

TOPICS OF THE MONTH: DISRUPTION IN THE NEW YEAR

All of you have made plans for the New Year. Spending and personnel levels by month or quarter and you will track the results of the year against these numbers and hold people accountable. What were these projections based on? To a significant degree, what happened last year and add a percentage, right? There may be, in today's good business climate, some "unstructured" funding for new areas that is not well defined. Let's look at how TRIZ thinking and tools can help focus these activities.

First of all, there has been much discussion and public talks (and the formation of a consulting company!) around the pioneering work of Clayton Christensen regarding "disruption" and how important a concept this is in planning and thinking. Disruption is not as magic as it is portrayed by many. It is not a mystery. Where it will occur is predictable through the study of the inventive patent literature over the past decades.

The TRIZ Lines of Evolution predict quite accurately product and process disruption lines and events. Just to take a few--Systems become more ideal by performing additional functions (cell phones) or by trimming and eliminating functions (cell phones that only receive calls, floor washing systems without buckets); Field progression (mechanical, thermal, chemical, electronic, electromagnetic)--image capturing systems from cave drawings (mechanical) to conventional photography (chemical) to electronic photography. Cooking, toothbrushes and oral care, indicating systems (pointing devices), cleaning systems (mechanical sweeping, detergent systems, static dust mopping), and cooking moving to microwaves and show the same progression.

Resources are more completely identified and used, making a system more ideal. System complexity and simplicity oscillate (look at computer software complexity vs. just use and rent what you want when you want it, complicated oral care systems). Patterns of invention are shared and multiply in use (breath strips now delivering medicine and other functionality). The list goes on and on. If you want some additional stimulation on this topic, take the Skymall gift catalog out of the airplane see the next time you fly and see how many examples of TRIZ evolutionary principles you can identify.

So what should you specifically do? First, take a look at every product and system you use or make and ask the simple question: How could I make it more ideal (and this is not a 20% improvement!)? How could I eliminate a part of the system and still deliver the functionality that is needed? How its functionality could be achieved without it existing? (In other words, how could you be put out of business?) Are there resources that you haven't considered to help achieve this? Make a list and if there are blanks, budget some money and serious people resources to look at these possibilities. Second, ask yourself honestly--how complex is my system?

Don't wait for a competitor to figure this out and displace or disrupt you! If it looks like a Rube Goldberg device, it probably is. Have you added functionality and complexity? How can you do the first without the second? Again, think about the oral care area--Crest's Spin tooth brush vs. Sonicare for no more than 25% of the cost. Third, make a list of each of your products and plot where they are along the field evolution line. Mechanical--thermal--chemical--electronic--electromagnetic.

How would you or your customer perform the function of your current product with chemical photography. Along with that input, budget some money to understand how that next field might be used even if it's not in your core competence. Think about missed steps and fields that might offer opportunities (hand crack rechargeable cell phones). Make these lists and use them to plan your next generation research, collaboration, joint venture or acquisition.