by Jill Barson Gilbert

# EH&S Software CEOs Discuss Their Market

terms of a Title V air permit, prepare a SARA Title III Toxic Release Inventory, or complete one of thousands of other environmental compliance tasks. The leading EH&S software vendors tout the many benefits of their systems, such as EMISs allow businesses to view critical environmental information as an asset, communicate consistently and accurately, preserve institutional memory, leverage existing data and systems, and improve overall business processes. Yet, one of the greatest challenges for vendors is to get organizations to adopt them. According to Niemoller, although there are an overwhelming number of EH&S requirements, the market has not been quick to adopt EH&S software because there is an absence of regulatory pressure to implement it.

The panelists agree that, for EMIS software to be widely adopted, EH&S objectives and goals—supported by information technology (IT) infrastructure—must get attention at the corporate Board level. Goldenhersh says that if software meets needs at the Board level, then EH&S professionals will not be left to manage 30,000 points of compliance in Excel. He says the Board should view the software as a strategic asset, not as an expense. Organizations must develop business cases that make clear the value of EH&S software, linking it directly to business performance.

## At A&WMA's Annual Conference

& Exhibition in Minneapolis this past June, I chaired a panel discussion that included the CEOs of four leading environment, health, and safety (EH&S) software vendors—Lawrence Goldenhersh, Enviance Inc. (www.enviance.com); Robert Johnson, Environmental Support Solutions (ESS) Inc. (www.ess-home.com); John E. Niemoller, Perillon Software Inc. (www.perillon.com); and David S. Risi, Spiramid LLC (www.spiramid.com)—who spoke about the EH&S software market, its challenges, and future direction. I thought I would use this month's column to share some of the key insights from that discussion.

### MARKET ADOPTION IS A CHALLENGE

An Environmental Management Information System (EMIS) can enhance an organization's ability to manage thousands of data points from disparate sources, whether to meet the

### NEW TECHNOLOGY OFFERS MORE CHOICES

Businesses today have more choices than the $1-million client/server enterprise software installations of the past. Software-as-service, Web services, mobile technologies, and automated alerts top the list of recent technical innovations. All four panelists point to the software-as-service model that allows businesses to "pay as they go," purchasing only the features they need, with the option to expand functionality at a later date. This model, which evolved from the Application Service Provider (ASP) or "hosted application" model, offers broad applications, scalable from small mom-and-pop shops up to the largest multinational companies, whereby the "vendor" becomes the "service provider."

Online publication *NewsFactor.com* reports that software as service—which typically eliminates hefty upfront license fees and requires little or no on-site hardware or dedicated IT personnel to install, configure, or maintain—is growing in popularity among large corporations and small businesses alike (see www.newsfactor.com/news/Software-as-Service-Reincarnation/story.xhtml?story_id=103003D0B2X8).

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# CEOs Offer Implementation Advice

The businesses that could benefit most from EH&S software often do not know how to go about determining their needs, selecting and implementing the software, and getting the help they need to sort through the process. Typical software implementation approaches include do it yourself, using a software/solution provider, or hiring a third-party implementer. But which approach works the best? The four panelists offer their advice on pursuing EH&S software implementation.

**Risi** recommends that companies obtain good advice, since even the best software package will not work well if it is not implemented correctly. He also advises companies to evaluate their in-house resources for data migration, systems integration, and so on. And, he says, potential EMIS customers should educate themselves about EH&S software capabilities by reading papers and talking with consultants.

**Goldenhersh** recommends that potential EMIS customers catalog their obligations, either in-house or with the help of an independent consultant. He says companies that self-implement EH&S systems typically find that they don't have enough in-house resources or expertise to successfully complete the job. He recommends finding an independent consultant with domain (EH&S) expertise—this applies not only to implementers, but also to software vendors. He warns that domain expertise is not always apparent in vendor presentations. Finally, he says, potential customers should check the references of software vendors and service providers and inquire about the company's stability and track record.

**Johnson** says that 99% of consultants are objective, but software companies are not. If potential customers are looking at only one company, he recommends finding an outside party to get a second opinion. He also advises selecting a system based on who will be using it; for example, EH&S managers will have different needs than people working on the shop floor.

**Niemoller** proposes a phased approach to achieve successful EMIS implementation, by first implementing the backbone of the system and then adding functionality as needed. He notes that it is important to find successes and to articulate them in the marketplace. He also advises businesses to leverage existing systems. Today's IT allows companies to extract data efficiently and facilitates benchmarking across companies.

Meanwhile, IT analysis firms IDC and Gartner Inc. both forecast the rapid growth of applications delivered as a service in the near future. Gartner predicts software-as-service is ripe for adoption in the next 2–5 years (see www.gartner.com/resources/130100/130115/gartners_hype_c.pdf).

However, the panelists say that software-as-service is not for everyone. Niemoller predicts an evolution versus a "big bang" as a lot of companies are skeptical of housing their data on a server outside the company firewall. Johnson says he's not convinced the entire market will adopt the software-as-service model, so his company will continue to offer different platforms. Risi adds that there will be more software-as-service adoption as the EH&S market gets comfortable with security for sending data back and forth across the company firewall.

Web-based services, $n$-tier architecture, and mobile devices allow the convergence of data sources, transparent to the end user. Web services, including open-standard-based applications (e.g., XML or light-weight XML-based protocol SOAP) that interact with other Web applications to exchange data, can be used to integrate EH&S processes with the rest of the business. Integration with human resources, training, maintenance, purchasing, and other corporate functions allows management to view information business-wide and make informed risk-based decisions. Dashboards are becoming more and more popular for the display of performance metrics.

$N$-tier architecture—typically with database, business rules, and presentation layers—allows end users to configure software without touching the underlying code. Users can easily design queries and reports without the need for programming. Each of the panelists' companies applies $n$-tier architecture.

Mobile devices are a great way to automate shop floor work as well as EH&S audits. People directly responsible for data generation can input data where they work. As a result, mobile devices, such as tablet PCs, handheld computers with drop-down lists, and barcode scanners, are replacing traditional paper log sheets and client/server applications.

Automated alerts "push" information to divergent types of users, removing EH&S professionals from the position of having to ask for information. This allows them to focus on strategic, rather than clerical, matters. Many EH&S applications can be configured to notify users when a compliance task is due or when certain parameters are in danger of being exceeded.

## EH&S SOFTWARE MARKET PREDICTIONS

The panelists expect the market to grow, with an upturn over the next five years. Still, the EH&S software market will remain fragmented and further market consolidation is predicted. The panelists also foresee increased collaboration among players in the market, both vendors and service providers. Finally, they predict that there will be greater interest in the EH&S software market by investment analysts, driven in part by computer vendor SAP's entry into the market (see www.sap.com/solutions/business-suite/plm/featuresfunctions/ehs.epx). Increased investment should follow. **em**