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Ask the Experts

by Steve Rice & Richard MacLean
September 2000

Venture Capital ... Preparing Reports ... Structuring EH&S

Got A Question?

Send your question about environmental management issues to Editor@GreenBiz.com.

We can't guarantee that we'll answer every question, but we'll try.

Q: As the U.S. representative of Swedish trade delegation interested in helping startup environmental companies obtain investment funding, how can I find venture capitalist firms that specialize in environmental technology investment? How do they evaluate their candidate companies?

SR: Even though the markets have seen a downturn in dot-com investment fever, opportunities for obtaining venture capital investment in environmental technology firms still remain elusive. Many of the funds and networks specializing in environmental investment opportunities have dissolved over the past few months. According to the PWC MoneyTree survey for the second quarter of 2000, of the \$19.6 billion of venture capital investment placed with 1,432 companies in the survey, approximately \$60 million (0.3%) went to just two (0.1%) companies for environmental business investment. In the words of PWC Managing Partner Tracy Lefteroff, "If it's not tech, it's not happening."

There is hope, however. I know of two other environmentally oriented operations that have recently received funding, though not from VC sources, and one other has indicated the upcoming receipt of funding. Most of our clients' successes, however, have come when we have positioned the client's company as strictly a business opportunity -- greatly underplaying the environmental aspect as only an "added bonus." Thus, candidate companies are evaluated by traditional business measures that are more familiar with the broadest spectrum of venture capital firms. This has greatly expanded the initial interest, which is the first step in getting a presentation invitation.

One of the most interesting investment opportunities we have worked with lately has been Redwood Rubber, LLC; they are developing technology to devulcanize tire rubber back into high-grade crumb rubber without the massive amounts of energy (and emissions) associated with pyrolysis technology. They have demonstrated the technology at the bench-scale level and are looking for investment to proceed to the demonstration plant /commercial operation levels.

Fortunately, there are still a few opportunities for investment targeted to environmentally

oriented opportunities. [The Environmental Capital Network](#) hosts a series of presentation forums; the next one will be in San Francisco this fall. [The Sustainable Jobs Fund](#) has a different investment philosophy; it invests only in companies that have a proven business record but need help in reaching their next operational plateau. I understand they have hired a new director and have a 30% hurdle rate. Other, more specialized and regional investment communities can be found on [SustainableBusiness.com](#).

In addition, environmental investment forums occasionally are presented in conjunction with various conferences. One portion of the "Special Sessions" track of The ECCO2000 Environment & Energy Conference (Nov. 27-28, 2000 in Toronto, Canada; contact [Amanda Wood](#)) will be an investment capital forum. Here in the United States, we are in the initial stage of working with New Jersey to develop a venture capital investment presentation forum and contest in conjunction with next summer's Expo2001.

This topic seems to be generating more interest. Look for a more detailed "white paper" on the subject on my Web site shortly.

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Q: We are considering preparing our first integrated social and environmental report. What are the key social responsibility metrics that other companies focus on?

RM: Bristol-Myers Squibb recently conducted a survey of corporate social reporting and published the results in the July-August 2000 issue of [Tomorrow](#) magazine. Editors listed 14 prominent reporting metrics of which five seemed to be the most common:

- Total philanthropic contributions (88%)
- Workforce gender diversity (59%)
- Wages, salaries, and benefits (41%)
- Workforce race diversity (41%)
- Community-specific contributions (35%)

Recognize, of course, that the object of reporting is to provide what stakeholders are asking for, not what other companies report. Reporting what other companies disclose may provide good benchmarking information, but may or may not satisfy your stakeholders. To examine this issue, we have conducted surveys similar to the Bristol-Myers Squibb survey that have focused on only stakeholder-reported preferences. We found that most environmental reporting appears staid, limited and routine in comparison to the social responsibility landscape. Analysis of resources such as the 1999 [United Nations Environmental Program's](#) "The Social Reporting Report" indicate that there is an incredible array of potential candidates for reporting, everything from number of policies related to business ethics to the number of legal actions due to human rights violations.

The June 2000 Sustainability Reporting Guidelines by the [Global Reporting Initiative](#) offers a basic framework for reporting. In the absence of any other clear direction, it is probably the best publicly available guidance to help sort through this confusing and emerging field. Social reporting, probably more so than environmental reporting, can be sensitive to local cultural issues. What a company chooses to track and report should be predominately based on what is important to stakeholders in the regions where their operations are located and their products sold.

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Q: Our EH&S organization has been asked, "Are you the right size for our company's current size?" What EH&S organizational metrics are available for determining our "right" size?

SR: While the question is short and to the point, the answer and its potential implications are not. You could easily spend \$100,000 for a business management benchmarking study or expend the time and effort to sponsor a study through one of your industry or trade association groups. Other sources are also available -- one recent survey compiled results

from 50 companies in eight industry sectors, then produced a table providing data on the minimum, median, mean and maximum EH&S staffs for companies in each sector, normalized for number of employees, revenues and capital assets. This gives a "quick and easy" assessment of where a company might stand in the continuum for its respective industry.

But beware of both the Ides of March and simplified number management; this analytical approach is filled with the potential for organizational disaster. Management by the numbers might work for the Census Bureau and tax accountants, but for an EH&S organizational assessment to be both successful and provide useful recommendations the answer to the question must also take into account:

- Company organizational structure, culture and operating philosophy
- Overall EH&S policy and objectives
- Strategies to achieve those objectives
- Tactics to implement the strategies
- Gap analysis of the expertise and skills needed to conduct the activities that will execute the planned tactics and the expertise and skills currently available in the organization.

Many companies and EH&S executives have tried to short-cut the evaluation to either meet organizational deadlines or provide the answer that they believe is wanted by those asking the question. As the adage goes, "It ain't easy being green," though it appears it is easy being black and blue.

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Q: We plan to conduct some benchmarking exercises in the fall, as part of our 2001 strategic planning program. What are the best companies to benchmark ?

RM: I have my favorites, but I can't name names without their permission. Besides, it also depends on the specific areas of interest; no company is world class in every area. What I can do is discuss where the latest, cutting edge ideas are emerging. To restate your question, Where can I shop for information that leads to competitive advantage?

From the mid 1980s through the early '90s, the answer would have been very easy: the U.S. chemical industry. Not any longer. As Leslie Carothers, vice president, United Technologies Corporation, said in a recent Environmental Forum column, "Today the most aggressive -- even provocative -- proposals are sprouting from Brussels and member states of the European Union."

The humor may be subtle -- *Brussels sprouts* -- but the implications are bold: the United States is not where the actions are for much of today's creative new approaches. This loss extends to international leadership on key global issues. Paul Hagen, at Beverage & Diamond in Washington, D.C., calls this failure "the green diplomacy gap."

The chemical industry may retain its leadership in pollution control technology, but for emerging issues such as social responsibility, they appear to be lagging. This comes in spite of the American Chemical Council's (formerly CMA) Responsible Care program. While the chemical industry has done an excellent job in addressing the public's concerns after Bhopal, there is a new crop of issues centered on sustainable development.

Ironically, the mining industry, once considered one of the most recalcitrant industries, finds itself at the forefront in addressing resource issues, as the chemical industry found itself addressing toxics. Through the [World Business Council for Sustainable Development](#), the mining industry has funded a major initiative by the UK-based [International Institute for Environment and Development](#). What gives this initiative credibility is the impeccable, independent reputation of IIED. Called the [Mining Minerals and Sustainable Development project](#), the objective is to identify how mining can best contribute to the global transition to sustainable development.

The bottom line in this answer is that the best companies to benchmark today may be headquartered outside the United States, most probably in Europe or Canada, and in industry sectors that in the past may even have been considered laggards. In addition, NGOs are

playing a more pivotal role in finding solutions, so do not overlook these new resources for fresh ideas. Organizations that are thrust on the edge or are uncomfortable with the status quo are always breeding grounds for new ideas.

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Q: What is the most effective organizational structure for EHS programs?

RM: Business organizational structures are characterized by a few simple terms like portfolio, matrix, functional, or exotic sounding names like "divided parenting." (Sounds like joint custody to me.) Individual departments operate on themes such as shared services, site services and corporate core. Operating responsibilities are classified as decentralized, centralized or networked.

The terms are still in common use, but gradually managers are becoming more focused on how the "boxes," or people, interact. For example, a recent Harvard Business Review article calls the science of mapping how organizations work in real life "organigraphs." The basic premise is the quality of the information exchanged around the water cooler will tell you a lot more about how a company operates than how the blocks on the organizational chart are arranged. I agree.

In a recent survey of organizational structure, I asked the EHS director for a major corporation what he felt are the most important factors that contribute to a successful EHS organization. He offered two insights without hesitation. First, the internal networks are key. "Networks transcend the organizational structure. They are the 'glue' that holds things together." Second, institutionalizing EHS into line management dramatically shifts required staffing levels. He reported, "Ten years ago an EHS person spent 90% of their time at a site doing hands-on activity. Now it is closer to 40% with the remainder consulting/advising the operations people who are doing the work."

The very best EHS organizations that I have studied today employ a sophisticated blend of each of the descriptors listed above. Some activities are highly centralized, others are decentralized. Shared or centralized service departments are used, as well as outsourced services.

Networks are a primary source of communication across the company. In fact, the worst, most dysfunctional organizations are those that tend to employ only a few concepts and then carry these to the extreme -- outsourcing to the point that strategic leadership and vendor control is lost. The secret to success is to find the correct blend that best matches the company's culture and gets the job done efficiently.

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Q: Our chemical plant has a small (35,000 gallon per day) wastewater treatment plant. We have been able to optimize the biomass efficiency so that we have not had to remove excess solids from our system in over a year. Is this a national wastewater treatment record of some kind?

SR: While this column focuses more on EH&S management issues than technical ones, this question intrigued me so I explored it from both the technical and management perspectives.

From the technical side, Dave Gaddis and his associates at Camp, Dresser and McKee indicate that this while this is not uncommon at larger plants that have an advanced oxidation step, where excess solids are oxidized, it is indeed a long time for a smaller plant. On occasion, smaller plants may experience this duration for a variety of reasons including:

- Solids buildup in the clarifier or holding ponds
- Solids removal through over-aeration and wind drift
- Low solids loading to the plant
- Solids are being carried out with the effluent

We understand that these factors have already been checked, so the plant might wish to apply for both a technology process patent and a pollution prevention award from your

particular state (South Carolina) and/or state Chemical Industry Council. You may also want to apply for an award from either the USEPA, such as its Excellence in Operation & Maintenance award for municipal wastewater plants (<http://www.epa.gov/owmitnet/nexcel.htm>) or the [Water Environment Federation](#).

From the managerial side, the implications regarding organizational learning may present the more significant EH&S opportunity. This ties in closely with the importance of EH&S networks, mentioned by Dick in the previous question on EH&S organizational structures. These days most industrial/commercial sales and marketing staffs rely on a Lotus Notes or similar networked organizational knowledge database to keep all participants up to date on current developments and past experiences -- yet few EH&S staffs have incorporated such technology as one of their daily management tools. If your company has an internal EH&S learning network, post the project as a case study on the system so that other similar plants in your company benefit. Be sure to include comments on the learning process -- how the organization and people involved came to their current state of learning.

Perhaps even more importantly, if it doesn't have such a network, this may provide the catalyst for establishing one. An increasing number of companies are establishing organizational learning forums and databases on their intranet sites so that anyone in the company can learn from others successful experiences -- worldwide. This has been a priority for one company we have recently talked to as most of their senior EH&S professionals are at, or near, retirement age and there are few others in the organization who have been prepared sufficiently to replace their experience.

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