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Can innovation be taught?

Western manufacturers have recognized that they cannot match the low-cost production of China and India. To prosper they must instead out-innovate the competition.

Initial efforts to rapidly spur innovation had CEOs and R&D heads simply renaming the "Product Development Process" to "The Innovation Process." This did little to help. From there, companies began to adopt more substantial methods including Edward DeBono's *Lateral Thinking and Six Hats*; Genrich Altshuller's *Theory of Inventive Problem Solving (TRIZ)*; and Eric Von Hippel's *Lead User Analysis (LUA)*.

My company recently reviewed these and other innovation tools, 57 in all, based on cost, inventive format, and learning curve. In general, certain tools drive breakthrough innovation while others provide only incremental improvement. Likewise, some tools are appropriate for consumer products while others are best suited for highly complex and technical products. No matter the end use, all techniques align themselves into four main levels:

The first level includes familiar tools for self and group help such as brainstorming, yoga, and meditation.

Tools in the second level emphasize the sharing of domain knowledge. The Six Hats technique, for example, recognizes that many successful people think from a rational, positive viewpoint. By doing so, they may fail to see a problem from an emotional, intuitive, creative, or negative view. This can lead to an underestimation of resistance to a plan, a failure to make cre-

ative leaps, or a lack of contingency planning. Six Hats helps decision makers look at a problem from a number of important, alternative perspectives.

At the next level, domain knowledge is shared, analyzed, and organized. The K-J Technique, for instance, is based on the belief that a company's employees have all the answers to management's questions. The trick is to get all of the people with the right perspective to quickly reach consensus.

On the highest level are innovation tools that emphasize the sharing, structuring, and increasing of domain knowledge. TRIZ, for example, says universal principles of invention guide creative innovations that advance technology. Identifying and codifying these principles make the process of invention more predictable.

Also on the highest level is LUA. It involves identifying and learning from individuals who have an immediate need for products that do not yet exist. Lead users experience this need months or years before their colleagues.

Cost for innovation tools can vary from a few dollars for a "How-To" book to hundreds of thousands of dollars for software. Learning curves range from days to months, depending on the technique.

Most of these tools have just begun their adoption curves and there will be false starts experienced by companies trying them out. However, it is clear that Lateral Thinking and TRIZ have proven their value over the past 30 years and are here to stay.

In our view, companies that aggressively pursue emerging innovation techniques could likely put themselves four to six years ahead of the competition. **MD**

Goldense Group Inc. (www.goldensgroupinc.com) is a management consulting firm.

Edited by Lawrence Kren