

Workforce Information System Overview

The dream of a comprehensive employment statistics system has rapidly become a reality. Born of the need for better communication between data producers and users, this collaborative effort among the states and the United States Department of Labor is an idea whose time has come. The vision of putting the American public within easy reach of all the information and tools needed to make intelligent career and business decisions has reached fruition. Over time, it has expanded from the original conception of an integrated and standardized delivery system for labor market information into something much more comprehensive.

The *Workforce Information System* that has emerged incorporates all elements of America's Career Kit, O*Net, Bureau of Labor Statistics program data as well as customized state products. A data management platform known as the America's Labor Market Information System (ALMIS) Database, which was developed by a consortium of states, serves as the standard repository for most of the state and local workforce information. File structure and layout are standardized across the nation, with certain core elements of information common to all states. Each state has the responsibility for populating its particular database. These state databases serve as the cornerstone for delivery of state and local information. Information delivery systems may vary, but all states are required to have a standard core of data products. These can be supplemented at the state level with customized information in response to state and local needs.

Implementation of the *Workforce Information System* has greatly improved the capacity to collect, analyze, disseminate and use information. Electronic delivery via the Internet allows for links between state data systems, significantly enhancing the free exchange of workforce information among states. For the first time in history, customers are able to make valid comparisons of national, state and local data.

America's Career Kit, which combines America's Job Bank, America's Talent Bank, America's Career InfoNet and America's Learning Exchange into a single integrated system, is designed as a portal through which job seekers and employers can find jobs, explore career possibilities, or find suitable employees. States retain the right to choose whether or not to list job openings with this national system. The Occupational Information Network, known simply as O*Net, serves as a valuable companion to America's Career Kit. O*Net is a relational database which incorporates a common language for job and skill descriptions. It is a further resource for identifying skills and educational requirements in the career exploration and job classification process.

Data collected through the federal-state Bureau of Labor Statistics programs remain a vital part of workforce information. In many cases, these data serve as the starting point for the development of new information series. The long history of reliability and accuracy of the BLS data series allows the states to use them with confidence as they develop new products in response to customer needs.

The flexibility inherent in the *Workforce Information System* gives state and local workforce professionals a greatly increased capacity to design products and services tailored to local needs. Ironically, the standardization of the core statistical products serves as the foundation for this new-found flexibility by increasing the avenues of access to data. Advances in information technology further enhance the states' ability to share information across programs and geographic areas within or among states.

Workforce Information System

- ▶ How can my workers get the skills training they need to keep the company competitive?

How can I help my students explore career and education choices? ◀

- ▶ Will there be enough workers with the right skills for my business expansion?

How can I help my One-Stop Center customers find quality skills training? ◀

- ▶ Where can I find a job with good pay and prospects of continued employment?

Are these training programs worth the billionsof dollars we are spending on them? ◀

The *Workforce Information System* offers a wide range of products and services that respond to these and countless similar questions being asked at state and local levels.

The Workforce Investment Act of 1998, built on the principles of individual choice and local level decision-making, emphasizes the importance of high quality, accessible and relevant information about the labor market as a tool for making sound choices.

While the Act refers to the “employment statistics system”, the more descriptive term “*Workforce Information System*” has evolved to better express the spirit of the law and to more clearly convey the system’s capacity and purpose. The system provides not only statistics, but also value-added analysis, information delivery and support to its customers. The system allows for flexibility, while supporting state efforts to develop and provide customized local information products and services.

The tremendously diverse range of customer needs and expectations requires a broad array of information that can be made available quickly and in user-friendly formats. Information resources must incorporate customer preferences for level of detail and geographic area, as well as method of access to the information.

Vision

The Workforce Information System will provide quality information that its customers can easily access and use to make informed choices.

- The nationwide system will provide comparable data for all states, and be responsive to customer needs for local, state, and national information.
- The system will anticipate and meet the changing needs of customers, support analysis and research, and use customer feedback for continuous improvement.

Achieving the Vision

- Data Collection and Development
- Analysis
- Data Quality
- Information Dissemination
- Research and Development
- Customer Feedback

customers. The analysis of workforce information is an art as well as a science. The experience and expertise of data analysts in each state add valuable insight to the information, going beyond mere statistics to provide a more descriptive picture of economic conditions.

Data Quality

Information collected through the *Workforce Information System* is subject to stringent quality control measures. More than any other entity, the states have an unparalleled history of statistical integrity in the collection of workforce data. Collected under the

System Components And Characteristics

In light of the diversity of customer information needs, the *Workforce Information System* goes beyond mere statistics. The system builds on existing strengths as well as introducing essential enhancements. Major components of the system include the following:

Data Collection

Extensive data collection procedures are already in place for producing a variety of statistical data from surveys and models, as well as administrative data from reporting and service delivery systems. These serve as the solid foundation upon which the *Workforce Information System* rests. Most of the data collected via these processes are stored using the ALMIS Database structure, which is maintained individually within each state.

Data Analysis

Analysis is vital to transforming the data into workforce information that is useful at the state and local level. Analysis and interpretation add meaning and context to data in the *Workforce Information System*, maximizing its usefulness to job seekers, students, planners, employers and other

direction of the Bureau of Labor Statistics, the federal-state program data have long been measured against standards of reliability, while adhering to classification standards and regulations related to confidentiality. As states move toward providing more localized information, they must balance response to customer needs against the statistical integrity and reliability of the data.

Ongoing Enhancements

The *Workforce Information System* requires a well-designed and continuous research and development program. Data collection and analysis methods must be improved, and needs for new data products must be anticipated. The Department of Labor and other federal agencies have taken the lead in this area, utilizing in-house resources or funding grantees, contractors or individual states to improve existing programs or develop new ones. Ongoing research focuses on data collection methods, statistical procedures, and the application of technology to reduce cost, increase timeliness and improve quality.

Data Delivery

Sophisticated electronic support and delivery systems for workforce information are key to the success of the *Workforce Information System*. While traditional publications and reports continue to play a vital role, that role is becoming more limited and specialized as advances in computer technology offer more flexibility and accessibility. Delivery of information through printed publications has a number of disadvantages. These include cost of production and delivery, difficulty in providing timely data, the necessity for static formats, and inflexibility for customers who need to manipulate data.

Electronic dissemination, especially through the Internet, provides information quickly and cost-effectively to a wide variety of audiences in flexible, user-friendly formats. When coupled with standardized databases, such as the ALMIS Database, these systems can be updated efficiently through a single maintenance point. Electronic systems also make it easier to incorporate tools such as graphing, mapping, statistical analysis, custom reporting, and file download capability. A number of states already offer electronic workforce information delivery systems. Most are Internet systems, although some are stand-alone or network-based.

At the national level, the Internet is being used extensively. The Bureau of Labor Statistics maintains a web site that provides reliable data and technical information to users. Several state consortia, funded by the Employment and Training Administration, have developed a suite of applications collectively called "America's Career Kit" which contains job listings, job seeker resumes, career and educational information. Users can access all these tools through a single portal.

Many state workforce information delivery systems incorporate O*Net (Occupational Information Network) as the classification system for identifying occupations and

related skills, as well as educational requirements. O*Net, which is the only federally supported occupational classification system, contains information that links many components in the spectrum of one-stop services. Customers can access information linked to this skills-based occupational network as an additional tool for making informed decisions.

Customer Feedback

Systematic customer feedback remains a vital element in achieving continuous improvement in the *Workforce Information System*. To comply with the Workforce Investment Act of 1998, states must maintain a comprehensive customer satisfaction and outreach program. This process builds on the experience of individual agencies and states in gathering customer satisfaction information. Feedback from customers will be the driving force behind implementing system improvements and making necessary changes in planning and budgeting.



Workforce Information System Products and Services

(Note: Availability of information products and customized services may vary from state to state)

Products Related to Economic Conditions

These products are intended to give the customer an overall view of the structure and condition of the economy and labor market in a particular area. Each data series paints a picture of a different segment of the economy. Taken in part or collectively, these products represent an invaluable tool for making informed career and business decisions. This particular type of information has long been useful to economic planners and developers as they assess current and historical conditions within a given area. These data products often help point the way for future development by providing a solid foundation on which to build.

Labor Force and Employment Statistics

Current and historical estimates of employment and unemployment by place of residence are available for state and substate areas. These are used to produce estimates of the civilian labor force and rates of unemployment for these same areas. Data for larger cities are also included. Nonagricultural employment figures by industry are also available at the state and substate level. These estimates are based on place of work, rather than place of residence.

Population

The *Workforce Information System* contains various national, state and local data series related to the composition of the population. These include actual counts of the total population derived from the most recent decennial Census, as well as population estimates for ensuing years prepared by the Bureau of Census. Most counts and estimates feature further breakdowns according to gender and ethnic group. States have the option of including projected estimates for future years that may be derived from a variety of sources.

The Acme Service Company must make a decision between expanding their current location or opening a new branch in the suburbs. The president of the company asks John, the Human Resources Manager, for a recommendation.

John remembers seeing a presentation on a workforce information system and wonders what it might offer. He digs out the material, locates the Internet address and discovers a wealth of economic data.

He prints off the information about the labor force, other businesses that are currently building in those locations, retail sales and household income for both locations.

He then calls the telephone number that was listed and speaks to a workforce information system specialist.

After getting his questions answered and obtaining additional information, John then writes his recommendation and takes it to the president of the company.

Commuting Patterns

Most often obtained from the latest Census, this data series includes the number of workers living and working in the same county (or other jurisdiction), the number who commute to jobs in other areas, and the number who work in the area but live elsewhere. Some states may utilize other data sources to provide more detailed or current information.

Consumer Price Index (CPI)

At a minimum, this product provides current and historical figures from the national Consumer Price Index as published by the Bureau of Labor Statistics. Regional or metro area indexes, similar to the CPI, may be developed in some states. Additionally, states may supplement these with price measures obtained from other sources, such as a chamber of commerce or state university.

Tax Revenues

Information on tax revenues varies considerably from state to state, but commonly includes data about sales tax revenues (including local option taxes if applicable); real and personal property taxes; state income taxes; and any ad valorem tax revenues generated. Levels of geographic coverage also vary from state to state.

Building Permits

The availability of information for this data series also varies considerably from state to state. Items for which information is likely to be collected include the number of new commercial units under construction, housing starts for single and/or multi-family residences, permits issued for remodeling, and estimated construction costs by permit type.

Income Data

Data series that relate to income include the following: median family income (derived from the latest decennial Census); annual estimates of total personal and per capita personal income (obtained from the Bureau of Economic Analysis); and annual estimates of median household income (collected by the Department of Housing and Urban Development.)

Retail Sales

Depending on availability, states may provide information on the dollar amount of retail sales generated by state or substate area. Level of detail and geographic coverage vary from state to state.

Products Related to Occupational Data

The **Workforce Information System** provides a wealth of information on jobs, occupations, and careers. With easy accessibility to occupational information, business owners, counselors, job seekers, and others can make informed career decisions, improve curriculum design, and enhance economic development planning. Solid occupational intelligence can give prospective job seekers a good idea of how their individual interests, values, and abilities match up with job availability in their area. The system provides direct links to local employers, training providers, and current job openings. Employers have direct access to job seekers, including the ability to access resumes on line. Training providers can use the system to obtain the valuable supply/demand information vital to providing appropriate skills training.

Occupational Information Network (O*Net)

Thousands of occupations with similar duties but different titles exist in today's labor market. These have been organized into a relational database and occupational classification system called O*Net. This product contains over 1,100 occupations that are matched to more than 800 variables such as tasks performed, job duties and training requirements. The system identifies specific knowledge, skills and abilities associated with a particular occupation. It also identifies fields of specialization within an occupation, the level of proficiency required, and the relative importance of various skills and tasks related to that occupation. O*Net is an invaluable tool for determining the transferability of skills for dislocated or discouraged workers from one occupation to another. It can further assist the job seeker in assessing potential career progression by identifying skills and attributes of higher-level jobs that might be in a particular career path.

Occupational Employment Statistics (OES)

This product provides information on the occupational composition of the various industry groups. Staffing patterns for up to 350 industrial classifications are cross-matched to as many as 750 different occupations and are available at the state, local and national level. By assessing the industrial makeup of a particular area, the job seeker can better assess

Jane Davis has been working as an administrative assistant in Central City. Now she is interested in a new career offering better pay and advancement opportunities.

Ms. Davis visits a local workforce information system career specialist who assists her, using an automated tool called O*NET, in matching her skills, knowledge and abilities with other types of jobs.

With this list, she heads home, logs onto the Internet, and goes to America's Career Kit. Using products and links in America's Career Kit, she finds the future outlook, current job openings and average wages for those types of jobs. She also locates the types of businesses that have those types of jobs and learns how many are located in the areas where she would like to work.

Ms. Davis decides on three of the most promising types of jobs, finds employers with current job openings, and sends them her resume.

the availability of jobs that match their occupational skills. The system provides direct links to training providers for each occupation as a further aid to those who wish to gain additional job skills.

Occupational Projections

Based on current and historical data from the Occupational Employment Statistics series, this product provides forecasts of occupational demand by industry. Data series produced include both long term (10 year) and short-term (2 years or less) estimates of occupational demand. These occupational employment projections provide excellent insight into occupational demand for as many as 750 different job titles. Data are available at the national, state and substate level. This product helps training providers and job seekers identify expanding and declining occupations, allowing them to make informed choices related to career planning.

Occupational Wages

In conjunction with the state Occupational Employment Statistics programs, information on wages by occupation is tabulated from an annual survey of more than 1.2 million establishments across the nation. Each state is required to achieve a 75% response rate for their statewide employer survey, virtually guaranteeing reliable estimates. Information is provided for average wages, median wages and common wage ranges. Data can be displayed as hourly, monthly or annual. In many states an average “entry level” wage will also be available.

Licensed or Certified Occupations

This product provides a list of occupations requiring licenses or certificates within each individual state. Other information may include contact information for the agency issuing the license, testing dates, and costs associated with obtaining the license or certificate.

America’s Career Kit (ACK)

This comprehensive on-line tool combines elements from America’s Job Bank, America’s Talent Bank, America’s Career InfoNet and America’s Learning Exchange into a suite of applications that serves as a clearinghouse for job matching across the nation, as well as providing career and educational information. Job seekers can post resumes, assess skills and gain information on training providers. Employers can place job orders, review resumes and compare wages and benefits of competitors advertising similar openings. For those without Internet access, the system can be accessed through local one-stop resource centers.

Products Related to Industry Data

Many customers depend on detailed information regarding industry employment trends as a key indicator of economic vitality. The *Workforce Information System* contains a substantial amount of data related to industrial classification. A large portion stems from BLS programs such as the ES 202 and Current Employment Statistics data series. States use these as building blocks to construct more detailed data series as dictated by local needs. These data products go hand in hand with the occupational data to provide a comprehensive picture of state and local conditions.

Covered Employment and Wages (ES 202)

Compiled from quarterly reports submitted by employers covered under state Unemployment Insurance (UI) programs, this program is the most comprehensive source of employment and wage data by specific industry. Information garnered under this program serves as the basis for all other estimates of employment by industry. The data are useful in making comparisons of average wages and employment levels by size of business establishment. Individual employer data are protected by stringent regulations regarding confidentiality, but summary data are almost always available.

Current Employment Statistics

This product contains data on current employment by industry group, compiled at the state and major Metropolitan Statistical Area (MSA) level. The information is collected on a monthly basis utilizing a comprehensive sample taken across all industry classifications. Month-to-month change is referenced against the most recent data from the Covered Employment and Wages program to produce current estimates. As an adjunct to this program, data on average hours worked and average hourly wage rates are also compiled for selected industries. Information from this data series can serve as an excellent indicator of current and emerging employment trends within a state or metropolitan area.

Industry Projections and Staffing Patterns

Historical employment information gathered from a variety of sources serves as the basis for forecasting change in

Betty Jones is a member of a local Workforce Investment Board. Her board is developing their local plan.

She calls the workforce information system specialist asking for help with

- putting together the local plan and
- gaining a thorough understanding of the current local economy and labor market, the projected market conditions and an historical perspective of past trends in the market.

She needs the most comprehensive, timely and reliable sources for her information.

The workforce information system specialist analyzes data related to economic conditions, occupational supply and demand, industry trends, and training opportunities for the area. The specialist then prepares a series of customized local profiles about conditions and expectations for the area and explains these in detail to Betty.

Betty now feels prepared to direct local public training funds and guide local workforce development policy decisions.

industry employment levels. By combining historical data with occupational staffing patterns obtained via the Occupational Employment Statistics program, workforce professionals in each state can produce quality information regarding the industry/occupational mix in a given area. This helps training providers and job seekers to assess expanding or declining industries and identify associated occupational changes.

Business Establishment Lists

Compiled from a variety of public or private sources, these data products provide lists of specific employers by industry and geographic location. They provide information on types of business, employment levels, addresses, phone numbers and other contact information. When linked with local occupational and industry information, these lists provide the job seeker or placement professional with a valuable tool for career development.



Products Related to Education and Training

Many customers of the *Workforce Information System* require information on resources related to education and training. This includes information such as the names of training providers; programs and courses offered; accessibility and quality of the training; and availability of financial assistance. Such information is vital to the success of one-stop resource centers. Additionally, the Workforce Investment Act also calls for providing “consumer reports” on the performance of training providers and the success of training programs.

Educational Institutions and Training Providers

States are charged with the responsibility for providing customers with comprehensive information on both public and private educational institutions as well as other training providers. Information provided for these entities includes training programs offered, length of courses, cost information, and other pertinent data. Contact information may also be included.

Training Completer Data

To fulfill requirements of the Workforce Investment Act, states must develop systems for tracking employment outcomes of training program completers. These systems can be used as a tool for evaluating the quality of training programs. Customers may use the information to make comparisons between various training program options. Data on training completers are gathered by matching individual records to Unemployment Insurance wage databases as a means of identifying employment and wage status. This information is then incorporated into comprehensive “consumer reports” systems at the state level to satisfy requirements of the Workforce Investment Act by providing customers with overall “report cards” on training providers.

Ed Gentry, a community college instructor, has been asked to design training for a local business. He gets on the Internet, goes to America’s Career Kit and finds the skills needed for that occupation, “what’s in it for me” data for the trainees, existing training curriculum that others are willing to sell or share, and average national costs of providing training.

He also finds links to a book he can order which contains some tips, techniques and new approaches that he keeps for later use.

He then researches:

- state and local labor market trends and employee demographics,
- work based training survey results,
- employee satisfaction survey results, and
- other related information.

He roughs out a training blueprint using a sample proposal he found on a link through the America’s Career Kit and then heads out to discuss the training in more detail with the local business.

Products Related to Specific State and Local Needs

One of the most innovative features of the *Workforce Information System* is its flexibility in allowing for customized reports and services in response to specific state or local needs. Under the direction of local Workforce Investment Boards, states are free to provide consultation service, adapt old data resources to new scenarios, or even to build completely new data sources. The long history of data production and management at the state level can be merged with the new insights provided by local partners to produce innovative products. These products help to satisfy the wide range of information needs at the local level while maintaining statistical integrity and validity. In support of local needs, states are able to provide customized data and services that can be as diverse as the states themselves.

Customized Studies and Surveys

Depending on local needs, states can develop specific surveys or other data collection processes to fill the void for information not provided by standard products. This would be limited only by the availability of resources to accomplish the task.

Data gathered from existing sources can often be adapted or modified to fit specific needs. This process often provides a classic example of the benefit of having staff with experience and expertise in data collection and interpretation available to assist in making such determinations.

Training and Presentations – *Workforce Information System* professionals are especially suited to assist in the development of training materials related to the workforce. Their broad knowledge of existing data resources provides a solid platform for designing appropriate training materials. These can be used to educate and enlighten a wide variety of audiences with a need for increased understanding of workforce information. They can develop training packages to fit most any customer need. Better information, combined with training and technical assistance, leads to better decisions by partners and customers throughout the workforce development community.

Geographic Information Systems - Many states have linked their information delivery systems to various GIS interfaces. This increases accessibility to the data sources by utilizing “point and click” technology from maps to instantly create customized data displays. It also enhances the ‘user friendliness’ of the system and simplifies data analysis by adding additional flexibility in the selection of target areas.

A major local company in the small town of Carroll is closing in three months. Over 100 people will be directly affected. A response team forms and contracts with the workforce information system to find the current emerging national industries, identify the current and projected job vacancies within commuting distance, list the training and skills of the affected people, and match these to training and skills requirements for the job vacancies.

After obtaining the information, the team completes their final action plan. They start economic development activity and notify the affected people as to what options are available.