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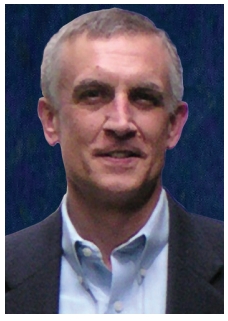

The Maker Movement Spurs Corporate Innovation and Entrepreneurship

Rapid innovation delivered with a maximum amount of proprietary IP has been a mantra for western corporations over the past decade. Many of those corporations are increasingly challenged to keep up. The growing number of legitimate competitors and continuing technological advancements have upped the ante on maintaining the necessary "factorylike innovation." Size, legacy, budgets, and a host of other factors hinder intrapreneurship and the ability to change quickly. Historically, all corporations suffered this same malaise and the playing field remained level. Corporations also enjoyed significant barriers to quick, nimble competitors. Engineering departments, testing labs, and manufacturing plants take months to staff and build; never mind what they cost.

Enter the new kid on the block, the "Individual Manufacturer." Technological advancements continue to lower the cost of many entry barriers. For example, one new business option is the short-term rental of industrial capabilities. Today, individuals with ideas or inventions can hire design teams and get access to rapid-prototyping equipment and, ultimately, to companies dedicated to contract manufacturing for third parties. Today, this can be done at reasonable rates and for relatively short times.

Many engineers and technically savvy folks already have their own CAD and analysis systems at home and work directly with prototyping and manufacturing-service providers. This so-called Maker Movement is gaining momentum after being loosely organized since the mid-2000s. Since then, Maker cycle-times have gotten shorter and their numbers have been growing. Collectively, Makers are becoming a disruptive innovative force, analogous to the rapid emergence of global competition a decade ago.

Corporations still retain some significant barriers like a global footprint, organized sales forces, established distribution channels, inventory advantages due to scale, and access to funding. However, if you look closely, these barriers are beginning to erode as well. Television, Internet-based sales and distribution, and companies helping entrepreneurs build and fund product inventories are becoming larger and more prevalent.

Established companies are going to need their A-games to consistently achieve high enough levels of innovation to keep up with both global competitors and Maker threats. Although there are a host of products that only large corporations can economically make, there are also products that do not need the capabilities of large traditional companies.

What can individual corporate engineers do about all this? It goes without saying that one has to stay current in their technology and product domains, and with the tools and software used in the creation and testing processes. More subtle is learning how to get things done in your company. Then, after mastering how to stay current, create, test, and navigate, you must also rapidly innovate to keep your corporation healthy and competitive.

This demand for innovation over the past decade has lead to a numerous "innovation-enabling" tools and software. The growth of these generally available tools and/or services has seen them go from 10 serious contenders in 2000 to nearly 300 today. Offerings now span self-help, group-help, and sharing and structuring knowledge. The most-expensive tools actually increase domain knowledge, regardless of technical or product domain.

Corporations require that their designers use lean, six-sigma, agile, flexible, and other largely deterministic business methods. Companies now need to increase the use of ideation, concepting, brainstorming, creation, and IP tools if they want to harness innovation.

Engineering intrapreneurs need not wait. Your corporations need you. Tools that enhance design and innovation capabilities for individuals and small groups are available at prices management will approve. Today, forward-thinking companies are looking for individual and small-group leaders who will help build an "innovation pipeline and factory." md

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