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The WPI Venture Forum is a program
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Financing Tales from the Trenches

Any start-up entrepreneur can tell you a few war stories about financing their venture. David S. Miller, Ph.D. can tell you dozens. Founder and Executive Managing Director of angel investors Clean Energy Venture Group (CEVG), Miller will be the keynote speaker for the WPI Venture Forum's February 14 meeting, where he will address the critical criteria required to provide financing for energy startups. With more than 20 years of technology experience and 10 years of seed stage investing under his belt, Miller has plenty of wisdom to share with the Valentine's Day audience at WPI.

An engineer by training, Miller is on the board of directors or advisory board of several clean energy companies, including Azima DLI, Next Step Living, MyEnergy, and Cambrian Innovation, and has mentored many others. A founding member of the MIT Enterprise Forum's Energy Special Interest Group, he has chaired the mentor program for what is now the Northeast Cleantech Open for more than four years. He is also a research affiliate at MIT's Sloan School of Management.

Miller also co-founded EPrime, a forum for clean energy entrepreneurs to network and support each other's enterprises. He previously founded



DAVID S. MILLER, Ph.D.

several companies, including Quantum Telecom Solutions, which developed software for programmable switching equipment. He negotiated venture financing for Quantum and sold the company to a division of Lucent Technologies. Miller was awarded a patent for co-developing a "one number" telecom service.

Case Presenter:

Pharma-Cycle Inc.

Cancer patients return home after chemotherapy treatment often to endanger their families and local drinking water supplies with the toxic chemicals that pass through their bodies. Pharma-Cycle (PCI) has developed patent pending devices to neutralize and sequester these dangerous drugs, and is creating a service system to safely collect the stabilized wastes from patients' homes and oncology clinics.

Presenting the case will be PCI's Chief Financial Officer, **John Anderson**, together with Chief Scientific Officer **Theresa O'Keefe**, Ph.D. Anderson has more than 30 years of experience and has run three chemical waste companies in locations across North America. O'Keefe has developed antibody drugs for inflammatory and oncology diseases, co-founded Waltham Technologies, and holds more than 25 patents. √

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A LETTER FROM A CHAIR

Financing the WPI Venture Forum

The theme for this month's program, "War Stories in Financing," reminds me of the WPI Venture Forum's ongoing discussions about our own finances. After 20 years of existence, we thankfully have had few war stories; however, fundraising remains a top priority for us every year.

Our success rests with the major contributions of our sponsors, members, volunteers and staff who work tirelessly to support the many programs and services of the WPI Venture Forum. Their time, talent (and yes, treasure) help us develop programs that assist entrepreneurs and contribute to the region's ongoing economic development.

Our financial objective is twofold: to cover our costs and invest in new services for the region's entrepreneurs. One key source of revenue for the organization is sponsorships.

The advantages of being a sponsor are many:

- Receive exposure to regional entrepreneurs and other potential clients and business partners who are focused on launching and growing new companies, products and services.

- Enjoy greater visibility for your company within your highly targeted markets.

- Educate, support and inspire technology-oriented entrepreneurs and emerging start-up companies.

- Fulfill a philanthropic mission.



Richard Prince

- Play a powerful role in the region's educational and business community.

The WPI Venture Forum has great appreciation for our sponsors. We recognize that each sponsor seeks unique benefits, and that is why we offer different sponsorship options and ways for sponsors to connect with the WPI Venture Forum audience and membership.

Sponsors may host entrepreneurship workshops at WPI, sponsor other special events and competitions, host networking events and publish articles in this *Vantage* newsletter (see this month's sponsor article on page 3).

Membership and program fees provide the remainder of our funding. Our volunteers work faithfully to increase membership while improving the quality and quantity of our programs.

The WPI Venture Forum is very similar to a small business in that finances are our lifeblood. The organization is thriving with many willing volunteers together with a growing base of supportive sponsors. You can be a part of this vibrant community by becoming a sponsor as well as assist in introducing the advantages of sponsorship to others. Join us today to help our quality organization and its valuable programs. I look forward to starting the conversation at our next meeting.

Sincerely,

Richard Prince

Chair, Sponsorship Committee

Investments Jumpstart Innovation Economy

Over the last few decades, the U.S. economy has shifted from a manufacturing-driven model to one driven by innovation. Some feel that with the loss of manufacturing jobs has come a reduction in living standards for the middle class and a concentration of high paying jobs going to the innovators. The basis of much innovation in the U.S. is tied directly to our higher education system and the ability to train and attract individuals in the areas of science, technology, engineering and mathematics (STEM). STEM students go on to become programmers, scientists, professors, entrepreneurs and other professionals who form the basis of our innovation economy.

Here in Worcester and more broadly, in Massachusetts, we are very much dependent on the innovation economy. In Worcester, universities like WPI, Clark, Holy Cross, Assumption, and the University of Massachusetts Medical School not only educate our young people in STEM and other areas vital to the innovation economy, but also hire faculty who discover new technologies which help drive this innovation engine. Their technologies are then developed by commercial entities to become new, innovative products and services. Throughout the 20th century, this cycle of education, innovation and manufacturing made the U.S. the economic power it is today.

But in the early years of the 21st century, we find that the innovation engine is running more slowly. I see several reasons for this troubling development:

1. U.S. students are less interested in STEM education pathways to STEM careers. U.S.-trained foreign students have increased economic opportunities in their homeland and immigration laws have become stricter, resulting in a reduction in the future workforce needed to drive the innovation economy.

2. The government, historically a key financial supporter of STEM education and workforce development, has cut back on such funding in today's troubled economic times. This results in fewer incentives for students and educators to engage in STEM education and careers.
3. Risk capital, provided by venture capital firms and other sources in past years, has greatly diminished due to poor returns over the last decade. It is harder than ever for an entrepreneur to find the capital needed to fund an early technology to commercialization. Thus, many fledgling technologies with great potential sit on the shelves of university technology transfer offices and government research centers due to lack of capital required to move them off the shelf and onto the next stage.
4. On the manufacturing side, it is far cheaper to make our high-tech products overseas than it is to make them in the U.S., thus pushing manufacturing to the Far East. In many cases, these manufacturing facilities are run by U.S.-trained foreign nationals.

So is there a simple fix for the U.S. innovation economy? No, not simple, but a multi-pronged investment strategy is required.

- **Invest in STEM education:** Whether the next president is a Republican or Democrat, we need to take the necessary steps to assure that we have a well-trained workforce to remain competitive in the future.
- **Invest in basic and applied research:** Despite the U.S. deficit running at an all-time high, we should continue to invest in areas of value to society — transportation, communication, medical, electronics, defense, and other strategic areas. The United States still leads the world in research.

by

MARK A. TEPPER, PH.D.

- **Find non-protectionist ways to support U.S.-based manufacturing jobs:** We can bring innovation into the workplace and retrain our workforce to apply new ideas to increase productivity. Government incentives should support the use of automation, robotics and other technologies which increase productivity yet still create real jobs. The implementation of retraining programs and tax incentives for capital improvements will also help.

Technology does not kill jobs, but a lack of workforce training and employer flexibility can destroy many of them.

America has been the land of promises and dreams since its birth. We can thrive economically if we continue to support innovation through education, research, capital infrastructure and training. Given the right tools, Americans' longstanding ability to adapt to changing circumstances make our workforce ideally suited for such an economy. Indeed, our future depends on it.

Mark Tepper, Ph.D., is a serial entrepreneur who has started multiple biotechnology companies, including RXi Pharmaceuticals in Worcester. A founding member of the Boynton Angels, he holds a BA in Chemistry from Clark University, a Ph.D. in Biochemistry and Biophysics from Columbia University, and he undertook a post-doctoral fellowship at the University of Massachusetts Medical School. He can be reached at mtepper (at) boyntonangels.com. ✓

A LOOK AT THE JANUARY 2012 MEETING

Marketing Beyond

by

JANINE M. SUSAN, PH.D.



Keynote speaker Nitzan Shaer



Case presenter Tomas Harvda

Social media and inbound marketing are all the rage. But participants in the January 10th meeting of the WPI Venture Forum learned that it takes more than posting a Tweet or creating a blog to successfully market a product. Co-moderated by Barbara Finer, Principal of QuiVivity Marketing Partners and Jerrold Shapiro, Ph.D., President and CEO of Fem-Medical LLC, this month's meeting featured several experts who shared their thoughts and experiences in successful marketing strategies.

Research has shown that 90 percent of products launched to mass market fail. Keynote speaker Nitzan Shaer, Managing Partner and Co-founder of High Start Group, noted that assuming customers will love your product is the number one reason many products fail.

High Start Group works with startups and Fortune 500 companies to create and launch breakthrough products. Educating the WPI Venture Forum attendees on what companies

need to know before going mass market, Shaer noted that "good marketing starts with an outstandingly good product." So, how do you develop an "outstandingly good product"?

Customers expect ever-increasing value, which contributes to an accelerated rate of innovation and a decreased lifespan of the average product. What is cutting-edge today, Nitzan said, is outdated tomorrow. Companies simply can't afford to launch the wrong product.

Shaer advocates the concept of "Product Market Fit" (PMF) as defined and promoted by serial entrepreneurs and start-up gurus Marc Andreessen and Steve Blank. Applying PMF, companies match their product value proposition with customers' needs, align product experience with customers' expectations, focus on a specific market segment, select a pricing model that maximizes customers' willingness to pay, and identify messages that resonate with customers' "hot buttons."

Shaer identified three stages to achieving Product Market Fit:

- **Customer decoding** — by observing a day in the life of and shopping along with proposed customers, and by engaging customers in product design, customer decoding can reveal behaviors, decision processes, sources of influence and customers' needs and aspirations.
- **Concept discovery** – at this stage, ideas are generated and prioritized and concepts are created with an open willingness to change and iterate the product as initial users test it.
- **PMF validation** — PMF is measured and tracked by feedback from larger pilot groups. Only after reaching the PMF stage is a product ready for the mass market and tactics like social media which provide a rich tool to reach out and engage customers in dialogue.

Social Media



Panelists (from left) John Dix, Nitzan Shaer and Ameeta Soni

Shaer summarized his marketing advice with a list of do's and don'ts. Don't

- assume that customers will love your new idea
- let business plans dictate product launch dates and sales targets
- believe that a good marketer/sales person can sell any product.

But do

- understand your unique market position
- start by comprehending customer needs and what will solve them
- create prototypes, measure, learn and iterate, until a solid PMF is reached.

Case Presentation:

Solid Access Technologies

Tomas Havrda, CEO of Solid Access Technologies, a Newburyport-based, privately held company, shared both the successes and challenges facing a small company in the fast-

paced world of information storage and retrieval. The company's mission is to lead the ultra-fast Solid State Disk (SSD) category by adhering to a philosophy of reliance on industry standards in both sharable technology and the use of widely available components.

The demand for rapid information retrieval is growing at an incredible rate. To prosper in such an environment, companies must maintain a strong competitive position in the area of IT performance. Despite improvements in some areas, transaction-intensive enterprise applications continue to be plagued by input-output (I/O) bottlenecks that limit their throughput and productivity.

Solid Access Technologies' patented technology meets the demand for increased storage performance and capacity by accelerating I/O throughput and real-time data generation. In addition, their products provide significant savings in space and power. In one example illustrated by Havrda, a system's queue depth, i.e. the number of

CONTINUED ON PAGE 6

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A Look at the January 2012 Meeting

CONTINUED FROM PAGE 5



Audience members enjoy both networking and food at each meeting.

tasks waiting to be processed, was lowered from 6 to 1.2, thereby significantly shortening the system's latency. At the same time, power consumption was reduced from 12,350 watts (\$11,500) to 3,125 watts (\$2,910) and the physical infrastructure space requirement was decreased four-fold.

By delivering savings in time and money, Solid Access Technologies has attracted world class customers including Samsung, State Street and the European Commission. However, the six-person team has also encountered road blocks due to their small size. Some large companies have policies that require they deal only with larger, more established providers.



The learning continues during the networking break.

In response, Havrda and his team are actively working to secure strategic partners to resell their products to such companies.

Havrda identified the financial sector, where speed is crucial for financial traders to analyze and react to real-time data, as a natural fit for their technology. Nevertheless, he expressed concerns regarding how to increase the company's overall brand and product visibility, build a more productive reseller network and increase its U.S. market traction.

A panel of industry experts provided suggestions to help address Havrda's marketing concerns. Joining keynote speaker Nitzan Shaer was Ameeta Soni, Senior Vice

President and Chief Marketing Officer of VFA where she leads strategic planning and corporate, industry and product marketing; and John Dix, Editor-in-Chief of *Network World*, where he is responsible for setting the strategic direction of the newsweekly and its internet site to provide information, intelligence and insight for network and IT executives. The panelists had several recommendations:

- Analyze the company's competitors and identify barriers that are preventing potential customers from choosing their products.
- Approach a market segment, such as government agencies, that is eager to work with small companies that are demonstrating innovative technology. Market segments that value the ability to analyze and react to real-time data include numerous groups ranging from the military to internet gamers.
- Use the solution's compelling ROI as a sales tool.
- Highlight the product's advantages for C-level company influencers, not just the IT managers.

Janine M. Susan, Ph.D. is an intellectual property attorney with Burns & Levinson LLP. She can be reached at jsusan (at) burnslev.com. ♡



Presenters and co-moderators gather after a successful meeting. From left, John Dix, Tomas Havrda, Ameeta Soni, Jerry Shapiro, Barb Finer and Nitzan Shaer.

Checklists Boring?

by
JEAN D. SIFLEET, ESQ.

Think again.

Better yet, read *The Checklist Manifesto* by Boston surgeon Atul Gawande. With compelling stories and diverse examples (from a broad range of occupations including surgical teams, airline pilots, complex construction projects with many subcontractors, restaurants consistently delivering complex menus, and financial analysis), Gawande shows how checklists reduce errors in complex tasks and increase efficiency.

Frequent errors can be eliminated by the systematic use of a well-designed checklist.

The Surgical Safety Checklist is one page - and is used by the World Health Organization worldwide with great results in improving patient outcomes (and preventing

common infections). See gawande.com/the-checklist-manifesto for a few samples.

Well-designed checklists are concise, with specific responses required, and have been validated by front-line users. Checklists are not just a list of tasks; they also help to ensure communication between the members of the team. Team checklists can be designed to be read aloud so that team members verbally confirm — that way, you don't inadvertently skip a step, forget to ask an important question, or miss important information known only to one member of the team.

Remember the plane that landed safely in the Hudson River after bird strikes caused it to lose power in both engines? Who would think there was a special checklist for that situation? Pilot

Sullenberger ("Sully") and his team were highly experienced and systematically used checklists to help land the plane and save all aboard.

The well-designed checklist transforms knowledge into simple, usable, accessible information, so that *you don't have to count on your memory*. It reminds you of the important steps and questions. Sub-checklists should be used for specific situations and unusual situations - like losing power to both engines.

Checklists help you to be Smart Fast! For example, I use a checklist for contract review. It makes the process efficient and thorough.

Jean Sifleet is a business attorney, entrepreneur and author, and can be reached through her website at www.smartfast.com. ✓

Community News

Wind Power Boosts Mass Megawatts

Mass Megawatts Wind Power, Inc. has delivered its first off-the-grid, wind-powered water pump system in Colorado to provide low-cost irrigation and water for remote livestock. According to *Mass High Tech*, the company sells a wind augments to provide the extra torque required for the mechanical application of electricity generated by its wind turbines. The company previously announced it had one wind power unit ready for construction in New York and three additional units planned for use in Central Massachusetts. The Worcester-based company was a case presenter at the December 2001 WPI Venture Forum meeting.

New Life Science Grant Cycle

Applications for the Small Business Matching Grant Program administered by the Massachusetts Life Sciences Center are now being accepted from early-stage life science companies. Applicants must be ready to commercialize their products and have received Phase II or post-Phase II federal small business grants. Applications are due by noon on Friday, February 10. For more information and application forms, visit www.masslifesciences.com.

SBANE Innovation Awards

SBANE wants to celebrate New England businesses whose innovations have brought them success, both for-profit and non-profit. Nominations, due February 29, should be from companies at least two years old with employees. The Rising Star category is for early stage businesses. Find out more and apply online at www.sbane.org.

SPOTLIGHT on Entrepreneurs

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The WPI Venture Forum invites technology entrepreneurs seeking investors or potential partners to make a one-minute elevator pitch at monthly programs. For rules, registration form, and helpful suggestions on what to include in your pitch, please see wpiventureforum.org/spotlight.html



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FINANCING WAR STORIES
Tuesday, February 14, 2012

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NETWORKING: 5:30 – 6:30 P.M.
MEETING: 6:30 – 8:30 P.M.

WPI Venture Forum members and students – Free
Non-members – \$30
WPI alumni and past case presenters – \$15



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Seeking Success Stories

**Has your business met with success?
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*Vantage is seeking news about our members and presenting companies.
Email your news to editor Allison Chisolm, [Chisolm \(at\) ChoiceWordsOnline.com](mailto:Chisolm@ChoiceWordsOnline.com).*

SECOND TUESDAY MONTHLY PROGRAMS, 2011-2012

WPI CAMPUS CENTER ODEUM, 5:30-8:30 P.M.

February 14	Financing War Stories
March 13	Sports Industry Entrepreneurship
April 10	Manufacturing's Evolving Landscape
May 8	Managing Today's Workforce
June 12	Five-Minute Pitch Contest

Check the wpiventureforum.org home page announcement box for program listings throughout the year.