspective of the site selection and economic development industries, public education was ranked fourth in importance among ten quality-of-life factors. The top three factors in order of importance were cost of living, higher education, and “nature-oriented” outdoor options. (Weiss, 2004) A survey undertaken by Segedy and others (1994) of fifty Indiana communities found that when quality of life does become an important location factor—as it often does with technology related companies—“economic development professionals consistently rate education at or near the top of the list.” (Segedy, 1997)

### What is Alignment?

The Education Commission of the States (ECS) reports that education and economic development planning typically function separately from one another and the economic impact of K12 institutions have largely been absent in policy discussion. (Vandal, 2009)

As separate sets of policy, they often conflict and, consequently, do not maximize their impact on the overall economic health of a state or region. Tim Alford, Teresa Chasteen and Katherine DeRosear of Worldwide Interactive Network, Inc. (WIN) argue these three policy areas should be aligned into a single strategy they term the “Educonomy.” According to WIN, understanding a region’s educonomy requires the following (2009) :

- identifying business and industry talent needs,
- understanding the current and emerging occupational and job-specific skills that are in demand,
- and take an inventory of the quantity and quality of people willing and able to seek employment in critical occupations.



### Conclusion

The best employers the world over will be looking for the most competent, most creative and most innovative people on the face of the earth. This will be true not just for the top professionals and managers, but up and down the length and breadth of the workforce. (2007)

It is our aim for this Board work session to begin dialogue toward alignment, to position Albemarle County and prepare its youth for the global, knowledge economy that awaits them.

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