Using TRIZ Lines of Evolution to Choose Business Partners

The TRIZ methodology and algorithms have a key item within them and that is the list of lines and patterns of evolution. This was the third stage of TRIZ development after the basic concepts of inventive patterns and the basic TRIZ algorithm (ideal result, resources, contradictions, etc.)was defined. Not only are the patterns of how we solve problems predictable and reproducible, but the manner in which technology and systems evolve also predictable, and far less mysterious than many futurists and market researchers would have us believe. These lines contain many predictable discontinuities. Some examples would be the rigid, flexible, wave line, the field evolution line (mechanical, thermal, chemical, electronic, electromagnetic) and the line relating the oscillation between simplicity and complexity. Let's look at the first one from a business strategy viewpoint and assume that you are in the business of making wooden stick pointers. Your Six Sigma team and QC teams are working diligently on reducing wood density and raw material requirements, minimizing quality variation in the incoming wood supply, eliminating the need to sand the wood, improving the tapering machine, simplifying how the rubber end is put on, and other aspects of the manufacturing process. While you're doing all of this optimization, an upstart metal working company has just come out with an interesting new device which fits in someone's pocket (something your long stick has a problem doing, so it's got to be carried in a long bag of some sort), made out of metal, and with flexible welded metal joints which allow it to be collapsed into someone's pocket just like a pen. You don't even have any knowledgeable metallurgists on your staff, let along someone who knows about welding. Then as soon as this product displaced the stick pointer, the laser pointer came along. This required knowledge not only of lasers, but how to incorporate them into small, safe consumer products that again would fit into someone's pocket. A number of companies soon displaced the flexible metal pointer companies as well and stick pointers and flexible metal pointers (and their suppliers) are now in the Smithsonian. All of this was predictable. What are the lessons here? First, know where you are on the appropriate TRIZ Lines of Evolution. (There are others that apply here such as dynamism). They're not time forecasters, but they are extremely accurate qualitative forecasters. When you see a potential discontinuity between your current product design and how its function is predicted to be performed in the future, ask yourself how you going to find the core competencies needed to bridge this upcoming discontinuity? Who else has them? Could you acquire these skills? Partner with them? Be acquired by them for your current market knowledge? Could you file a defensive patent? There are laws of science that can assist in your long range business planning and TRIZ can play a key role.