Whether you call it crowdsourcing, open innovation, or the wisdom of crowds, the collaborative approach to innovation is becoming a force. Businesses, individual inventors, and government bodies are increasingly employing the tactic. After having set aside any sense of paranoia about protecting their intellectual property rights, these leaders are turning to customers, competitors, and even the public at large for inspiration in solving a host of technological as well as design problems.

Sometimes firms with a problem turn directly to the crowd for help in finding a solution. For example, Rob McEwen, chief executive of U.S. Gold, asked the public for help in finding gold when he was the head of a Canadian company called Goldcorp. McEwen published all the mining data, maps, and geologic information relating to Goldcorp’s property on the company’s Web site, and offered $575,000 to anyone with suggestions on how the company could find six million ounces of gold. More than fourteen hundred people from fifty countries responded, identifying fifty-five new drilling sites. In the aftermath of this experiment, the company’s value shot up from seventy million to six billion euros.
More often, though, firms turn to companies like Idea-Wicket, NineSigma, and Napkin Labs, all of which act as innovation “middlepeople” by connecting seekers with solvers.\(^5\) The best known of these entities is InnoCentive, a company founded within Eli Lilly in 2001 that became independent in 2005.\(^6\) InnoCentive strives to “help companies innovate better, to find the fastest path to solutions.”\(^7\) Firms that want to take advantage of InnoCentive’s services first post a project by constructing a detailed list of their goals. InnoCentive’s community then selects projects to “solve” from among those listed. The result can be hundreds of ideas for the firm’s technological or design problems.\(^8\) The prize money for the best ideas, which serves as an inducement for the problem solvers, ranges from five thousand to a hundred million dollars.\(^9\) The solvers come from 175 countries. More than one-third of them have doctorates.\(^10\)

Dwayne Spradlin, president and chief executive of InnoCentive, says that for many companies, embracing open innovation requires a large cultural shift.\(^11\) Two particular concerns are that companies that post information about their problems risk giving valuable information to competitors, or that a solver will devise a useful solution but refuse to hand it over to the organization that initially sought it. So far, neither concern has materialized.\(^12\) In fact, InnoCentive appears to have been remarkably suc-
cessful. Giants like Procter and Gamble and even the US government have turned to the InnoCentive community for help in solving their problems.

The National Aeronautics and Space Administration

When the Space Life Sciences Directorate at the National Aeronautics and Space Administration’s (NASA) Johnson Space Center in Houston needed solutions to a variety of astronaut health and performance issues, it turned to InnoCentive and its network of over two hundred thousand problem solvers. Jeffrey R. Davis, the director of the Space Life Sciences Directorate, believed that “accelerating the solutions to problems which affect astronauts will have a major impact on the future of our space program.” Spradlin shared Davis’s enthusiasm: “InnoCentive is pleased to work with NASA to apply the power of open innovation and the expertise of our Solver community to explore new approaches to significant problems in the aerospace industry.”

Three challenges were initially posted. They were won by Yury Bodrov, a scientist from Saint Petersburg, Russia; Alex Altshuler, a mechanical engineer from Foxboro, Massachusetts; and Bruce Cragin, a retired radio frequency engineer from Lempster, New Hampshire. Bodrov proposed a new, lightweight, flexible graphite material for food
packaging that can maintain food quality over a three-year shelf life. Altschuler suggested an aerobic and resistance exercise device that allows astronauts to exercise under limited or zero gravity. Cragin designed a solution that allows for the prediction of solar radiation during a twenty-four-hour forecast window with 75 percent accuracy.

NASA’s Innovation Pavilion on InnoCentive recently listed seven challenges, ranging from designing a process for tracking medical consumables used from medical kits to determining the optimal method of coordinating swarms of sensors to collect data on extraterrestrial environments. The prize amount for the challenges ran from fifteen to thirty thousand dollars, and the number of solvers ranged from a low of 174 to a high of 598. Currently, all the challenges have either been awarded or are under evaluation. Yet the partnership between NASA and InnoCentive shows no signs of ending, ensuring that “anyone with interest and ability can impact how the U.S. explores the final frontier.”

BP

When an explosion at a BP-owned rig unleashed the largest oil spill in US history in the Gulf of Mexico, InnoCentive decided to launch a challenge seeking ideas to help the company with cleanup. InnoCentive’s community of
problem solvers has dealt with similar issues before. In 2007, it devised a method of removing frozen oil from the bottom of Prince William Sound after the Exxon Valdez oil spill—a problem that had gone unsolved for twenty years. For the BP challenge, InnoCentive saw its fastest response ever, with over a thousand solvers registering to work on the problem—61 percent of whom had PhDs or master’s degrees. More impressive was the fact that this response was generated without the aid of any financial inducement. “In a crisis situation we thought our network would get involved because it was the right thing to do,” said Spradlin.

Spradlin and InnoCentive reached out to BP with their suggestions. BP was at first receptive, identifying the remote sensing of oil and better skimming technology as two areas where InnoCentive’s solutions could be most helpful.

The open-innovation approach to problem solving is not always met with open arms. BP ended up declining to cooperate with InnoCentive—this time around, anyway. On June 19, 2010, BP said that an agreement with InnoCentive would be “too complex and burdensome,” and rejected its solutions. In a blog post on Perspectives on Innovation, Spradlin responded: “These agreements are simple, allow us to use BP’s name without InnoCentive taking on liability, and set the price of engagement at $0.” Nor were InnoCentive’s ideas the only ones rejected. Over
a hundred thousand other suggestions were sent to BP’s offices in Houston. BP claimed that “nearly all are impossible, impractical, obvious or likely to make things worse.”\textsuperscript{21}

Spradlin, however, did not end up feeling completely dejected from the experiment with BP. The impressive response from InnoCentive’s community gave him confidence in the network’s capacity to mobilize itself to assist with future emergencies. “We know we’ve got an ability to tap bright minds in a variety of crisis situations. . . . Now we can prewire some of these things that will allow us to use them on demand,” he said.\textsuperscript{22}