

We need an Advanced Research Project Effort for the Manufacturing Sector

Jerry Rosenstein, Pioneer Magnetics (www.pioneermagnetics.com)



Of all the economic components driving our financial system, the manufacturing sector is among the most important and now perhaps the most vulnerable to financial firestorms. Though recent economic figures show that U.S. manufacturing is improving, we have a long road to travel before manufacturing industries can be considered healthy. Many of us in manufacturing still see uncertain backlogs, uncertain forecasts and a collapsing infrastructure. These “financial flames” encircle companies of all sizes and purposes. Bad economics spells an almost certain death sentence for many American businesses unless legislators in Washington devise a clear path designed to battle what is shaping up to be a catastrophic economic inferno.

In general terms, we can use Pioneer Magnetics as an example of how the economy is affecting manufacturers. We are a 50+ year-old high-end switching power supply company with a large customer base crossing over all market sectors. Typically, corporate decisions are driven (in part) by booking rates and forecasts providing clear, short-term as well as long-term global perspectives. Putting aside inklings of an economic turn around, many PMI customers are continuing to keep projects on hold or canceling long-range programs with promises that, “They may be reinstated within the next few years!” These statements do not sound like, “Conditions will be better in 2011!”

Fortunately, PMI’s customer base is so wide that there are market niches doing well enough to keep things going at a reasonable rate. But, as a “reflection of the economy,” PMI must “do whatever is necessary” to maintain stability, cash flow and profitability. Sadly, PMI, like many companies, is making short-term decisions that are counter to what may be (in the long run) better for society – creating jobs.

As is the case with many engineering driven companies, PMI has two categories of advance-engineering projects: One engineering group expands current designs – products that can be designed quickly, requiring minimal resources, which generates quick time-to-market sales. Often, these products are called “Mods” (modifications of existing models) or “One Offs” (one slight change to existing specifications). Another group is employed on projects representing newer designs,

which tend to be longer range – requiring more resources than are currently available. These newer, long-range technologies represent power supplies that are super efficient, smaller, less costly and would be designed to accelerate the move to more environmentally friendly or alternative energy programs – solar, wind, battery, hydrogen and so forth. It is also the longer-range products that are getting cut back because of trying economic times.

Could we work on both advance-engineering programs simultaneously with the right kind of backing? Absolutely! In fact, I sent a letter to President Obama as well as to a variety of congressional sub-committee chairs, key congressional leaders, department heads, etc., suggesting an innovative approach that would make this happen.

As a direct result of the “Sputnik threat,” DARPA (Defense Advanced Research Projects Agency) was formed in 1958. The basic principles were to keep it a small, flexible, flat and autonomous organization. It was designed to let world-class scientists and engineers work with representatives from industry, universities and government labs. It was conceived with a project-based style; technical staff rotates every five years or less and program managers are selected to be technically outstanding and entrepreneurial.

So, it seems conceivable that the Office of the President (in conjunction with Congress), could set up an office called MARPA : Manufacturing Advanced Research Projects Agency. Conceptually, as part of a stimulus package, a minimal amount of financial support under the guidance of MARPA, companies (such as Pioneer Magnetics) would initiate immediate hiring of technical staff followed by hiring of production and support personnel. Regarding PMI’s scheduling parameters, within nine months, prototypes would be ready for the marketplace. The supply chain would have already started to receive purchase orders for material, thus spurring additional hiring among vendors. Customers would (in parallel) hire, design and begin to market their own prototype systems.

It is reasonable to assume that every month of further delay might result in an additional two to three months of keeping the economy off an upward path. Another year of stagnation may require two to three years of recovery – if not more.

All in all, it is time for Washington to rethink the stimulus policy. Shoring up the financial and automotive institutions was a good start. However, there seems to be little recognition that it is more that just the banks and auto industry that needs attention. A MARPA-type agency would help to generate new products and new markets quickly. The unemployment issues would then start to take care of itself.

There is a lot on President Obama’s plate these days, but he wanted the job. It is time for him to rewrite his policy tune. If government does not act quickly, instead of MARPA, we’ll need a new government agency with the sole purpose of cleaning up the ashes of U.S. manufacturing companies that were destroyed by the financial firestorm.

We need an Advanced Research Project Effort for the Manufacturing Sector

Published on Electronic Component News (<http://www.ecnmag.com>)

Source URL (retrieved on 12/20/2013 - 12:02am):

<http://www.ecnmag.com/blogs/2011/02/we-need-advanced-research-project-effort-manufacturing-sector>