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Workforce Innovation in Regional Economic Development

California Innovation Corridor Task 3.1

Workforce Needs Assessment Analysis

Project Report Submitted to
Christine Purcell, 3.1 Project Leader
California Space Authority

From

Robert T. Mejia, Employment Services Manager
South Bay Workforce Investment Board

October 2, 2008

Funding provided by Department of Labor, Employment & Training Administration: WIRED Initiative

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

Workforce Needs Assessment Analysis: Project 3.1

Economic Development Partner:	South Bay Economic Development Partnership
Contact:	Liz West, Interim Executive Director (310) 227-8100
Workforce Investment Board Partner:	South Bay Workforce Investment Board
Contact:	Robert T. Mejia, Employment Services Manager, (310) 970-7747
Date:	September 25, 2008
Location:	South Bay Region of Los Angeles County
Number of Companies Surveyed:	21

WIRED 3.1 Project Overview: (Project Goal): The goal of this project was to conduct a labor needs assessment within a base 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, and 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 skill gaps in order to develop a strategy to address future California Innovation Corridor employer needs. To collect the data, a survey instrument was created where employers were asked to rate both the competency and importance of workforce skills. As partners for the WIRED 3.1 project, the South Bay Economic Development Partnership (SBEDP) and the South Bay Workforce Investment Board (SBWIB) collected data from 21 South Bay employers.

This summary provides an analysis of the survey and includes data from the 21 targeted key companies in the fields of hi-technology, aerospace, environmental, bio-tech, manufacturing, and transportation, which represent the innovation and economic leadership of the South Bay Region of Los Angeles County.

Although this sample size may not be large enough to be considered relevant statistically, the survey accurately reflects the diversity of the high-tech business community of the South Bay, giving voice to common themes and workforce concerns.

To complete this project, the survey instrument which was developed specifically for the WIRED 3.1 project was administered to ensure continuity with the findings from other regions within the California Innovation Corridor. Although the survey responses, both qualitative and quantitative, are reflected verbatim in the tabulation instrument, additional comments and insights were gained by verbal interviews, not all of which could be recorded in writing. The most universal and instructive of these comments are reflected in this narrative as well.

South Bay Region Overview:

The South Bay region covers 161 square miles in the southwest quadrant of Los Angeles County. It is roughly bounded by the I-105 freeway to the north and the Pacific Ocean to the west and south. There are 15 incorporated cities in the South Bay, plus part of the city of Los Angeles, the city of Inglewood and Los Angeles International Airport.

The five significant economic drivers for the South Bay include: Defense/High-Tech; Recreation/Tourism; International Trade; Transportation and Manufacturing. There are also three "boutique" industry sectors: Auto Industry; Biomedical and Petro-chemical.

The typical growing clusters in Los Angeles County (e.g. Entertainment and Hospitality, Retail and Health Care) were excluded as target industries because of their lesser connection to technical innovation.

Target Companies:

The South Bay Economic Development Partnership and the South Bay Workforce Investment Board reached out to several hundred South Bay employers within these targeted NAICS codes: 325, 334, 336, and 541. The following tables show the self-identified profile of the businesses surveyed.

Targeted Company NAICS Designations:

NAICS	Description	Total Respondents	FTE
334	Computer and Electrical Product Manufacturing	9	(1) < 5; (1) 11-19; (2) 20-29; (3) 100-249; (1) 500-999; (1) 1,000+
336	Transportation Equipment Manufacturing	2	(1) 5-10; (1) 500-999
423	Electronic Parts and Equipment; Computer Equipment	2	(1) < 5; (1) 500-999
541	Professional, Scientific and Technical Services	8	(2) < 5; (1) 5–10; (3) 50–99; (1) 100-249; (1) 250-499

Summary of Surveyed Respondents:

Type	Service	Manufacturing	Government	Other	Not Stated
Count	4	16	0	1	0

FTE	0-4	5-10	11-19	20-49	50-99	100-249	250-499	500-999	1000+
Count	4	2	1	2	3	4	1	3	1

Respondent Position	HR Director	Supervisor/Mngr.	President/ Owner/CEO	Other	Not Stated
Count	5	4	7	4	1

Background	A: Supervise	B: Periodically Observe	C: Discuss with Supervisors	D: Other	Not Stated
Count	7	2	11	1	0

Type of Companies: Of the 21 companies surveyed, 76% indicated manufacturing as their primary classification, 19% service and one "other." Even if they could be classified as more than one type of company, each provided only one response, based on their primary business function.

Company Size: Although the average number of employees of those companies surveyed was 216, it is more accurate to view them in categories: small (under 20) is 33%; small to mid (20 - 99) is 24%; mid to large (100 – 499) 24% and large (500+) 19%. Overall, 57% of the responding companies have less than 100 employees. This percentage reflects the business base of Los Angeles County, as a whole, which is predominantly made of small and medium-sized businesses.

Respondents: Feedback was obtained directly from upper management that either directly supervises employee performance or regularly discusses performance with the direct supervisor, as in the case of human resources (HR).

Core Critical Occupations:

At the beginning of the survey, employers were asked to identify their main core critical occupation and to answer the survey questions as they pertain to their main function. Next, they were asked to list the core competencies required to perform their core function(s). In essence, this constitutes a list of key functions or competencies.

The table below shows a breakdown of Critical Core Competencies by NAICS code, as well as the percentages per major category. Engineering of various disciplines represented 35% of overall Critical Core Competencies for this sample set. Non-technical professional areas such as Sales and Financial Management represent a combined total of 16%, with technical and manufacturing disciplines representing the balance. For a complete detail of all responses, please see Chart II E.

Critical Core Competency	Responses per NAICS					
Category	334	336	541	423	Responses	%
Engineering	6	3	4		13	35%
Technicians	1	1	1		3	8%
Machinists	1			2	3	8%
Electronic & Software Design Skills	2	1	2		5	14%
Manufacturing or Assembly Skills	3		2		5	14%
Computer Networking/Server Skills	1		1		2	5%
Financial Analyst	1				1	3%
Management		2			2	5%
Sales/Sales Management	1		1	1	3	8%
					37	**100%**

Major Skills Gaps:

Table 1: Skill Gap Analysis ~ Quantitative Summary

Survey Question #2	Ranking of Employees Skills	Total	Average	Gap Score	Skills Gap Priority Rank
2	Rating of Problem Solving Skills	60	3.0	0.29	5
Importance	Importance of Problem Solving Skills	69	3.3		
3	Rating of Workplace Skills	48.0	2.5	1.00	1
Importance	Importance of Workplace Skills	74.0	3.5		
Technical Skills	Technical Skills		3.0		
4	Rating of Occupational Technical Skills	62.0	3.0	0.76	2
5	Importance of Occupational Technical Skills	78.0	3.7		
6	Rating of Additional Technical Skills	72.0	3.4	-0.10	6
7	Importance of Additional Technical Skills	70.0	3.3		
8	Rating of Computer Skills	56.0	2.7	0.52	4
9	Importance of Computer Skills	67.0	3.2		
11	Rating of Social Skills	54.0	2.7	0.60	3
Importance	Importance of Social Skills	66.0	3.3		
14	Rating of Education Sufficiency (Average)		2.9		Education Gap Priority Rank
14	Satisfaction with Entry Level	59.0	2.8	2.8	1
14	Satisfaction with Technical	64.0	3.0	3.0	2
14	Satisfaction with Professional	57.0	3.0	3.0	2

Largest Skill Gaps: The Skill Gap is derived from comparing the relative importance of the specific skill to the rating of the current performance of that skill. The larger the gap, the greater the dissatisfaction with the level of performance, vis a vis its impact on the critical core occupation. The Skill Gaps are ranked in terms of priority, 1 being the greatest opportunity or challenge.

Workplace Skills, defined on the survey as judgment, decision making, management of resources and time, have the greatest gap by a relatively wide margin, and are the greatest priority.

The next Skill Gap in importance is Occupational Technical Skills. Occupational Technical Skills were not specified on the survey, but are specific to each company's critical occupation. Social Skills, defined by the survey to include teamwork, coordination, relationship-building and cross-cultural understanding, scored 3rd in priority. The negative Skill Gap means that the rating of the actual skill level is above the relative importance of the skill. In the case of "Additional Technical Skills" category, the definition which includes "use of tools" is generalized.

Most Important Skills: In addition to identifying and ranking the Skill Gap, the chart above denotes how companies rated various employee skills in terms of importance. All six of the skill areas are important, evidenced by a rating of 3+. The following is the list of important skills, from greatest to least:

1) Occupational Technical Skills 3.7
2) Workplace Skills 3.5
3) Additional Technical Skills 3.3
4) Problem Solving Skills 3.3
5) Social Skills 3.3
6) Computer Skills 3.2

This ranking is consistent with the qualitative responses, where Technical Skills ranked highest, followed by math. In the South Bay region, other than communication and problem solving, "soft skills" did not weigh heavily in importance on this survey.

Education Sufficiency: Section 14 of the survey measures the level of satisfaction with education levels, rather than a gap score, with four being the highest satisfaction and 1 being the lowest. Based on this scale, employers are equally satisfied by the quality of education of Technical and Professional employees, followed by Entry Level employees. Of the three categories, they are least satisfied with the educational sufficiency of Entry Level employees, which fell below the score of "3" indicating less than satisfied.

Table 2: Skill Gap Analysis ~ Qualitative Summary

1 a								
Critical Skills Required	Technical Skills 5	Math 4	Communi-cation 3	Problem Solving 3	Computer Skills 3	Engin. Degree 2	Industrial Design 2	Inter-personal Skills 2
12								
Other Social Skills	Inter-personal Communi-cation 3	Conflict Resolution 2	Customer Service & Telephone Skills 2	Work Ethic & Professionali sm 2	Promptness 1	Meetings Mngt. 1		
13 b								
Describe best employee	Motivated; Dedicated; Initiative 5	Conscien-tious; Attention to Detail; Reliable 4	Problem Solver 3	Multi-tasker; Multi-discipline 3	Interested in Contin-uous Education 3	Math 3	Technical Ability 3	Communica-tion; English Skills 3
15								
Critical Shortage	Technical 7	Professiona l 7	Both Technical & Professiona l 3	No Shortage 2	No Response 2			
16								
Identify Future Skills	Computer, Software and I.T. Skills 3	Adaptable to Change 2	Six Sigma 1	Basic Reading, Writing and Comprehen-sion 1	Work Experience 1	Analy-tical Skills 1	Avionics Engin.; Software Engin.; Materials & Processes 1	Electronics, Aircraft Assembly, Solar Cells 1
17								
Identify Desired Training	Profession-alism, Leadership & Teamwork 3	Math, Science & Statistics 3	Industrial Design and Overview of Manufactrn g. 3	Hands-on manufactur-ing skills; Machine Shop 2	Project Mngt. 1	CNC Program-ming 1	Comm. Skills 1	Computer Skills 1

Qualitative Summary, continued

Employer Comments, Question 19:

1) We only work with subcontractors, so we have no direct interaction with actual employees. We expect our subcontractors to have a high degree of technical expertise. We do not interview them regarding the types of degrees they have. These are long-term relationships (some over 20 years) based on performance & trust.
2) We work with a program through Verbum Dei where we host four high school aged interns, who share one job at the company. This is a great program because we teach them real work skills. They come out of high school after 4 years of working here at Belkin or other firms knowing how to do practical work. There is a gap between training and the real world that these kinds of programs can help close.
3) Long Beach has a good industrial design program. El Camino is notable. Otis has a Toy Invention program. Owner participates as guest speaker and supports local programs.
4) We compete with higher-paying large companies for our workforce and often higher workers who have been laid off. New employees lack basic success skills like being on time. Would appreciate some type of orientation program for basic success skills to be available as resource for employers.

Critical Skills Shortage (Technical or Professional): Of the 17 companies that reported a critical skills shortage, respondents were evenly split between seeing the shortage as primarily Technical (41%) or Professional (41%), with 17% citing both. 10% of those responding did not consider there to be a shortage. **Note:** This survey question does not provide any detail as to the definition of the terms "professional" or "technical." This is one of the areas where the low number of responses does not represent a statistically significant pool from which to draw a strong conclusion.

Best Employees: The top category of attributes characterizing the "best employees" includes motivation, dedication and initiative. Next in importance were conscientiousness, reliability and attention to detail. The next set of six attributes, all ranking equally in importance, includes problem-solving, ability to multi-task, commitment to professional development, technical skills and basic skills including math, English and communication.

Identification of New Skills:
9 out of the 21 companies surveyed did not respond to this question, did not know the answer or did not think there were any new skills that would be important. This is interesting, considering that one of the main purposes of this survey is to help identify skills needed to equip the workforce of the future. From this, it can be concluded that the skills that are identified for current employees will be the same ones needed for future employees.

Of the 12 companies that provided a specific response, there were 13 different specific answers covering a broad spectrum ranging from technical, basic skills, soft skills and personal attributes such as adaptability that employers are looking for in future employees. The range and diversity of these answers is illustrated in the following table:

New Skills Required by Future Workers:

	Responses	Skill Set
1	2	Adaptability
2	2	IT; Computer literacy
3	1	Electronics
4	1	Software Engineering
5	1	Avionics Engineering
6	1	Materials and Processes
7	1	Solar Cells
8	1	Six Sigma
9	1	Basic Writing, Reading and Comprehension
10	1	Analytical Skills
11	1	Extensive Work Experience
12	1	Aircraft Assembly
13	1	Collaboration

Education/Training Issues:

Employers expressed a clear difference in valuation between older and younger workers, saying today's recent graduates, whether K-12 or college, are not as adept as those in years past. In general, the workplace and technical skills of a new hire, even one with a few years experience, were not up to expectations. These issues will need to be addressed through a combination of company-sponsored training and local educational programs.

Basic Training: Many of the companies surveyed identified the need for strengthening basic skills in the areas of Communication (written and verbal), Math, and Science. Although most professionals believe in the value of mastering basic skills, there is evidence of a growing generational disconnect among members of the younger generation of people entering the workforce as far as the perceived relevance of these skills. One of the challenges our educators face, in addition to ensuring the quality and accessibility of basic skills education, is conveying the relevance of these subjects as they relate to lifestyle and material success.

Workplace Skills and Social Skills Training: Based on the results of this survey, "soft skills" fall into two categories: practical skills, such as problem solving, communication and teamwork, which can be taught, and items which are more closely related to personal attributes such; as creativity, integrity, reliability and accountability. The first group of practical soft skills can be taught and are, in fact, increasingly incorporated into modern course work which requires students to complete projects together, encouraging teamwork and communication.

The second group of soft skills that revolve around character issues are more complex, with more complex origins and influences beyond the academic environment. These successful behaviors and character attributes are modeled in the family, churches, community organizations, schools, and within the corporate workplace. They are integrally woven throughout the fabric of these social structures. Positive affects on the development of desirable employee character traits will require an unprecedented, concerted effort, and a multifaceted approach.

Across all business disciplines, the need for these characteristics remains of primary importance to the core critical business function. Twin questions arise: <u>can</u> companies and or educational institutions teach these attributes; and who is ultimately responsible for doing so?

Continuous Employee Education: Several companies mentioned that a commitment to continuing education was an attribute of their "Best" employees. This is an area for future exploration, whether providing an incentive for employees through tuition reimbursement, or company-sponsored, in-house training programs and courses.

Hands-on Experience: On-the-job (OJT) training programs throughout the greater LA County/South Bay region have experienced a sharp decline in federal funding. Because of a lack of funding, many companies no longer consider OJT as a viable strategy for employee development and attraction. Fortunately, California companies have an excellent resource available to help them upgrade the skills of existing employees through the use of the state-funded Employment Training Panel (ETP) program. Funded by the California Unemployment Insurance Program, ETP programs allow companies to work with a hired consultant or educational institution to create a tailored curriculum for their training needs, while the State pays for a portion of the training.

Internships: Companies should be encouraged to work with local educational stakeholders to expand practical internships, which would allow prospective employees to gain real-world experience and provide employers a tool to train prospective employees for workplace success. Internship programs, however, require an investment of time and resources as well as a top-down commitment to long-term workforce development.

One of the survey respondents, Belkin International, described a highly successful internship program that has helped them bridge the experience gap for students, giving them the opportunity to develop practical, hands-on experience prior to entering the full-time workforce.

Conclusion: Whether the focus is on specific tech related training or certification, or on developing workplace skills, a key success strategy for the South Bay area is to ensure that education and training providers stay in tune with the changing needs of the area's innovators so that programs remain current and relevant. This can be achieved by maintaining a dialogue between companies and educational institutions that develop technology-related and work-related curricula.

South Bay Education and Training Resources:

- South Bay Workforce Investment Board
- CA Employment Training Panel (ETP) program
- California State University, Dominguez Hills
- Los Angeles Harbor College
- El Camino College
- El Camino College Center for Applied Competitive Technology
- El Camino College Small Business Development Center
- Southern California Regional Occupational Center
- California Manufacturing Technology Consulting
- El Camino College Compton Education Center
- Harbor WorkSource Center
- Harbor Occupational Center

Regional Investment Strategy:

How skills will evolve: The results of this survey represent current perspectives that will enhance the cooperative dialogue already underway between our business community, education and training stakeholders and supportive agencies and resources. The impact that this survey will have on how skills will evolve will be the direct result of how it is used to encourage the synergy between members of these three groups.

A broad strategy is required, which includes reaching out to businesses to help them identify cost-effective methods to remedy skills gaps including an understanding of training organizations and funding sources. Secondary approaches include the following recommendations:

- Advise the thirteen school districts in the region, especially career counselors, on what student minimum requirements exist for employment in high-paying jobs within the community.

- Conduct community forums for parents of current students to discuss career opportunities and the requirements for each.

- Identify community advisory councils comprised of business owners, residents, educators, and trainers to determine the best methods for developing curricula necessary for educating those students wishing to enter the workforce immediately after high school.

- Enlist the assistance of the California Department of Education to support community-based efforts, establishing a platform for programs designed to reduce dropout rates via cooperative education/training programs and apprenticeships.

- Work closely with county, state and national elected officials to promote funding of education-to-work programs.

- Increase positive impact of ETP through cross-promotion to expand awareness and outreach of programs and funding opportunities.

Additional Insights Gained from Company Interviews:

Companies responding to our surveys had similar feedback regarding the current workforce. They perceive older, more experienced workers as more productive, demonstrating more of the desired skills and attributes than the younger, less experienced worker, regardless of education. In conversations during interviews, employers described a gap in motivation and desire for excellence between the mature worker and those relatively new to the industry. The more mature worker generally possess a greater passion for the work, an inquisitive nature to solve problems and overall desire to produce a superior product compared to those workers relatively new to the industry.

One example shared was that of a recruit with a 4-year engineering degree who knows how to use the latest software modeling application program, but does not have a driving interest beyond what the software produces and is willing to accept the outcome without question. The older more desirable employee appears to be more skeptical of face value and doesn't as readily accept initial findings. This was expressed as the carpenter's "measure twice and cut once" rule.

Regarding the technician level, employers said basic education is lacking, especially in math, science and English. Companies giving higher marks to entry level employees appear to have more rigorous hiring practices, choosing to take longer to hire and ensuring the quality of entry level employees. A few companies hire on perceived character qualities, preferring to train on site in order to maintain their current corporate culture.

A company hiring primarily more highly educated workers offered an interesting insight; the smartest of these, who were slightly older than the mean, were not as socially adaptable as the newer, younger employee and often rejected out-of-hand that with which they were not familiar. This example was given in reference to how the company handles day-to-day conflict resolution.

Cultural differences were also mentioned as a source of conflict, which is understandable considering the diversity of Los Angeles County, where more than ninety languages are spoken and many workers are

not native. If the trends identified in this survey are more wide-spread than in the relatively small sample set, offering cross-generational and cross-cultural collaboration and teamwork training may be a highly productive strategy for educators and companies alike.

Those interviewed voiced concern that expectations were lowering as time goes by. In general, managers seem to be resigned to having to fill education and skill gaps with the less experienced employee. If this is in fact the case, it raises the question of succession. Where is the next generation of supervisors, managers and executives going to come from?

All surveys conducted by:
The South Bay Economic Development Partnership and
the South Bay Workforce Investment Board

Sample Questionnaire 1.D

Employer Questionnaire for Innovative/Hi-tech and Bio Firms

Part One: Demographics

Name of Employer:

Industry (NAICS):

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

# of Full_-time employees or full-time equivalents (FTE)?:

Interviewee's Title/Position:

Primary Site of Business:

Part Two: Background Description: BOLD your answer.

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…

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.

Please try to recall recent new hires in your business and give an evaluation of how well they meet your *performance expectations*.

Specific skills are grouped in 4 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.

The survey questions below address specific skills and ask that you rate the skills of the new hire in terms of **meeting your *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)

You will also be asked 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 is one of the core critical occupations that drive your company or make your company able to perform?

1.a. For that core occupation, what do you consider to be the most critical skills?

For that core occupation, please answer the following:

How *important* is it that employees meet your expectations in those skills (refer to skills listed above, if needed) when hired?
Rating

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

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

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

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

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 (refer to list of technical skills here if necessary) 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 technologies 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 i*mportance* 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.

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? **BOLD your answer.**
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: **BOLD your answer.**

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?

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

Date:
Location of Interview:
Person conducting Interview:
Duration of Interview:

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	

Thank you for your input, which is strictly confidential. For a copy of the Regional Summary Report, please contact Robert Mejia, Employment Services Manager, South Bay WIB at: 310-970-7747.

WIRED 3.1 Respondent Survey List - South Bay

Survey #	Company Name	Address	City	St	Zip	Phone	Contact First	Contact Last	Title	Prim sic
1	American Technology Service	1312 E 29th St	Signal Hill	CA	90755	562-426-0521	Leonard	Olivares	**Owner**	334412
2	Artilient	225 South Lake Ave, Pasadena (Opening office in Hawthorne)	Hawthorne	CA		626-381-9759	Nikhil	Jain	President	5416
3	Belkin International, Inc.	501 W Walnut St	Compton	CA	90220	310-898-1100	Donna	Van Gundy	Director of HR	423430
4	Brico Engineering Co.	23212 Normandie Ave	Torrance	CA	90502	310-326-4301			N/A	336
5	CoorsTek	2051 E. Maple	El Segundo	CA	90245	310.322.8030			Supervisor/Manager	334
6	Fisher Custom Comm.	20603 Earl St.	Torrance	CA	90503	310-303-3862			Supervisor/Manager	334
7	Global Communication Semiconductors, Inc.	23155 Kashiwa Ct.	Torrance	CA	90505	310-530-7274			Other	541
8	HCD. Tech INC.	21171 So Western Ave	Redondo Beach	CA	90501	310-374-3888	Bob	Helfant	President	5415
9	Magnespec Inc.	1301 Mahalo Place	Rancho Dominguez	CA	90220	310-603-2262	Hene	Barot	VP Operations	334416
10	Microcosm, Inc.	4940 West 147th St.	Hawthorne	CA	90250	310-219-2700			Other	541
11	Northrop Grumman	One Hornet Way	El Segundo	CA	90245	310-331-4220	Lori	Sunday	Human Resources Site Manager	334511
12	Pulse Instruments, Inc.	1234 Francisco St.	Torrance	CA	90502	310-515-5330			Torrance	541
13	Qual-Pro	18101 Savanah Way	Carson	CA	90746	310-380-5687			Other	541
14	RTG, Inc.	2780 Skypark Drive Suite 410	Torrance	CA	90505	310-534-3016			President/CEO/Director	334
15	Rudell Designs	1619 Gramercy Avenue	Torrance	CA	90501	310-533-6166	Elliott	Rudell	Owner	54171001
16	Sankosha USA Inc.	406 Amapola Avenue, Suite 13	Torrance	CA	90501	310-320-1661	Bruce	Thatcher	VP / General Manager	423690
17	SpaceX	12301 Crenshaw Blvd	Hawthorne	CA	90250	562-494-1400	Jerry	Fielder	HR Dir	334
18	Systems Technology, Inc.	137766 Hawthorne Blvd.	Hawthorne	CA	90250	310-679-2281			Other	541
19	Vought Aircraft Industries	3901 Jack Northrop Avenue	Hawthorne	CA	90250	310-332-7777	Dana	Dicskon	General Manager	336
20	WEMS Inc	4652 W Rosecrans Ave	Hawthorne	CA	90250	310-644-0251	Terri	Sunbury	Hawthorne	334418
21	Xerox Corporation	101 Continental Blvd.	South Bay Area	CA	90245	213-614-0247	Tracie	Weathers	Development; HR Consultant; Marketing Manager	334

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WIRED 3.1 Survey													
Part I: Demographic	Part I Details	1	2	3	4	5	6	7	8	9	10	11	12
Employer Name	Employer Name	American Technology Service	Artilient	Belkin International, Inc.	Brico Engineering Co.	CoorsTek	Fisher Custom Comm.	Global Communication Semiconductors, Inc.	HCD. Tech INC.	Magnespec Inc.	Microcosm, Inc.	Northrop Grumman	Pulse Instruments, Inc.
Industry NAICS	Industry NAICS	334412	5416	423430	336	334	334	541	5415	334416	541	334511	541
Business Type	Business Type	Service	Service	Manufacturing	Manufacturing	Manufacturing	Manufacturing	Manufacturing	Service	Manufacturing	Manufacturing	Manufacturing	Manufacturing
Size of Business	Size of Business	Less than 4	Less than 4	650	5-10	100-249	20-49	100-249	Less than 4	30	50-99	4510	50-99
Respondent Position	Respondent Position	Owner	President	Director of HR	N/A	Supervisor/Manager	Supervisor/Manager	Other	President	VP Operations	Other	Human Resources Site Manager	President/CEO/Director
Primary Site	Primary Site	Signal Hill	Hawthorne	Compton	Torrance	El Segundo	Torrance	Torrance	Redondo Beach	Compton	Hawthorne	El Segundo	Torrance
Part II: Background	Please see legend below	D "Experience working with subcontractors for over 20 years"	B	C	A	C	C	A	A	C	C	C	A
Part IV: Questions	Details												
Critical Occupations and their Basic Skills	Critical Occupations and their Basic Skills	3.75	3.6	3.6	2.8	2.8	3.4	3.4	3.6	2.8	2.9	3.6	3.2
1	1. What are some of the core critical occupations that drive your company or make your company able to perform,?	PCB design, fabrication, assembly (PC Board); Circuit board manufacturers	Ability to listen to client and deliver sophisticated, value-added and effective solutions	Financial Analyst	CNC Programmers	Machine Operators; conventional and CNC	Electronic & Software Design Skills	Process Engineer, Process Technician	Computer Networking; Server Skills	Manufacturing or Assembly Skills	Engineering	Engineering	Electric Engineerin; Production Egineering
1a	1.a. For each occupation, what are the most critical skills of these occupations?	Technical proficiency; accuracy & precision	A combination of entrepreneurial skills and management consulting background	Computer analytical skills	3-D Visualization and math	In process inspection, read blueprint and replicate product, problem solving and initial setup, knowing material	Math; English; Abstract Reasoning; Science, especially Physics	EE or Chemical Engineering degree; Math; Problem-solving ability	Gaining knowledge before acting	Communications & ability to learn	Advanced mathematical skills; analytical ability; use of technological tools; ability to communicate results	Technical skills; Software development	Electronics; design skills; computer skills; understanding the business environment as in how design skills end up in a product
Importance	How important is it that employees meet your expectations in those skills when hired?	4	4	4	3	3	4	4	4	3	4	4	4
2	2. How do you rate their problem solving skills performance/competency?	4	4	3	2	2	3	3	4	3	3	3	2
Importance	Please rate the importance of problem-solving skills for future entry-level employees?	3	4	4	3	3	4	4	4	2	3	4	4
3	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?	N/A	2	3	3	2	2	2	2	3	1.5	3	2
Importance	How important will these skills be for future employees?	4	4	4	3	4	4	4	4	3	3	4	4
Technical Skills	Technical Skills	3.17	3.67	3.67	2.8	2.3	3.0	3.5	2.67	3.00	3.2	3.33	3.5
4	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?	4	3	3	3	2	2	3	3	2	4	3	2
5	5. Please rate the future importance of occupational knowledge for employees	3	4	4	3	4	3	4	4	3	4	4	4
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 technologies when hired?	3	4	4	3	4	3	3	1	3	3	4	4
7	7. What is the importance of these skills and/or abilities for future entry level employees?	3	4	4	3	4	3	4	1	3	3	3	4
8	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?	3	3	3	2	0	3	4	3	3	3	3	3
9	9. How would you rate the importance of information technology use and management for future entry-level employees?	3	4	4	3	0	4	3	4	4	2	3	4

WIRED 3.1 Survey													
10	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.	No	Client management, intra-team communication skills, phone skills, common courtesy and professionalism	N/A	N/A	Yes	Yes	Yes	Ability to communicate will with clients	No	N/A	N/A	Yes
Social Skills	Social Skills	2.00	3.33	2.67	3.0	3.3	2.3	2.7	3.00	3.00	2.7	2.33	2.8
11	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.?	2	3	2	3	3	3	3	3	3	2	2	2
	What level of future importance will social skills have for your entry level employees?	2	4	4	3	4	3	2	3	3	3	3	4
12	12. Are there any social skills not mentioned which you include in entry level expectations, now, or will in the future? Please discuss.	No	Meetings management and communication with client and team	Good listening skills, ability to resolve issues without becoming personally offended, tenacity	3	Conflict resolution	Work ethic and customer service	N/A	No	No	No	N/A	No
13	13. In demonstrating good work ethics (initiative, dependability, reliability), how well does the employee meet entry-level expectations?	N/A	3	2	N/A	3	1	3	3	3	3	2	2.5
13b	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:	Finish projects on time with high degree of accuracy.	N/A	Someone who is flexible learner and is able to quickly devise solutions for labor-intensive analysis.	N/A	Dedicated, passion for work: continuing education; desire to grow in the job: ambitious, prudent decision making	Customer-focused, well educated and continuing education; emphasis on math, science and English	Independent problem solving	Care in everything	Technical abilities	Multi-taskers; able to work to cos and time constraints; team players; highly mathematical.	Multi-skilled with the ability to move to various projects	Technical ability; communication skills; an understanding of business.
Overall Perception of today's workforce	Overall Perception of today's workforce	3.50	3.00	2.50	3.0	2.7	2.0	3.0	3.50	2.50	3.0	3.00	2.3
14	14. In general, how satisfied are you with the education of today's worker ?	3.50	3.00	2.50	3.0	2.7	2.0	3.0	3.50	2.50	3.0	3.00	2.3
Entry level:	Entry level:	3	3	2	3	2	2	3	4	2	3	3	2
Technical	Technical	4	3	3	3	3	2	3	3	3	3	3	2
Professional	Professional	N/A	3	3	3	3	2	3	2	3	N/A	3	3
15	15. Is there a critical skills shortage, if so, is it more at the: professional or technical level?	Technician	Professional	Professional	Technician	Technician	N/A	Professional	Professional	Both	Technical	Professional	Technician
16	16. Are there any new skills sets that may be required of future workers in this industry?	We only work with individuals with extensive work experience	Ability to adapt to changes in the economy quickly	Yes- higher analytical skills for almost every role. Great persona management skills since our environment is extremely fast-paced. Ability to adapt since the rules and our products change all of the time.	N/A	Six Sigma training, every employee needs to be white belt. Every supervisor red belt, managers and head supervisors green belt.	Unknown	Knowledge of solar cells	N/A	No	N/A	Software Engineering; Avionics Engineering; Materials & Processes	This industry not evolving as quickly as others. We will need a higher level of competency of existing skills.
17	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?	Not that I know of	Professionalism; Ethics; Client Management	We work with a program through Verbum Dei where we host four high school aged interns, who share one job at the company. This is a great program because we teach them real work skills. They come out of high school after 4 years of working here at Belkin or other firms knowing how to do practical work. There is a gap between training and the real world that these kinds of programs can help close.	Machine shop, CNC programming	Classes on Leadership and Teamwork	No	Statistics	No	Math & Science	More Computer Courses applied to their skills or trade	N/A	Classes that excite the student, especially science. Encourage hobbies that mirror future occupations.
18	18. What types of companies are involved in your supply chain?	Companies which purchase circuit boards - all types of electronic manufacturers	Marketing Strategy; Law Firms; Accounting Firms; Website Developers	We serve all sorts of retailers and wholesalers worldwide. Examples- Best Buy, Wal-Mart, Target, Ingram Micro, etc.	N/A	Resin manufacturers; tooling; general office supplies; inspection equipment; high temp. ovens	N/A	Commodities; wafer growers; precious metals; chemicals; air products	Not sure what supply chain is.	Aerospace	Software, Composites, Drafting, Engineering	Manufacturing; Parts Suppliers	Electronics, raw materials for extrusions
19	19. Are there any further comments you would like to make?	We only work with subcontractors, so we have no direct interaction with actual employees. We expect our subcontractors to have a high degree of technical expertise. We do not interview them regarding the types of degrees they have. These are long-term relationships (some over 20 years) based on performance & trust.	N/A	N/A	N/A	No	No	No	N/A	N/A	N/A	N/A	No

Part Two: (legend)

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 performance of employment

D. Or complete the following statement: "My opinion and perceptions of the current workforce are based on……..

WIRED 3.1 Survey

Part I: Demographic	Part I Details	13	14	15	16	17	18	19	20	21				
Employer Name	Employer Name	Qual-Pro	RTG, Inc.	Rudell Designs	Sankosha USA Inc.	SpaceX	Systems Technology, Inc.	Vought Aircraft Industries	WEMS Inc	Xerox Corporation				
Industry NAICS	Industry NAICS	541	334	54171001	423690	334	541	336	334418 / 335314	334; 5416				
Business Type	Business Type	Manufacturing	Manufacturing	Manufacturing	Manufacturing	Manufacturing	Service	Manufacturing	Manufacturing	Other				
Size of Business	Size of Business	250-499	11-19	10	4	500-1000	50-99	750	102	100-249				
Respondent Position	Respondent Position	Other	President/CEO/Director	Owner	VP / General Manager	HR Dir	Other	General Manager	HR Manager	VP, Learning & Development; HR Consultant; Marketing Manager				
Primary Site	Primary Site	Carson	Orange	Torrance	Torrance	Hawthorne	Hawthorne	Hawthorne	Hawthorne	South Bay Area				
Part II: Background	Please see legend below	C	A	A	A	C	B	C	C	C				
Part IV: Questions	Details										Total	# Responses	Average	Median
Critical Occupations and their Basic Skills	Critical Occupations and their Basic Skills	3.8	2.6	4	3.2	3.4	3.7	2.8	1.67	3.2	332		3.24	
1	1. What are some of the core critical occupations that drive your company or make your company able to perform,?	Surface Mount Operator; Through Hole Operator	Electronic & Software Design Skills	Inventors; Toy Designers	Sales manager	Composite Engineers; Design Engineers; Technicians; Structural Engineers; Machinists; Aerospace Engineers; Mechanical Engineers	Physical Systems Dynamics and Control	Assembly Technicians; Aircraft Engineers; Manufacturing Engineers; Industrial Engineers; Supply Chain Management; Management	Electronic Assembler	Sales				
1a	1.a. For each occupation, what are the most critical skills of these occupations?	Equipment operation; understanding of components and machine skills; dynamics of programming and robotics	Asbestos and Lead Training	Creativity; Collaboration; Industrial Design	Communication, product knowledge, accuracy, writing	4-yr engineering degree; practical problem solving skills. Technicians require trade school training, A& P license, composite certification and work experience in each area.	Understanding systems dynamics, modeling of human operator, advanced computational techniques, new modeling software knowledge	Technical skills; Interpersonal skills; Mechanical skills; Leadership	Identify electronic components; manual dexterity; reliability	Consultative Selling; Business/Financial Acumen, Relationship Skills, Embracing Change				
Importance	How important is it that employees meet your expectations in those skills when hired?	4	4	4	4	4	4	4	4	4	81	21	3.9	
2	2. How do you rate their problem solving skills performance/competency?	3	3	4	3	3	3	3	N/A	2	60	20	3.0	
Importance	Please rate the importance of problem-solving skills for future entry-level employees?	4	2	4	3	4	4	1	1	4	69	21	3.3	
3	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?	4	2	4	3	2	3.5	2	N/A	2	48	19	2.5	
Importance	How important will these skills be for future employees?	4	2	4	3	4	4	4	0	4	74	21	3.5	
Technical Skills	Technical Skills	3.7	2.2	3.50	3.67	3.5	3.0	3.50	3.17	3.33	404		3.21	
4	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?	3	3	4	3	3	3	3	3	2	61	21	2.9	
5	5. Please rate the future importance of occupational knowledge for employees	4	3	4	4	4	3	4	4	4	78	21	3.7	
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 technologies when hired?	4	3	4	4	4	3	4	3	4	72	21	3.4	
7	7. What is the importance of these skills and/or abilities for future entry level employees?	4	3	4	4	4	3	2	3	4	70	21	3.3	
8	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?	3	0	2	3	3	3	4	3	2	56	21	2.7	
9	9. How would you rate the importance of information technology use and management for future entry-level employees?	4	1	3	4	3	3	4	3	4	67	21	3.2	

WIRED 3.1 Survey

10	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.	No	No	Our company has a small core workforce and subcontracts with specialists depending on specific projects, such as chemists and other varied tech backgrounds. Employees are culturally diverse which is an asset as our clients are from around the world. Core employees are highly functional, high tech and high ticket.	N/A	Yes	Yes	The ability to integrate in an existing workgroup	Show up on time everyday ready to work.	Business and Financial Acumen, Relationship skills at all levels of the organization, communication skills, ability to manage multiple priorities				
Social Skills	Social Skills	3.3	2.7	4.00	3.00	2.7	3.0	3.33	3.00	2.67	58.50		2.97	
11	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.?	3	3	4	3	2	3	3	N/A	2	58	20	2.90	
	What level of future importance will social skills have for your entry level employees?	4	2	4	3	4	3	4	N/A	4	66	20	3.30	
12	12. Are there any social skills not mentioned which you include in entry level expectations, now, or will in the future? Please discuss.	No	No	No	Promptness, professionalism, telephone skills, sincerity	N/A	N/A	N/A	No	N/A				
13	13. In demonstrating good work ethics (initiative, dependability, reliability), how well does the employee meet entry-level expectations?	3	3	4	3	2	3	3	3	2	51.5	19	2.71	
13b	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:	Conscientious, detail focused, desire to do the work, positively aggressive, want to succeed and move up in company.	Customer-focused, continuing education, strong math, science and English.	Multi-task; multi-discipline	Steady, with the company a long time; know our products and customers; reasonable; competent in word processing, spreadsheet software. A little accounting helps.	Excellent problem solving skills; exceptional communication skills; high energy and drive; creativity.	Highly motivated, very smart, dedicated, passion for the work, good team player, takes initiative.	N/A	Workplace etiquette; behavior; tolerance of cultural differences	Adaptable, constant learner, not fearful of the unknown				
Overall Perception of today's workforce	Overall Perception of today's workforce	4.0	3.7	2.00	3.00	2.3	4.0	3.00	3.00	3.00	60.00		2.9	
14	14. In general, how satisfied are you with the education of today's worker ?	4.0	3.7	2.00	3.00	2.3	4.0	3.00	3.00	3	60		2.9	
Entry level:	Entry level:	4	3	2	3	2	4	3	3	3	59	21	2.8	
Technical	Technical	4	4	2	3	3	4	3	3	3	64	21	3.0	
Professional	Professional	4	4	3	3	2	4	3	3	3	57	19	3.0	
15	15. Is there a critical skills shortage, if so, is it more at the: professional or technical level?	Professional	No	No	N/A	Both	Professional	Technical	Technical	Both				
16	16. Are there any new skills sets that may be required of future workers in this industry?	Better computer literacy; better knowledge of electronics	Unknown	No	IT skills are increasingly important	Just the basic writing skills and reading comprehension. The new generation of workers as mentioned before don't seem to have a problem with understanding new technology and embracing it.	No	We will have a growing need for Aircraft Assembly workers over the next 5 years	Not new	Working collaboratively in a highly complex/matrixed organization				
17	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?	Introduction to electronics, reading assembly drawings, overview of manufacturing.	No	Industrial design should be required for more business majors. For example, people with marketing degrees who know nothing about how things are designed and fabricated are less useful than folks with I.D.	It would be nice if we could do a better job teaching people to communicate, especially in writing.	Basic rules of Professionalism.	The trade schools and community colleges seem to have a decent curriculum in training our employees so far.	Industrial Arts; Project definition design and manufacturing. Basic planning skills to complete projects within a given time	Workers need more training in soldering, fabrication and manufacturing skills. Hands-on experience is very important and is lacking in most new workers.	Presentation Skills; Use of all PC Software Applications; Time Management; Goal Setting				
18	18. What types of companies are involved in your supply chain?	N/A	Cleaning chemical supply companies, pipes, and hose manufacturing industries.	Retail Toy Distributors; Private companies; Film Industry	Our parent company in Japan is our main supplier.	We are an aerospace company. Our vendors provide industrial products for us such as electronics and metal.	Bulb manufactures; circuit and microchip manufacturers and an assorted array of electrical component companies	Material, machined parts, sheet metal parts, engineering resources, environmental	N/A	N/A				
19	19. Are there any further comments you would like to make?	No	N/A	Long Beach has a good industrial design program. El Camino is notable. Otis has a Toy Invention program. Owner participates as guest speaker and supports local programs.	N/A	N/A	No	N/A	We compete with higher-paying large companies for our workforce and often higher workers who have been laid off. New employees lack basic success skills like being on time. Would appreciate some type of orientation program for basic success skills to be available as resource for employers.	N/A				
Part Two: (legend)														
A.	I directly supervise or ar													
B.	I periodically (at least on													
C.	In my position I discuss													
D.	Or complete the followin													

WIRED 3.1 Survey Los Angeles												
Part IV: Questions	Part IV Details - Companies	1	2	3	4	5	6	7	8	9	10	11
2	Rating of Problem Solving Skills	4.0	4.0	3.0	2.0	2.0	3.0	3.0	4.0	3.0	3.0	3.0
Importance	Importance of Problem Solving Skills	3.0	4.0	4.0	3.0	3.0	4.0	4.0	4.0	2.0	3.0	4.0
3	Rating of Workplace Skills	N/A	2.0	3.0	3.0	2.0	2.0	2.0	2.0	3.0	1.5	3.0
Importance	Importance of Workplace Skills	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	3.0	3.0	4.0
4	Rating of Occupational Technical Skills	4.0	3.0	3.0	3.0	3.0	2.0	2.0	3.0	3.0	2.0	4.0
5	Importance of Occupational Technical Skills	3.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
6	Rating of Additional Technical Skills	3.0	4.0	4.0	3.0	4.0	3.0	3.0	1.0	3.0	3.0	4.0
7	Importance of Additional Technical Skills	3.0	4.0	4.0	3.0	4.0	3.0	4.0	1.0	3.0	3.0	3.0
8	Rating of Computer Skills	3.0	3.0	3.0	2.0	0.0	3.0	4.0	3.0	3.0	3.0	3.0
9	Importance of Computer Skills	3.0	4.0	4.0	3.0	0.0	4.0	3.0	4.0	4.0	2.0	3.0
11	Rating of Social Skills	2.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
	Importance of Social Skills	2.0	4.0	4.0	3.0	4.0	3.0	2.0	3.0	3.0	3.0	3.0
14	Rating of Education Sufficiency (Average)	3.5	3.0	2.5	3.0	2.7	2.0	3.0	3.5	2.5	3.0	3.0
14	Satisfaction with Entry Level	3.0	3.0	2.0	3.0	2.0	2.0	3.0	4.0	2.0	3.0	3.0
14	Satisfaction with Technical	4.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0
14	Satisfaction with Professional	N/A	3.0	3.0	3.0	3.0	2.0	3.0	2.0	3.0	N/A	3.0

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12	13	14	15	16	17	18	19	20	21	Total	Average	Gap Score	Skills Gap Priority (1 greatest; 6 least)
2.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0	N/A	2.0	60.0	3.0		
4.0	4.0	2.0	4.0	3.0	4.0	4.0	1.0	1.0	4.0	69.0	3.3	0.29	5
2.0	4.0	2.0	4.0	3.0	2.0	3.5	2.0	N/A	2.0	48.0	2.5		
4.0	4.0	2.0	4.0	3.0	4.0	4.0	4.0	0.0	4.0	74.0	3.5	1.00	1
3.0	2.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	62.0	3.0		
4.0	4.0	3.0	4.0	4.0	4.0	3.0	4.0	4.0	4.0	78.0	3.7	0.76	2
4.0	4.0	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	72.0	3.4		
4.0	4.0	3.0	4.0	4.0	4.0	3.0	2.0	3.0	4.0	70.0	3.3	-0.10	6
3.0	3.0	0.0	2.0	3.0	3.0	3.0	4.0	3.0	2.0	56.0	2.7		
4.0	4.0	1.0	3.0	4.0	3.0	3.0	4.0	3.0	4.0	67.0	3.2	0.52	4
2.0	3.0	3.0	4.0	3.0	2.0	3.0	3.0	N/A	2.0	54.0	2.7		
4.0	4.0	2.0	4.0	3.0	4.0	3.0	4.0	N/A	4.0	66.0	3.3	0.60	3
2.3	4.0	3.7	2.0	3.0	2.3	4.0	3.0	3.0	3.0	62.0	2.8		Education Gap Priority
2.0	4.0	3.0	2.0	3.0	2.0	4.0	3.0	3.0	3.0	59.0	2.8	2.8	1
2.0	4.0	4.0	2.0	3.0	3.0	4.0	3.0	3.0	3.0	64.0	3.0	3.0	2
3.0	4.0	4.0	3.0	3.0	2.0	4.0	3.0	3.0	3.0	57.0	3.0	3.0	2

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WIRED 3.1 Survey Los Angeles					
Part IV: Questions	Part IV Details - Companies	Total	Average	Gap Score	Skills Gap Priority (1 greatest; 6 least)
2	Rating of Problem Solving Skills	60.0	3.0	0.29	
Importance	Importance of Problem Solving Skills	69.0	3.3		5
3	Rating of Workplace Skills	48.0	2.5	1.00	
Importance	Importance of Workplace Skills	74.0	3.5		1
4	Rating of Occupational Technical Skills	62.0	3.0	0.76	
5	Importance of Occupational Technical Skills	78.0	3.7		2
6	Rating of Additional Technical Skills	72.0	3.4	-0.10	
7	Importance of Additional Technical Skills	70.0	3.3		6
8	Rating of Computer Skills	56.0	2.7	0.52	
9	Importance of Computer Skills	66.0	3.2		4
11	Rating of Social Skills	54.0	2.7	0.60	
	Importance of Social Skills	66.0	3.3		3
14	Rating of Education Sufficiency (Average)	0.0	0.0		Education Gap Priority
14	Satisfaction with Entry Level	59.0	2.8	2.8	1
14	Satisfaction with Technical	64.0	3.0	3.0	2
14	Satisfaction with Professional	57.0	3.0	3.0	2

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WIRED 3.1 Survey											
Companies		1	2	3	4	5	6	7	8	9	10
1a	**Critical Skills Required**	Technical proficiency; accuracy & precision	A combination of entrepreneurial skills and management consulting background	Computer analytical skills	3-D Visualization and math	In process inspection, read blueprint and replicate product, problem solving and initial setup, knowing material	Math; English; Abstract Reasoning; Science, especially Physics	EE or Chemical Engineering degree; Math; Problem-solving ability	Gaining knowledge before acting	Communications & ability to learn	Advanced mathematical skills; analytical ability; use of technological tools; ability to communicate results
12	**Other Social Skills**	No	Meetings management and communication with client and team	Good listening skills, ability to resolve issues without becoming personally offended, tenacity	3	Conflict resolution	Work ethic and customer service	N/A	No	No	No
13b	**Describe best employee**	Finish projects on time with high degree of accuracy.	N/A	Someone who is flexible learner and is able to quickly devise solutions for labor-intensive analysis.	N/A	Dedicated, passion for work: continuing education; desire to grow in the job: ambitious, prudent decision making	Customer-focused, well educated and continuing education; emphasis on math, science and English	Independent problem solving	Care in everything	Technical abilities	Multi-taskers; able to work to cost and time constraints; team players; highly mathematical.
15	**Critical Shortage**	Technician	Professional	Professional	Technician	Technician	N/A	Professional	Professional	Both	Technical

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WIRED 3.1 Survey											
Companies		11	12	13	14	15	16	17	18	19	20
1a	**Critical Skills Required**	Technical skills; Software development	Electronics; design skills; computer skills; understanding the business environment as in how design skills end up in a product	Equipment operation; understanding of components and machine skills; dynamics of programming and robotics	Asbestos and Lead Training	Creativity; Collaboration; Industrial Design	Communication, product knowledge, accuracy, writing	4-yr engineering degree; practical problem solving skills. Technicians require trade school training, A& P license, composite certification and work experience in each area.	Understanding systems dynamics, modeling of human operator, advanced computational techniques, new modeling software knowledge	Technical skills; Interpersonal skills; Mechanical skills; Leadership	Identify electronic components; manual dexterity; reliability
12	**Other Social Skills**	N/A	No	No	No	No	Promptness, professionalism, telephone skills, sincerity	N/A	N/A	N/A	No
13b	**Describe best employee**	Multi-skilled with the ability to move to various projects	Technical ability; communication skills; an understanding of business.	Conscientious, detail focused, desire to do the work, positively aggressive, want to succeed and move up in company.	Customer-focused, continuing education, strong math, science and English.	Multi-task; multi-discipline	Steady, with the company a long time; know our products and customers; reasonable; competent in word processing, spreadsheet software. A little accounting helps.	Excellent problem solving skills; exceptional communication skills; high energy and drive; creativity.	Highly motivated, very smart, dedicated, passion for the work, good team player, takes initiative.	N/A	Workplace etiquette; behavior; tolerance of cultural differences
15	**Critical Shortage**	Professional	Technician	Professional	No	No	N/A	Both	Professional	Technical	Technical

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WIRED 3.1 Survey		Trend of Responses (Page does not calculate)							
Companies	22								
1a Critical Skills Required	Consultative Selling; Business/Financial Acumen, Relationship Skills, Embracing Change	**Technical Skills 5**	**Math 4**	**Communication 3**	**Problem Solving 3**	**Computer Skills 3**	Engineering Degree 2	Industrial Design 2	Interpersonal Skills 2
12 Other Social Skills	N/A	**Interpersonal Communication 3**	**Conflict Resolution 2**	**Customer Service/Tele-phone Skills 2**	**Work Ethic & Professionalism 2**	Promptness 1	Meetings Management 1		
13b Describe best employee	Adaptable, constant learner, not fearful of the unknown	**Motivated; Dedicated; Takes Initiative 5**	**Conscientious; Attention to Detail; Reliable 4**	**Problem Solver 3**	**Multi-tasker; Multi-discipline 3**	**Interested in Continuous Education 3**	**Math 3**	**Technical Ability 3**	**Communi-cation ; English Skills 3**
15 Critical Shortage	Both	**Technical 7**	**Professional 7**	**Both Technical & Professional 3**	**No Shortage 2**	**No Response 2**			

		1	2	3	4	5	6	7	8	9	10
16	**Identify Future Skills**	We only work with individuals with extensive work experience	Ability to adapt to changes in the economy quickly	Yes- higher analytical skills for almost every role. Great personal management skills since our environment is extremely fast-paced. Ability to adapt since the rules and our products change all of the time.	N/A	Six Sigma training, every employee needs to be white belt. Every supervisor red belt, managers and head supervisors green belt.	Unknown	Knowledge of solar cells	N/A	No	N/A
17	**Identify Desired Training**	Not that I know of	Professionalism; Ethics; Client Management	We work with a program through Verbum Dei where we host four high school aged interns, who share one job at the company. This is a great program because we teach them real work skills. They come out of high school after 4 years of working here at Belkin or other firms knowing how to do practical work. There is a gap between training and the real world that these kinds of programs can help close.	Machine shop, CNC programming	Classes on Leadership and Teamwork	No	Statistics	No	Math & Science	More Computer Courses applied to their skills or trade

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		11	12	13	14	15	16	17	18	19	20
16	**Identify Future Skills**	Software Engineering; Avionics Engineering; Materials & Processes	This industry not evolving as quickly as others. We will need a higher level of competency of existing skills.	Better computer literacy; better knowledge of electronics	Unknown	No	IT skills are increasingly important	Just the basic writing skills and reading comprehension. The new generation of workers as mentioned before don't seem to have a problem with understanding new technology and embracing it.	No	We will have a growing need for Aircraft Assembly workers over the next 5 years	Not new
17	**Identify Desired Training**	N/A	Classes that excite the student, especially science. Encourage hobbies that mirror future occupations.	Introduction to electronics, reading assembly drawings, overview of manufacturing.	No	Industrial design should be required for more business majors. For example, people with marketing degrees who know nothing about how things are designed and fabricated are less useful than folks with I.D.	It would be nice if we could do a better job teaching people to communicate, especially in writing.	Basic rules of Professionalism.	The trade schools and community colleges seem to have a decent curriculum in training our employees so far.	Industrial Arts; Project definition design and manufacturing. Basic planning skills to complete projects within a given time	Workers need more training in soldering, fabrication and manufacturing skills. Hands-on experience is very important and is lacking in most new workers.

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16	**Identify Future Skills**	Working collaboratively in a highly complex/matrixed organization	**Computer, Software and I.T. Skills 3**	**Adaptable to Change 2**	**Six Sigma 1**	**Basic Reading, Writing and Comprehension 1**	**Work Experience 1**	**Analytical Skills 1**	**Avionics Engineering, Software Engineering, Materials and Processes 1**	**Electronics, Aircraft Assembly, Solar Cells 1**
17	**Identify Desired Training**	Presentation Skills; Use of all PC Software Applications; Time Management; Goal Setting	**Professionalism, Leadership & Teamwork 3**	**Math, Science & Statistics 3**	**Industrial Design and Overview of Manufacturing 3**	**Hands-on manufacturing skills; Machine Shop 2**	Project Management 1	CNC Programming 1	Communi-cation Skills 1	Computer Skills 1

19	**Other Comments**	We only work with subcontractors, so we have no direct interaction with actual employees. We expect our subcontractors to have a high degree of technical expertise. We do not interview them regarding the types of degrees they have. These are long-term relationships (some over 20 years) based on performance & trust.	N/A	N/A	N/A	No	No	No	N/A	N/A	N/A

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19	**Other Comments**	N/A	No	No	N/A	Long Beach has a good industrial design program. El Camino is notable. Otis has a Toy Invention program. Owner participates as guest speaker and supports local programs.	N/A	N/A	No	N/A	We compete with higher-paying large companies for our workforce and often higher workers who have been laid off. New employees lack basic success skills like being on time. Would appreciate some type of orientation program for basic success skills to be available as resource for employers.

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	WIRED 3.1 Survey	Qualitative Analysis ~ Trend of Responses							
1a	**Critical Skills Required**	Technical Skills 5	Math 4	Communication 3	Problem Solving 3	Computer Skills 3	Engineering Degree 2	Industrial Design 2	Interpersonal Skills 2
12	**Other Social Skills**	Interpersonal Communication 3	Conflict Resolution 2	Customer Service & Telephone Skills 2	Work Ethic & Professionalism 2	Promptness 1	Meetings Management 1		
13b	**Describe best employee**	Motivated; Dedicated; Initiative 5	Conscientious; Attention to Detail; Reliable 4	Problem Solver 3	Multi-tasker; Multi-discipline 3	Interested in Continuous Education 3	Math 3	Technical Ability 3	Communication ; English Skills 3
15	**Critical Shortage**	Technical 7	Professional 7	Both Technical & Professional 3	No Shortage 2	No Response 2			
16	**Identify Future Skills**	Computer, Software and I.T. Skills 3	Adaptable to Change 2	Six Sigma 1	Basic Reading, Writing and Comprehension 1	Work Experience 1	Analytical Skills 1	Avionics Engineering, Software Engineering, Materials and Processes 1	Electronics, Aircraft Assembly, Solar Cells 1
17	**Identify Desired Training**	Professionalism, Leadership & Teamwork 3	Math, Science & Statistics 3	Industrial Design and Overview of Manufacturing 3	Hands-on manufacturing skills; Machine Shop 2	Project Management 1	CNC Programming 1	Communication Skills 1	Computer Skills 1
19	**Other Comments**	We only work with subcontractors, so we have no direct interaction with actual employees. We expect our subcontractors to have a high degree of technical expertise. We do not interview them regarding the types of degrees they have. These are long-term relationships (some over 20 years) based on performance & trust.	We work with a program through Verbum Dei where we host four high school aged interns, who share one job at the company. This is a great program because we teach them real work skills. They come out of high school after 4 years of working here at Belkin or other firms knowing how to do practical work. There is a gap between training and the real world that these kinds of programs can help close.	Long Beach has a good industrial design program. El Camino is notable. Otis has a Toy Invention program. Owner participates as guest speaker and supports local programs.	We compete with higher-paying large companies for our workforce and often higher workers who have been laid off. New employees lack basic success skills like being on time. Would appreciate some type of orientation program for basic success skills to be available as resource for employers.				

WIRED 3.1 South Bay Region ~ Core Competencies II.E

NAICS	Type		Co. #	Critical Core Competency	Type	Responses	%
541	Eng.	1	10	Engineering	Engineer	13	35%
334511	Eng.	1	11	Engineering			
541	Eng.	1.1	12	Electric Engineering			
336	Eng.	1.11	19	Industrial Engineers			
541	Eng.	1.12	7	Process Engineer			
541	Eng.	1.2	12	Production Engineering			
334	Eng.	1.3	17	Composite Engineers			
334	Eng.	1.4	17	Design Engineers			
334	Eng.	1.5	17	Structural Engineers			
334	Eng.	1.6	17	Aerospace Engineers			
334	Eng.	1.7	17	Mechanical Engineers			
336	Eng.	1.8	19	Aircraft Engineers			
336	Eng.	1.9	19	Manufacturing Engineers			
334	Tech.	2	17	Technicians	Technician	3	8%
336	Tech.	2.1	19	Assembly Technicians			
541	Tech.	2.2	7	Process Technician			
334	Mach.	3	17	Machinists	Machinist	3	8%
423430	Mach.	3.1	3	Machine Operator, CNC			
423430	Mach.	3.2	3	Machine Operators, conventional			
334	Syst. Design	4	14	Electronic & Software Design Skills	System Design	5	14%
541	Syst. Design	4	18	Physical Systems Dynamics and Control			
54171001	Syst. Design	4.1	15	Inventors; Toy Designers			
334412	Syst. Design	4.2	1	PC Board design			
336	Syst. Design	4.3	4	Electronic & Software Design Skills			
334416	Manuf.	5	9	Manufacturing or Assembly Skills	Manufacturing	5	14%
541	Manuf.	5	13	Surface Mount Operator			
541	Manuf.	5	13	Through Hole Operator			
334418 / 335314	Manuf.	5	20	Electronic Assembler			
334412	Manuf.	5.1	1	PC Board fabrication, assembly			
5415	Comp.	6	8	Computer Networking/Server Skills	Computer	2	5%
334	Comp.	6.1	5	CNC Programmers			
334	Fin.	7	6	Financial Analyst	Financial	1	3%
336	Mgt.	8	19	Management	Mngt.	2	5%
336	Mgt.	8.1	19	Supply Chain Management			
423690	Sales/Serv.	9	16	Sales/Sales Management	Sales/Service	3	8%
334; 5416	Sales/Serv.	9	21	Sales/Sales Management			
5416	Sales/Serv.	9.1	2	Client services			
						37	**100%**

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