

# Entrepreneurially Hard Wired

Mike Rainone, Co-Founder, PCDWorks

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It's amazing how time away from the office can change your perspective, especially when it involves traveling halfway around the world. As I write this column, I'm sitting in my hotel room in Ringsheim, Germany after touring cities across Northern Europe. For the past few weeks, I have wandered around and talked to folks in Sweden, Germany, and the Netherlands about the state of the global economy, unemployment, manufacturing, new product development, and innovation.

### ***Revelation #1: Europeans Know the State of the World Economy***

In the States, we certainly know about China and the Far East — after all, we have been shipping jobs that way for years. Only recently, with the wobbling of the Euro, have we begun to understand how tightly bound we are to Europe. The Europeans have no such blind spot in their vision. They've been traders on a worldwide basis for 500 years, and that experience has stood with them. Perhaps the Euro crisis and its impact on America will help to broaden our world view as well.

### ***Revelation #2: High Paying Manufacturing Jobs Are Gone Forever***

The high paying assembly line jobs that once created a stable middle class are gone forever. Many of you knew this, of course, but now I understand it at a gut level.

My eye opener came when I visited the Volvo plant in Gothenburg, Sweden, as part of the factory delivery experience while picking up a new Volvo S-60. Volvo was kind enough to provide the manager of the S-60 line for questions. I was surprised, but not shocked, to discover that Volvo nearly employed more people in R&D and design than on the assembly line. In a company as big as Volvo, one-third are dedicated to R&D and product development. From what I can tell, with every product cycle, some part of the manufacturing process is taken from human hands and put into the grippers of a robot... and that is our future.

### ***Revelation #3: The Death of the Manufacturing Job is Not About China***

The real killers of higher paying manufacturing jobs come from two sources: Poka-yoke and automation. Poka-yoke is an effort to simplify jobs on the line to the point that each job can be done by lesser skilled employees. This simplification first lends itself to off-shoring, and inevitable robot replacement. Second, microprocessors and the ubiquitous application of sensors, machine vision, and other sophisticated forms

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of automation have replaced many second tier jobs that used to require craft skills.

The Germans, as I learned from the folks at EZN and Temacon in Hannover, have somehow managed to avoid this for the most part. The unemployment rate in Germany is slightly north of 6 percent. How is it that the Germans have managed to create a worker's paradise in spite of the world's economic woes?

According to my friend John Dreu, a Dutchman and consulting partner for a German electronics firm, the answer has been innovation. John's theory is that back in the 1960s, when Americans were the center of the manufacturing world, Germans decided that the only way to compete was to innovate.

Our car industry, flush with success, began to rest on its laurels while the Germans were recovering from the war and producing increasingly sophisticated innovations like ABS, electronic fuel injection, air bags, and ever more powerful, fuel-efficient engines.

Meanwhile, the old Big Three were inventing the lighted vanity mirror and less fuel-efficient engines. Today, Mercedes, BMW, and Volkswagen are the real big three, and they achieved such status with innovation and a hard wired German precision gene. The success in the automotive industry has been built upon and the Germans have since dominated in machine tools, lasers, and other high precision realms.

EZN and Temacon were initially funded by the government of Lower Saxony, Germany to help support innovation in that region. They have been responsible for almost a billion dollars in revenue. The companies are now on their own and doing fairly well, but with increased global competition they face a few serious problems. These problems could give us a hint at how to do it right.

First, they have a hard time looking beyond the borders of Germany for partners. Second, they seem naturally drawn to sell their technology rather than risk creating a start-up venture. Entrepreneurship is not quite as treasured in Germany as it is in the U.S., thus the start-up infrastructure is not as well developed.

So what conclusions can we draw from this? Frankly, we are blessed with the most fertile ground for the creation of innovation, and we have an abundance of nearly everything necessary to succeed in innovation. We idolize risk taking, we love innovation, we have a legal system that is innovation friendly, and we are wired as a nation with the entrepreneurial gene. What we lack is the European vision that seed money, especially government seed money, is a required ingredient for successful innovation.

Unfortunately, we have a government that is grid locked, and a small but vocal minority that insists there is no place for any governmental involvement. In a world in which virtually every other government in the world is a major player in funding and guiding innovation, how long will it be before these trickle-down ideologues drive us further behind? How long before we lose that American can-do spirit?

As a psychologist, I am convinced that much of our treasured American psyche

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comes from having a large, marginally comfortable middle class — folks who have something, but see the potential to have more. Such a mind set is the breeding ground for entrepreneurs. This trip has convinced me that America still has a slight edge over the rest of the world, but given the dysfunctional state of our political system, I worry as to how long our inherent advantages can last.

The sooner we recognize what is required to bring back America's middle class jobs and save our nation's entrepreneurial spirit, the sooner we will return to a nation of stability and world leadership.

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