

Get In or Get Left Behind

5 best industries to get venture financing

By Kingsley Kanu Jr.



EXPERT PREDICTIONS ARE GOOD FOR SOFTWARE FIRMS LIKE GILBERT'S PROCLIVITY SYSTEMS.

SHELDON GILBERT KNOWS YOUR FAVORITE color. He also knows how many times you added that flat screen TV to the online shopping cart without buying it and what you like to do in your spare time. The creator of Proclivity, a behavior predicting software, he knows the ins and outs of data mining.

Sitting in his Fifth Avenue office in New York City, Gilbert explains, "Every time you click a link, it's a request for information you're making to a server." The 33-year-old tutored students in chemistry on the side while he spent a year writing the software. "We can then mine the data stored on the servers to create a profile of a person's likes and dislikes—or proclivities."

With this software, the 25-person firm Proclivity Systems has increased online sales by as much as 30% for clients such as Barney's New York, by predicting which offers to present to which customers, says Gilbert. Proclivity's motto: Predict behavior. Drive revenue.

Launched in April 2006 with \$750,000 from angel investors, the startup recently raised an additional \$5.5 million in venture capital. The funds will be used to expand Proclivity's platform and services into new vertical arenas and channels, as well as bring on senior management, says Gilbert.

Whether he knows it or not, Gilbert has tapped into one of the hot spots of entrepreneurship. But what are the others? **BLACK ENTERPRISE**, to borrow an old, yet fitting adage, followed the money trail. With the understanding that venture capitalists have their collective fingers on the pulse of the business world, **BE** looked at where they're investing their money. In short, these are the places entrepreneurs want to be. In the following pages, **BE** identifies these areas and, most importantly, how to tap their potential.

FOLLOW THE MONEY

From a venture capitalist investment standpoint, the standouts are software, biotechnology, medical devices, cleantech energy, and telecommunications. Of 17 industry categories, representative of all sectors of the economy, these five accounted for two-thirds of all reported venture capital funding in the first and second quarters of 2008, according to the *MoneyTree Report*, a study on venture capital investment prepared by PricewaterhouseCoopers and the National Venture Capital Association.

What gives these industries the edge? Scott A. Shane, professor of entrepreneurial studies at Case Western Reserve University in Cleveland, and author of *The Illusions of Entrepreneurship* (Yale University Press; \$26), suggests four reasons: business models focused on selling to other businesses and the government; relatively high barriers to entry as a result of patentable technology or technical know-how that provides new businesses with sustainable competitive advantages; continued alignment with economy-shaping global trends; and change that allows new

Software

Industry size: \$90 billion—\$82 billion in business software, \$5.5 billion is personal, and \$600 million for schools

Why so attractive? Scalable, huge returns, low overhead, long-term sustainability.

Industry Organizations:

- ▢ Association of Information Technology Professionals (www.aitp.org)
- ▢ Black Data Processors Associates (www.bdpa.org)
- ▢ Business Software Alliance (www.bsa.org)
- ▢ Information Technology Association of America (www.itaa.org)
- ▢ Software and Information Industry Association (www.siiia.net)



WOMACK ANTICIPATES DOING BIG BUSINESS IN BIOTECH.

businesses to get a foothold in markets and challenge the status quo. “Research shows that when put together, these characteristics help new firms in these industries out-compete other firms,” Shane adds.

HARD CASH IN SOFTWARE

“Software has almost become like air,” says Ken Wasch, president of the Software and Information Industry Association in Washington, D.C., speaking of the ubiquity of computer code. “So many industries have software as the core component of their products—from electronics to assembly lines, automobiles, even sneakers.”

Its functionality across industry lines, low startup and overhead costs, and scalability have made software the darling of venture capitalists. “You write a piece of software once, and from one location you can duplicate and deploy it to stores all over the country,” says John Taylor, vice president of research with the National Venture Capital Association.

Partly in response to piracy concerns, but also an indicator of the pervasive reality of the Internet, software distribution is moving to an on-demand, utility-based model, which is what Proclivity Systems offers. “Instead of breaking the shrink-wrap on a CD, you’re accessing your new software online through a vendor’s server,” explains Wasch. “The support infrastructure has changed.”

Wasch says opportunities exist for businesses offering help-desk and tech support services as well as software coding for cell phone content and other Web-based applications. Other opportunities lie in the development of educational software accessible to students via their phones and/or iPods. Wasch adds, “Internet security and applications that increase efficiency, reduce operating costs, and streamline business processes will always have a market.”

BIOTECH BOOM

Biotechnology is risky business. Pharmaceutical Research and Manufacturers of America reports that for any group of 250 screened compounds in preclinical testing, only five enter human clinical trials, and only one ends up being approved for sale to the public by the Food and Drug Administration.

NanoVec, a biotechnology firm, was launched in January 2006 to produce artificial vaccines. Most vaccines require biological systems to manufacture and require significant time to scale-up, but NanoVec vaccines can be produced in one to two months. Although based in Philadelphia, NanoVec is operated virtually; the company outsources its lab work to contracted research organizations.

Principal Founder, President, and Chief Science Officer Chad Womack, who also serves as president and chair of the executive board of directors of the National Association for Blacks in Bio, raised about \$300,000 to begin design and development of a prototype vaccine against influenza. Though biotechnology is

Biotechnology

Industry size: \$360 billion, the combined market capitalization of U.S. publicly traded biotech companies

Ancillary opportunities: Provision of clinical and preclinical research testing services.

Industry Organizations:

- ▣ Biotechnology Industry Organization for blogs, industry trends, and business advice (www.bio.org)
- ▣ BioWorld, business news coverage of the biotechnology industry (www.BioWorld.com)
- ▣ iPraxis, a nonprofit connecting entrepreneurs to scientists in the biotech space (www.ipraxis.org)
- ▣ National Association for Blacks in Bio (www.nab-bio.org) ▶

potentially lucrative, Womack cautions, "Most biotech companies take five to seven years on average before ever reaching the stage when they start to generate significant revenue." He notes that his 2-year-old firm has yet to turn a profit. "The global flu vaccine market alone was \$2.2 billion in 2006. Upon product launch, we hope to capture up to 25% of that market."

The Tufts Center for the Study of Drug Development, an independent research group affiliated with Tufts University, puts the cost of developing a new drug at an estimated \$1.1 billion, a figure that limits development to the big players. However, with genetic testing and personalized medicine being two of the fastest growing sectors within this industry, Stephen Keith, president and COO of Panacea Pharmaceuticals in Gaithersburg, Maryland, and also a co-founder of NanoVec, adds that the biotechnology boom means entry points for the creation of new businesses to conduct contract and clinical research for the pre-clinical and clinical trials required for FDA approval.

Womack agrees: "A lot of biotech is done virtually until the human clinical testing stage." He confirms that NanoVec spent about 50% of its cash flow in outsourcing its lab work and about 40% in legal fees to protect intellectual property. And a summer 2008 study by biotechnology analysts with the investment firm Turner Investment Partners in Berwyn, Pennsylvania, revealed that contract and clinical research outsourcing is projected to reach \$29.4 billion by 2011, up from \$16.3 billion in 2006.

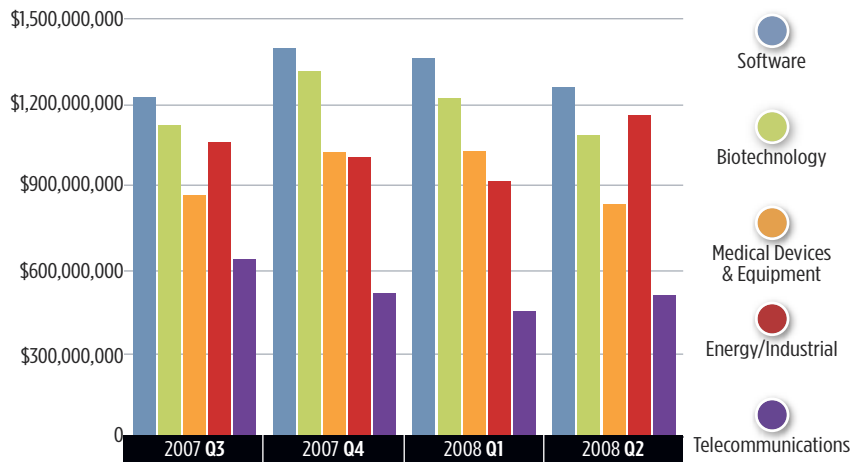
MEDICAL DEVICES IN DEMAND

Further advances in surgical apparatuses and the discovery of safer and more flexible synthetic materials for implanted equipment are among the factors driving the growth in medical devices, according to Matthew Gardner, president and CEO of BayBio, a life science advocacy group in San Francisco.

"A lot of investment is going into high-reliability devices such as circuit boards and mainframes for medical devices that are not likely to be outsourced," says Julian Harris, a research analyst with the consulting firm Frost & Sullivan in San Antonio. "These devices are found in minimally invasive surgery equipment and cardiovascular regulatory devices and have stricter quality standards."

Gardner says that even in a bad economy, the development of new equipment remains resilient because product development takes a great deal longer than an economic cycle. And research funding from government agencies, such as the National Institutes of Health, that sustain medical research allows such development to continue on a positive growth curve. However, he adds that regulatory processes significantly prolong the time-to-market. "Diagnostic devices often enjoy faster returns on investment and less regulatory restrictions than devices for surgery or treatment," Gardner says.

Venture Capital Investment (last four quarters)



SOURCE: THE MONEYTREE REPORT BY PRICEWATERHOUSECOOPERS AND THE NATIONAL VENTURE CAPITAL ASSOCIATION.

Medical Devices & Equipment

Industry size: \$123 billion in 2005, about 6% of the \$2 trillion healthcare industry

What's hot now? Minimally invasive devices treating cardiovascular, neurological, diabetes, obesity, and aesthetic concerns

Industry Organizations:

- ▢ Advamed, a trade association representing medical device manufacturers (www.advamed.org)
- ▢ Medical Device Manufacturers Association (www.medicaldevices.org)
- ▢ National Technology Transfer Center (www.nttc.edu), for patentable new technologies

Mark Leahey, executive director of the Medical Device Manufacturers Association, says that considerable opportunities within the industry include clinical trials, distribution, and contract manufacturing for device components, especially miniaturized equipment.

GOING GREEN WITH CLEANTECH

By developing new or renewable sources of energy and raw materials, and by improving the efficiency of consumption, cleantech is answering a vast market opportunity, says Brian Fan, senior director of research at the Cleantech Group, a global cleantech industry research and consulting firm in San Francisco.

"Technologies that improve efficiency or open up new sources for things such as water are profitable," says Fan. "Also, opportunities in recycling range from designing new methods of sorting and managing waste to applying advances in chemical and material sciences to make use of previously unusable garbage." ▶

Venture capitalists are investing in batteries, power electronics, and engines focused on optimizing efficiency, says David Prend, co-founder of Rockport Capital Partners, a cleantech venture fund in Boston and Menlo Park, California. Prend adds that green building and smart utility grids are also in demand.

Of course, one of the greatest challenges for the growth of cleantech companies has been inconsistent regulations and policies, says Ron Pernick, co-author of *The Clean Revolution* (Harper Collins; \$26.95) and managing director of Clean Edge Inc., a Portland, Oregon-based firm that tracks and analyzes cleantech markets.

“Case in point: the investment tax credit and production tax credit for renewables is about to expire if Congress doesn’t extend it,” says Pernick. “Places where we’ve seen the greatest growth are those that have long-term plans and programs in place such as in Japan, Germany, and California.”

He adds that some growth areas to watch out for are bio-energy and biomaterials harvested from waste streams and dedicated energy crops such as algae used for biodiesel.

TELECOM: 1 TRILLION AND GROWING

With the amount of sensitive data exchanged over the Internet via phones and computers, ancillary opportunities for entrepreneurs who provide security products and services is in demand.

Grant Seiffert, president of the Arlington, Virginia-based Telecommunications Industry Association, projects increased demand for the construction and installation of advanced communications networks, saying, “The need to carry voice, video, and data over broadband and wireless means that all the companies that manufacture, deliver, install, and service these products either for the enterprise or for the home have a shot at being successful.”

Cleantech

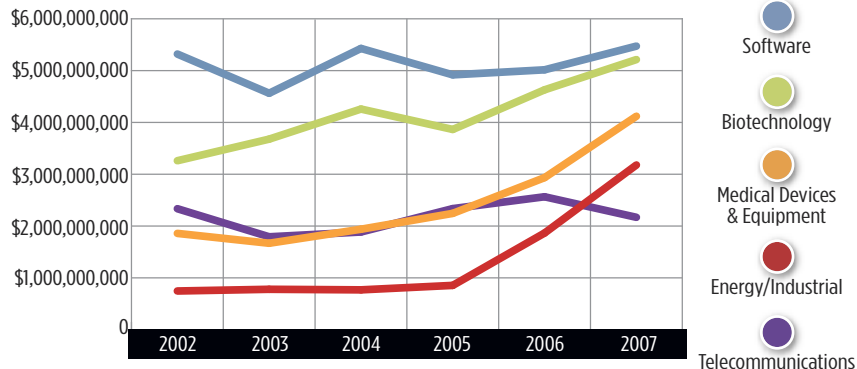
Industry size: Wind, solar, hydrogen, and biofuel markets amounted to \$55.4 billion in 2006, and are projected to reach \$226 billion by 2016

FYI: Cleantech includes energy generation, storage, infrastructure, and efficiency; transportation; water and industrial raw materials; agriculture; recycling and waste management products and services

Industry Organizations:

- ▢ Clean Edge (www.cleantech.com), a research and publishing firm helping companies, investors, and governments profit from clean technologies
- ▢ The Apollo Alliance (www.apolloalliance.org), a coalition of business, labor, environmental, and community leaders working to catalyze a clean energy revolution
- ▢ Cleantech.org (www.cleantech.org), a portal that provides industry insights and business opportunities

5-Year Trends in Venture Investing



SOURCE: THE MONEYTREE REPORT BY PRICEWATERHOUSECOOPERS AND THE NATIONAL VENTURE CAPITAL ASSOCIATION.

Rob Ayoub, a network security manager and analyst with the growth consulting firm Frost & Sullivan, cites on-the-job security training, assessments and audits, scam identification, data protection/encryption services, and improved teleconferencing security products as avenues for new businesses. He also believes that the Internet and increased demands for wireless functionality are blurring the distinction between phone and computer.

There are additional opportunities for providing media and entertainment content on mobile platforms, says Emily Mendell, vice president of strategic affairs at the National Venture Capital Association. “You can’t have 20 different Facebooks,” Mendell says, “but there are opportunities for consumer-driven content, such as online gaming, fitness, lifestyle, and similar services.”

“You don’t personally have to be the expert to connect yourself to an opportunity. You can connect yourself with someone else who has the expertise you need,” says Darrin Redus, chief economic inclusion officer at Jumpstart Inc., a Cleveland-based venture development firm that prepares entrepreneurs to present their ideas to venture capitalists. “There’s a whole new technology revolution taking place now and, at minimum, learning how to support these industries is a great way to get involved.” **BE**

Telecommunications

Industry size: \$1 trillion, projected to reach \$1.3 trillion by 2011

Ancillary opportunities: security products, training and consultation services; fraud recognition and detection; adapting Web successes for mobile phones such as bill payment, online banking, access to health records; mobile media and entertainment

Industry Organizations:

- ▢ Cellular Telecommunications & Internet Association (www.ctia.org)
- ▢ National Association of Black Telecommunication Professionals (www.nabtp.org)
- ▢ Telecommunications Industry Association (www.tiaonline.org)
- ▢ U.S. Internet Industry Association (www.usiia.org)