

Which is it? Critical Thinking or Critical Condition!

By Rod Greder, Ph.D.

Thomas Watson, president of IBM in its formative years, said: "All the problems of the world could be solved easily if men were only willing to think." New product development is an area desperate for more critical thinking to prevent companies from lapsing into "critical condition" due to their lack of life-supporting new-to-the-world products. Failed new products cost Fortune 1000 companies over 60 billion dollars per year. Sloppy market analysis, seat-of-the-pants development processes and shoddy launch planning (which all reflect a lack of critical thinking) are the cause of this high cost of failure.

Critical thinking and new product development The probability that a new product concept will become commercially successful is less than 10 percent. Sophisticated "rigid" stage-gate approaches are being used to force go/kill business-driven decisions at crucial steps in development before products are launched to improve this ratio. Progress is being made with these formal processes, however, critical thinking and preemptive action by informed and active gatekeepers (read people) on an almost daily basis to counter ever-changing market conditions and tenuous company circumstances is still the linchpin of successful product development.

Some formal product development tools being promoted are less than ideal because they, in the interest of improving success rates, constrict the process on the front end where some fuzziness and flexibility is a prerequisite for nurturing much needed creativity. Furthermore, when the result isn't as anticipated from these more formal approaches, process aficionados blame the implementation, i.e. it is an aptitude or attitude problem of the people involved. Let's deal with the "how to" and "want to" challenges by using methods that are easily understood, are easily implemented and can offer more immediate rewards. As Einstein put it, "Everything should be made as simple as possible, but not simpler."

Process: Seven step problem-solving method Any process that begins with a crystal clear definition of the problem, continues with a wide-open survey of potential solutions and ends with a data-driven analysis of the best alternatives will provide significant returns. A seven-step problem-solving process like the following can work for the majority of challenges we face.

7 Step Problem-Solving

- 1. Define the Problem. (What's broken?)**
- 2. Background the Problem.**
- Identify possible cause and effect, Ask doctor questions
- 3. Identify Possible Solutions. (Divergent thinking)**
- Open Brainstorming
- 4. Evaluate Solutions. (Convergent thinking)**
- 5. Analyze the Best Solutions.**
- Pro/Con, Cost/Benefit Analyses
- 6. Develop the Action Plan. (Who, What, When)**
- 7. Track Results. (What gets measured gets improved)**

People: A balance of personal styles While using the right process is important for good critical thinking, having the right people is equally important. Deploying only the stereotypical linear thinkers from operations on a new product development task could result in cost reductions in manufacturing (absolutely important to the enterprise), but it would probably not yield a first of its kind breakthrough product. To think critically about multi-faceted problems and to drive innovation, companies need individuals with a diversity of experience, extensive technical knowledge from different functions, divergent thinking patterns and offsetting (that sometimes becomes off-putting!) behavioral styles on each team. The C.A.R.E. Profile® is a useful assessment tool to use to identify potential team members, their strengths and their best role assignments on an innovation team. A successful team will have a mix of the following types.

Innovate with C.A.R.E. Profile®

Creator – Generates concepts and ideas. Takes the team into uncharted territory. Divergent thinker.

Advancer – Recognizes potential ideas early and begins to promote them. Pushes the process.

Refiner – Challenges concepts. Plays “devil’s advocate”. Analytical. Convergent thinker.

Executor – Implements ideas and solutions. Pays attention to detail and process.

Facilitator – Manages the process and the team. Ensures hand-offs take place.

Place: A conducive environment Most of us claim to do our best thinking during our morning shower. Why? Because it is one of the few refuges from TV, radio, computer, newspaper or conversation in an otherwise sensory saturated day. Undistracted thought time (or soak time in this case!) is a powerful prerequisite for creative problem solving. Imagine the explosive breakthrough thinking that might occur if team brainstorming were conducted with the same undistracted freedom of thought that we experience in the shower. Thomas Edison, when stumped by a puzzling problem, would go fishing by himself. Oftentimes he would not bait his hook. When asked about this peculiar practice he replied, “I do not want to be disturbed by man or fish”.

Tying it all together: Process, People, Place Companies that want to avoid the critical condition label and the next step...the corporate-equivalent of the toe tag...will be those that provide non-intimidating problem-solving processes and adequate “quality time” to mull over problems. The survivors will also empower and train their innovation teams and proactively form teams that are predestined for success. The thrivers will provide the tough-love encouragement to teams to, no-kidding, use the tools and report in-progress and end results so everyone can benefit from their conclusions and the evolving processes used to get them. While doing all this necessary process stuff, the most successful innovative companies will simultaneously incorporate the explosive intuition of their very own world class living and breathing problem solving machines...their people. Just “think” about the possibilities!

ROD GREDER, Ph.D. (rgreder@improveproducts.com) founded *New Productivity Group* to provide new-to-the-world training for new-to-the-world-products. They focus on enhancing the seven critical success skills of scientists and engineers to improve productivity of new product development. The full text of this article can be found at www.improveproducts.com.