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**WORKFORCE INNOVATION IN REGIONAL ECONOMIC DEVELOPMENT (WIRED)
CALIFORNIA INNOVATION CORRIDOR (CIC)**

Workforce Needs Assessment Analysis: Project 3.1

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Location	Riverside County
Number of Companies Surveyed	20

WIRED 3.1 Project Overview (Project Goal) Conduct a labor needs assessment of 200 entities, to include 100 key space and information technology companies and government employers, 50 space entrepreneurial and small business companies, and 50 manufacturing companies. Workforce composition, current and future skill needs, education and training gaps will be identified and included in the assessments.

Introduction

The purpose of the survey was to gather information about the skills required for critical positions and to identify future workforce gaps in order to develop a strategy to address future California Innovation Corridor employer needs. To collect the data, employers were asked to rate both the competency and importance of workforce skills. As a participant of the WIRED 3.1 project, the Riverside County Economic Development Agency’s Workforce Division collected data from twenty Riverside County employers.

To complete this project, a survey instrument was created for the 3.1 project by utilizing a California Employment Development Department, Labor Market Information Division (LMID) survey development process. Company, occupation, and staffing pattern data were analyzed to help each county focus in on potential target companies. The resultant survey instrument was utilized by the Riverside County Economic Development Agency’s Workforce Division in March 2008-April 2008 and conducted on the twenty targeted companies. In addition to this survey, other relevant information was collected and utilized in this report. This summary of the survey includes data from these targeted companies in Riverside County.

Target Companies

The Riverside County economy is diverse, but not known for having a significant number of space and information technology companies, so for the purposes of Goal 3.1, other innovative industries critical to the regional economy were studied. This flexibility allowed Riverside County Economic Development Agency’s Workforce Division to conduct surveys of twenty Riverside County employers in the 238, 541 and 621 NAICS codes. The targeted industries are specialty trade contractors, professional, scientific and technical service companies and ambulatory health care companies. These industries represent growing segments in Riverside County’s developing economy. Companies in the specialty trade contractor segment are part of the area’s expanding green building sector. Ambulatory health care is of particular interest due to the proposed medical school at the University of California, Riverside. The professional services sector continues to expand, mirroring Riverside County’s population growth and rising income levels.



The following table shows the self-identified profile of each surveyed firm.

Targeted Company NAICS Designations

NAICS	Self-Identified Business Description	FTE
238220	Plumbing Contractor for New Home Developers	50-99
541310	Architectural and Engineering Services	20-49
238220	Sheet Metal Manufacturer	50-99
541512	Computer Product Sales	20-49
621111	Multi-Subspecialty Orthopedic Practice	100-249
541519	Computer Network Design and Installation Services	11-19
621511	Medical X-Ray Services	20-49
541330	Engineering Consultants – Land Development	50-99
238220	Solar Heating Contractor	11-19
541310	Architectural and Interior Design Services	11-19
621111	Medical Imaging and Interpretation Services	20-49
621111	Physician Offices/Rehabilitation Center	100-249
238910	Site Preparation Services	5-10
541512	Web Site Design and Internet Services	11-19
621511	Medical Imaging and X-Ray Services	5-10
238310	Lathing, Plastering and Stucco Contractor	50-99
541310	Architectural, Planning and Construction Services	11-19
621210	Dental and Orthodontics Group	20-49
238290	Network Systems Consulting and Installation Services	100-249
541320	Land Use Planning and Development Services	20-49

Summary of Surveyed Respondents

Type	Service	Manufacturing	Government	Other	Not Stated				
Count	14	1	0	5	0				
FTE									
FTE	0-4	5-10	11-19	20-49	50-99	100-249	250-499	500-999	1000+
Count	0	2	5	6	4	3	0	0	0
Respondent Position									
Respondent Position	HR Director	Supervisor/Manager	President/CEO	Other	Not Stated				
Count	5	9	6	0	0				
Background									
Background	A: Direct Observe	B: Periodically Observe	C: Discuss with Supervisors	D: Other	Not Stated				
Count	10	1	9	0	0				

The targeted industries were speciality trade contractors (25%), professional and health care services (70%) and one manufacturer (5%). Half of the surveyed companies were medium-sized (20–99 FTE) 35% small-sized (5–19 FTE) and 15% were larger companies (100-249 FTE). Feedback was obtained directly from upper management that either directly observes or discusses with supervisors their employees' performance.

Critical Employees

Number of WIRED 3.1 Survey Employers	NAICS	Self-Identified Business Description	SOC Code	Occupational Title	2007 Median Hourly Wage ¹	Education/Training Requirements
3	5413	Architectural, Interior Design, Planning & Construction Services	17-1011	Architects, Except Landscape and Naval	\$32.41	BA/BS Degree
3	6215	Medical Imaging and X-Ray Services	29-2034	Radiologic Technologists and Technicians	\$29.13	AA Degree
2	5413	Engineering Consultants; Land Development and Engineering Services	17-2051	Civil Engineers	\$34.73	BA/BS Degree
2	6211	Physicians' Offices and Rehabilitation Center; Orthopedic Practice	31-9092	Medical Assistants	\$12.00	1-12 Month OJT (10), Certificate 1 year; AA 2 years
1	2382	Plumbing Contractor for New Home Developer	47-2152	Plumbers, Pipefitters, and Steamfitters	\$17.82	12-Month OJT
1	2382	Sheet Metal Manufacturer	47-2211	Sheet Metal Workers	\$18.72	1-12 Month OJT
1	5415	Computer Product Sales	41-9099	Sales and Related Workers, All Other	²	1-12 Month OJT
1	5415	Computer Network Design and Installation Services	15-1071	Network and Computer Systems Administrators	³	BA/BS Degree
1	2382	Solar Heating Contractor	49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers ⁴	\$20.89	12-Month OJT
1	2389	Land Clearing Services	53-7051	Industrial Truck and Tractor Operators	\$13.32	30-Day OJT
1	5415	Web site Design and Internet Services	15-1021	Computer Programmers (includes web site programmers)	\$22.25	BA/BS Degree
1	2383	Lathing, Plastering and Stucco Contractor	47-2161	Plasterers and Stucco Masons	\$18.92	12-Month OJT
1	6212	Dental and Orthodontics Group	31-9091	Dental Assistants	\$13.93	1-12 Month OJT
1	2382	Network Systems Consulting and Installation Services	49-9052	Telecommunications Line Installers and Repairers	\$20.40	12-Month OJT
1	5413	Land Use Planning and Development Services	19-3051	Urban and Regional Planners	\$44.86	MA/MS Degree

Source: State of California Employment Development Department, Labor Market Information

- (1) Data for Riverside County is not available. Occupational wages are for Riverside-San Bernardino-Ontario MSA
- (2) Workers may not work full-time all year-round, so not feasible to calculate hourly wage
- (3) An estimate of wage could not be provided due to confidentiality
- (4) Solar installers' earnings are in line with Heating, Ventilation and Air Conditioning wages

Type of Employees

Since Riverside County still has available land to develop into industrial, retail and office space as well as residential housing, it is not surprising that eight of the surveyed companies are in construction-related businesses. These range from architectural and engineering firms that employ architects, civil engineers and land use planners to specialized contractors that employ plumbers, plasterers and tractor operators for site preparation services. The remaining specialty trade contractors interviewed were sheet metal manufacturing machine operators and solar installers. Key employees surveyed in the health care industry were radiology technicians (3), medical assistants (2) and dental assistants. The four other professional service companies surveyed employ computer network technicians, computer consultants (sales representatives), web site developers and computer/telecommunications line installers.

Number of Critical Employees

Only one employer identified more than one critical occupation, noting that both architects and engineers were essential to its operation.

Typical Education

Because of the surveyed companies' broad range of occupations from engineers to agricultural tractor operators, we found a wide spectrum of educational experience. A Bachelor of Science or Bachelor of Arts degree is required at a minimum for architects, civil engineers and land use planners. Computer network technicians and web site programmers need an associate's or bachelor's degree or at a minimum, college-level courses in specialized fields. Radiology technicians and medical assistants need an Associate of Arts degree or a certificate from a vocational training program. Dental assistants may have an Associate of Applied Science degree or graduate from a certificate program. The remaining occupations of plumbers, plasterers, solar installers, network line installers, computer product sales representatives and machine and tractor operators require a high school diploma and offer on-the-job training, usually for 12 months.

Typical Job Experience

All but three of the companies surveyed hire employees with no job experience, ranging from architectural firms hiring college graduates straight out of college to plumbing contractors and network installation companies that hire high school graduates. One engineering firm prefers to hire engineers with experience, the site preparation company hires tractor operators with two years' experience and a medical x-ray laboratory said they only hire licensed technicians with at least one year's experience.

Typical Wages

As shown in the table on the preceding page, the highest wage found for the surveyed occupations is the regional planner with a master's degree at a median hourly wage of \$44.86. Engineers and architects have median hourly wages of \$34.73 and \$32.41, respectively. Radiology technicians with an AA degree earn a median hourly wage of \$29.13. Some other technical trades also have good earning potential with median hourly wages of \$18.92 for plasterers, \$18.72 for sheet metal workers and \$17.82 for plumbers. At the lower end of the earning spectrum are medical assistants who earned a median hourly wage of \$12 and dental assistants at \$13.93. Registered dental assistants earn a higher wage because of more rigorous training standards. Wages in Riverside County typically tend to be lower than neighboring counties.

Major Skills Gaps

Quantitative Results Summary

WIRED 3.1 Survey					
Part IV Questions	Part IV Details	Total	Average	Gap Score	Rank Skills Gap Priority Here
2	Rating of Problem-Solving Skills	60.5	3.0		
Importance	Importance of Problem-Solving Skills	62.5	3.1	0.10	5
3	Rating of Workplace Skills	54.0	2.7		
Importance	Importance of Workplace Skills	68.0	3.4	0.70	4
4	Rating of Occupational Technical Skills	53.0	2.7		
5	Importance of Occupational Technical Skills	71.0	3.6	0.90	2
6	Rating of Additional Technical Skills	72.0	3.6		
7	Importance of Additional Technical Skills	74.0	3.7	0.10	5
8	Rating of Computer Skills	44.0	2.2		
9	Importance of Computer Skills	68.0	3.4	1.20	1
11	Rating of Social Skills	52.0	2.6		
Importance	Importance of Social Skills	67.0	3.4	0.75	3
14	Rating of Education Sufficiency	54.3	2.7	2.7	Rank Education Gap Priority Here
14	Satisfaction with Entry-Level	51.0	2.6	2.6	1
14	Satisfaction with Technical	57.0	2.9	2.9	3
14	Satisfaction with Professional	55.0	2.8	2.8	2

Most Important Skills

On a scale of 1 to 4, with four being highest, the surveyed companies reported a variety of skills they felt were most important. The data showed that *Occupational Technical Skills* and *Additional Technical Skills* were the two most important skills in aggregate. *Problem-Solving Skills* were ranked as least important, most likely because employees in lower level jobs focus on completing tasks, while higher level employees are the problem-solvers.

Largest Skill Gaps

Comparing the importance of a skill versus the current performance of that skill allows us to determine the largest skill gap between expectations and actual. From the table and the same scoring system, we see that *Computer Skills* has the largest gap, with *Occupational Technical Skills* the second highest. At the company level, the widest gap in computer skills is for medical and dental assistant positions whose current computer skills were ranked as “not meeting expectations” while deemed “very important for the future.” The same gap in computer skills was reported for solar installers and computer network line installers.

With the exception of architectural and engineering firms, many of the other companies surveyed noted that entry-level employees are not very well trained in basic occupational technical skills. For companies that hire workers directly out of high school, many said that entry-level employees lack basic skills such as math, science, reading and writing. These basic skills are the foundation for being able to successfully learn specialized technical skills.

By contrast, the smallest gaps are *Problem-Solving Skills* and *Additional Technical Skills*. This result may indicate that many lower level positions do not require interdisciplinary skills and as mentioned above, problem-solving is not a critical skill in these jobs.

Virtually tied for third in the skills gap results are *Social Skills* and *Workplace Skills*. A lack of social skills such as being a team player and having customer service and good communication skills appears to be a problem for the majority of the companies surveyed. Companies reported turnover due to a poor work ethic and mentioned the need for teachable, dependable employees. A list of individual company comments can be found in the Survey Results section in the addendum.

Qualitative Results Summary

WIRED 3.1 Survey		Trend of Responses						
		Technical Skill	Basic Skills	Communication Skills	Customer Service	Problem-solving		
1a	Critical Skills Required	14	6	9	4	3		
		Team Player	Cross-cultural apprec.					
12	Other Social Skills	7	1					
		Teachable	Dependable reliable	Certified	Accurate	Good Attitude	Multi-task	Time Manager
13b	Describe best employee	6	4	3	3	3	2	1
		Technician	Professional	Both	No			
15	Critical Shortage	8	6	4	2			
		Technical	Computer Skills	None				
16	Identify Future Skills	8	7	4				
		Technical	Computer Skills	Communication (speaking/ writing)	Social Skills	Team Building	Leadership	Ethics
17	Identify Desired Training	6	4	4	3	2	1	1
		No comment	Work ethic	Union, inhouse training	Liberal arts ed.	Adapt to fast pace	Riv. Co. not dynamic	Unskilled labor pool
19	Other Comments	11	2	2	1	1	1	1

Critical Skills Shortage (Technical or Professional)

Ninety percent of those surveyed reported that there is a critical skills shortage at the professional or technical level. With a fairly even split, eight reported more of a shortage of Technicians and six noted more of a shortage of Professionals. However, four employers said that it was at both levels. One company remarked that the reason for shortages is because Riverside County is not perceived as dynamic enough to attract these highly skilled workers. Another employer noted that the shortage of professionals is at the middle-manager level. "There are plenty of entry-level candidates and highly experienced executives, but we can't find mid-manager professionals who are crucial for the success of

our business.” This type of comment underscores the importance of organizational succession planning as the older more experienced leaders reach retirement age.

Best Employees

It is not surprising that the best employees in higher level positions have excellent technical knowledge while a solid foundation in “the basics” is essential for lower level positions. Nearly half of the companies surveyed mentioned good communications skills as very important, cutting across all types of occupations from computer network technicians and architects to plumbers. Even solar heating companies look for installers who have public speaking skills so they can attend trade shows. Teamwork is also highly valued for a variety of types of companies in the three disciplines of specialty contractors, health care and professional services. Six employers said having employees who are teachable is extremely important. Being willing to learn applies to college graduates who think “they know it all” as well as to high school graduates.

Identification of Future Skills

Eight companies said that new skill sets required for future workers in their industry would be technical in nature, referring to constantly changing technology that affects the key elements of their business or trade. Since technology changes are often computer-related, seven employers mentioned the importance of computer skills for future employees. Several of those interviewed also commented that it will be critical for employees to be able to easily learn new software programs and new equipment. Examples mentioned of changing technology were digital x-radiology, three-dimensional modeling and merging technologies such as telephones with high-tech surveillance systems. It was noted that new skill sets will emerge from the developing green building sector.

Education Issues

Desired Training

At the Community College level, three employers asked for specialized computer training in Revit architecture building design software and AutoCAD. Other types of desired computer training included web site programming; graphics design software and Microsoft Office system software courses. Four employers requested communications classes in public speaking and business writing. Allied health care employers suggested medical terminology classes and an introduction to patient care.

At the High School level, some companies would like to see more computer classes so new employees will have “more knowledge than just computer games and email.” One employer suggested that high schools provide vocational courses such as Interior Design, AutoCAD Drafting, Electronic Documentation and General Design, stating that vocational trade tech schools are not very effective. Also mentioned as crucial are basic workplace skills that involve teaching soft skills like workplace etiquette, how to dress for an interview and team building. While difficult to teach a work ethic, this is clearly an issue for many of the companies surveyed. Two employers’ comments: “Our high turnover rate is because of a poor work ethic.” “Our biggest problem is the entry-level employee’s work ethic.”

How Skills Will Evolve

No quantitative results can be reported for this question. Cal Poly Pomona, the University of California, Riverside, USC and UCLA were specifically mentioned as resources for Riverside County’s technical workforce. Riverside Community College, Mt. San Jacinto College and College of the Desert already offer many of the computer, communications and health care courses requested by the companies surveyed.

Similarly, Riverside County's Regional Occupation Programs also offer many of the vocational classes requested. Agencies such as the Workforce Development Centers of Riverside County and the Coachella Valley Economic Partnership provide training in soft skills such as customer service, workplace etiquette and how to keep a job.

How to Continue Employees' Education

The majority of the surveyed companies reported that they use on-the-job training as their means for keeping their employees current with technology. One employer has a mandated continuing education program and a specialty contractor uses its union for training. Also, one business uses certificate programs through Microsoft and Cisco Systems to maintain high technical standards.

Regional Investment Strategy

The mission of Riverside County's Workforce Development Board is to link resources, people, business and education together to help form a globally competitive workforce. In support of this mission, one of the top goals of the Board is to strengthen the bridge between education and business. Two objectives include building the relationship with the Building Trades Apprenticeship program and placing more emphasis on On-the-Job training. These types of programs and training will have a favorable impact in creating the ideal worker. Continued collaboration between community colleges and businesses through regional Advisory Boards will help create the types of classes and certificate programs most valuable for continued employee education.

Summary

Although this survey tool did not result in statistically relevant results, it did provide insight into Riverside County's workforce composition, current and future skill needs and education and training gaps. Compared to neighboring Los Angeles, Orange and San Diego Counties, Riverside County has a lower portion of its workforce in the professional, scientific and technical services sector. However, the survey's targeted industries of specialty trade contractors, professional services and ambulatory health care services represent growing segments in the area's economy. Architects, engineers and planners represented the area's high level technical employees, while skilled laborers such as plumbers and plasterers represented some of the area's highly paid blue collar workers and those whose skills will be critical in the innovative field of sustainable development.

Reflective of the region's overall business composition, the companies surveyed tended to be small to medium sized. Computer skills are the biggest concern for these surveyed companies. Except for professional firms, many companies noted that entry-level employees were not well trained in basic occupational skills. Most of those interviewed agreed that the biggest need for the future is to have employees who are able to keep up with rapidly changing technology such as learning new software programs and operating new equipment.

Two apparent ways to maintain high technical standards, lower employee turnover and provide long term stability are to expand on-the-job training programs and to increase the continuing education offerings at local community colleges to include specialized computer software packages. Improving basic math, writing, communication, comprehension, computer skills and reinforcing excellent work ethics are critical to raise the quality of the area's workforce.

Survey Results

Part IV Details	Total	# Responses	Average
Critical Occupations and their Basic Skills	320		3.2
1. What are some of the core critical occupations that drive your company or make your company able to perform?			
1.a. For each occupation, what are the most critical skills of these occupations?			
How important is it that employees meet your expectations in those skills when hired?	75	20	3.8
2. How do you rate their problem solving skills performance/competency?	60.5	20	3.0
Please rate the importance of problem-solving skills for future entry-level employees.	62.5	20	3.1
3. How would you rate typical new-hire performance/competency in workplace skills such as: judgment and decision making, management of resources and time management?	54	20	2.7
How important will these skills be for future employees?	68	20	3.4
Technical Skills	382		3.2
4. In your company, how well does the new employee typically meet performance/competency expectations set for entry-level workers in terms of technical knowledge related to the job s/he will perform?	53	20	2.7
5. Please rate the future importance of occupational knowledge for employees.	71	20	3.6
6. In the area of technical skills, how important will it be for entry-level employees to be adept in the use/operation of equipment, tools, materials, software, information systems, or more than one specific technology when hired?	72	20	3.6
7. What is the importance of these skills and/or abilities for future entry-level employees?	74	20	3.7
8. In terms of specific computer skills such as using spreadsheets, databases, word processing, graphics, Internet or giving presentations, etc., how well does the new hire meet entry-level performance expectations?	44	20	2.2
9. How would you rate the importance of information technology use and management for future entry-level employees?	68	20	3.4
10. Do you look for any other skills that are among your entry-level expectations for present and future employees which I have not mentioned? Please discuss them.		12	Yes
Social Skills	175		2.9
11. In the area of social skills, how well does the employee meet entry-level performance expectations for team-work, coordination, instructing, relationship-building, cross-cultural understanding, negotiation, persuasion, etc.?	52	20	2.6
What level of future importance will social skills have for your entry-level employees?	67	20	3.35
12. Are there any social skills not mentioned which you include in entry level expectations, now, or will in the future? Please discuss.			
13. In demonstrating good work ethics (initiative, dependability, reliability), how well does the employee meet entry-level expectations?	56	20	2.8
13.b In terms of technical abilities and organizational fit, please identify the characteristics, which best describe your most effective, reliable technical employees for each critical occupation.			
Overall Perception of Today's Workforce	217.3		2.7
14. In general, how satisfied are you with the education of today's worker?	54.3	20	2.7
Entry-level	51	20	2.6
Technical	57	20	2.9
Professional	55	20	2.8

Survey Results

Consolidated Answers to written questions:

13b. In terms of technical abilities and organizational fit, please identify the characteristics, which best describe your most effective, reliable technical employees for each critical occupation:

- Strong technical knowledge, works safely, understands the physical demands of the job, meets deadlines, team player
- Collaborative, cooperative, open to other's views, able to take constructive criticism, open to mentoring, time management skills, able to convey ideas, self-initiative
- Good quality control skills, able to read drawings
- Reliable, flexible, willing to do what they are asked, positive attitude, good work ethic
- Ability to follow-up and complete assigned tasks, have basic electronics skills
- Able to work in a fast-paced environment
- Team player
- Good problem solving skills, customer service skills
- Broad knowledge of commercial construction, trained in design theory, produce technical documents with software, open-minded, team spirit, willing to learn
- Great technical skills, accurate (no rework), team player
- Understand technical fundamentals
- Two+ years of experience; show initiative without supervisor onsite
- Good customer service skills with the ability to create what the customer wants
- Accurate, precise
- Trainable, able to multi-task, very professional, responsible, accurate and reliable
- Good listening skills, willing to meet commitments, promptness and ownership, create design solutions
- Organized, able to multi-task, good leadership skills, stay within budget
- Consistent quality of work, able to understand and carry out directions, able to appropriately interact with customers
- Good education (BA or BS in planning), ability to grow and apply theory learned in college

15. Is there a critical skills shortage, if so, is it more at the Professional Level or Technical Level?

- Technical Level
- Professional Level
- Both
- Riverside County is not perceived as dynamic enough for most graduates in architecture, so there is a critical skills shortage at the technical and professional level
- Critical shortage of professionals at the middle manager level. There are plenty of entry-level candidates and plenty of high-level executives, but not many mid-level employees, which is a concern.

16. Are there any new skills sets that may be required of future workers in this industry?

- Ability to adapt to software changes. *Revit* will be the new software standard for architects, replacing AutoCAD

Survey Results

Consolidated Answers to written questions: (continued)

- Program CNC (Computer Numerical Control) machinery (at this time the company outsources programming function)
- More computer skills will be required because of the paperless environment
- Adapt to merging technologies (phones, CCTB surveillance systems)
- Ability to adapt to new technology and equipment
- New versions of AutoCAD and other engineering software
- Basic electrical skills
- Willing to participate in 24 hours of continuing education every two years
- Ability to operate new tractor trailers in an agricultural setting
- Keep up with new software, web site design techniques
- Knowledge of new technology
- Three-dimensional visioning/modeling, easily adapt to new technology, software
- Must be a registered dental assistant
- Adapt to constantly changing technology
- Keep up with new laws, growth of green building and green technology, adapt to changing computer technology

17. Are there any classes or training programs you would like to see covered during high school years or offered by the local community college that would better prepare potential employees for employment by your company?

- Teach social skills and effective communication skills
- Teach Revit (versus AutoCAD) and BIM (Building Information Modeling)
- Offer basic training on programming CNC machines
- Soft skills training (such as workplace etiquette and how to dress for an interview)
- Incorporate team building, group project work and leadership training into coursework
- Basic introduction to medical terminology and patient care
- No, the company will train
- General design class or design courses specifically for architecture and training in CAD drafting and graphics programs
- High school – basic customer service skills and how to be a team player. College – medical terminology
- Courses in writing and public speaking, ethics and fundamental business skills
- Web site design classes at community college and university level
- X-ray technology courses
- Carpentry courses
- Public speaking courses (improve verbal skills)
- Offer only Registered Dental Assistant training (not just basic training)
- Extensive training in Microsoft programs (Excel, Access, Word), teach social skills, good work ethic, communications skills

Survey Results

Consolidated Answers to written questions: (continued)

18. What types of companies are involved in your supply chain?

- Material supply warehouses
- Raw materials, building materials and manufacturing companies
- Aluminum extruding, carton cardboard and packaging sheet metal companies
- 1,500 computer product manufacturers, schools and school districts
- Office supply, medical supply and drug supply companies
- Microsoft, HP, Cisco Systems, distributors of industry-specific software
- Hospitals, doctors' offices, medical laboratories
- Real estate developers, land management companies, government agencies
- Inverter and solar panel manufacturers, wire and electronic equipment companies, local utility companies
- Software, marketing and advertising companies, construction supply companies
- Companies that sell IV's and X-ray film and supplies, IT support companies
- Medical equipment companies, food service companies, drug companies
- Manufacturing and construction companies
- All types of professional businesses
- Medical supply companies, medical facilities
- Stucco, metal and sand companies
- Consulting engineers, technical reproduction firms, IT companies, construction firms
- Medical supply and office supply companies, pharmacology companies
- Electrical and building suppliers, safety and training companies, insurance and bonding companies, public schools
- Cities, counties, engineering firms, biologists, environmental specialists, utility companies, traffic specialists

19. Are there any further comments you would like to make?

- We hire high school graduates and train them. There is a high turnover rate because of a poor work ethic. We support immigration reform because immigrants generally have an excellent work ethic. Basic reading and math skills are important, while our employees (plumbers) do not need computer skills.
- Engineers and architects need technical skills as a foundation, but liberal arts education is also very important. Most new hires are loners, lacking the ability to work in a team. Global focus is crucial. Our project teams have members all over the world. If an employee doesn't work out, it is because of social skills, not technical skills. New hires typically don't have time management skills. State colleges prepare students with practical skills versus the more "prestige" colleges.
- For entry-level positions we are drawing from a very unskilled labor pool with no social skills. Applicants are looking for someone to train them. They switch jobs frequently for the money. Not many applicants have a sense of ownership for their career pathway.
- We offer extensive in-house training and other continuing education. We have offered job shadowing to high school and community college students to encourage careers in engineering.

Survey Results

Consolidated Answers to written questions: (continued)

- Would like high schools to provide vocational courses such as Interior Design, AutoCAD drafting, electronic documentation and general design. Vocational trade schools are not very effective.
- New employees typically do not meet expectations. Most take awhile to adapt to the fast work pace. Ninety percent of the technician's job (Radiology Technician) is computer work, so must have great computer skills. Entry-level employees need more confidence in their decision-making abilities. Wages for entry-level technicians start at \$20 per hour.
- Administrator was very reluctant to participate in the survey due to HIPAA regulations. Administrator does not want business name or address listed.
- We hire high school graduates for network line installers. Basic computer skills are sorely lacking in entry-level employees who only know games and e-mail. A poor work ethic is the biggest problem with new-hires. They don't want to put in a full day's work and lack teamwork and customer service skills. Our employees are trained through union programs as well as certificate programs through Microsoft and Cisco Systems.
- Entry-level employees must be teachable. The college degree is just the beginning and knowledge is acquired on-the-job. New hires must be open to learning and realize that they don't know it all and some don't want to admit that. We have had good success recruiting from Cal Poly Pomona, USC and UCLA.

Sample Survey (Page 1)

WIRED 3.1 Interview Format for Employer Questionnaire

Introduction

Part One: Demographics

Name of Employer _____

Industry (NAICS): _____

Type of Business: Service _____ Manufacturing _____ Government _____ Other _____

Size of Business:

0 -4 Full-time employees or full-time equivalents (FTE) _____ 5 - 9 FTE _____ 10 - 19 FTE _____ 20 - 49

FTE _____ 50 - 99 FTE _____ 100 – 249 FTE _____ 250 – 499 FTE _____ 1000+FTE _____

Interviewee's Title/Position

Pres./CEO/Dir. _____ HR Dir. _____ Supv./Mgr. _____ Other _____

Primary Site of Business _____

Part Two: Background Description

Please indicate which one of the following descriptions best defines your role relating to employees at your company?

_____ A. I directly supervise or am able to closely observe the job performance and/or work results of employees.

_____ B. I periodically (at least once a month) observe the job performance or see the work results of employees.

_____ C. In my position I discuss with direct supervisors, managers and/or management personnel, the job performances of employees as part of my role with the company.

_____ D. OR complete the following statement. "My opinions and perceptions of the current workforce are based on

Do you have any questions or concerns before we continue?

(Note comments or observations as needed)

Part Three: Directions for Interview Questions

The purpose of this interview is to gather information about the skills required for positions at your firm and any gaps between your expectations and what is available in the current workforce.

While you are recalling recent new hires in your business, please give an evaluation of how well they meet your *performance expectations*.

Specific skills are grouped in three broad areas:

- A. Basic Skills, i.e., math, language, writing, reading
- B. Technical Skills i.e., skills specific to the occupation
- C. Social Skills, i.e., communication, coordination, team building

D. Workplace Skills, i.e., reliability, dependability, etc.

Sample Survey (page 2)

First, I will name specific skills and ask that you discuss the skills of the new hire in terms of *performance/competency expectations*:

- 4 = **Exceeding** your entry-level expectations (E)
- 3 = **Meeting** your entry-level expectations (M)
- 2 = **Nearly Meeting** your entry-level expectations (NM)
- 1 = **Does Not Meet** your entry-level expectations (DNM)
- 0 = **Does not apply (NA)**

Secondly, I will ask you to rate how **important** each attribute is for employees you will hire in the future. Please rate each attribute using one of the following, which best applies.

- A. 4 = **Very Important** in future entry level employees (VI)
- B. 3 = **Important** (I)
- C. 2 = **Somewhat Important** (SI)
- D. 1 = **Not Important** (NI)

You are encouraged to briefly elaborate on your response with any specific examples related to a particular occupation.

Part Four: Interview Questions

Critical Occupations and their Basic Skills

1. What are some of the core critical occupations that drive your company or make your company able to perform?

1.a. For each occupation, what are the most critical skills of these occupations?

For each critical occupation, please answer the following:

How *important* is it that employees meet your expectations in those skills when hired?

Rating _____

2. How do you rate their problem solving skills *performance/competency*?

Rating _____

Please rate the *importance* of problem-solving skills for future entry-level employees?

Rating _____

3. How would you rate typical new-hire *performance/competency* in workplace skills such as; judgment and decision making, management of resources and time management?

Rating _____

How *important* will these skills be for future employees?

Rating _____

Sample Survey (page 3)

Technical Skills

4. In your company, how well does the new employee typically meet *performance/competency* expectations set for entry-level workers in terms of technical knowledge related to the job s/he will perform?

Rating _____

5. Please rate the future *importance* of occupational knowledge for employees

Rating _____

6. In the area of technical skills, how *important* will it be for entry-level employees to be adept in the use/operation of equipment, tools, materials, software, information systems, or more than one specific technology when hired?

Rating _____

7. What is the *importance* of these skills and/or abilities for future entry-level employees?

Rating _____

8. In terms of specific computer skills such as using spreadsheets, databases, word processing, graphics, Internet or giving presentations, etc., how well does the new hire meet entry-level *performance* expectations?

Rating _____

9. How would you rate the *importance* of information technology use and management for future entry-level employees?

Rating _____

10. Do you look for any other skills that are among your entry-level expectations for present and future employees which I have not mentioned? Please discuss them.

Social Skills

11. In the area of social skills, how well does the employee meet entry level *performance* expectations for team-work, coordination, instructing, relationship-building, cross-cultural understanding, negotiation, persuasion, etc.?

Rating _____

What level of future *importance* will social skills have for your entry level employees?

Rating _____

12. Are there any social skills not mentioned which you include in entry level expectations, now, or will in the future? Please discuss.

Sample Survey (page 4)

13. In demonstrating good work ethics (initiative, dependability, reliability), how well does the employee meet entry-level expectations?

Rating _____

13.b In terms of technical abilities and organizational fit, please identify the characteristics, which best describe your most effective, reliable technical employees for each critical occupation:

Overall Perception of today's workforce

14. In general, how satisfied are you with the education of today's worker?

Entry level:

4 = Very satisfied ____ 3 = Satisfied ____ 2 = Unsatisfied ____ 1 = Very Unsatisfied ____

Technical:

4 = Very satisfied ____ 3 = Satisfied ____ 2 = Unsatisfied ____ 1 = Very Unsatisfied ____

Professional

4 = Very satisfied ____ 3 = Satisfied ____ 2 = Unsatisfied ____ 1 = Very Unsatisfied ____

We appreciate the time you have taken to share your perceptions. We value your feedback. There are a few final questions that I would like to ask regarding the labor pool from which you have to choose future employees.

15. Is there a critical skills shortage, if so, is it more at the:

1. Technician level
2. Professional Level

16. Are there any new skills sets that may be required of future workers in this industry?

17. Are there any classes or training programs you would like to see covered during high school years or offered by the local community college that would better prepare potential employees for employment by your company?

18. What types of companies are involved in your supply chain?

Sample Survey (page 5)

19. Are there any further comments you would like to make?

Date _____

Location of Interview _____

Person conducting Interview _____

Duration of Interview _____

Recording Interview Responses

Part One: Demographics

Check response given or record information given under "other".

Part Two: Background description

Check response given or record information given "Complete this statement..."

Part Three: Directions for interview

Please note any need for clarification or concerns expressed.

Part Four: Interview Questions

Suggested abbreviations for ratings:

4 = EX = Exceeds expectations	4= VI=Very Important
3 = M = Meets expectations	3 = I = Important
2 = NM = Nearly meets expectations	2 = SI = Somewhat Important
1 = DNM = Does not meet expectations	1 = NI = Not Important
0 = NA = Does not apply	

Please transcribe your notes of lengthy responses, with appropriate interview question numbers.