Six Tips for Effective Technology Scouting

By Kevin Closson, Nerac Analyst

One of the most pressing issues for companies big and small, in every industry, is the need to stay relevant in their markets. Innovation is rightly seen as the chief way to achieve this goal. It is also widely acknowledged that innovation cannot be the only province of internal R&D efforts. Instead, innovative technology can come from a variety of sources outside the company.

Acknowledging the reality that important technologies can and do come from outside a company’s wall is only the first step, though. A whole host of questions present themselves:

- Where do we look for new technologies?
- What process should we use to determine whether a technology is worth investing time and money in?
- What do we do with it once we find an innovative technology?

An effective technology scouting program can help answer these questions and enable the market innovations that all companies seek.

What is technology scouting?

Technology scouting is a purposeful, systematic means of identifying emerging technologies or applying established technologies in new ways. Technology scouting is fundamentally about seeing the full potential of technologies. It is not limited to identifying promising new technologies; it is imagining new applications and markets for existing technologies.

Companies use the principles of technology scouting (without always calling it that) for a number of reasons, often to:

- Speed time to market
- Overcome resource constraints
- Solve an issue with a product in development
- Meet growth objectives
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Though properly running a technology scouting program isn’t as simple as following a recipe, there are some important tips that can ease the path for companies trying to execute one.

1. Define the corporate innovation strategy first

Perhaps the biggest mistake companies make in fulfilling their ambitions in technology scouting is not developing a corporate innovation strategy first. Make no mistake, it is hard work. This is not a place for vague platitudes about “being the most customer-centric and innovative company in our market.”

Properly defining your corporate innovation strategy means deciding exactly how and to what degree innovation will play a role in your company’s future. Will you look to apply your core competencies in new markets? Are you looking for innovative technologies as a complete package to add to your business and achieve growth targets? Are you trying to marry your current technology to other technologies and create something completely new? How much will you rely on new products and services to meet your revenue targets?

Answering these questions in concrete terms is not always easy, but it is definitely necessary if you are to apply resources to technology scouting. Companies that skip this step or don’t do it completely are likely to fail in their technology scouting efforts.

2. Secure support for the technology scouting program from the highest levels of the company

Without question, technology scouting cannot come from a bottom-up, grassroots effort. No program, no matter how carefully executed, will achieve its goals of adding to the company’s bottom line without support from the highest levels within the company. Like developing an innovation strategy, this too may not be easy. While company executives may understand that innovation is important, even necessary, they may not understand that innovation doesn’t just “happen.” It takes careful cultivation and dedicated resources to uncover and understand the potential for new technologies.

Having sponsorship support from the top is necessary for a successful technology scouting program. This support will be critical for getting cooperation within the company, facilitating communication, and getting the resources needed to properly execute a scouting program.

3. Have a designated, capable technology scout

Many companies, having acknowledged that innovation is key to their survival, don’t make their technology scouting efforts concrete by designating someone as a “technology scout.” It’s not enough to tell business development and marketing teams to “keep your eyes open” for promising technologies. While well meaning, these peoples’ incentives just aren’t aligned with a high functioning technology scouting program. They have other, more immediate and lower risk objectives.

It’s important, then, to designate one or more people to specifically be technology scouts. While it may be impractical for small and medium size companies to have technology scouting be that person’s sole responsibility, simply tasking someone and putting him or her in charge of your technology scouting efforts provides the ownership required to make the effort a success.
This begs the question of who should be the technology scout. Ideally, a technology scout will have broad experience within the company. He or she should have been involved with multiple product lines, customers and markets. A technology scout should have a technical background, but also an excellent understanding of business principles. Someone with both a technical degree and a business degree is ideal.

A good technology scout will be a quick learner and divergent thinker. This person is going to be tasked with quickly understanding and vetting new technologies, possibly from very different industries than he or she has experience in. Furthermore, he or she will need to envision employing these technologies in potentially very ways other than they were intended. That sort of creative, divergent thinking is a requisite for the job.

Finally, the technology scout has to have excellent communication skills, both written and verbal. This person is not only going to identify promising technologies, he or she will then have to sell them internally. Being able to “sell” the potential of a new technology is critical.

4. Have a company culture that allows experimentation and even failure

This is perhaps the most difficult aspect of having a successful technology scouting program. Almost by definition, even with careful scrutiny and thorough due diligence, many technologies will not reach their full potential. Some innovation efforts will simply fail. It is critical that a company that truly wants to execute a technology scouting program accept this fact and try anyway.

It is easy to say “oh, yes, our company rewards risk taking and tolerates failure as long as we learn something.” Our experience tells us, however, that this is easy to say and hard to actually do. Before stepping out on a technology scouting effort, ask honestly, “does my company allow experimentation and risk taking?” If the answer isn’t an unequivocal yes, consider carefully whether to proceed.

5. Have a process for locating technologies

Having a technology scouting program means having a technology scouting process. There are as many different variations on this process as there are technology scouting programs, but the most successful programs have a written process for where they will look for innovative technologies.

There are many different potential sources for finding promising technologies, including:

- Allowing outsiders to submit them directly to you (“open innovation”)
- Tracking intellectual property filings
- Reviewing trade literature for industries outside your own
- Technical journals
- Government funding sources like SBIRs and STTRs
- Conferences and trade shows

Again, one of the keys to a good technology scouting effort is to think outside your own industry. This will mean attending conferences far outside your own business areas or reviewing journals for technologies outside your own area. Note, too, that this has to be an ongoing effort.
6. Have a process for evaluating, acquiring and implementing found technologies

The work isn’t done when a technology scout has found a promising technology. Now the technology has to be vetted and evaluated. This might include:

- An independent review of the technical merits and viability of the technology
- A review of the intellectual property landscape
- An understanding of the market and competitive situation

Even knowing a technology is scientifically interesting isn’t enough, though. Somehow this technology must be brought in-house and put to use. Acquiring the technology doesn’t necessarily mean buying it, however. Some other options include:

- Licensing
- Joint ventures and partnerships
- Sole-source supplier arrangements

The bottom line is that before embarking on a technology scouting effort, these issues have to be thought out and answers decided on. Certainly, not all cases will adhere to the same playbook in terms of acquiring, for example. However, a successful program requires carefully considering the options, maybe even each time a technology is located.

Outside firms and vendors that can help find, review and vet opportunities are often utilized to ensure a robust technology scouting process, unhindered by companies’ internal resource limitations. This is especially true if technology scouts are wearing many hats within the organization. The very nature of technology scouting is to bring outside talents and skills to augment a company’s strengths, so it is a natural fit for scouts to reach out to research firms with certain expertise in the above steps to assist in the process.

In the end, a technology scouting program is a risky thing. Even properly executed, considering all the tips above, a program might take years to produce a blockbuster innovation. However, Nerac’s work with our clients suggests that following these suggestions will substantially improve a company’s chances of success in innovating new, novel products for the market through technology scouting.
About the Analyst

Kevin Closson

Analyst Kevin Closson helps companies to look beyond their business today to see how internal and external forces will shape their futures. He works with clients to identify both new markets for existing products and potential markets for new products. He evaluates the technical features of highly complex components and systems, assesses the intellectual property aspects, and applies his ten years of industry experience in telecommunications, optics and electronics to inform his recommendations. As a telecom network planner for Verizon before joining Nerac, he was responsible for the planning and engineering of the entire eastern Pennsylvania telecom backbone. In that role, he gained extensive experience with all major telecommunications products and equipment, including FTTx, ROADMs, and IP over SONET. He also worked for fiber optic and electronics manufacturing firms in a variety of roles, including manufacturing and design engineer, product manager, and sales engineer. Mr. Closson has experience in off-shore technology transfer, having planned and executed the off-shoring of an entire manufacturing department. He also has experience in competitive intelligence, product management, and the commercialization of fundamental scientific and engineering research. Mr. Closson earned both his master’s in mechanical engineering from the University of Maryland and his M.B.A. from the University of Baltimore the same year.

Credentials

M.S., Mechanical Engineering, University of Maryland, Baltimore County
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About Nerac

Nerac Inc. is a global research and advisory firm for companies developing innovative products and technologies. Nerac provides expert insights that equip clients with the knowledge to develop or refine a technology, explore market growth opportunities, evaluate intellectual property strategies and respond to regulatory changes. Nerac has approximately 1,000 clients worldwide and a long, successful consulting history in a wide-range of industries with a strong focus in the areas of pharmaceutical, medical devices, engineering, energy, food and nutraceuticals and specialty chemicals.