



New Education and Skills Requirements for the New Jersey Economy

**Carl Van Horn, Ph.D.,
Professor and Director**

**Aaron Fichtner, Ph.D.,
Director of Research and Evaluation**

The John J. Heldrich Center for Workforce Development
Edward J. Bloustein School for Planning and Public Policy

Workforce Challenges Posed by a Global Economy

- **Skill requirements of jobs at all levels are changing rapidly.**
- **Changes present new challenges to job seekers, educators, and workforce development professionals.**
- **Since 1997, the Heldrich Center has worked with the State Employment and Training Commission, a wide variety of state agencies and departments (including DOE), local and regional governments, and employers to address these challenges.**



Overview of Existing Efforts

Career Connections

An Initiative Funded by Verizon NJ

Key Partners

- The State Employment and Training Commission
- NJ Department of Education
- NJ School Counselors Assn.

Ready for the Job

An Initiative of the State Employment and Training Commission

Key Partners

- NJ Department of Labor and Workforce Development
- New Jersey Department of Education
- New Jersey Commission on Higher Education
- Governor's Office of Economic Growth
- Employers / Industry Assns.

NJ NextStop.org

An Initiative of the State Employment and Training Commission

Key Partners

- The State Employment and Training Commission
- NJ Department of Labor & Workforce Development

Consumer Report Card

An Initiative Funded by NJDLWD

Key Partner

- NJ Department of Labor & Workforce Development
- The State Employment and Training Commission

Industries and Topics Covered by the Ready for the Job Research

The Heldrich Center has conducted more than **300** employer interviews and more than **20** industry advisory council meetings since 2002 to inform:

- **15 industry/special topic reports**

Construction	Finance (2)
Information Technology	Health Care
Manufacturing	Tourism/Hospitality
Transportation/Logistics	Utilities/Infrastructure
Retail	Port Newark/Elizabeth
Public Health Preparedness	Life Sciences
Remote Work	Green Jobs in Energy

- **2 reports on emerging cross-industry skills (2003 and 2007)**



Overview of Key Findings:

**The Emerging Skill Needs of New Jersey's
Rapidly Changing, Innovation-Driven Economy**

Six Evolving Workplace Trends

TREND #1.

Competitive advantage of firms that harness knowledge and innovation

TREND #3.

Continued and expanded reliance on technology in the workplace

TREND #5.

Employers focused on privacy, security, and ethics concerns

TREND #2.

Decentralization of business operations and management

TREND #4.

Increasing diversity in the workplace

TREND #6.

Business processes change in response to shifts in regulations

Implications for Workers' Skill & Education Requirements

- **Skills needed for jobs at all levels are increasing & changing rapidly.**
- **Five broad priority skill areas identified by employers:**
 - **Adaptability Skills**
 - **Information Management and Communication/ Relationship-building Skills**
 - **Business Skills**
 - **Math/Science/Engineering/Technology Skills**
 - **Interdisciplinary skills**



Adaptability Skills

- Critical thinking and problem-solving skills
- Monitoring
- Flexible role orientation
- Manage organizational change
- Lifelong learning
- Time management
- Career management



Adaptability Skills

Changing Job Skills Snapshot:

- In order to fill high-demand pharmacist jobs, store managers at a large New Jersey retail pharmacy chain must develop new scheduling policies and procedures that appeal to older workers who expect flexible work hours.
- Line installers at telecommunications firms must understand a new generation of telecom products, and acquire the additional technical skills needed to install them.

Information Management and Communication/ Relationship- Building Skills

- Gather, prioritize, and analyze data and information
- Convey knowledge gained through analysis
- Cultural understanding, awareness
- Public speaking / presentation
- Writing
- Teamwork
- Negotiation



Information Management and Communication/ Relationship- Building Skills

Changing Job Skills Snapshot:

- Managers at a New Jersey defense contractor must increasingly build relations with “virtual” engineers and other employees in remote locations, and manage their progress via electronic communications.

Business Skills

- Project management
- Product management / marketing
- Sales / customer service
- Basic business finance
- Management skills, especially in a virtual environment



Business Skills

Changing Job Skills Snapshot:

- After the deregulation of the finance industry in 1999, customer service insurance agents had to acquire sales skills in order to promote a complex assortment of banking and security products.
- Project managers must often supplement their technical expertise with the business skills needed to direct diverse, multinational teams through virtual networks.

Math/Science/Engineering/ Technology Skills

- Advanced knowledge in a single math/science/engineering discipline
- Basic knowledge in a technical discipline
- Understand and apply new technologies, including distance learning tools



Math/Science/Engineering/ Technology Skills

Changing Job Skills Snapshot:

- Chemical plant production workers must now master new technology in order to monitor threats to plant security and worker safety, and to maintain proper records.
- Electronics engineers are increasingly hired as consultants rather than as corporate staff, requiring them to pursue their own training to stay current with the latest technology.

Interdisciplinary Skills



- Knowledge of multiple science, engineering disciplines
- Combined business and science/engineering skills



Interdisciplinary Skills

Changing Job Skills Snapshot:

- Emerging sectors -- such as nanotechnology -- require Research & Development scientists to master more than one scientific field, and supplement their technical knowledge with the entrepreneurial skills demanded by newly-launched technology companies.



**Talent Networks:
A Sectoral Response to
the Emerging Skill Needs of New Jersey's
Rapidly-Changing, Innovation Driven Economy**



Creating Industry Talent Networks that:

- 1. Integrate the 5 key priority skills into existing curricula when possible;**
- 2. Expand work-based learning opportunities (internships, co-op education) for students at all levels; and**
- 3. Develop a sustainable, well-coordinated model / process for:**
 - Understanding and responding to the changing education and skill requirements of today's economy;**
 - Expanding meaningful connections between employers, educational institutions, and workforce development providers; and**
 - Strengthening relationships among educational institutions.**

Possible Model: Transportation, Logistics and Distribution Talent Network

New Jersey
TLD Talent Network

Building a Skilled Workforce for
Transportation, Logistics, and Distribution

TLD Talent Network was founded in the summer of 2008 with 14 original members.



The Network was publically-launched on November 24th with a TLD Workforce Roundtable at Kean University attended by more than 100 employers, industry associations, educators and workforce development leaders.

Goals of Talent Networks

1. **Identify workforce needs through extensive, on-going employer engagement.**
2. **Develop new curricula and refine existing curricula to meet industry needs.**
3. **Disseminate improved information about the workforce needs of the sector to students, job seekers, job / career counselors, educators, and job developers.**
4. **Assist individuals to obtain employment in the industry and to strengthen career ladders in the sector.**
5. **Improve incumbent worker training that assists employers to adjust to new technologies and assists employees to obtain new skills.**

Overview: Transportation, Logistics and Distribution Talent Network

New Jersey
TLD Talent Network
Building a Skilled Workforce for
Transportation, Logistics, and Distribution

