

CAROCP Market Watch

(A Monthly Trends & Forecasting Report)
June 2007

TOP 10 “EUREKA” INVENTIONS *(Manufacturing and Product Development)*

We're a nation of inventors, creating gadgets and services that delight us and occasionally drive us crazy. USA TODAY chose inventions that changed our lives in the past 25 years. Here's the top ten:

1. Cellphones – Motorola introduced the first widely available handheld cellphone in 1982. It weighed almost 2 pounds and cost \$3,995.
2. Laptop computers – The 28-pound Compaq Portable was the first IBM-compatible portable PC on the market in 1983.
3. BlackBerrys – In 1999 the company, Research in Motion, shortened attention spans around the world with the launch of this mobile e-mail device.
4. Debit Cards – These took off after Visa launched its check card in 1995. Before then, fewer than 2% of Americans used debit cards. Ten years later, debit card transactions exceeded those on credit cards.
5. Caller ID – This invention introduced by BellSouth in 1984 makes it easy to decide which calls to answer and which calls to send to the message machine.
6. DVDs – Americans traded all those hours rewinding video cassettes with the introduction of digital video discs in 1995. Consumers spent \$7.4 billion on DVD rentals last year, up 10%. VHS rentals plummeted 74%, to \$281 million.
7. Lithium rechargeable batteries – Sony brought this invention to the market in 1991. It made its debut in a Sony camcorder – and has provided juice for laptops, cell phones, digital cameras and other portable electronics ever since.
8. iPods – Walking down the sidewalk hasn't been the same since 2001, when Apple introduced its iconic portable digital music player. It wasn't the first player, but fans declared it the coolest and easiest to use by snapping up more than 100 million.
9. Pay at the pump – Filling up the tank in 1986 became even more self-serve when a gas station chain in Texas, invented technology that turned the pump into a quasi-ATM.
10. Lettuce in a bag – Fresh Express in Salinas, Calif., invented a high-tech plastic bag in 1989 making it possible to conveniently have mixed lettuce greens in a bag. This helped ignite a whole consumer category of portion-controlled foods, such as baby carrots.

USA TODAY, May 21, 2007 (For the complete list of the top 25 inventions, go to usatoday.com)

YOU RAISED THEM NOW YOU MANAGE THEM *(All Sectors)*

Generation Y, the 70 million people born from 1977 to 1994, are different in many respects, from their upbringing to their politics, but it might be their effect on the workplace that makes them truly noteworthy. They're ambitious, they're demanding, and they question everything, so if there isn't a good reason for that long commute or late night, don't expect them to do it. When it comes to loyalty, the companies they work for are last on their list – behind their families, their friends, their communities, their co-workers, and of course, themselves. As the baby-boomers begin to retire, triggering a ballyhooed worker shortage, businesses are realizing that they may have no choice but to accommodate these curious Gen Y creatures. Especially because, if they don't, the creatures will simply go home to their parents.

A profile of Generation Y

Numbers: They make up more than 20 percent of the U.S. population.

Upbringing: Raised by active parents who gave children lots of attention. Today, they need lots of feedback.

Makeup: The most ethnically diverse generation to date.

Work Style: Independent, because of their background: time spent in day care, one out of four comes from a single parent household, and three out of four have working mothers.

Outlook: Optimistic about the future; sense of empowerment.

What employers want:

1. Communication skills
2. Honesty/integrity
3. Interpersonal skills
4. Motivation/initiative
5. Strong work ethic
6. Teamwork skills
7. Computer skills
8. Analytical skills
9. Flexibility/adaptability
10. Detail-oriented

What grads want:

1. Enjoying what they do
2. Integrity of the organization in dealing with employees
3. Ethical business practices
4. Good benefits package
5. Stability
6. Opportunity for advancement
7. To work with others
8. Continuing education/training opportunities
9. Location
10. High starting salary

Getting Gen Yers to join a company is a challenge, getting them to stay is even harder. The key is the same one their parents have used their whole lives – loving, encouraging, and rewarding them. The loyalty of the twenty-somethings is really based on the relationships they have with those directly above them. There's a perception among management that those relationships shouldn't be too personal, but that's how they know you care about them. Business cards are an easy way to make young employees feel valued. Letting them shadow older employees helps, as does inviting them to a management meeting now and then. And marking milestones is major, no birthday should go uncelebrated. [Fortune](#), May 28, 2007 and [The Orange County Register](#), May 20, 2007

MILLENNIALS – THE CLASS OF 2007'S DREAM JOB *(All Sectors)*

Which employers do undergraduates most want to work for? In Universum Communications' 2007 survey, the 40,000 students gravitated to super-profitable companies or resume boosting public-service organizations. Here are the top five choices: Google, Disney, Apple, U.S. State Department, and the Peace Corps. [Business Week](#), May 21, 2007

THE LAST GREEN MILE *(Energy and Utilities)*

So let's say this whole alternative-energy craze inspires you and me to rethink our energy consumption. Who can we call to help change our carbon-choked ways? At the moment, that's problematic. We'd need to find a mom and pop solar dealer or maybe a local electrician or construction guy who understands the nuances of solar, wind, and bioenergy. Opinions would vary as to how much energy we'd save and how much it should cost. The price might be \$18,000, or \$80,000. The disorder, and the huge dollars at stake, has attracted a slew of companies that want to do for the aspiring greenie what Home Depot did for do-it-yourselfers and contractors, when it consolidated a fragmented market of small paint shops, lumberyards and hardware stores under one roof. The general idea: Call a toll-free number and a renewable energy specialist walks you through the process, discussing the best technology options for your location.

The concept has huge potential. Solar is already a \$15 billion business worldwide and growing 40% annually. Public concern over global warming, the environment, and rising electric bills as well as government tax credits and better technology are projected to drive that market as high as \$75 billion by 2010.

Historically, price, as much as the hassle, is what has slowed solar adoption. Many of the new enviro services facilitate rebates offered by local utilities and government subsidies, but SolarCity goes one step further, offering bulk discounts to buyers in the six California markets it serves. If a potential client can rally enough neighbors to produce 175 kilowatts of solar power in the area (approximately 45 residences), they all save 30%. People want to go green, but they won't do it if it costs them an arm and a leg. [Fast Company](#), June 2007

SCHOOLS HIT HOME WITH ONLINE “GRADCASTS” *(Information Technology)*

As school districts go high-tech, everyone can now get a front-row seat at commencements. Gradcasts, as some techies call them, allow viewers to watch live streaming video of the ceremonies. The Web-based technology is catching on among some school districts that say it costs next to nothing to offer the extra service to students' families. Some districts have even started webcasting sporting events and pre-kindergarten graduations. School plays and open houses aren't far behind.

Rice University and the University of Houston have offered live video streaming of commencements for years. The gradcasts are especially popular among family members who are elderly, living out of town or are in the military.

Houston Chronicle, May 23, 2007

UNCONVENTIONAL CONFERENCES *(Information Technology)*

Free classified ads on Craigslist threaten newspapers. Open-source software is gaining on Microsoft and Oracle. Now the convention business faces its own Web-inspired competition: the “unconference.” Think of the unconference as a hybrid of a teach-in and a jam session, with a little show-and-tell mixed in, and they are attracting hundreds of participants in cities like Austin, Bangalore, San Francisco, Sydney and Tokyo.

Unlike traditional conferences, they're totally unstructured – the agenda isn't determined until the opening day of the event. Everyone who shows up is a potential speaker, and those who don't speak contribute by posting photos, blog entries, podcasts and video clips of the proceedings.

Last month, a typical unconference, Web2Open, unfolded on the second floor of Moscone Center in San Francisco. Chris Messina and two fellow Web2Open organizers invited anyone present to sign up and speak at the gathering by sticking a Post-it note on one of two big chalkboards. All speakers had to do was come up with a title and find an open time slot. Two factors spurring the growth of unconferences is its appeal to tap the smarts of the people who usually sit quietly in the audience, and there's limited commercialism to these gatherings. Unconferences don't have big-bucks underwriters and there's usually no financial upside for organizers.

While there's no dress code at unconferences, there are rules: no passive attendees, only participants. A high-speed WiFi network is mandatory so those present can publish notes and other material. And if participants find a session boring or they're not motivated to contribute, they're expected to get up and go somewhere else.

BusinessWeek, May 14, 2007

NATURE'S WAY (*Engineering and Design*)

Researchers and entrepreneurs, pioneering a relatively new field called biomimicry, are taking a close look at nature's marvels and reverse-engineering them into real-world products. How, they ask, do lotus leaves repel water and stay so clean? How can the ventilation systems in termite mounds be used to cool city buildings? Could the glue that mussels use to adhere to rocky surfaces be adapted to heal broken bones?

Answering such questions could bring great wealth to a new generation of inventors. But it could also do much more. Biomimics, as the practitioners in this field call themselves, see nature's example as the key to combating environmental destruction. Natural designs, honed through millions of years of evolution, tend to be surprisingly efficient. Products built along those lines could replace the detritus of the first industrial age with cleaner, more elegant and much more sustainable substitutes.

Biomimicry has become a methodology for finding answers to engineering or design questions. You take an engineering problem like, how to lubricate or adhere to something, and you find examples of how nature has solved that problem.

History suggests that we've only just begun to crack the market. In 1941, a Swiss engineer noticed that the seeds of the burdock plant stuck to his wool socks. Through a microscope, he saw how the tiny hooks snagged fabric so effectively. It took more than a decade of experimentation, but he eventually turned his discovery into the product we call Velcro. The puzzles that today's Biomimics are trying to solve make Velcro look downright primitive. Armed with sophisticated technology, dozens of research centers have begun putting engineers and biologists together and encouraging them to cross-pollinate. In a few years, we'll see hearing aids that mimic the auditory mechanism of *Ormia ochracea*, a small yellow fly. And a company called Novomer is transforming carbon dioxide into a kind of biodegradable plastic using tricks it learned from the way plants turn CO₂ into sugar and starch. [Business 2.0](#), June 2007

A NO-SHOT VACCINE (*Health Science and Medical Technology*)

If you've popped a quick-melting Listerine strip into your mouth lately, you may have tasted the next big idea in vaccines. Johns Hopkins University just announced that a team of bio-medical engineering students working with Aridis Pharmaceuticals has tapped breath-mint technology as a potentially revolutionary way to inoculate infants and children.

Any parent can spot the benefits: less painful than an injection, more effective than a spilling spoonful of liquid, these cellophane-like strips are simply placed on the tongue, where they melt in seconds and are easily swallowed. The real boost is to the developing world. Most vaccines must be shipped, stored and administered in a consistent "cold chain," which is difficult and costly for aid organizations working in the heat of Africa. With further testing and refinement, it will be four to six years before the vaccine strips are put into use. [Newsweek](#), May 28, 2007

FLUNKING BRAND GEOGRAPHY *(Marketing, Sales, and Service)*

Marketers around the world avidly pursue them, but many young Americans don't have a clue about the origins of their favorite brands. A survey of 1,000 undergraduates by market researcher Anderson Analytics found that students tend to mistakenly identify familiar brands as Japanese, American or German. Many students make assumptions based on countries' perceived strengths, assuming that electronics products are Japanese for instance. Here is a sampling of the answers:

Brand	Country of Origin	% Who Answered Correctly	Most Common Answer
Nokia	Finland	4.4	Japan (53.6)
Lego	Denmark	8.4	U.S. (61.1)
Samsung	Korea	9.8	Japan (57.8)
Ericsson	Sweden	9.9	U.S. (30.3)
Adidas	Germany	12.2	U.S. (48.5)

[Business Week](#), June 18, 2007

[Trends & Economic Forecasting Committee –June 2007](#)

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California State Standards for Career and Technical Education (CTE)

Industry Sectors

1. Agriculture and Natural Resources
2. Arts, Media, and Entertainment Technology
3. Building Trades and Construction
4. Education, Child Development and Family Services
5. Energy and Utilities
6. Engineering and Design
7. Fashion and Interior Design
8. Finance and Business
9. Health Science and Medical Technology
10. Hospitality, Tourism and Recreation
11. Information Technology
12. Manufacturing and Product Development
13. Marketing, Sales, and Service
14. Public Services
15. Transportation

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