

---

## *Competency Models In Action:*

# **New Jersey Workforce Development Partnership Uses Bioscience Competency Model to Connect Job Seekers and Employers**

June 2010

### **Introduction**

Bio1Stop is a workforce development partnership of regional industry groups, businesses, Workforce Investment Boards, educational and research institutions, and government and non-profit organizations, named for the central New Jersey Route 1 corridor where many bioscience firms are clustered. The partnership was formed to support one of the governor's economic development strategies to create quality, high-paying jobs, and a skilled bioscience workforce. Bio1Stop aims to transform the rich array of existing bioscience education, training, and economic development initiatives into a world class bioscience talent development system.<sup>1</sup>

### **The Workforce Need**

Developing the workforce for an industry sector requires an analysis of the worker knowledge, skills, and abilities needed by employers in the industry and region. Workforce development also means developing strategies for recruiting, educating, hiring, and retaining workers. The Bio1Stop initiative focuses on several key strategies that address the development of a skilled workforce:

- *Exciting* young people about the bio-sciences – strengthening the pipeline of new workers
- *Creating* career pathways from K-12 through university level educational institutions through articulation agreements, mentoring, and professional development
- *Transforming* graduate education with the development of professional science master's degrees that integrate business and science disciplines
- *Increasing* education, training, and re-training opportunities for the existing workforce
- *Enhancing* linkages between education and industry through internships, cooperative education, and mentoring

The implementation of these strategies requires a clear understanding of the workforce needs of the regional employers.

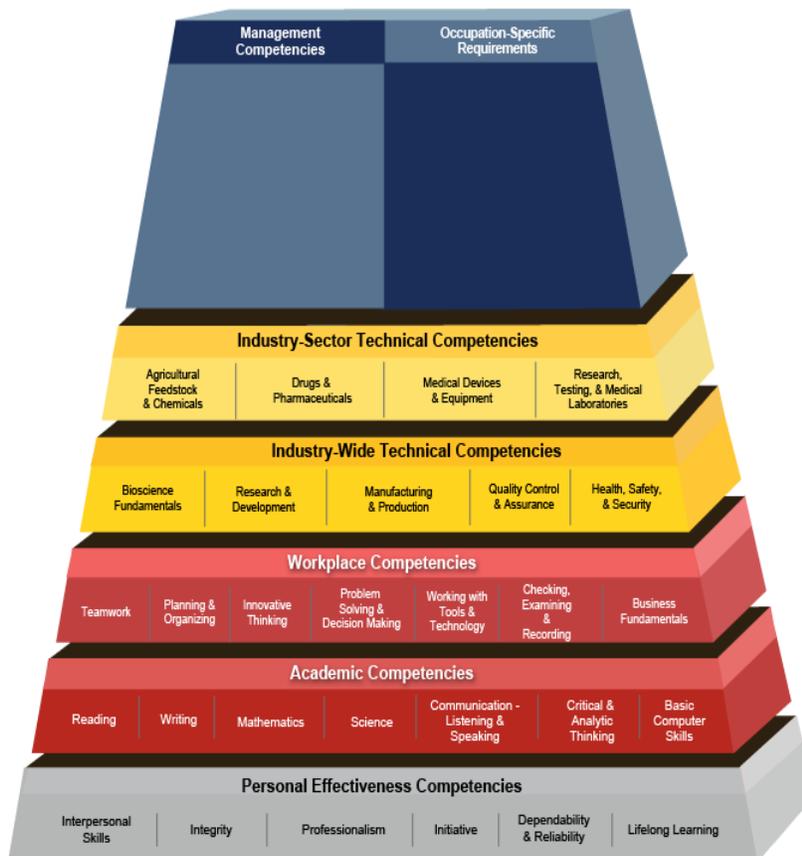
### **Solution: The Bioscience Competency Model**

Mary Ellen Clark, Executive Director of Bio1Stop, has had experience using competency models in both the corporate and workforce development settings. She values competency models as frameworks for identifying training and as tools for objectively evaluating workers' skills.

---

<sup>1</sup> About Bio1Stop, <http://www.bio-1stop.org/about/>.

## Bioscience Competency Model



Ms. Clark had participated in the validation process of the Bioscience Competency Model, developed as a collaborative effort between the U. S. Department of Labor, Employment and Training Administration and education and industry leaders. She saw its value for supporting the Bio1Stop goals.

The Bioscience Competency Model organizes competencies into a pyramid framework with five tiers. The first three tiers describe the foundation competencies applicable to workers in any industry. The fourth tier contains the competencies required for workers throughout the Bioscience Industry. The fifth tier defines four major bioscience industry sectors.

Many of the programs within the Bio1Stop initiative are using the Bioscience Competency Model to support their projects and are promoting its use with their partners. Bio1Stop considers the model a useful catalyst for discussing skills needs, making it a valuable resource for job seekers, employers, and workforce development professionals as they collaborate to match qualified workers with job opportunities. This tiered system for depicting skill needs provides a resource for helping displaced workers from other industries find employment in the biosciences.

### Identifying Transferable Skills

The competency model demonstrates the potential for hiring displaced workers from other fields. Bio1Stop is using the Bioscience Competency Model to help displaced workers evaluate their existing skills, identify gaps, and find the training they need to enter the bioscience field. For example, workers with business or administrative skills who were displaced by the decision to close Fort Monmouth or the economic downturn may have the potential to transfer to the business side of the bioscience industry. Often these workers only need to learn industry fundamentals and bioscience terminology to become qualified applicants. Workers with a scientific, environmental, or engineering background in other fields often have transferable skills that can help them find employment in the bioscience industry. For employers, the model is a useful tool for articulating their specific skill needs. They need workers who have academic and workplace competencies and the potential to learn basic bioscience skills.

---

### Bio1Stop's Job Matching Site

Bio1Stop has developed a Job Matching Site as a tool for both job seekers and employers. Applicants create an account with a personal profile, and can post their resumes and search for jobs using selection criteria or by keyword. Employers from industry, academia, and government can use the site to post full or part-time jobs, fellowships, internships, and research opportunities.

To help job seekers articulate the skills they possess, the Job Matching Site has a special feature developed using the Bioscience Competency Model. The Bioscience Skills Inventory lists important bioscience work activities grouped by area of specialty. Job applicants complete the skills inventory by checking boxes to indicate their skills and the information is added to the applicant's profile. Employers are encouraged to use the key words found in the skills inventory to search for applicants who have the specific skills they need.

### Establishing Internships

Bio1Stop is instrumental in establishing internship opportunities for students to help them gain the real-world work experience critical for finding employment. Bio1Stop found it challenging to place interns in many of the small and medium sized firms in the area. These firms felt they could not hire interns because they did not have the resources to train them. Using the Bioscience Skills Inventory and the competency model, Bio1Stop helps students and employers communicate about skill needs to find a good match. Students are able to show that they already possess skills that would make them a worthwhile hire for these firms. Firms are able to find interns who are work ready and possess clearly defined competencies.

### Partnerships with Education

To ensure a pipeline of new entrants into the bioscience workforce, the Bio1Stop partners determined that they needed to get young people excited about the biosciences. The Bioscience Competency Model is used as a resource for reaching out to K-12 students and teachers. The Monmouth County Vocational-Technical Biotechnology Career Academy High School in Freehold, NJ is using the model to inform and evaluate its curriculum. Monmouth University and Rutgers University are also using the model to analyze how their bioscience programs are preparing students to meet the needs of business. Through programs funded by Bio1Stop, the four community colleges in the region are creating associate degrees that prepare students for immediate career opportunities in pharmaceutical or biotechnology companies or transfer to upper division colleges and universities. By working with educators from K-12 through university levels to create articulation agreements, mentoring programs, and professional development opportunities, Bio1Stop is creating career pathways in the bioscience industry. This helps Bio1Stop achieve one of its primary goals: to help high school and college students enter the bioscience workforce.

For more information about Bio1Stop and the Bioscience Competency Model, visit the Related Links below.

---

## **Related Links**

Bio1Stop

<http://www.bio-1stop.org/>

Bioscience Skills Inventory

<http://www.bio-1stop.org/jobs/inventory?site=new>

Bioscience Competency Model

<http://www.careeronestop.org/competencymodel/pyramid.aspx?BIOSCI=Y>

Competency Model Clearinghouse

<http://www.careeronestop.org/competencymodel/default.aspx>