

2006 KNOWLEDGE WORKER QUOTIENT™: College Towns Are at the Heart of the Knowledge Sector Economy

[4/1/2006] Posted By: Bill King, Chief Editor, and Michael Keating, Senior Research Editor

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Our 4th annual Knowledge Worker Quotient compares all 362 MSAs for the ability to support the technology revolution in the United States.

For those companies whose competitive edge depends upon their being able to always remain on the cutting-edge of technology, being located in a place that is able to supply highly educated workers in sufficient quantity and quality is their No. 1 site location requirement.

It's not simply a matter of personal preference. It's a matter of survival.

That's why, for knowledge-based companies desperate to find the educated workers they need to grow and prosper, it's hard to beat a university town. No, not the quaint little New England or Midwestern village with a small liberal arts college, but rather those metro areas fortunate enough to be home to a major research university.

These cities and towns represent the Promised Land for technology companies. Examples abound.

Late last year, Korean Software developer 3Ksoft Co., Ltd. decided to locate its global headquarters and research and development center in Pittsburgh, Pa. Initially, the company will locate at Carnegie Mellon's Collaborative Innovation Center.

Carnegie Mellon will use 3Ksoftware's extensible markup language (XML) technology for educational purposes. The company established the XML-Internet Data Center, which provides Carnegie Mellon faculty and students with full access to the company's entire set of XML tools.

"Relocating to Pittsburgh is ideal because of the superior, technological expertise that is available throughout the region's business and university communities," said 3Ksoftware CEO Young Kun Kim. "I look forward to working closely with Carnegie Mellon, the institutes of Computer Science Language Technologies and eCommerce, and the Mobile Commerce and e-Supply Chain labs."

National Medical Health Card Systems, Inc. No. 6 on Fortune Magazine's 2004 Fastest Growing Companies list, recently opened an office in Pittsburgh, Pa.

"The Pittsburgh area offers an environment rich in pharmacy practice, research, and education," said James F. Smith, president and CEO. "The strong university community, as well as the work force it generates, was a key influence in our final decision. In fact, NMHC Chief Clinical Officer Robert Kordella, a University of Pittsburgh alumnus, will be leading our local office."

NMHC manages prescription drug programs for HMOs, employer groups, third party administrators, corporations, unions and local governments through its clinical expertise, benefits design and advanced information systems.

Top 10 Knowledge Worker Metros

1. Ithaca, N.Y. MSA
2. Boulder, Colo. MSA
3. Ann Arbor, Mich. MSA
4. Washington-Arlington-Alexandria, D.C.-Md.-Va.-W.Va.
5. Boston-Cambridge-Quincy, Mass.-N.H. MSA
6. Gainesville, Fla. MSA
7. San Jose-Sunnyvale-Santa Clara, Calif. MSA
8. San Francisco-Oakland-Fremont, Calif. MSA
9. Raleigh-Cary, N.C. MSA
10. Madison, Wis. MSA

SOURCE: 2006 Knowledge Worker Quotient

"The fact that both Duquesne University and University of Pittsburgh offer programs in pharmacy was another attractive feature to NMHC," said Pittsburgh Mayor Bob O'Connor. "NMHC has already hired 20 professionals, several of whom are clinical pharmacists."

In January, Advanced Photonix Inc. (API) announced that it would relocate its headquarters from Camarillo, Calif., to Ann Arbor, Mich., home to the University of Michigan. In addition, the company plans to consolidate the semiconductor micro-fabrication portion of its operations from California and Wisconsin to Ann Arbor.

Founded in 1989, API is a supplier of high-speed optical receivers and Terahertz instrumentation used in military, medical, industrial, telecommunication and homeland security applications.

The Research Triangle region of North Carolina — with Duke, North Carolina and North Carolina State universities — has long been a magnet for businesses looking to take advantage of the synergies created by major research universities.

Eisai Inc., a U.S. pharmaceutical subsidiary of Tokyo-based Eisai Co., Ltd., announced a \$90 million expansion of its Research Triangle Park facility. The company is headquartered in Teaneck, N.J., and maintains its only U.S. pharmaceutical production and formulation research and development operations in Research Triangle Park. The new jobs will include quality control analysts, manufacturing and packaging operators, chemists, engineers and technicians.

"We are excited to expand our operations in RTP, where our high compliance standards will be instrumental for regulatory approvals and production of our first anticipated oncology product," said Lou Arp, vice president of production operations at Eisai Inc. "Constructing the new facility at our current location allows for seamless integration between our production and research and development departments as well as access to North Carolina's strong talent pool."

However, not all companies looking for highly educated workers settle on U.S. university towns.

Amgen, the world's largest biotechnology company, recently announced that it will be making major investments in additional manufacturing

Top Metros for University R&D Spending

1. San Francisco-Oakland-Fremont, Calif. MSA
2. New York-Newark-Edison, N.Y.-N.J.-Pa. MSA
3. Baltimore-Towson, Md. MSA
4. Boston-Cambridge-Quincy, Mass.-N.H. MSA
5. Houston-Baytown-Sugar Land, Texas MSA
6. Chicago-Naperville-Joliet, Ill.-Ind.-Wis. MSA

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and R&D operations in the U.S. and Europe and expansion of its commercial operations into new markets.

In Cork, Ireland, Amgen intends to invest more than \$1 billion

7. Durham, N.C. MSA
8. Philadelphia-Camden-Wilmington, Pa.-N.J.-Del.-Md.
9. Atlanta-Sandy Springs-Marietta, Ga. MSA
10. Ann Arbor, Mich. MSA

SOURCE: National Science Foundation

in new process development, bulk manufacturing and fill and finish facilities that will give the company capacity closer to the patients it serves in Europe. University College Cork, part of the National University of Ireland, is located in Cork.

Amergen also recently announced its intention to expand its existing R&D operations in Cambridge, Mass., San Francisco, Seattle, and Cambridge, U.K.

Clearly, being located near a major research university is an imperative for many technology-based companies. In fact, university “towns” will be the “super cities” of the 21st century because of their ability to provide talent from the student and faculty pools, as well as research facilities and expensive test equipment.

Not only that, but universities are increasingly willing and eager to partner with private companies, particularly startups.

That’s why, for the fourth consecutive year, Expansion Management is publishing its annual Knowledge Worker Quotient™ ranking of 362 metropolitan statistical areas (MSA) in terms of their ability to provide the depth of talent and innovative environment that knowledge-driven technology companies crave.

How We Evaluated the Metro Areas

As we have in previous years’ rankings, we attempt to get a quick feel for the relative intellectual vitality of a metropolitan area by looking at its people, its higher education facilities, and the amount of R&D money flowing into the university.

With that in mind, we focused our examination on the following broad categories:

Adult Education Levels Among College Graduates. We believe the education level of the adult population is far and away the most attractive asset a community offers.

In this category, we ranked MSAs according to the percentage of adults with at least a bachelor’s degree, the percentage with at least a master’s degree, the percentage with a Ph.D., and the percentage of adults possessing professional degrees. We also compared the percentage of the work force engaged in science and engineering jobs.

This information is available through a variety of sources, including the Bureau of Labor Statistics, Occupational Employment Statistics, U.S. Census Bureau and County Business Patterns.

Top Metros for Scientists & Engineers

1. Kennewick-Richland-Pasco, Wash. MSA
2. Huntsville, Ala. MSA
3. San Jose-Sunnyvale-Santa Clara, Calif. MSA
4. Boulder, Colo. MSA
5. Ithaca, N.Y. MSA
6. Ames, Iowa MSA
7. Palm Bay-Melbourne-Titusville, Fla. MSA

Scientists and Engineers. The percentage of the overall work force that is engaged in science and engineering occupations is also an important indicator of the strength and vitality of a community's technology economy. Our primary source was the Bureau of Labor Statistics' Occupational Employment Statistics.

Medical Doctors. Medical doctors are an important ingredient in the growth of the life sciences industry sector and are increasingly involved in the entrepreneurial side. Doctors are not only users of this new technology, they are often intimately involved in its development and delivery to market.

8. Idaho Falls, Idaho MSA
9. Blacksburg-Christianburg-Radford, Va. MSA
10. College Station-Bryan, Texas MSA

SOURCE: Bureau of Labor Statistics

Our primary source was the Bureau of Labor Statistics' Occupational Employment Statistics.

Colleges and Universities. Having a major university or, better yet, having a wide variety of colleges and universities, is a major asset to a community. If you look at all of the great technology centers during the past few decades, every one of them (i.e., Silicon Valley, Research Triangle, Boston's Route 128, etc.) has been built around the presence of world-class universities.

Universities not only provide a steady flow of educated workers, their faculty members also are a major resource for knowledge-based companies. They also represent a major source of entrepreneurial talent.

As in years past, our primary sources in this category were Barron's "Profiles of American Colleges, 2005 Edition," the American Association of Community Colleges (www.aacc.nche.edu), and U.S. College Search (www.uscollegesearch.org).

University R&D Spending. The strength of the technology economy is based, in large part, on an extensive research and development program. A good measurement for relative R&D activity at a university is to look at how much money is flowing into the university for R&D. This information is readily available from the National Science Foundation.

By going to the NSF Web site (www.nsf.gov), you can also determine, by academic discipline, how the R&D money has been divided up within a particular university, as well. This enables you to better focus in on research activity going on in your company's particular field of interest.

Top Metros for College Educated Workers

1. Ithaca, N.Y. MSA
2. Iowa City, Iowa MSA
3. Boulder, Colo. MSA
4. Gainesville, Fla. MSA
5. Santa Fe, N.M. MSA
6. Columbia, Mo. MSA
7. Lawrence, Kan. MSA
8. Corvallis, Ore. MSA
9. Champaign-Urbana, Ill.
10. Ann Arbor, Mich. MSA

Why is This Important?

The Knowledge Worker Quotient is just one part of a series of rankings Expansion Management conducts each year that, taken together, attempt to measure the relative business climate of each of the 362 metro areas throughout the U.S.

Some, like the Quality of Life Quotient, measure living costs, along with other "livability" factors essential to being able to enjoy a middle-class lifestyle. Others, like the Logistics Quotient and the Legislative Quotient, measure the logistics infrastructure and the tax-and-spending environment, respectively.

Two studies attempt to evaluate the work force businesses are likely to encounter in various communities around the country.

The annual [Education Quotient](#), which compares 2,800 public school districts nationwide, looks at the high school graduate part of the work force, which still accounts for some 72 percent of all adults in the U.S. The Knowledge Worker Quotient, on the other hand, looks at the remaining 28 percent of the work force: those with at least a

college degree. Taken together, they provide a way to measure the “quality” side of the work force equation, while standard demographic data will provide the “quantity” side.

If your business relies on that 28 percent of the work force, though, the Knowledge Worker Quotient represents an important resource for you and your company’s future.

NOTE: Detailed results of the 2006 Knowledge Worker Quotient will be available beginning April 15 for all 362 MSAs on our Relocation Toolkit website at www.RelocationToolkit.com

To read the Commentary, "**How Government Can [and Cannot] Help the Life Sciences Revolution,**" [click here](#)

Click here to read the commentary: ([“Education Is the Key to Success in the Knowledge Economy”](#))

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