Growing Our Own

Following the Path of Hoosier Entrepreneurs

For many years, the economic development strategy in a number of states was to enter the heated competition for that new automobile plant or major manufacturing facility. Big buildings, large numbers of jobs, huge headlines.

Indiana, as a manufacturing stronghold, can point to a number of successes and some failures in those high-stakes battles. But, as the change to a knowledge-based economy began and continues to evolve, the rules of the game have changed. Sure, an occasional "mega project" might come along, but the path to high-wage, high-skill jobs is simple: Grow your own.

The Microsofts of the world have to start somewhere. And whether a company becomes a global power or a contributing member to the diversity in its local community, it's likely to remain close to its roots. Instead of "build it and they will come," the philosophy becomes "grow it and they will stay."

Some states or communities embraced this concept sooner than others. Some struggle with the changes required. The business model of evaluating a tangible product coming off the assembly line often does not apply. Research, technology transfer, innovation, entrepreneurship, and dynamic leadership and vision are the backbone of success.

Growing a company is not an easy task — and one that cannot be accomplished alone. Entrepreneurs face a number of valleys on the way to the top of the mountain — if they make it.

BizVoice will be following the growth of two Indiana companies attempting to make that long climb. There are similarities (both are products of Purdue University research and currently call the Purdue Technology Center home) and significant differences in the early methods of development.

These stories and others to come in subsequent issues will not focus on the technologies involved, but the business practices and procedures the companies follow. The purpose is not to compare the companies, but to analyze the opportunities they receive and the challenges they face. Along the way, and in review, maybe we can find ways to make it easier for future entrepreneurs.

The Purdue Technology Center offers entrepreneurs the ability to focus on growing their companies.

Arxan Technologies

The technology is complex, yet the mission is basic. Arxan is all about software security. Using technology developed at Purdue's CERIAS Institute (Center for Education and Research in Information Assurance and Security), the company goal is to become the vendor of choice, to be the expert for software protection. Along the way, it strives to be a recognized name in the industry within the next year.

Eric Davis states those aspirations with confidence. Currently vice president, he founded the company with Hoi Chang, a Ph.D. candidate in computer sciences at Purdue responsible for much of the design and development work, and three Ph.D.'s with nearly 80 years of experience at Purdue — Mike Atallah, Tim Korb and John Rice.

"They are all experts in the field," Davis explains. "They told me that in various ways they had been looking to start the company for more than a year."

Davis and the three scientists each invested a small amount of money, enough to last a couple of months. They opened a one-room office in the Purdue Technology Center on July 1, 2001.

By Tom Schuman

Eric Davis hopes some future growth of Arxan Technologies will take place in Indiana.

There was a pressing need for immediate funding. Just coming off a previous business venture (see sidebar story), Davis acknowledged, "I could not afford to spend a whole lot of time working for free. We realized we needed some outside investment."

Davis wrote the business plan, and the concept was introduced to anyone and everyone who would listen. The founders believed they could raise close to $500,000. In a struggling financial market, the fear was where would the next, larger round of capital be found.

"We had a choice of staying small and proving our business model out," Davis explains, "or going to someone with a track record of raising a decent amount of money and growing it faster. In this market, the odds were better to go to someone for the initial capital."

Financial support

Enter Richard Earley, a principal in Dunrath Capital (a seed capital firm) and an entrepreneur with a proven track record of launching and building technology companies. By the end of 2001, Earley had secured $3 million from Trident Capital, a private equity firm.

Along with the money came a *Who's Who* board of directors and technical advisory board. It can only help people take notice when your team includes the likes of:

- Lt. Gen. Ken Minihan, retired from the U.S. Air Force after 33 years with a final tour of duty as director of the National Security Agency/Central Security Service
- Craig Fields, Ph.D., most recently chairman of the Defense Science Board, an advisory board for the Secretary of Defense, and someone who works closely with Congress on technology issues

With the outside capital, however, comes a loss of some control. The original engineers, based in West Lafayette and most with Purdue ties, were moved to the Bay Area in 2002. The technology industry fallout partially prompted the move.

"There are a lot of engineers out there looking for work, people that two or three years ago you couldn't think of attracting to a start-up," Davis notes.

There is still the potential for some growth, however, in Indiana. Davis divides his time between business development, providing legal support and managing the company's intellectual property. He calls on defense industry contractors or agencies, assessing their need for Arxan's technology. One of the largest current customers is the Wright-Patterson Air Force Base in Dayton, Ohio, with plans in place to add personnel to help support that contract.

The three professors remain involved in providing advice to the engineering team and management. Earley, as CEO, and the director of operations work out of an administrative office in Chicago. Eight people are based in the San Francisco area.

If Arxan had come along at a different time, all the growth might have taken place in Indiana. Those with the capital maintain an affinity for the coastal areas — closer to home — with the added perception that it's difficult to find and relocate people to the Midwest. Davis says whether that is myth or reality has yet to be proved.

Although in today's world the potential needs for software security are many — "anywhere you are trying to protect something electronic," Davis claims — the focus for the present is on the defense industry.

"Defense has identified a need and has a mandate for action. Defense has the money, and they're spending it right now," Davis says. "There is a heightened awareness of the need for information security, but the economy has had an impact on commercial information technology spending, including security."

Griffin Analytical Technologies

Dennis Barket and Garth Patterson decided to pursue the idea of starting a company while attending the Applied Management Principles course at Purdue. Barket was a chemistry and biology double major at Indiana University and spent 4½ years in product development work for Procter & Gamble in Cincinnati before attending Purdue. Patterson graduated from a small liberal arts college in western Pennsylvania. When he looked at the leading analytical chemistry programs, he stopped at Purdue, No. 1 on the list.

Different Times, Different Approach

Arxan Technologies is the second entrepreneurial venture for Eric Davis. He was one of the founders of egenerosity.com, now Copient Technologies. In simple terms, the company works with mass retailers to give them the ability to send specific marketing messages to particular customers. Software keys the communication process and makes it affordable.

Davis and partners started the business and sought funding through venture clubs in Lafayette, Indianapolis and Kalamzaoo, Michigan, among other places. An arrangement with a broker/dealer allowed the company to raise money through individual investors, primarily from the Chicago area.

"It wasn't organized venture capital, so that gave the company the ability to grow here in Indiana," Davis recalls. "These people invested their money, but were not managing on a day-to-day basis. At the time, in mid-1999, there was a lot of that going on."

By April 2000, the market was in a freefall. Needing to downsize to the bare minimum, Davis, then the president, left the day-to-day operations of the company in order to conserve capital. Copient has since rebounded under a revised business model.

Dennis Barket, foreground, and Garth Patterson have utilized a variety of funding sources to get Griffin Analytical Technologies off the ground.

Equipment testing is one small part of Griffin Analytical's technology development.

In May 2000, the two began seriously discussing starting their own business. Both finished their Ph.D. work in 2001, while at the same time getting Griffin Analytical off the ground. The reason for doing both at the same time: "We couldn't afford to starve for very long."

The company is taking licensed Purdue technology and giving it commercial applications. Its first product, the Miniaturized Mass Spectrometer (MMS), will allow a shift from the normal "sample-to-lab analysis" to "lab-to-sample analysis." Typical spectrometers are largely immobile, sometimes occupying entire rooms. Griffin Analytical's MMS — the size of a backpack — will make the lab portable.

Eighteen months of perseverance and taking advantage of the available resources have allowed Barket and Patterson to reach this stage. Research that began at Purdue in 1996-97 is moving toward full commercialization, with customers now signing contracts for the company's prototypes.

"We tried to plug into all the available resources we could," Barket explains. "Five years ago Griffin probably wouldn't have launched, because that supportive environment was not there."

Strong start

With the assistance of two second-year MBA students (part of a 21st Century Research and Technology Fund grant to the Indiana Instrumentation Institute), a rock-solid business plan earned first-place awards and $35,000 in three competitions. The top showing in an international contest hosted by the University of Nebraska qualified future Purdue Burton D. Morgan Entrepreneurial Competition winners for the University of Texas competition — the Super Bowl of such events.

In addition to the prize money and recognition came a confidence boost.

Patterson says, "Not having a strong background in business, winning these competitions allowed us to make a final decision that what we had was a good, viable idea."

Griffin Analytical also tapped into local angel investors for more than $200,000 in funding. It was one of the early recipients of a $250,000 grant from the Purdue Research Foundation's TRASK Pre-seed Venture Fund. Two rounds of SBIR (Small Business Innovation Research) funding from the Department of Defense have been invaluable.

(In fiscal year 2001, Indiana ranked 29th among states receiving SBIR funding, which totaled more than $5 million).

Each success led to the next one. "That momentum was important," Patterson notes, explaining that the due diligence required by potential investors comes a little easier after the first time.

All of the Griffin Analytical funding thus far, however, has not taken it to the venture capital stage. Strong planning and execution have proved successful for Barket and Patterson. Others don't benefit in the same way, with their potentially viable ideas not getting off the ground.

"The critical thing for people in Indiana is to understand the gap funding," Barket says, "the stage between (borrowing from) friends and family and the early stage venture capital. We tapped into the Industrial Research Liaison Program, which provides information about opportunities for federal funding.

"Your idea can be great and you can have people ready to go, but capital is the lifeblood. That's why I think a healthy 21st Century Fund is so important."

The promising nature of the initial Purdue research resulted in more advanced development at the academic level. Through contracts with the university, Griffin Analytical is able to focus on development, while Purdue continues with the major research responsibilities. The company does have an electrical and software engineer on staff, as well as two part-time business unit managers to assist with operations and finances.

As a result of the SBIR funding, Griffin Analytical has obligations to fill with the Department of Defense.

"That is certainly an initial market. Defense is an early adopter. They will take technology at

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an early stage and prove it out for commercial markets," Patterson theorizes.

Academic research and testing labs are among those currently signing contracts for the company's beta prototypes. Other natural customers include those in the pharmaceutical, biotechnological, chemical, environmental and petroleum industries.

While both co-founders acknowledge the obvious advantage of having world-class experts available in the research side of the business at Purdue, they also recognize the benefits of the incubator setting in the Purdue Research Park.

"You certainly gain from the experiences of the companies around you, both good and bad," Patterson says. "If you're out on your own working in the garage somewhere, you don't see that."

Barket adds, "This kind of office space really helps with recruitment. It helps project a strong company image."

INFORMATION LINK

Resources: Arxan Technologies at www.arxan.com

Griffin Analytical at www.griffinanalytical.com