Notes From The Real World

Mike Rainone, Co-Founder of PCDworks

To offer an alternative to my usual rant, this month I thought I'd share some hard-earned insights with those of you who have an insane itch to develop, manufacture, and sell your own products. Until now, I have been shielded from the vagaries of actually manufacturing something in the real world. Recent events, however, have put me on the front line of this endeavor, and I hope my experiences will prove valuable to any who dream of traveling this path.

Running a new product development (NPD) "think tank" has some real perks, and some real challenges. The greatest challenge, as with virtually any “for hire” consultancy, settles around being at the mercy of the economic misery of the day. When the economy goes to hell, NPD clients are often in the front seat of that roller coaster. When an economic recovery gets things moving again, NPD is typically pushed to the back seat in all but the most visionary companies. Thus, obtaining and retaining a reliable stream of work is my toughest job.

The perks of this industry come from being able to wash ones hands of the nasty business of getting something through manufacturing and onto the loading docks, which involves dealing with suppliers, shipping dates, procurement hassles, and factory limitation capabilities. At the fuzzy front end of NPD, we deal with capricious technology, not people. Now, however, I am deep in the misery of manufacturing, supply shortages, interim financing, shipping schedules, personnel scheduling, and other HR chores.

Along with PCDworks, a technology innovation firm I founded nine years ago, I find myself president of a new partnership between PCDworks and Sam Houston State University in Huntsville, Texas. Our goal is to start up and grow our newly founded

venture, Active Water Sciences (AWS), into a real company.

AWS owns some wonderful patents for the processing of municipal waste, along with two or three successful demonstration units that the Army and Air Force have been funding for the past seven years. Not only do we have real, full-sized prototypes that work, we also have significant orders for additional commercial units intended for use in war zones around the world. Not bad for a company that was incorporated in August of this year.

Let me, right off the bat, disclaim any special insight or genius on my part. I just happened to be at the right place at the right time to be run over by this juggernaut. In fact, I'm simply trying to hang on to the tail as it runs, guiding by digging one heel or the other to keep it roughly in the center of the road. In truth, I've been watching this technology develop for about four years, bringing venture folks to the table, then stepping aside without staking a financial interest.

I kibitzed from the sideline, hoping to catch a crumb of consulting work as the cake was eaten. As things progressed, my company developed the control system for this technology and implemented a fundamental system design that took the product to a new level. We played the role of contractor, with no ownership. When venture capitalists got impatient with the progress, however, the university turned to us to move the project forward, and here we are, out of the skillet and into the fire.

So, here is **Lesson Number One**: Patience pays big dividends when you're looking for the right vehicle to take to market. It certainly doesn’t pay to get greedy or push harder than the situation warrants. Patience gives you a platform to stand on; and a platform allows you to stand above the fray and watch things develop in a detached manner. Detachment is critical if one is to have clear judgment about the value of a product.

Speaking of seeing clearly, one should never lose focus of the fact that money is the main battlefront. If you think finding credit is tough for a Fortune 500 company, try finding it for a start-up that has nothing to do with IT, nanotechnology or alternative energy, and everything to do with processing waste water. Talk about unglamorous technology!

Recently, I manned a booth for AWS at a wastewater convention and, believe me, there wasn’t a booth babe to be found in the entire convention center. Fortunately, our local small town banker has supported my fantasy of creating a new product development think tank in the boonies of East Texas for over a decade, so treating wastewater for the military was something he could get his hands on, so to speak. That brings us to **Lesson Number Two**: If you don’t have a long term relationship with a banker, GET ONE.

I used to think of myself as a “big picture” person, the visionary who sees all of the disparate pieces of a problem, intuitively understanding the interactions between those parts, weighing the importance of each, discarding the irrelevant, and from that morass weaving a cohesive systemic picture of how everything works together.

Today, I work on contracts, schedules and financial spreadsheets. If you find yourself in my shoes, be prepared for questions like these: “Is the word “performance” adequately defined? Should performance be defined by the number of units sold or how much money they produce? Is he a sub licensee, or a distributor? If we sell the unit before we distribute shares, will there be an onerous tax burden on the shareholders? What is the net present value of that income stream? What shortcut will get that part here in time to hit the deadline?"

I hope you get the picture of **Lesson Number Three**: If you head down this path, learn to love details, minutia, and the nuance of words. If you think you can hire a lawyer to do all of your detail thinking, fuggedaboutit. A good lawyer is a necessity, but a lawyer will not reduce your detail burden. The same is true for a good cost accountant. Face it now, because you are going to have to get used to it.

Finally, the greatest misery and joy of running a business is dealing with people. Decades ago, I taught organizational behavior in a graduate business school. That made me an expert on leadership, or so one would think. I'm also a trained clinical psychologist, which should make me an expert on abnormal behavior, right? NONE of that prepared me for the frustration of attempting to get people to follow a vision, work together as a team, cooperate for their own survival, or even follow simple instructions.

As an example of this failure to follow directions, my Taiwanese friend, Mr. Lin, who runs a large factory in Shenzhen once said this to me, “When I tell a worker to walk my dog, I don’t know if he will walk it or eat it, and I am prepared for both outcomes.” My research and experience suggests this axiom to be true regardless of land or language — communication is our greatest challenge in the workplace, or at home for that matter.

Which brings me to **Lesson Four**: Even if you have the patience of Job, the wisdom of Solomon and the leadership charisma of Patton, you will likely be disappointed with the human race as a productive force. But, with persistence, gentle guidance and the willingness to entertain uncertain outcomes, you might succeed in achieving your dream without committing a felony.

One can only hope.

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