• Biological technicians, a key biotechnology occupation, is expected to grow by 19.4% between 2002 and 2012, while the occupation of biological scientists is projected to grow by 19.0%.
(U.S. Bureau of Labor Statistics, National Employment Data)

• The biotechnology industry employed 713,000 workers in 2002 and is anticipated to employ 814,900 workers in 2007.
(Economy.com, Industry Workstation, Biotech industry forecast)

• The population of companies engaged in biotechnology is dynamic and growth in the biotechnology-related workforce has been vigorous, averaging 12.3% annually for those companies that provided data for 2000-2002. Companies with 50 to 499 employees experienced the fastest growth, with an annual increase of 17.3%, while growth among larger firms was 6.2%.
(U.S. Department of Commerce, A Survey of the Use of Biotechnology in U.S. Industry, Executive Summary for the Report to Congress)

Recruitment and Retention
To succeed and grow in the 21st century economy, biotechnology employers need to fill each position in their companies, from entry-level to the most advanced, with qualified, skilled individuals. Because the industry is experiencing such rapid growth, biotechnology firms often demand more skilled workers than are available and are projected to need more workers than are currently enrolled in training programs.

Skills Competencies and Training
While there may be instances where locally industry-driven career ladders and competency models exist, the lack of nationally-recognized articulated skills competencies and career ladders as well as sources of training presents a challenge. This is complicated by the rapidly changing environment in which the industry operates. Advances in the underlying sciences continuously affect the technology and processes used by the biotechnology industry, making it necessary for employees working in the industry to continuously upgrade their skills to maintain productivity.

Image and Outreach to the Public
Youth, educators, and job seekers lack clear information about career options within the biotechnology industry and generally fail to understand the depth and range of the industry’s activities. This disconnect is a challenge for the industry because the lack of definition and outreach limits the number of people who consider the biotechnology field to be a viable career option.
The U.S. Department of Labor (DOL) has sought to understand and address the critical workforce needs of the biotechnology industry. DOL held forums with employers, representatives from industry associations, and others associated with the biotechnology industry to learn about their hiring and training needs and potential solutions to those challenges.

U.S. Secretary of Labor Elaine L. Chao has announced a series of investments totaling approximately $18 million to support comprehensive partnerships that include employers, educators, the public workforce system, labor-management organizations, and other entities. These innovative approaches address the following workforce needs of business while also effectively helping workers find good jobs with good wages and promising career pathways in the biotechnology industry:

- expanding the pipeline of youth by creating awareness of biotechnology and biotechnology careers at the elementary and high school levels;
- helping alternative labor pools gain industry-defined skills and competencies;
- developing alternative training strategies such as apprenticeship;
- developing tools and curricula for enhancing skill sets;
- enhancing the capacity of educational institutions;
- developing industry-defined career ladders and lattices;
- developing strategies to retain and retrain incumbent workers; and
- assisting transitioning individuals from declining industries to biotechnology careers.

For additional background information about the industry and details on the grants, information about employment and training opportunities, and workforce development tools for employers, educators, and workforce professionals please refer to the following: [www.doleta.gov/BRG](http://www.doleta.gov/BRG), [www.careervoyages.gov](http://www.careervoyages.gov), [www.careeronestop.org](http://www.careeronestop.org), and [www.workforce3one.org](http://www.workforce3one.org).