Crowds and the Innovation Dilemma

In his book *The Wisdom of Crowds,* author James Surowiecki offers his view on why "the many are smarter than the few and how collective wisdom shapes business, economies, societies and nations." For these crowds to be effective he also suggests that they must be simultaneously diverse, independent and decentralized and there must be a means to aggregate the results.

Surowiecki offers numerous examples to support his thesis: estimating the number of jelly beans in a jar; finding a lost submarine when no one knew why it had disappeared; assigning responsibility for the *Challenger* disaster; estimating point spreads for athletic events; the success of the Iowa Electronic Markets (IEM) for predicting the outcomes of political races; scout bees searching for nectar; and so forth. In each of these examples, the key to the success of this process, Surowiecki hypothesizes, is while any one part of the group may only have a small piece of the required information, the group as a whole has it all.

In recent years the use of crowds has been extended to the practice of innovation and has come to be applied to the field of *Open Innovation* in searching for ideas external to one's own group or company. *Crowd Sourcing*, using large networks to find solutions to innovation problems, has been adapted as a business model by some companies. The results, however, are mixed:

- *As Einstein said, "If I had an hour to save the world, I would spend 59 minutes defining the problem and one minute finding solutions."* First and really key, the success of any such inquiry depends on asking the right questions (i.e., defining the problem correctly). If the problem is framed too broadly, proposed solutions are likely to be overly generic or fail to address the fundamental issues. If framed too narrowly, a more robust solution may be missed. Without sufficient insights into the underlying root causes, true solutions are unlikely and the opportunities for demonstrating novelty and the critical requirement for gaining new IP are significantly reduced.
- *Why would a "boiling the ocean" model be most effective or efficient?* Second, there is no assurance that the group, by chance, includes someone with just the right area of expertise or experience to suggest the best answer to the problem posed. In many cases, multiple experts or technologies must be harnessed to create a workable solution. The larger the crowd, the more difficult it often is to separate the wheat from the chaff. A better expenditure of time and effort might be to conduct a focused search from the start.

- *While crowds may address simpler qualitative and quantitative problems, can they address complex, multi-dimensional problems and find the why?* And finally, many innovation problems, challenges, and opportunities are complex in nature – part of the reason why a company has not easily found a ready solution using their own expertise. Without rigorous analysis, deep problem cause analysis, and multi-dimensional solution testing, true breakthrough innovations may be missed.

We believe that a far higher likelihood of success in achieving innovation objectives is garnered by employing a systematic, disciplined approach to attacking the innovation challenge or opportunity. *GEN3 Innovation Discipline (G3:ID),* used for example as a core innovation tool by GE Global Research, is one such systematic approach to solving complex innovation problems and challenges related to products, processes and packaging. G3:ID is characterized by: (1) a thorough, analytical deconstruction of the innovation problem; (2) accessing targeted subject matter experts from a global functional network to fundamentally understand the underlying Key Problems and root causes, and frame solution paths; (3) identifying potential technologies that can be readily adapted with significantly less risk to solve the problem; and (4) performing multi-dimensional analysis to arrive at practical, robust solutions to exploit the true innovation opportunity.

While crowd sourcing is a useful tool in business practice, true breakthrough innovation more often demands a greater level of analysis and systematic process to fully - and effectively and efficiently - leverage a world of available technologies, innovations and expert knowledge.

