Crowdsourcing: Idea power from the people

Picture a glass jar packed with jelly beans at a county fair. Then imagine that 500 fairgoers try to guess the number of jelly beans.

If you add up the guesses and divide by 500, the resulting average will be very close to the accurate jelly bean count — and likely much closer than any individual guess.

Behold the "wisdom of crowds."

Get ready for a revolution based on that concept: It's called "crowdsourcing." In fact, the revolution is under way.

Crowdsourcing means taking a problem, technical, creative, economic or informational, and seeking a solution from the vast, international public of the Internet. It's like opening a digital suggestion box to the entire globe.

This concept has already transformed the software industry. The collaborative, public writing of "open source" code — a seminal example of crowdsourcing — has produced such game-changers as the Linux operating system.

Now the concept is transforming science and product development.

The crowd can be pretty smart. Not always, though, cautions James Surowiecki, the New Yorker's superb economics writer and *The Wisdom of Crowds* author.

For a crowd to be wise, he says, it must be large enough and diverse in knowledge. It must work independently enough to avoid group-think.

Though the crowd can arrive at brilliance, it usually does so sloppily. Ninety percent of its ideas will be junk. But 10 percent will be dotted with gems, gems you never would have found if you'd consulted only your usual circle.

Here's another benefit: The crowd will happily sift the jetsam to find the good stuff for you. Think Netflix users' movie ratings. Or Zagat's, which crowdsourced restaurant reviews 25 years before the term was invented.

Chris Satullo · *Center Square*

Each Sunday, "Center Square" explores an idea that's shaping the news.

The guy who coined the term, Jeff Howe, has written the book on it. *Crowdsourcing* is an enthusiastic, but not uncritical, look at the trend.

Howe cites many places you've seen crowdsourcing. Wikipedia is a triumph of the practice. *American Idol* is a cultural phenomenon built on it: The crowd provides the talent, winnows it (often to Simon's exasperation), then makes its favorites stars.

Crowdsourcing can achieve far meatier tasks than deciding who warbled a Bee Gees medley best. Two examples:

Science: Darlene Cavalier is "The Science Cheerleader." On a blog devoted to citizen science (www.sciencecheerleader.com), this Philadelphia woman matches ordinary people with research projects in search of data or observations.

Amateur science isn't new. Weather observers and birdwatchers have practiced it for years. Now it's taking root in other scientific disciplines, particularly those dealing with the environment, says Cavalier, a Discover magazine consultant (and former Sixers cheerleader).

Amateur scientists take water or air samples, count fireflies, track butterflies, and so on. They enable sound data to be collected more swiftly, broadly and cheaply.

Cavalier says she tries to work with professional researchers who are looking to do more than "just grab some free labor ... who will come down out of the ivory tower, answer people's questions, teach about the experimental method, make science more accessible."

Research and development: David Tracy is a solver for InnoCentive Inc. Translation: He tries to crack tough nuts that have foiled the R&D teams of major corporations such as Procter & Gamble. Companies contract with InnoCentive to crowdsource problems that have them stumped, offering prizes for the best workable solution. InnoCentive's "crowd" of Ph.D.s and basement tinkerers has about a 30 percent success rate, according to one academic study.

Tracy, a physicist from Norwalk, Conn., has won two prizes (worth more than $40,000) in six tries, though he believes he found workable solutions each time, including a couple that "were more elegant than the ones for which I won!"

One of the problems Tracy solved was about a chemical reaction: "I didn't even understand the chemistry in the problem, but I came up with a physics solution that happened to work." That's common in crowdsourcing; solutions from left field. One of the crowd's strengths is breaking free of the specialization that can limit thinking.

As Jeff Howe readily admits, this trend he named is not all seashells and balloons. It can cost people income or jobs, as employers turn to the crowd to work on the cheap. The crowd can exalt mediocrity (Clay Aiken, anyone?) and it can get stuck on superficiality. For example, Digg.com, an online news source where readers act as editors, has its virtues but can ignore important issues, such as Darfur.

But crowdsourcing can't be shoved back in the bottle. The Internet "crowd" is a billion strong and rising. The wise move is to point it to the high ground.