CAREERS UNDER CONSTRUCTION

Models for Developing Career Ladders

Employment Development Department
Labor Market Information Division
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Introduction

What are career ladders?

Career ladders are structures that relate occupations in an organization or industry based upon skill progressions and increased earnings.

Specific Organization Career Ladders
Traditionally, career ladders have been occupational structures that encourage, recognize, and reward capable employee performance in a specific organization. Successful performance and acquisition of additional skills through education or training prepare individuals for the next job level, or rung, on the career ladder. Formal career ladder programs have existed primarily in organizations large enough to have a hierarchy of related occupations plus enough growth and turnover to allow for movement up the ladders. Moving up a career ladder requires more than simply accumulating time in an organization; employees must demonstrate competence and the readiness to take on new responsibilities. In smaller organizations, career ladders may be informal and depend upon the ability of employees to identify potential opportunities, and position or prepare themselves for advancement. Mentoring from experienced employees directs employees toward possible career paths within the organization or field.

Industry-wide Career Ladders
Industry-wide career ladders are emerging as employers face increased difficulty in finding skilled workers and identify strategies to move workers up, while new employees move into entry level. The workforce investment system supports this movement as it examines how to provide additional employment opportunities that pay a living wage for those moving from welfare to work. *Shared Prosperity and the California Economy, Implications for California's Workforce Investment System* advocates industry sector career ladder skill-building programs as the first step "to help existing workers move up to better jobs and higher pay."[1] Highly visible industry-based career ladders open up entry-level jobs and provide an incentive for individuals to enter a field and develop their skills for upward mobility.

Uses for career ladders

Career ladders have many applications for individual employers and industries:

Employee Retention - Career ladders provide an incentive for employees to stay with an organization when they see opportunities to advance. Employers save on costly turnover, recruitment, and training expenses.

Uses for career ladders (continued)

Performance Incentive - The opportunity for advancement motivates employees to produce and perform well on the job and to acquire new knowledge and skills.

Succession Planning - Career ladders enable organizations to plan for and develop the skills, knowledge, and abilities they need now and in their future workforce.

Boost to Small Firms - Regional industry-based career ladder strategies spread the expenses of developing and maintaining career ladders and training among participants. This makes career ladder programs affordable for small and medium-sized employers rather than just large employers.

Career Development Programs - The graphic representation of career ladders provides an easily understood tool to assist career counselors and individuals in career planning and decision-making.

"Up is not the only way"

The terms, "career paths" or "career lattices" rather than "career ladders" may more accurately reflect the type of movement that often occurs in the workplace today. Twenty years of corporate flattening, downsizing, rightsizing, and outsourcing have curtailed the number of rungs on career ladders in many organizations and diminished the image of "climbing the ladder of success."

"Industries with many middle-class jobs, strong union representation and established internal career development programs make up a smaller share of the nation's job base than at any time during the past 50 years," according to the *Shared Prosperity and the California Economy* report by the Center for Continuing Study of the California Economy.[2]

Flattened organizational structures cause workers to move laterally to pursue fresh challenges, develop new skills, or seek opportunities to move up. Lateral career moves allow workers to transfer their skills to a different, but related, occupation.

The 1981 book title, *Up Is Not the Only Way,*[3] captured the challenge human resource professionals faced to find employee career development alternatives to the truncated career ladders of the last two decades. The quest continues in the 2002 second edition titled *Up Is Not the Only Way: A Guide to Developing Workforce Talent:* [4]

"Up is not the only way" (continued)

"Once considered a way of shelving "dead wood," lateral moves have become a way for employees to broaden existing skills, learn about other areas of the organization, develop new talents, demonstrate versatility, and prepare for future vertical moves. Such movement is also a method through which organizations with slow internal job markets can continue to challenge their highly motivated employees."

Upward mobility is not the only motive for lateral career moves. For example, a nurse aide who can no longer work in that occupation because of back injuries may move to a position as a medical records clerk or medical coder using knowledge of medical terminology as a transferable skill.

Using *Careers Under Construction*

The resources and processes described in *Careers Under Construction* are designed as a catalyst for discussion and action for local workforce investment partners—employers, training providers, and workers--interested in planning and implementing regional career ladder programs.

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[1] Center for Continuing Study of the California Economy*, Shared Prosperity and the California Economy, Implications for California's Workforce Investment System*, The James Irvine Foundation, Palo Alto, 2001, p. 6. Retrieved from www.irvine.org/frameset3.htm (April 2003).

[2] Ibid, p.14.

[3] Kaye, Beverly, *Up Is Not the Only Way*, *A Guide for Career Development Practitioners*, 1981.

[4] Kaye, Beverly, *Up Is Not the Only Way, A Guide to Developing Workforce Talent*, Davies-Black Publishing, Palo Alto, CA, 2002, p. 122.

Building an Industry Career Lattice

Start with an inclusive process

The key to developing a career ladder or lattice is an inclusive, thoughtful process. The graphic model (a ladder/lattice, stair steps, tree branches, overlapping circles, rays of a sun, etc.) can be whatever image leads to a common understanding by the development group and ensures that subsequent reviewers can envision the relationships. Exhibits 2.1 through 2.6 depict examples portraying industry career growth opportunities.

Focus – Where are you climbing?

Focus on what you and your partners agree is important to your community and your industry or occupational cluster. The more precise your focus, the easier it is to understand the relationships between the occupations. Consider some of the following questions:

- Where is the need in your community?
- Is there an industry facing worker shortages or significant changes?
- Are you trying to attract a new industry to your area to support the economic development of the community?
- Are there barriers to advancement in the current structure that can be eliminated?
- What industry and occupations will you address?

Collaboration

Start with the people who know about the industry and the important occupations that industry uses—employers, training providers, the workers themselves, and their employee representatives. Bring them together and let them share their knowledge. They know what issues are facing the industry, what are the key occupations, how people move between occupations now, and where are the opportunities for change. This is the brain trust you need to thoroughly analyze the industry and occupations and define the opportunities for advancement in your focus area.

Analysis

Analyze the industry and occupations—compile all the available information to make knowledge-based recommendations. Standardized labor market information affords the opportunity to organize the industry and occupational data consistently—and analyze the relationships.

- How are occupations arrayed within the industry?
- What is the relative pay for the occupations?
- What knowledge, skills, abilities, and training are required for the occupations?

Analysis
(continued)

- How does one occupation relate to another within the industry? It is the relationship of these elements that demonstrates the essence of a career ladder. Shared elements are the foundation of movement. Identified gaps indicate where training (formal or on-the-job) might be helpful to facilitate the movement.
- Identify lateral as well as upward moves which provide the possibility of change and development for workers. What are the likely crossover points?

Relationships

Clearly understand the relationships between the occupations.

- Look at the information you have assembled.
- Get a reality check from your brain trust. Do the relationships ring true?
- How closely are the knowledges, skills, and abilities aligned from one occupation to the next?
- What changes, if any, may be required to facilitate movement from occupation to occupation within the industry or between industries? Recognition of previous experience as an alternative to an educational or certification requirement, for instance, might facilitate movement. Are structural, legal or policy changes needed to allow streamlined movement, or is a system in place to allow that movement? Are there cultural barriers?

Mobilize for change

This is when your collaborative process pays off. Human nature being what it is, there is often resistance to change—even the best-intentioned and supported changes. Together, work to create a supportive environment to facilitate the elimination of barriers. Ready the infrastructure for change, including enhanced training, modified licensing requirements (where required), and valid testing procedures. Prepare your workers for advancement—using a job related assessment process to identify the workers with the best chance to succeed and to identify training needs to fill the gaps.

Follow up

Validate your career ladder recommendations by assessing how effectively workers are able to make the transition from one occupation to another, and how satisfactorily management is able to accommodate the organizational change. Identify additional refinements to the assessment, selection, training, work assignment, and ongoing evaluation processes to ensure continuing success.

Uses for career lattice

A career lattice which displays occupations within an industry, arranged by type of work and wages paid can be used as a poster to facilitate:

Awareness – Career lattice posters display the broad framework of opportunities within an industry rather than just focusing on a few target occupations. Many people have familiarity with relatively few occupations. Viewing the lattice gives present and potential employees ideas of occupations that match their educational and earnings aspirations.

Recruitment – Recruiters can use a career lattice poster to discuss the variety of possible career paths and opportunities for growth.

Retention – Employees contemplating leaving an employer or industry may see alternatives for fresh challenges and career growth within that business or industry about which they had not previously thought.

Career Ladder and Skills Standards Collaborations – Collaborative efforts to develop industry career ladders and establish skill standards and certifications can use an industry career lattice as a springboard for discussions.

See Section Three for information on how we created the Health *Care Industry Careers – Room to Learn and Grow!,* Exhibit 2.1, career lattice poster.

On the Following Page…

EXHIBIT 2.1 – Lattice Format *Health Care Industry Careers – Room to Learn and Grow!* is a career lattice format. This approach arrays occupations horizontally by type of work and vertically by salary ranges. See Section Three for more information on how it was developed. Copies of Exhibit 2.1 are available as a poster that can be ordered from the LMID Publications and Information Unit at (916) 262-2162.

EXHIBIT 2.1

Health Care Industry Careers – Room to Learn and Grow!

Administrative Support and Management Occupations	Direct Patient Care Occupations	Other Health Services and Operations Support Occupations
Statewide median wages more than $39.00 per hour		**$$$$$$$**
✚ Chief Executives	◡ Dentists	
✚ Computer and Information Systems Managers	◡ Optometrists	
✚ Financial Managers	◡ Pharmacists	
✚ Marketing Managers	◡ Physicians and Surgeons	
Statewide median wages range from $30.00 - $38.99 per hour		**$$$$$$**
▲ Computer Programmers	◆ Clinical Nurse Specialists*	▲ Mechanical Engineers
▲ Computer Systems Analysts	▲ Dental Hygienists	▲ Orthotists
◆ Health Specialties Teachers, Postsecondary	◆ Nurse Anesthetists*	▲ Prosthetists
✚ Human Resources Managers	◆ Nurse-Midwives*	
▲/◆ Management Analysts	◆ Nurse Practitioners*	
▲/◆ Medical and Health Service Managers	◆ Physical Therapists	
◆ Operations Research Analysts	▲ Physician Assistants	
✚ Public Relations Managers	◡ Podiatrists	
✚ Purchasing Managers	◆ Psychologists, Clinical	
Statewide median wages range from $25.00 - $29.99 per hour		**$$$$$**
▲ Accountants and Auditors	◆ Audiologists	▲ Cytotechnologists
✚ Administrative Service Managers	◡ Chiropractors	▲ Histotechnologists
▲ Budget Analysts	▲ Diagnostic Medical Sonographers	▲ Medical and Clinical Lab Technologists
▲ Database Administrators	◆ Epidemiologists	◆ Medical Scientists
◆ Nursing Instructors and Teachers, Postsecondary	▲ Nuclear Medicine Technologists	◆ Microbiologists
	▲ Occupational Therapists	
	▲ Radiation Therapists	
	▲/▲ Registered Nurses	
	◆ Speech-Language Pathologists	
	▲ Ultrasound Technologists	
Statewide median wages range from $20.00 - $24.99 per hour		**$$$$**
✚ Claims Adjusters, Examiners, & Investigators	▲ CT Technologists (Computerized Tomographics)	▲ Biomedical Equipment Technicians
▲ Compensation, Benefits, & Job Analysis Specialists	▲ Dietitians and Nutritionists	✚ Carpenters
▲ Computer Support Specialists	◆ Educational, Vocational, & School Counselors	✚ Electricians
▲ Employment, Recruitment, & Placement Specialists	▲ Occupational Therapist Assistants	✚ Perfusionists
● Food Service Managers	▲ Physical Therapist Assistants	✚ Stationary Engineers & Boiler Operators
▲ Insurance Sales Agents	▲ Psychiatric Technician Instructors	
◆ Librarians	▲ Radiologic Technologists & Technicians	
▲ Public Relations Specialists	▲ Respiratory Therapists	
▲ Purchasing Agents	◆ Social Workers, Medical & Public Health	
▲ Training and Development Specialists	● Vocational Education Teachers, Postsecondary	

Statewide median wages range from $15.00 - $19.99 pe4r hour $$$

- Bookkeeping, Auditing, and Accounting Clerks
- Computer Operators
- Dispatchers, Police, Fire, and Ambulance
- Human Resources Assistants
- Insurance Claims & Policy Processing Clerks
- Medical Coders*
- Medical Transcriptionists
- Payroll and Timekeeping Clerks
- Procurement Clerks
- Statistical Assistants
- Art Therapists
- Cardiovascular Technologists and Technicians
- Dance Therapists
- Dental Assistants
- Electrocardiograph (EKG) Technicians
- Licensed Vocational Nurses
- Music Therapists
- Psychiatric Technicians
- Recreational Therapists
- Social Workers, Mental Health & Substance Abuse
- Surgical Technologists
- Environmental Science and Protection Technicians, including Health
- Heating and Air Conditioning Mechanics
- Histotechnicians
- Housekeeping Supervisors
- Medical & Clinical Laboratory Technicians
- Painters, Construction and Maintenance
- Plumbers

Statewide median wages range from $10.00 - $14.99 per $$

- Bill and Account Collectors
- Billing and Posting Clerks and Machine Operators
- Correspondence Clerks
- Customer Service Representatives
- Data Entry Keyers
- File Clerks
- General Office Clerks
- Interviewers, except Eligibility and Loan
- Mail Clerks & Mail Machine Operators
- Medical Records & Health Information Technicians
- Medical Secretaries
- Receptionists and Information Clerks
- Shipping, Receiving, & Traffic Clerks
- Stock Clerks & Order Fillers
- Word Processors & Typists
- Dietetic Technicians
- Electroencephalographic (EEG) Technologists
- Emergency Medical Technicians and Paramedics
- Medical Assistants
- Occupational Therapist Aides
- Opticians, Dispensing
- Pharmacy Aides
- Pharmacy Technicians
- Phlebotomists
- Physical Therapist Aides
- Psychiatric Aides and Apprentices
- Social and Human Service Assistants
- Ambulance Drivers and Attendants
- Cooks, Institution or Cafeteria
- Dental Laboratory Technicians
- General Maintenance and Repair Workers
- Medical Appliance Technicians
- Medical Equipment Preparers (Central Supply Technicians)
- Medical Equipment Repairers
- Order Clerks
- Switchboard Operators
- Truck Drivers, Light

Statewide median wages range from $6.75 - $9.99 per hour $

- Cashiers
- Certified Nursing Assistants
- Home Health Aides
- Nursing Aides, Orderlies & Attendants
- Personal and Home Care Aides
- Recreation Workers
- Cooks, Short Order
- Cosmetologists
- Counter Attendants - Food Concession
- Couriers & Messengers
- Dining Room and Cafeteria Attendants
- Dishwashers
- Food Preparation Workers
- Food Servers, Nonrestaurant
- Janitors and Cleaners
- Landscaping & Groundskeeping Workers
- Laundry Workers
- Maids & Housekeeping Cleaners
- Parking Lot Attendants
- Security Guards

Training Level Key

- Short-term on-the-job training
- Moderate-term on-the-job training
- Long-term on-the-job training
- Work Experience
- Post-secondary vocational training
- Associate degree
- Bachelor's degree
- Work experience plus a Bachelor's degree or higher
- Master's degree
- Doctoral degree
- First professional degree

Sources: *2002 Wages from Occupational Employment Survey of Employers* by EDD/LMID
*Healthcare Association of Southern California – Healthcare Human Resources Management Association

EXHIBIT 2.1

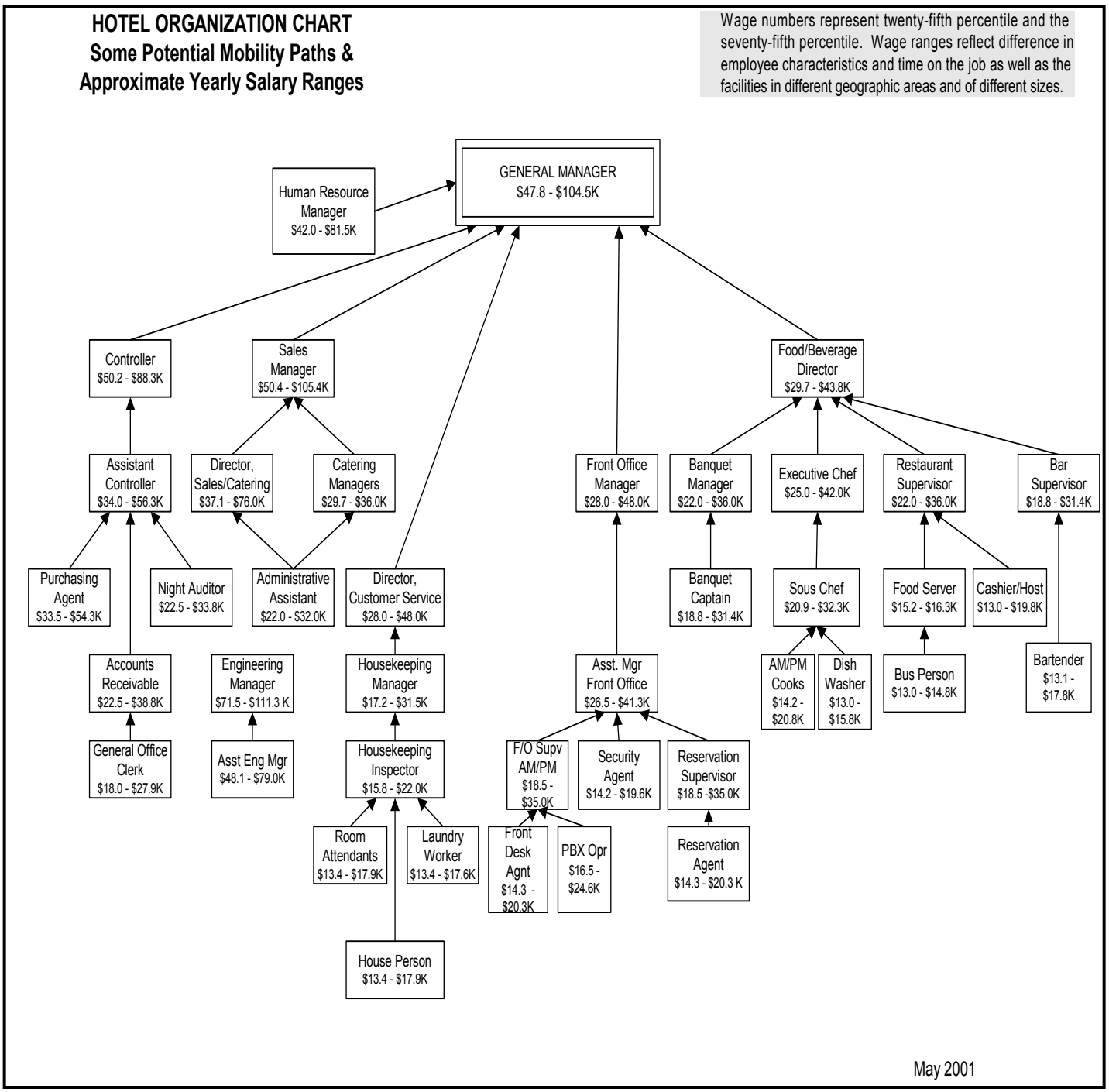


EXHIBIT 2.2 – **Organization Chart Format** An organization-chart approach to displaying career growth opportunities as Potential Mobility Paths in the hotel industry from the Career Ladders to the 21st Century project of the Employment Training Panel and EDD. Retrieved from www.edd.ca.gov/eddwtf.htm (June 2002).

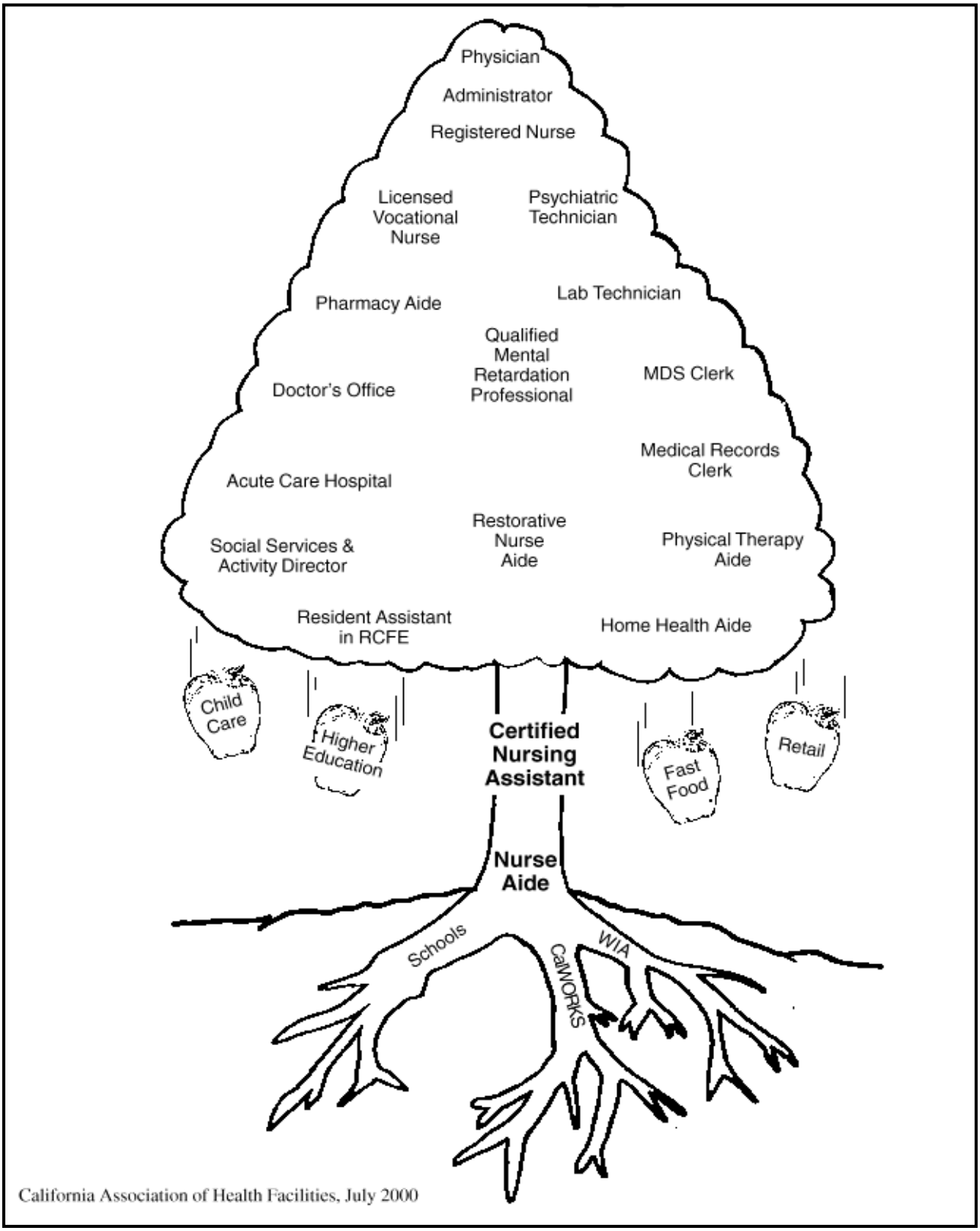


EXHIBIT 2.3 – **Tree Format** "Tree" representation developed by California Association of Health Facilities to illustrate nurse aides and certified nursing assistants as a start to other health careers (July 2000).

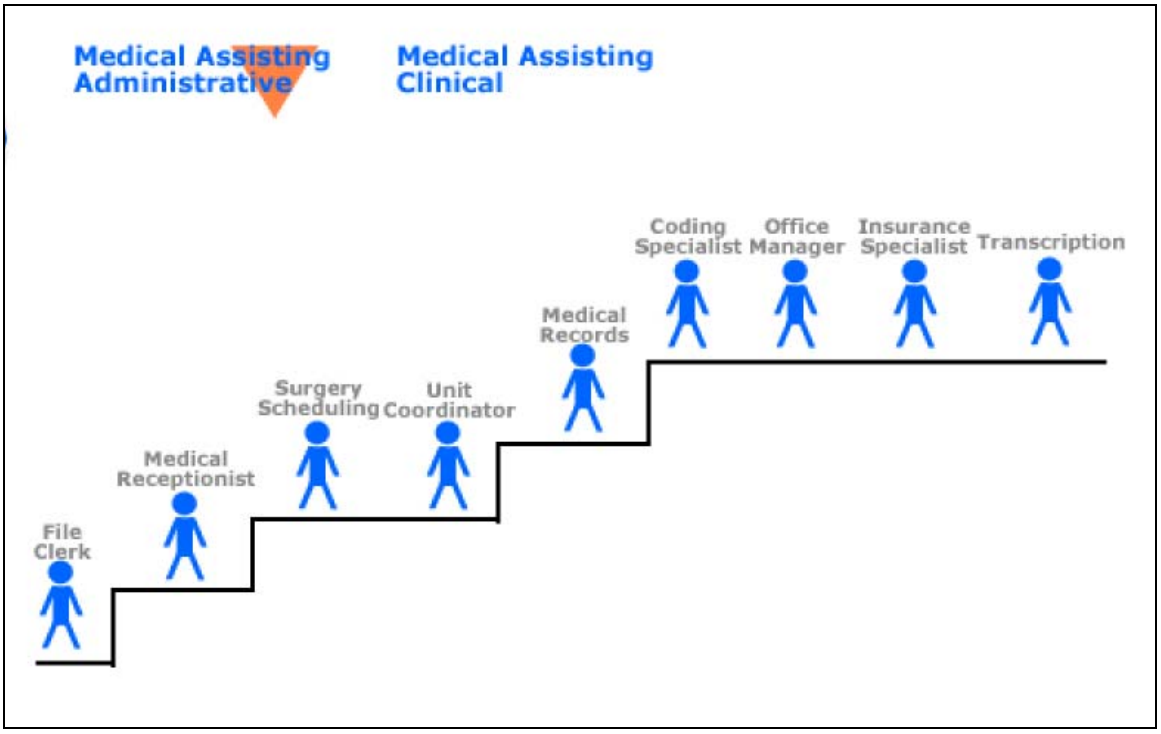
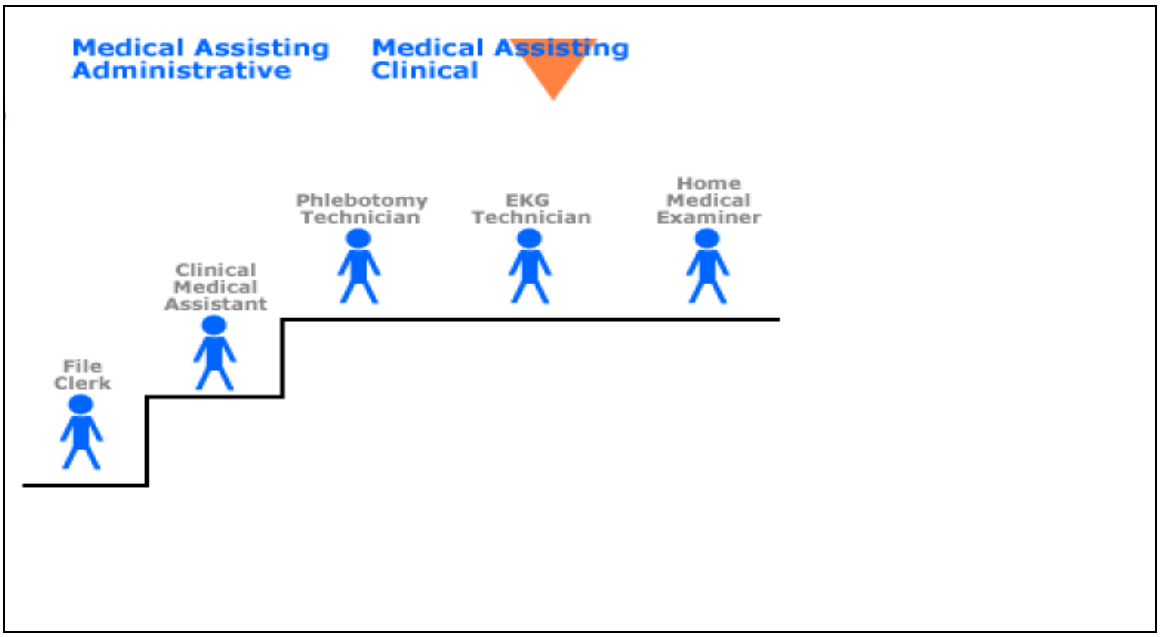


EXHIBIT 2.4 – **Step Format** Steps signify career growth opportunities for Medical Assistants who follow an administrative path (above) or a clinical path (below).
Source: Career Ladders Project, Santa Cruz County, 1998.
Retrieved from www.careerladders.net/main/careerladders.htm (July 2002).



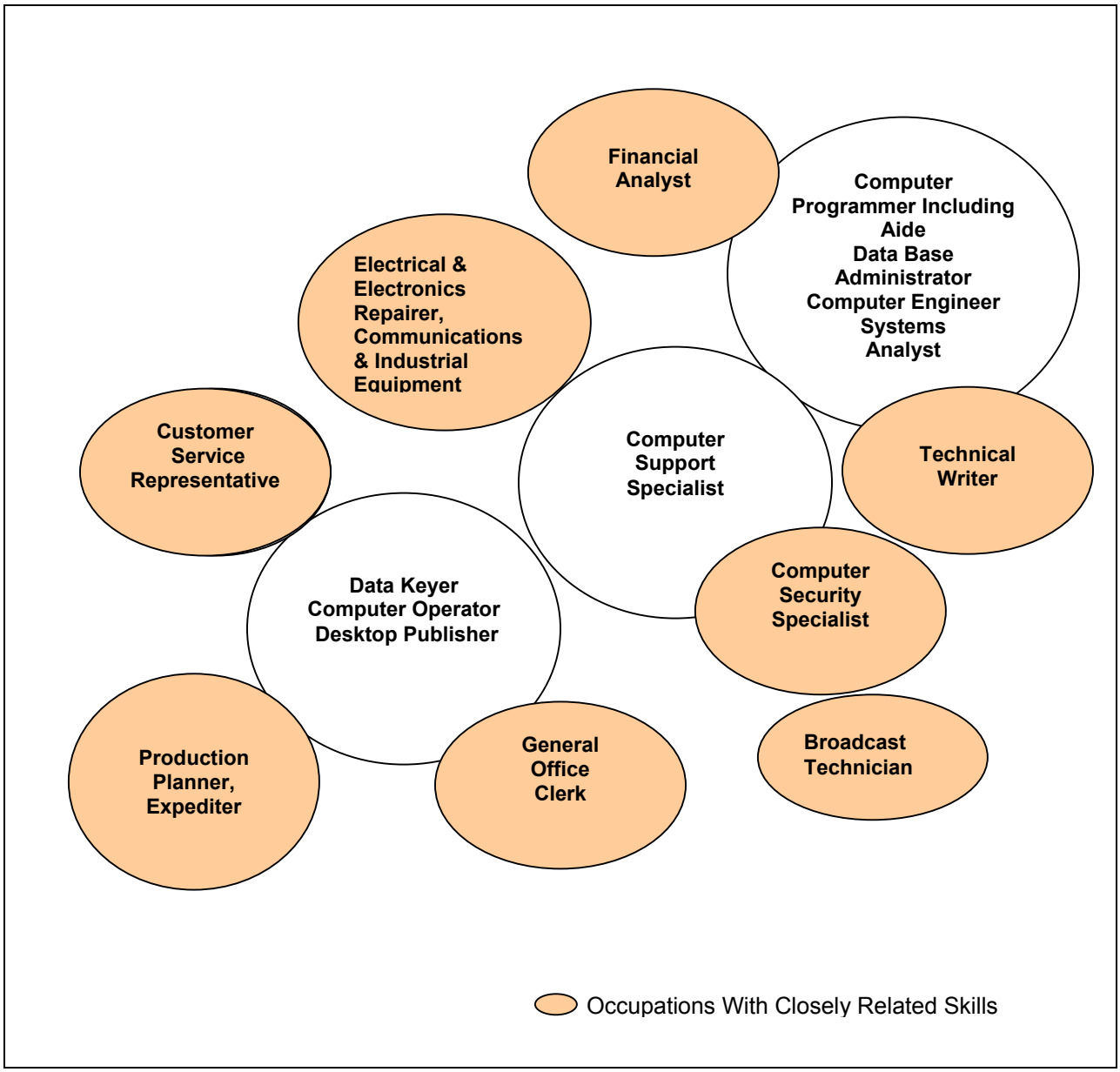


EXHIBIT 2.5 – Bubble Format "Bubble" charts representing career ladder hierarchy and closely related occupations. Source: Orange County Cluster Project, Orange County Business Council (June 2002).

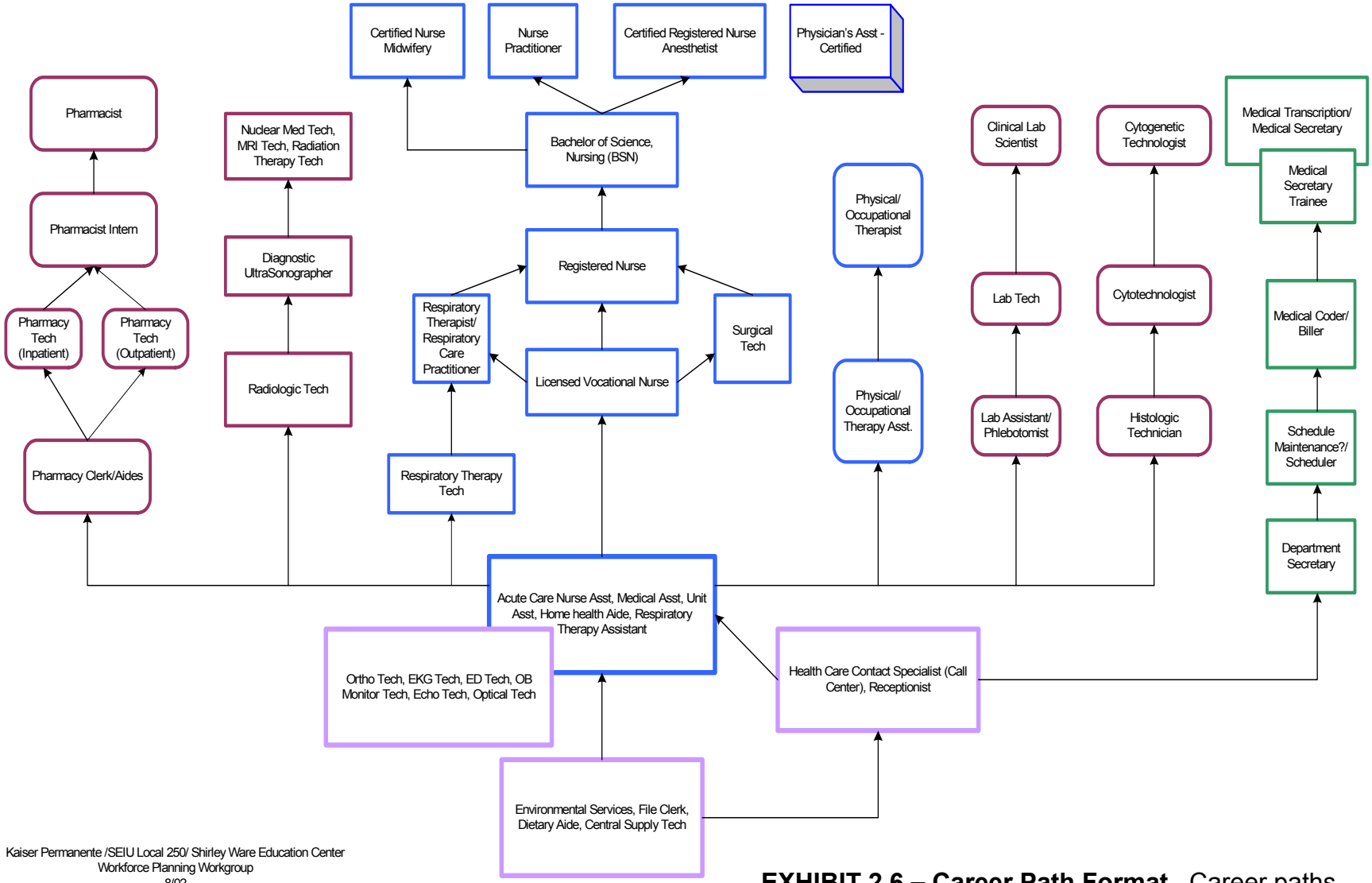


EXHIBIT 2.6 – Career Path Format Career paths showing some lateral movement between related occupations. Source: Kaiser Permanente, SEIU Local 250, Shirley Ware Education Center, Workforce Planning Workgroup (August, 2002).

An Industry Career Lattice: How We Did It

One example

Exhibit 2.1, *Health Care Industry Careers – Room to Learn and Grow!*, is an example of one way to represent industry occupations– an industry career lattice. The following steps detail how we built the graphic representation of occupations in the health services industry and a listing of labor market information resources we used.

Step 1 – Identifying the universe

We reviewed industry information from the U.S. Department of Labor's *Career Guide to Industries** to obtain industry background and an initial listing of occupations common to the industry. Additional occupations in the industry were identified from the *California Industry and Occupational Staffing Patterns*.* The official government occupational titles varied at times from job titles popular with the industry or those employed by specific health care organizations, so we used an industry publication to identify other commonly used titles. We also sought comments from educators, industry, and labor representatives.

Step 2 – Structuring the lattice columns

We chose a lattice rather than ladder format to better illustrate the lateral career moves that are possible within many large health care organizations in the health services industry.

We considered and combined several constructs to create the columns of the lattice. We initially selected the Data-People-Things (DPT) paradigm from the *Dictionary of Occupational Titles* (DOT)[1] as criteria for sorting occupations into three vertical columns. Although the Occupational Information Network (O*NET) replaced the *DOT*, the *DOT* Data-People-Things concept remains a useful way to group occupations. It is easy to understand, and many people know their preferences within those domains. We placed occupations into vertical columns based upon which DPT element had the highest skill level. (See Appendix A)

[1] This is based on the premise that every job requires a worker to function to some degree in relation to data, people, and things, and provides examples of the types of functions associated with each. For instance, activities associated with "data" include computing and analyzing. Activities associated with "people" include mentoring or serving, and activities associated with "things" include driving, operating, or feeding.

* See page 3.4 for Web site address

Step 2 – Structuring the lattice columns (continued)

Grouping by DPT required some judgment calls. Sometimes an occupation's highest function would be data; however, the image of the occupation was a "people" job, such as physician. Other times, there would be equal levels of complexity for data, people, or things; however, the occupation must be placed in one of the columns. In such cases, looking at the Interest Profile information in OnLine O*NET (http://online.onetcenter.org) for the occupation helped make the decision.

We adjusted the placement of occupations in the three columns applying Interest Profile codes and an organizational-chart approach to columns. Some of these judgment calls were arbitrary which is acceptable since the lattice is simply an aid for visualizing the breadth and depth of occupations within an industry. It is inevitable that sometimes an occupation will either fit into more than one column or not in any column based upon the criteria selected. This approach could vary from industry to industry in keeping with the variety of occupations in that industry.

Since our lattice would be used for career exploration purposes, we labeled the columns to signify a typical organizational career-path structure. The DPT, interest, and organizational constructs could be seen as filters we used to view and categorize the occupations into columns. The three approaches produced compatible results as seen in Exhibit 3.1.

EXHIBIT 3.1 – Summary of Columns and Constructs

	Left Column	Middle Column	Right Column
Health Career Lattice	Administrative Support and Management Occupations	Direct Patient Care Occupations	Other Health Services and Operations Support Occupations
Organization structure	Administrative Support and Management Occupations	Professional, Technical, and Other Occupations Unique to an Industry	Operations Support Occupations
Interest profile	Conventional (C) Entrepreneurial (E)	Social (S) Artistic (A)	Realistic (R) Investigative (I)
DOT	Data	People	Things

Step 3 – Structuring the lattice tiers

Deciding what criteria to use for the horizontal tiers of occupations was straightforward—increased earnings are the most identifiable incentive for climbing a career ladder/lattice. Since we wanted the *Health Care Industry Careers – Room to Learn and Grow!* lattice to be used to stimulate career exploration for youth, we selected hourly wages rather than annual wages for the lattice so youth could more easily relate the wages to their own income needs.

Step 3 – Structuring the lattice tiers (continued)

We used statewide median hourly wages from the *Occupational Employment Statistics Employment and Wages by Occupation** survey online report and arranged earnings into hierarchical tiers starting at minimum wage and stepping up by the following ranges:

- $6.75 (or current minimum wage) to $9.99 per hour
- $10.00 to $14.99 per hour
- $15.00 to $19.99 per hour
- $20.00 to $24.99 per hour
- $25.00 to $29.99 per hour
- $30.00 to $38.99 per hour
- More than $39.00 per hour

We contacted industry associations for wage information on occupations that were not captured in the survey for the *Occupational Employment Statistics Employment and Wages by Occupation* report.

Step 4 – Identifying education and training levels

We wanted to show the relationship of earnings to education and upward mobility so we created a key to represent training levels defined by the Bureau of Labor Statistics (BLS) as reported in the *Employment Projections by Occupation** online. We placed a symbol next to each occupational title on the lattice as a quick reference for readers to education and training requirements. When we knew California training requirements varied from the national BLS training levels, we used the California training requirement rather than the national BLS level.

EXHIBIT 3.2 – Bureau of Labor Statistics (BLS) Training Levels

1	First professional degree
2	Doctoral degree
3	Master's degree
4	Work experience, plus a Bachelor's or higher
5	Bachelor's degree
6	Associate degree
7	Post-secondary vocational education
8	Skills developed through work experience in related occupation, hobby or activities, or service in the Armed Forces
9	Long-term on-the-job training
10	Moderate-term on-the-job training
11	Short-term on-the-job training

* See page 3.4 for references

Step 5 – stakeholder review

Creating the lattice was a collaborative process from conception to completion. We took drafts of the lattice to several meetings of stakeholders including education and training providers, industry human resource representatives, and labor leaders to request their comments and made changes accordingly.

- Are there missing occupations that should be added?
- Do the earnings seem accurate?
- Are the education and training levels accurate?
- Are there already identified career ladders within the industry?

Labor market information resources used

The following information resources were used to create the *Health Care Industry Careers – Room to Learn and Grow!* industry career lattice. They are all available on the Web.

Career Guide to Industries 2002-2003, published by the Department of Labor, provides national information on available careers in 42 industries. Includes the nature of the industry, working conditions, employment, occupations in the industry, training, advancement, earnings, benefits, and employment outlook.
Internet Location: www.bls.gov/oco/cg

California Industry and Occupational Staffing Patterns are a list of the occupations employed within a particular industry, or a list of the industries that employ a particular occupation. Includes the number of people in the occupation and projected growth of the occupation within that industry.
Internet Location: www.calmis.ca.gov/file/IOMatrix/Staffing-Patterns1.htm

Employment Projections by Occupation estimate the changes in occupational employment over time resulting from two principal causes, growth and technology. Changes in the number, size and type of employers within a given geographical area will affect the demand for certain occupations. Information is available at Statewide and county levels. BLS Training Levels for each occupation are also listed in this report.
Internet Location: www.calmis.ca.gov/htmlfile/subject/occproj.htm

Occupational Employment Statistics (OES) Employment & Wages by Occupation lists the most current wages for each occupation: entry-level hourly, mean hourly, mean annual, and hourly at the 25th, 50th (median), and 75th percentiles. Regional, county, and statewide data are available.
Internet Location: www.calmis.ca.gov/file/occup$/oes$.htm

OnLine O*NET offers detailed skills, tasks, and related occupational information. O*NET replaces the Dictionary of Occupational Titles and contains crosswalks to other occupational classification systems including the DOT codes.
Internet Location: http://online.onetcenter.org

Collaboration! Collaboration! Collaboration!

Partnership

It takes partnership to create an industry-based career ladder. Each of the following, and others yet to be identified, are potential partners and have significant knowledge or resources to contribute to an industry career ladder project. Descriptive and contact information are listed below:

- Employers
- California Center for Regional Leadership (CCRL) and Collaborative Regional Initiatives (CRIs)
- California community colleges
- Other educators, both public and proprietary
- Division of Apprenticeship Standards (DAS)
- Employment Development Department (EDD)
- Labor unions
- Local Workforce Investment Boards (WIB)
- National Skills Standards Board (NSSB)
- Community organizations
- Professional and trade associations

Employers

Employers are the key to any career ladder development as their needs drive the creation of career ladders. Employers know their anticipated growth and staffing needs. Their human resource staff can provide job and task descriptions and information on needed skills, knowledge, and abilities. Employers have content experts with valuable insight into competency levels needed.

California Center for Regional Leadership (CCRL) and the **Collaborative Regional Initiatives (CRIs)**

The California Center for Regional Leadership (CCRL) is a statewide alliance of business, education, and community leaders who focus on strategies to address the State's economic, environmental, and social equity challenges. Collaborative Regional Initiatives (CRIs) operate at the regional level and have focused on workforce development demonstration projects. Visit the CRI and CCRL at www.calregions.org for details about their programs, projects, and downloadable publications.

California Community Colleges

California community colleges offer both remedial and vocational courses in their certificate and degree programs. They routinely develop customized courses to meet employer workplace learning needs. Community colleges also offer assessment and counseling resources to help individuals plan their career path.

Ladders of Opportunity describes the California Community College role in career ladder development: "Career ladders are not a training program or model, but rather a system for organizing and delivering career education on a lifelong basis…to be truly effective, career ladders must not only allow workers to climb 'up' within a given field, but also diagonally and horizontally into new careers as needed."[1]

Alphabetical and regional listings of California's 108 community colleges can be found at www.cccco.edu/find/alphabetical.htm.

Other educators

Other public and proprietary educational institutions offer a variety of skill training and certificate programs.

- Regional Occupational Programs - www.cde.ca.gov/rocp
- Adult Education Programs - www.cde.ca.gov/adulteducation
- Private Postsecondary and Vocational Schools - www.bppve.ca.gov

Department of Industrial Relations, Division of Apprenticeship Standards

The word "apprenticeship" may bring to mind construction occupations and trade unions; however, many apprenticeships are found in non-construction occupations both inside and outside of union sponsorship. The California Apprenticeship Council defines an apprenticeable occupation as "one which requires independent judgment and the application of manual, mechanical, technical, or professional skills and is best learned through an organized system of on-the-job training together with related and supplemental instruction."[2] Apprenticeship programs exist for varied occupations, such as painters, plumbers, surveyors, machinists, laborers, cosmetologists, auto mechanics, nursing, and psychiatric technicians.

Division of Apprenticeship Standards (continued)

"The Division of Apprenticeship Standards (DAS) administers California apprenticeship law and enforces apprenticeship standards for wages, hours, working conditions and the specific skills required for state certification as a journeyperson in an apprenticeable occupation. DAS promotes apprenticeship training, consults with program sponsors, and monitors programs to ensure high standards for on-the-job training and supplemental classroom instruction."[3]

Exhibit 4.1 lists Division of Apprenticeship Standards offices and consultants who may be contacted for assistance in setting up apprenticeship programs.

EXHIBIT 4.1 – Division of Apprenticeship Standards Offices

San Francisco headquarters	**San Jose**	**Oakland**	**Sacramento**
455 Golden Gate Avenue, 8th Floor San Francisco, CA 94102 (415)) 703-4920 (415) 703-5477 (fax) Senior consultant: Mary Sorokolit E-mail: msorokolit@dir.ca.gov	100 Paseo de San Antonio, Room 125 San Jose, CA 95113 (408) 277-1273 (408) 277-9612 (fax) Senior consultant: Glen Forman E-mail: gforman@dir.ca.gov	1515 Clay Street, Suite 602 Oakland, CA 94612 (510) 622-3259 (510) 622-3265 (fax) Senior consultant: Linda Olvera E-mail: lolvera@dir.ca.gov	2424 Arden Way, Suite 160 Sacramento, CA 95825 (916) 263-2877 (916) 263-0981 (fax) Senior consultant: Leo Hartland E-mail: lhartland@dir.ca.gov
Fresno	**Santa Ana**	**San Diego**	**Los Angeles**
2550 Mariposa St., Room 3080 Fresno, CA 93721 (559) 445-5431 (559) 445-6294 (fax) Senior consultant: Leo Hartland E-mail: lhartland@dir.ca.gov	28 Civic Center Plaza, Room 525 Santa Ana, CA 92701 (714) 558-4126 (714) 558-6430 (fax) Senior consultant: Minnie Poindexter E-mail: mpoindexter@dir.ca.gov	7575 Metropolitan Drive, Suite 209 San Diego, CA 92123 (619) 767-2045 (619) 767-2047 (fax) Senior consultant: Minnie Poindexter E-mail: mpoindexter@dir.ca.gov	320 West 4th Street, Suite 830 Los Angeles, CA 90013 (213) 576-7750 (213) 576-7758 (fax) Senior consultant: Paul Manning Jr. E-mail: pmanning@dir.ca.gov

Source: Division of Apprenticeship Standards Web site. Retrieved from www.dir.ca.gov/DAS/das_offices.htm (April 2003).

Employment Development Department (EDD)

The Labor Market Information Division (LMID) of the Employment Development Department maintains Labor Market Information Consultants around the State who can assist with locating and interpreting labor market information. A current list is included in Appendix B and future updates may be found on the LMID Web site at www.calmis.ca.gov/file/resource/analyst.htm.

Local EDD Job Service staff are good sources of information about local employers and hiring trends. A listing of EDD Job Service offices may be found at www.edd.cahwnet.gov/jsloc.htm.

Labor unions

Labor union apprenticeship programs have long led the way in career ladder development as they helped establish and facilitate worker movement up the skills and responsibility hierarchy within represented occupations. Apprenticeship programs combine education and on-the-job training in structured steps to achieve journey-level skill status.

Local Workforce Investment Boards (WIBs)

Local California Workforce Investment Boards (WIBs) administer and oversee the job training activities in their areas, designate One-Stop operators, and provide policy guidance. The WIB is certified by the State in partnership with local elected officials comprised of representatives from private sector businesses, organized labor, community-based organizations, local government agencies, and local education agencies.

Obtain a list of local Workforce Investment Boards at www.calwia.org/Local_Areas/index.tpl. Locate One-Stop Career Centers at www.edd.ca.gov/ONE-STOP/osfile.pdf.

National Skills Standards Board (NSSB)

The National Skills Standards Board offers a bounty of tools and assistance for developing career ladders within an industry. Their Web site is www.nssb.org. See Appendices C and D for more information about the National Skills Standard Board program.

Community-based organizations

Community-based organizations are a source of workers seeking entry into the workforce. Their programs may provide support services that enable workers to transition to the workforce and sustain employment and training efforts.

Professional and trade associations

Professional and trade associations commonly establish proficiency standards and competency certifications for the occupational hierarchies within a field. For example, claims adjustors in the insurance industry achieve certifications and designations from associations that offer industry segment-specific training and certification. These associations include the Insurance Institute of America, the National Association of Public Insurance Adjusters, the Independent Automotive Damage Appraisers Association, and the International Claims Association. Certification from such industry associations is portable among firms in the insurance industry. Probably the most familiar certification by a professional or trade association is the designation, Certified Public Accountant (CPA), obtained through the American Institute of Certified Public Accountants.

There are numerous certifications within the health services industry. For example, the occupation of medical assistant could be certified by either the American Association of Medical Assistants as a Certified Medical Assistant (CMA) or the national American Medical Technologists agency as a Registered Medical Assistant (RMA). An example of a relatively new certification in nursing is the Certified Hospice and Palliative Nurse (CHPN) offered by the National Board for Certification of Hospice Nurses since the late 1990s.

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[1] *Ladders of Opportunity*, A Board of Governors' Initiative for Developing California's New Workforce, July 26, 2001, p. 8. Retrieved from http://ednet.cc.ca.us/downloads/ladders.pdf.

[2] California Code of Regulations, Title 8, Section 205 Definitions, (c). Retrieved from Department of Industrial Relations www.dir.ca.gov/t8/205.html (June 2002).

[3] Division of Apprenticeship Standards. Retrieved from www.dir.ca.gov/DAS/das.html (June 2002).

Skills

Relationship of skills to career ladders

Career ladders could be defined as skill progressions; therefore, skill awareness and skill standards are a critical element in building industry career ladders and the education and training curriculums that support career ladders.

What are skill standards?

Skill standards spell out precisely the competencies needed and provide a process to acquire, assess, and certify those competencies. Such skill standards are recognized within an industry and are portable from employer to employer and across geographic boundaries.

Skill standards share the following qualities according to the National Skills Standards Board (NSSB):[1]

- Driven by industry needs
- Required knowledge and skills established by methodical occupational analysis of work and worker requirements
- Required level of achievement for competency
- Validated by statistical sampling of employers and workers
- Legally defensible and in compliance with applicable laws and regulations
- Quantifiable process for proficiency measurement and certification
- Up-to-date

Advantages of using skill standards

Skill standards benefit employers, workers, educators, and public agencies.

<u>Workers</u>

- Workers know exactly what skills and knowledge they need to acquire to move ahead.
- Workers are less likely to waste time or be discouraged by taking training not based on skill standards.
- Workers have information on which they can base their career development and education plans.
- Workers have skills that are nationally recognized and portable across geographic areas.

Advantages of using skill standards (continued)

Employers

- Employers can depend upon the consistent skill quality from workers trained under skill standards.
- Employers can draw upon a larger geographic area for recruiting workers knowing the same skill standards apply.
- Employers can save on turnover, recruiting, and training costs.

Educators can develop curriculum to match national skill standards and offer students congruent outcomes across different types of training institutions when they are teaching to the same standard.

Public agencies receive more value for training dollars knowing trainees have portable skills not dependent upon the vagaries of single training institutions, employers, or local economies.

Parallel steps

Methods for achieving skill standards and the steps to creating career ladders both involve parallel, recurring steps:[2]

- Meeting with Stakeholders – Define, organize, and obtain commitments from stakeholders in business, industry, labor, workforce development, education, economic development, and training providers.
- Information Gathering – Gather information on labor market supply/demand, training resources, economic development needs, and employer use of certifications.
- Decision Making – Select focus occupations for further research.
- Review and Refine – Research, compile, and compare certification information.
- Negotiation – Negotiate contracts, costs, timelines, and implementation tasks.
- Promotion – Let employers, educators, and workers know about their new opportunities.

Occupational certifications

Certifications provide objective, third-party substantiation of achieving standardized proficiency skill levels in a field. They may be awarded by an industry, trade, or professional association, such as the Certified Public Accountant (CPA) designation, or may be awarded by licensing or regulatory agencies such as the Certified Nursing Assistant designation.

[1] National Skills Standards Board, *An Introduction to the Use of Skill Standards and Certifications in WIA Programs*, Washington DC, 2001, p. 7. Retrieved from www.nssb.org/pubs/publications.htm (June 2002).

[2] Ibid, p. 29.

Ladders Do Not Stand Alone—Supporting Career Ladders

More than a graphic

Graphic representations of career ladders are prolific. It is an appealing image--whether the figure of a person "climbing the ladder of success" or job titles arranged in stair-step fashion portraying the career ascent.

Career ladders based on skill standards and/or national certifications are grounded in a reality that is measurable. Yet, more is needed to ensure career ladder programs are a success. Career ladders, like any ladder, must lean on something for support. Career development services provide a foundation for career ladders through assessment and career counseling services. Career choices based upon such self-knowledge matched to occupational information become gratifying career decisions that benefit workers, employers, and the greater community. Without the support of a well-run career development program, career ladder graphics illustrate an unrealized potential.

Career development programs

The career ladder program provides information about the jobs, their tasks and requirements, training, certifications, and opportunities. Career development programs focus on the essential piece of a career ladder program--the individual workers. Career development programs can provide the following services to facilitate career decision making:

- Work-related values and interest assessment
- Aptitude testing
- Skills, knowledge, and abilities assessment
- Goal-setting assistance
- Career strategies

Career development services assist workers to gain self-knowledge about their assets and preferences and explore how they fit into the world of work. This saves time and money for both the worker and employer. See Appendix E for the National Career Development Guidelines Adult Competencies and Indicators.

Availability of career counseling services

To be effective, an industry career ladder program should set up a structured career development program to supplement the career counseling services in the community and ensure that someone is available to help workers make effective decisions about their career advancement.

Availability of career counseling services (continued)

Career development services exist to some extent in high schools, community colleges, universities, community-based organizations, and government agencies. One-Stop Career Centers under the Workforce Investment Act (WIA) are designated to provide career counseling to the public at large. Some large corporations have internal career development programs, and some corporations contract out career development services to career counselors in private practice.

Staffing for career counseling is limited, and the counselor focus in high school and colleges is on academic advising. Staffing for career counseling at One-Stops is similarly limited. Community-based services and the Department of Rehabilitation counseling services are available to targeted populations based upon their funding source. There are many opportunities to enhance career counseling in all of these institutions.

Issues for an industry career development program

All career development programs take thoughtful planning to ensure maximum participation and results. Internal career development programs with far-flung employees in large organizations face problems of access and continuity. When the career development program involves many employers, issues of access, monitoring, maintenance, and accountability are compounded.

The career development component of an industry career ladder program needs to be as carefully planned as the steps and skill standards for the career ladder. Including career development specialists as part of the career ladder development team would be a good start in integrating effective career development practices into an industry career ladder program. If career ladders are the “stairs” to a better future for individual workers and a skilled workforce for employers, career development programs provide the foundation that supports the ladders or “stairs.”

APPENDIX A

EXPLANATION OF DATA, PEOPLE, AND THINGS[1]

Much of the information in this publication is based on the premise that every job requires a worker to function, to some degree, in relation to Data, People, and Things. These relationships are identified and explained below. They appear in the form of three listings arranged in each instance from the relatively simple to the complex in such a manner that each successive relationship includes those that are simpler and excludes the more complex. (As each of the relationships to People represents a wide range of complexity, resulting in considerable overlap among occupations, their arrangement is somewhat arbitrary and can be considered a hierarchy only in the most general sense.) The identifications attached to these relationships are referred to as Worker Functions, and provide standard terminology for use in summarizing how a worker functions on the job.

The fourth, fifth, and sixth digits of the occupational code reflect relationships to Data, People, and Things, respectively. These digits express a job's relationship to Data, People, and Things by identifying the highest appropriate function in each listing shown in the following table:

DATA (4th Digit)		PEOPLE (5th Digit)		THINGS (6th Digit)	
0	Synthesizing	0	Mentoring	0	Setting Up
I	Coordinating	I	Negotiating	I	Precision Working
2	Analyzing	2	Instructing	2	Operating-Controlling
3	Compiling	3	Supervising	3	Driving-Operating
4	Computing	4	Diverting	4	Manipulating
5	Copying	5	Persuading	5	Tending
6	Comparing	6	Speaking-Signaling	6	Feeding-Offbearing
		7	Serving	7	Handling
		8	Taking Instructions-Helping		

Definitions of Worker Functions

DATA: Information, knowledge, and conceptions, related to data, people, or things, obtained by observation, investigation, interpretation, visualization, and mental creation. Data are intangible and include numbers, words, symbols, ideas, concepts, and oral verbalization.

0 Synthesizing: Integrating analyses of data to discover facts and/or develop knowledge concepts or interpretations.

I Coordinating: Determining time, place, and sequence of operations or action to be taken on the basis of analysis of data; executing determinations and/or reporting on events.

2 Analyzing: Examining and evaluating data. Presenting alternative actions in relation to the evaluation is frequently involved.

3 Compiling: Gathering, collating, or classifying information about data, people, or things. Reporting and/or carrying out a prescribed action in relation to the information is frequently involved.

4 Computing: Performing arithmetic operations and reporting on and/or carrying out a prescribed action in relation to them. Does not include counting.

5 Copying: Transcribing, entering, or posting data.

6 Comparing: Judging the readily observable functional, structural, or compositional characteristics (whether similar to or divergent from obvious standards) of data, people, or things.

EXPLANATION OF DATA, PEOPLE, AND THINGS

PEOPLE: Human beings; also animals dealt with on an individual basis as if they were human.

0 Mentoring: Dealing with individuals in terms of their total personality in order to advise, counsel, and/or guide them with regard to problems that may be resolved by legal, scientific, clinical, spiritual, and/or other professional principles.

I Negotiating: Exchanging ideas, information, and opinions with others to formulate policies and programs and/or arrive jointly at decisions, conclusions, or solutions.

2 Instructing: Teaching subject matter to others, or training others (including animals) through explanation, demonstration, and supervised practice; or making recommendations on the basis of technical disciplines.

3 Supervising: Determining or interpreting work procedures for a group of workers, assigning specific duties to them, maintaining harmonious relations among them, and promoting efficiency. A variety of responsibilities are involved in this function.

4 Diverting: Amusing others, usually through the medium of stage, screen, television, or radio.

5 Persuading: Influencing others in favor of a product, service, or point of view.

6 Speaking-Signaling: Talking with and/or signaling people to convey or exchange information. Includes giving assignments and/or directions to helpers or assistants.

7 Serving: Attending to the needs or requests of people or animals or the expressed or implicit wishes of people. Immediate response is involved.

8 Taking Instructions-Helping: Attending to the work assignment instructions or orders of supervisor. (No immediate response required unless clarification of instructions or orders is needed.) Helping applies to "non-learning" helpers.

THINGS: Inanimate objects as distinguished from human beings, substances or materials; and machines, tools, equipment, work aids, and products. A thing is tangible and has shape, form, and other physical characteristics.

0 Setting Up: Preparing machines (or equipment) for operation by planning order of successive machine operations, installing and adjusting tools and other machine components, adjusting the position of work piece or material, setting controls, and verifying accuracy of machine capabilities, properties of materials, and shop practices. Uses tools, equipment, and work aids, such as precision gauges and measuring instruments. Workers who set up one or a number of machines for other workers or who set up and personally operate a variety of machines are included here.

I Precision Working: Using body members and/or tools or work aids to work, move, guide, or place objects or materials in situations where ultimate responsibility for the attainment of standards occurs and selection of appropriate tools, objects, or materials, and the adjustment of the tool to the task require exercise of considerable judgment.

2 Operating-Controlling: Starting, stopping, controlling, and adjusting the progress of machines or equipment. Operating machines involves setting up and adjusting the machine or material(s) as the work progresses. Controlling involves observing gauges, dials, etc. and turning valves and other devices to regulate factors such as temperature, pressure, flow of liquids, speed of pumps, and reactions of materials.

3 Driving-Operating: Starting, stopping, and controlling the actions of machines or equipment for which a course must be steered or which must be guided to control the movement of things or people for a variety of purposes. Involves such activities as observing gauges and dials, estimating distances and determining speed and direction of other objects, turning cranks and wheels, and pushing or pulling gear lifts or levers. Includes such machines as cranes, conveyor systems, tractors, furnace-charging machines, paving machines, and hoisting machines. Excludes manually powered machines, such as hand trucks and dollies, and power-assisted machines, such as electric wheelbarrows and hand trucks.

4 Manipulating: Using body members, tools, or special devices to work, move, guide, or place objects or materials. Involves some latitude for judgment with regard to precision attained and selecting appropriate tool, object, or material, although this is readily manifest.

5 Tending: Starting, stopping, and observing the functioning of machines and equipment. Involves adjusting materials or controls of the machine, such as changing guides, adjusting timers and temperature gauges, turning valves to allow flow of materials, and flipping switches in response to lights. Little judgment is involved in making these adjustments.

6 Feeding-Offbearing: Inserting, throwing, dumping or placing materials in or removing them from machines or equipment which are automatic or tended or operated by other workers.

7 Handling: Using body members, hand tools, and/or special devices to work, move, or carry objects or materials. Involves little or no latitude for judgment with regard to attainment of standards or in selecting appropriate tool, object, or materials.

[1] *Dictionary of Occupational Titles*, U.S. Department of Labor, Volume II, Fourth Edition, Revised 1991, p. 1005.

APPENDIX B: Labor Market Information Consultants

County Name	Region	Single Point of Contact	Public Telephone No.	Alternate Contact
Alameda	SF	Idell Weydemeyer	925/602-1536	Paak-Yin Tam (415/749-7546)
Alpine	NC	Mary Mahoney	530/470-1909	David Lyons (916/227-2015)
Amador	CC	Bunny Bentley	209/536-2985	Liz Baker (209/941-6551)
Butte (Chico)	NC	Brandy Daniel	530/895-4300	Kathy Porter (530/225-2562)
Calaveras	CC	Bunny Bentley	209/536-2985	Liz Baker (209/941-6551)
Colusa	NC	Brandy Daniel	530/895-4300	Kathy Porter (530/225-2562)
Contra Costa	SF	Idell Weydemeyer	925/602-1536	Paak-Yin Tam (415/749-7546)
Del Norte	NC	Dennis Mullins	707/441-5892	Kathy Porter (530/225-2562)
El Dorado	NC	David Lyons	916/227-2015	Mary Mahoney (530/470-1909)
Fresno	CC	Carla Barnes	559/230-4077	Sarah Parker (661/395-2543)
Glenn	NC	Brandy Daniel	530/895-4300	Kathy Porter (530/225-2562)
Humboldt	NC	Dennis Mullins	707/441-5892	Kathy Porter (530/225-2562))
Imperial	SC	Cheryl Mason	858/689-6544	Thomas Flournoy (909/955-3204)
Inyo	CC	Sarah Parker	661/395-2543	Victor Coelho (559/635-3221)
Kern	CC	Sarah Parker	661/395-2543	Victor Coelho (559/635-3221)
Kings	CC	Victor Coelho	559/635-3221	Sarah Parker (661/395-2543)
Lake	NC	Dennis Mullins	707/441-5892	Brandy Daniel (530/895-4300)
Lassen	NC	Brandy Daniel	530/895-4300	Kathy Porter (530/225-2562)
Los Angeles – Central	LA	Ericka Saenz	323/290-5966	Bill Freed (562/988-2824)
Los Angeles – Eastern	LA	Bradley Kemp	213/744-2569	Ericka Saenz (323/290-5966)
Los Angeles – Northern	LA	Abel Alcocer	818/897-8097	Bill Freed (562/988-2824)
Los Angeles – Southern	LA	Bill Freed	562/988-2824	Ericka Saenz (323/290-5966)
Madera	CC	Carla Barnes	559/230-4077	Sarah Parker (661/395-2543)
Marin	SF	Paak-Yin Tam	415/749-7546	Diane Disharoon (707/863-9753)
Mariposa	CC	Bunny Bentley	209/536-2985	Liz Baker (209/941-6551)
Mendocino	NC	Dennis Mullins	707/441-5892	Brandy Daniel (530/895-4300)
Merced	CC	Bunny Bentley	209/536-2985	Liz Baker (209/941-6551)
Modoc	NC	Kathy Porter	530/225-2562	Brandy Daniel (530/895-4300)
Mono	CC	Sarah Parker	661/395-2543	Victor Coelho (559/635-3221)
Monterey	CC	Victor Coelho	559/635-3221	Liz Baker (209/941-6551)
Napa	SF	Diane Disharoon	707/863-9753	Idell Weydemeyer (925/602-1536)
Nevada	NC	Mary Mahoney	530/470-1909	David Lyons (916/227-2015)
Orange County – North	SC	Maritza Quant	714/687-4816	Cheryl Mason (858/689-6544)
Orange County – South	SC	Ann Marshall	949/588-3888	Cheryl Mason (858/689-6544)
Placer	NC	David Lyons	916/227-2015	Mary Mahoney (530/470-1909)
Plumas	NC	Brandy Daniel	530/895-4300	Kathy Porter (530/225-2562)
Riverside	SC	Thomas Flournoy	909/955-3204	Maritza Quant (714/687-4816)
Sacramento	NC	David Lyons	916/227-2015	Mary Mahoney (530/470-1909)
San Benito	SF	Janice Shriver	408/558-0689	Ruth Kavanagh (650/413-1812)
San Bernardino	SC	Thomas Flournoy	909/955-3204	Maritza Quant (714/687-4816)
San Diego	SC	Cheryl Mason	858/689-6544	Ann Marshall (949/588-3888)
San Francisco	SF	Paak-Yin Tam	415/749-7546	Ruth Kavanagh (650/413-1812)
San Joaquin	CC	Liz Baker	209/941-6551	Bunny Bentley (209/536-2985)
San Luis Obispo	CC	Victor Coelho	559/635-3221	Sarah Parker (661/395-2543)
San Mateo	SF	Ruth Kavanagh	650/413-1812	Janice Shriver (408/558-0689)
Santa Barbara	LA	Valina Ghookassian	818/897-7737	Abel Alcocer (818/897-8097)
Santa Clara	SF	Janice Shriver	408/558-0689	Ruth Kavanagh (650/413-1812)
Santa Cruz	SF	Janice Shriver	408/558-0689	Ruth Kavanagh (650/413-1812)
Shasta	NC	Kathy Porter	530/225-2562	Brandy Daniel (530/895-4300)
Sierra	NC	Mary Mahoney	530/470-1909	David Lyons (916/227-2015)
Siskiyou	NC	Kathy Porter	530/225-2562	Brandy Daniel (530/895-4300)
Solano	SF	Diane Disharoon	707/863-9753	Idell Weydemeyer (925/602-1536)
Sonoma	SF	Diane Disharoon	707/863-9753	Paak-Yin Tam (415/749-7546)
Stanislaus	CC	Liz Baker	209/941-6551	Bunny Bentley (209/536-2985)
Sutter	NC	Mary Mahoney	530/470-1909	Brandy Daniel (530/895-4300)
Tehama	NC	Kathy Porter	530/225-2562	Brandy Daniel (530/895-4300)
Trinity	NC	Kathy Porter	530/225-2562	Brandy Daniel (530/895-4300)
Tulare	CC	Sarah Parker	661/395-2543	Victor Coelho (559/635-3221)
Tuolumne	CC	Bunny Bentley	209/536-2985	Liz Baker (209/941-6551)
Ventura	LA	Valina Ghookassian	818/897-7737	Bradley Kemp (213/744-2569)
Yolo	NC	David Lyons	916/227-2015	Mary Mahoney (530/470-1909)
Yuba	NC	Mary Mahoney	530/470-1909	Brandy Daniel (530/895-4300)

SF = San Francisco Bay Area Region
Peter Paul, Manager
(707) 864-9531

CC = Central California Region
Carla Barnes, Manager
(559) 230-4077

LA = Los Angeles Region
Mike Caplis, Manager
(213) 744-2571

NC = Northern California Region
Arvis Curry, Manager
(707) 441-5831

SC = Southern California Region
Linda Reed, Manager
(909) 933-2669

APPENDIX C: National Skills Standards Board (NSSB) Fact Sheet

What is the NSSB?

Established by Congress in 1994, the National Skills Standards Board Act (NSSB) is an alliance of leaders from business, labor, education, community, civil rights, and employee organizations committed to building a voluntary national system of skill standards, assessments, and certifications. The NSSB objective is to raise the standard of living of all Americans and improve global competitiveness.

Contact information:

Web address www.nssb.org
E-mail information@nssb.org
Phone (202) 254-8628
Fax (202) 254-8646
Mail NSSB
1441 L Street, NW, Suite 9000
Washington, DC 20005-3512

The National Skills Standards Board has a Director of Special Projects, Rick Spill, (707) 253-6159, based in California and available to answer questions about the skill standards process.

NSSB process

The National Skills Standards Board (NSSB) process provides a useful model for local organizations interested in developing industry-based career ladders, featuring collaboration, strong employer and worker involvement, an analytical process, and portability.

Two paths to skill standards

The NSSB offers two processes for arriving at skill standards. One is to develop skill standards where none previously existed. The other process, occupational certifications, entails researching existing certifications from professional and trade organizations within an industry and adopting them as the basis for curriculum in education and training institutions. This is a shorter process since the standards, assessments, and certifications already exist. See Appendix D for a 22-step process for using nationally recognized, industry-based occupational certificates to establish skill standards for training.

Certification databases

The NSSB maintains a database of Certification/Apprenticeship Programs on their Web site. This listing is arranged by 15 industry clusters and may be accessed from the NSSB Web site www.nssb.org under the Certifications & Apprenticeships menu.

NSSB also maintains a database of Skill Certification Organizations that is searchable by state and skill keyword.

Industry sectors

The National Skill Standards Board (NSSB) has identified 15 industry sectors that share similar skill requirements:[1]

1. Agriculture, Forestry, and Fishing
2. Business and Administrative Services
3. Construction
4. Education and Training
5. Finance and Insurance
6. Health and Human Services
7. Manufacturing, Installation and Repair
8. Mining
9. Public Administration, Legal and Protective Services
10. Restaurants, Lodging, Hospitality and Tourism, and Amusement and Recreation
11. Retail Trade, Wholesale Trade, Real Estate and Personal Services
12. Scientific and Technical Services
13. Telecommunications, Computers, Arts and Entertainment, and Information Technology
14. Transportation
15. Utilities and Environmental and Waste Management

Industry coalitions

Industry skill standards coalitions have been formed as voluntary partnerships under the NSSB in the following industries:

- Manufacturing Skills Standards Council
- Sales and Service Voluntary Partnership
- Education and Training Voluntary Partnership
- Hospitality and Tourism Futures
- Information and Communications Technology

The health services industry established health care core and cluster standards under a NSSB pilot in 1995. A copy of the report, *National Health Care Skill Standards*, is available at www.wested.org/nhcssp/nhcss03.htm.

NSSB publications

NSSB offers several publications that lead the user through the skills standards process that establishes the skills progression of career ladders. These publications are available in print or downloadable from the NSSB Web site at www.nssb.org/pubs/publications.htm.

Achieving Equity Through Opportunity – A guide for community based organizations and civil rights organizations to the skills standards process and the NSSB compliance with civil rights laws.

An Introduction to the Use of Skill Standards and Certifications in WIA Programs – Working document that introduces concepts, issues, and approaches related to the successful use of standards and certification programs in the federal Workforce Investment Act (WIA) Program designs and operations.

An Introduction to the Use of Skill Standards and Certifications in WIA Programs – 2002 – Revised and abbreviated edition of the above publication.

Built to Work – Provides an overview of the entire skill standards system framework and offers general guidance on developing skill standards.

Getting Started on Assessment – Guide to establishing a system of assessment and certification based upon NSSB-approved skill standards.

The Skills Scales Companion Guide – Companion to *Built to Work*, this manual contains guidelines for establishing the level of skill and knowledge required for each skill standards.

[1] National Skills Standards Board, *An Introduction to the Use of Skill Standards and Certifications in WIA Programs*, Washington DC, 2001, p. 11. Retrieved from www.nssb.org/pubs/publications.htm (June 2002).

APPENDIX D: NSSB 22-Step Process for Selection and Implementation of Nationally Recognized, Industry-based Occupational Certifications[1]

Through its State Engagement Strategy activities, the NSSB has developed a replicable 22-Step Process for using nationally recognized, industry-based occupational certifications. The following are the key steps in this process, which is still a work-in-progress:

1. Determine primary stakeholders, including representatives from business, industry, labor, workforce development, education, economic development, training providers, etc.

2. Explain the process to stakeholders.

3. Obtain commitments from key stakeholders to participate in the process as partners.

4. Develop the work plan, including roles and responsibilities of participating individuals/institutions/organizations, the specific resources they can contribute, and a calendar of events.

5. Gather information on:
   a. Current/projected labor market demands and skill shortages in high wage, high performance, high growth occupations;
   b. Current occupational skills training conducted (type and number of programs, location and scheduling/frequency of programs, number of participants enrolled), and related programmatic use of nationally recognized occupational certifications;
   c. Current economic development plans and requirements; and
   d. Current business and industry certification requirements, and related employer use of nationally recognized occupational certifications.

6. Identify 3 - 5 priority occupations to be included in the initial search effort as an easily manageable starting point.

7. Designate criteria (including items such as content, cost, availability, examination protocols, utilization requirements, etc.) against which to consider/screen existing nationally recognized certifications related to these occupations. For a comprehensive approach, apply the NSSB Occupational Certification Feasibility Review Document and Checklist (OCFRD/C) as a screening mechanism.

8. Locate and research existing certifications in the 3 - 5 chosen occupations, using the feasibility review document/checklist to record, organize, and assess the data.

9. Review findings for suitability, relevance, impact on existing needs, resource implications, and potential design modifications and/or operational adjustments necessary to incorporate these certifications/examinations into current occupational training endeavors (e.g., curriculum alignment changes; program certification; instructor training/certification, acquisition of required facilities, space, equipment, materials, and supplies, etc.).

10. Select appropriate, nationally recognized, industry-based occupational certifications for initial implementation, or conduct further searches, if needed.

11. Hold discussions and negotiate agreements with each selected certification/examination provider, addressing particulars such as contractual arrangements, bottom-line costs/payments, implementation steps and related timelines, provider obligations, scheduling/locating/conducting exams, receiving student/trainee results, etc. Careful attention should be given to details, since different certifications can vary widely in their implementation specifics.

12. Delineate a plan for instituting each certification/examination, covering:

    a. Incorporation of certification by participating programs on full-scale/pilot project basis, as well as related deployment procedures and infrastructure elements;
    b. Use of implementation teams, workgroups, and dedicated personnel;
    c. Linkages and partnerships to promote uniformity and consistency across delivery systems and funding streams;
    d. Information dissemination, orientation, organizational capacity building, and professional development;
    e. Mechanisms for monitoring progress, providing technical assistance, tracking outcomes, and ensuring quality control; and
    f. Approaches for acquiring "champions" and marketing the certification to attain widespread acceptance/use by employers.

13. Secure and commit resources needed to fund start-up/long-term programmatic efforts and to cover individual student/trainee costs, as appropriate.

14. Make required program design modifications and/or operational adjustments. Obtain necessary program certification, instructor training/certification, facilities, space, equipment, materials, and supplies. Align learning objectives, curricula, instructional methods, teaching materials, and classroom/worksite activities to stated employer knowledge and skill specifications. Where possible, facilitate integration of occupational and academic knowledge and skills, contextualized learning, and program articulation.

15. Carry out certification implementation plans.

16. Initiate related courses of study provided by participating education and training programs.

17. Administer selected certification examinations.

18. Evaluate results.

19. Refine process, determining the approach (structure, elements, procedures, and sequence of activities) necessary to successfully incorporate certifications on an ongoing basis into occupational preparation programs operating within and across various education and training delivery systems and funding streams.

20. Ascertain the next group of occupational certifications to consider.

21. Start the access and utilization process again.

22. Merge with the voluntary national system of skill standards and integrate products developed by the NSSB's Voluntary Partnerships.

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[1]National Skills Standards Board, *An Introduction to the Use of Skill Standards and Certifications in WIA Programs – 2002*, p. 29-31. Retrieved from www.nssb.org/pubs/publications.htm (June 2002).

APPENDIX E: National Career Development Guidelines[1]
Adult Competencies and Indicators

SELF-KNOWLEDGE

COMPETENCY I: Skills to maintain a positive self-concept.

1. Demonstrate a positive self-concept.
2. Identify skills, abilities, interests, experiences, values, and personality traits and their influence on career decisions.
3. Identify achievements related to work, learning, and leisure and their influence on self-perception.
4. Demonstrate a realistic understanding of self.

COMPETENCY II: Skills to maintain effective behaviors.

1. Demonstrate appropriate interpersonal skills in expressing feelings and ideas.
2. Identify symptoms of stress.
3. Demonstrate skills to overcome self-defeating behaviors.
4. Demonstrate skills in identifying support and networking arrangements (including role models).
5. Demonstrate skills to manage financial resources.

COMPETENCY III: Understanding developmental changes and transitions.

1. Describe how personal motivations and aspirations may change over time.
2. Describe physical changes that occur with age and adapt work performance to accommodate these.
3. Identify external events (e.g., job loss, job transfer) that require life changes.

EDUCATIONAL AND OCCUPATIONAL EXPERIENCE

COMPETENCY IV: Skills to enter and participate in education and training.

1. Describe short and long-range plans to achieve career goals through appropriate education/training paths.
2. Identify information that describes educational opportunities (e.g., job training programs, employer-sponsored training, graduate and professional study).
3. Describe community resources to support education and training (e.g., child care, public transportation, and health and human services).
4. Identify strategies to overcome personal barriers to education and training.

COMPETENCY V: Skills to participate in work and lifelong learning.

1. Demonstrate confidence in the ability to achieve learning activities (e.g., studying, taking tests).
2. Describe how educational achievements and life experiences relate to occupational opportunities.
3. Describe organizational resources to support education and training (e.g., remedial classes, counseling, and tuition support).

EDUCATIONAL AND OCCUPATIONAL EXPERIENCE (continued)

COMPETENCY VI: Skills to locate, evaluate, and interpret career information.

1. Identify and use current career information resources (e.g., computerized career information systems, print and media materials, and mentors).
2. Describe information related to self-assessment, career planning, occupations, prospective employers, organizational structures, and employer expectations.
3. Describe the uses and limitations of occupational outlook information.
4. Identify the diverse job opportunities available to an individual with a given set of occupational skills.
5. Identify opportunities available through self-employment.
6. Identify factors that contribute to misinformation about occupations.
7. Describe information about specific employers and hiring practices.

COMPETENCY VII: Skills to prepare to seek, obtain, maintain, and change jobs.

1. Identify specific employment situations that match desired career objectives.
2. Demonstrate skills to identify job openings.
3. Demonstrate skills to establish a job search network through colleagues, friends, and family.
4. Demonstrate skills in preparing a resume and completing job applications.
5. Demonstrate skills and abilities essential to prepare for and participate in a successful job interview.
6. Demonstrate effective work attitudes and behaviors.
7. Describe changes (e.g., technological developments, and changes in demand for products or services) that influence the knowledge, skills, and abilities required for job success.
8. Demonstrate strategies to support career change (e.g., on-the-job training, career ladders, mentors, networking, and continuing education).
9. Describe career planning and placement services available through organizations (e.g., educational institutions, business/industry, labor, and community agencies).
10. Identify skills that are transferable from one job to another.

COMPETENCY VIII: Understanding how the needs and functions of society influence the nature and structure of work.

1. Describe the importance of work as it affects values and life style.
2. Describe how society needs and functions affect occupational supply and demand.
3. Describe occupational, industrial, and technological trends as they relate to training programs and employment opportunities.
4. Demonstrate an understanding of the global economy and how it affects the individual.

CAREER PLANNING

COMPETENCY IX: Skills to make decisions.

1. Describe personal criteria for making decisions about education, training, and career goals.
2. Demonstrate skills to assess occupational opportunities in terms of advancement, management styles, work environment, benefits, and other conditions of employment.
3. Describe the effects of education, work, and family decisions on individual career decisions.
4. Identify personal and environmental conditions that affect decision-making.
5. Demonstrate effective career decision-making skills.

COMPETENCY X: Understanding the impact of work on individual and family life.

1. Describe how family and leisure functions affect occupational roles and decisions.
2. Determine effects of individual and family developmental stages on one's career.
3. Describe how work, family, and leisure activities interrelate.
4. Describe strategies for negotiating work, family, and leisure demands with family members (e.g., assertiveness and time management skills).

COMPETENCY XI: Understanding the continuing changes in male/female roles.

1. Describe recent changes in gender norms and attitudes.
2. Describe trends in the gender composition of the labor force and assess implications for one's own career plans.
3. Identify disadvantages of stereotyping occupations.
4. Demonstrate behaviors, attitudes, and skills that work to eliminate stereotyping in education, family, and occupational environments.

COMPETENCY XII: Skills to make career transitions.

1. Identify transition activities (e.g., reassessment of current position and occupational changes) as a normal aspect of career development.
2. Describe strategies to use during transitions (e.g., networks and stress management).
3. Describe skills needed for self-employment (e.g., developing a business plan, determining marketing strategies, and developing sources of capital).
4. Describe the skills and knowledge needed for pre-retirement planning.
5. Develop an individual career plan, updating information from earlier plans and including short and long-range career decisions.

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[1] *The National Career Development Guidelines* are published by the National Training Support Center, (888) 700-8940 and include career development competencies and indicators for elementary, middle/junior high school, and high school students as well as the adult competencies.