Climate Change and GHG Legislation Invigorate the EH&S Software Market

by Jill Gilbert

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>>Bert Tuner, IHS

Are greenhouse gas (GHG) emissions an environmental management/sustainability issue or a business issue? It depends upon whom you ask—scientists and engineers or corporate executives. No matter the answer, anticipation of a new "carbon economy" has ignited the environment, health, and safety (EH&S) software market.

In September and October 2009, I interviewed executives at seven EH&S software companies in a range of market niches to get their perspectives on how GHG and sustainability issues have impacted the EH&S software market. This column provides a summary of my findings.

Sustainability Has Changed How Executives View EH&S Issues

Sustainability is an overarching theme that has received significant attention at the corporate executive level, with many companies opting to join the Dow Jones Sustainability Indexes (indexes that track the financial performance of the leading sustainability-driven companies worldwide). "Sustainability is the next level of business operational excellence," says TechniData America's Stephen Illes.

In the past, EH&S was focused purely on compliance; that is, scientists and engineers created solutions just for themselves. Sustainability, however, has a broader impact on the processes that run a business. Also, traditional EH&S issues are local issues, whereas climate change and GHG emissions are global issues. Broader, global impacts require a strategic approach and elevate EH&S to the executive level.

IHS's Bert Turner noted that the buzz around GHG emissions developed in just two years. There was very little talk about GHGs at the 2007 CERAWeek global energy conference. In 2008, approximately 10–15% of the discussion was about GHGs, but by 2009, GHG topics comprised approximately 70% of the conference sessions. In a short time, the view of EH&S changed from cost burden to high-level risk management to business opportunity.

Spreadsheets Not Adequate for GHG Accounting

A carbon economy has a tremendous upside for many organizations, from both financial and company branding perspectives, making sustainability a strategic, forward-looking issue. Organizations must track, manage, verify, and achieve goals across the supply chain, and across geographies, in a very public fashion. GHG accounting calls for high-quality data, rolled up globally, near-real time, displayed in a way that a wide range of stakeholders can understand. It calls for standardized business processes, data transparency, and an audit trail.

The proliferation of spreadsheets, manual processes, and one-off software that many organizations use to track emissions does not work for large, multinational operations and lacks the transparency and audit trail that a carbon economy requires. Enviance's Larry Goldenhersh says, "If you talk with people who are pretty sophisticated consumers of data, and use that data in the public market, they understand that their market capitalization will be affected by their ability to explain their carbon footprints." They need software that stands up to stakeholder scrutiny.

GHG/Sustainability Software Market Segmented

The EH&S software market offers hundreds of GHG solutions, has several segments, but no clear leader. Some software vendors focus on certain industry "verticals," while others appeal to a broader range of industries; some focus on certain environmental media, while others focus on business

Discussion around boardrooms on environmental issues is no longer defined by words like "nice to do" and "early adopters." Instead, one hears the terms "business critical," "crossing the chasm," and "creating competitive advantage"—all giving rise to a new lexicon that is being used at the executive level to identify and exploit opportunities where others see threats.

—John-David Phyper and Paul MacLean, Good to Green: Managing Business Risks and Opportunities in the Age of Environmental Awareness (John Wiley & Sons, 2009)

processes that transcend various media; and some provide focused "point" solutions, while others provide broader/deeper solutions.

The GHG software market encompasses four general types of businesses:

- EH&S software vendors who have environmental subject matter expertise and whose software and capabilities have matured along with contemporary environmental regulations, such as the U.S. Clean Air Act, U.S. Clean Water Act, Resource Conservation and Recovery Act, and Comprehensive Environmental Response, Compensation, and Liability Act.
- Enterprise software vendors like SAP with significant information technology (IT) expertise and have supply chain software installations at thousands of customer locations around the world.
- Venture capital-backed startup companies with business acumen and a "green" orientation.
- "Big Four" accounting/consultancy firms with considerable GHG auditing and accounting experience in Europe and who can apply their expertise in the United States once legislation passes.

Who currently owns the market? EH&S software firms with deep environmental subject matter expertise who have the "nuts and bolts" technical features, software companies with deep IT expertise who can consolidate and deliver data on the latest platforms, or the Big Four accounting /consultancy firms who have significant carbon accounting experience in Europe under their belts and can transfer their knowledge to the U.S. market? Simon Jacobson, director at AMR Research, asks, "Can EH&S vendors grow up into the carbon economy?

…Many vendors due to their backgrounds look at sustainability as a 'birth right,' but are immature in product approaches that can measure full carbon impacts on the supply chain."

IT Trends Include SaaS and the Web

IT departments are short on resources, and some companies outsource many IT functions. As a result, Software as a Service (SaaS) is now accepted practice. "We have offered our solution as SaaS since 2000. 75% hosted our software in-house in the early 2000s; 75% use SaaS today," according to Intelex's Mark Jaine.

Several executives stressed the importance of GHG software delivered via the Web. "Solutions built on older technology will not make the grade," says Hara's Chris Farinacci. Solutions must be configurable and have a low total cost of ownership.

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Bert Turner	VP Global Business Development	IHS	www.ihs.com
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John Phyper	Executive VP		
Stephen Ross	Sales/Marketing Senior Solutions Manager		
Neno Duplan	President & CEO	Locus Technologies	www.locustec.com
Stephen Illes	CEO	TechniData America LLC	www.technidata.com

*In mid-September, shortly after the interviews with ESS executives were completed, IHS announced the purchase of ESS.

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They must be flexible and allow companies to innovate quickly. Web services and application programming interfaces (APIs) send data from one system to another. Web technologies, combined with electronic data interchange (EDI) standards, allow integration of several data sources that appears seamless to the software users. "The end-state platform for [GHGs] is the Internet," says Goldenhersh.

Web 2.0's collaboration and social networking tools, when added to data integration, will allow information exchange among regulators and the regulated community, companies, and their stakeholders, across the globe, in near-real time. Upcoming product innovations include richer technology platforms, seamless integration of disparate data sources, and the use of open-source applications. Ultimately, technology will allow delivery of an environmental platform for many issues, beyond GHG. "At the end of the day, this is all done under the umbrella of protecting the environment, but it will result in huge benefits—reduced energy consumption and reduced costs to do business,"

says Locus Technologies' Neno Duplan.

Conclusions

The Sarbanes-Oxley Act and pending GHG legislation in the United States has elevated EH&S to the executive level. Until recently, many organizations viewed EH&S issues as a cost of doing business. Most EH&S key performance indicators were backward-looking. Sustainability and GHG emissions management are forward-looking initiatives with a clear business upside. These initiatives require rigorous information management, audit trails, transparency, and executive accountability.

Silos of data, spreadsheets, paper-based tools and multiple business processes do not support data roll-up in large and global organizations. More sophisticated software will be the answer for many companies seeking GHG management solutions. While GHG reporting at first seems intimidating, several vendors have the combination of environmental, IT, and business expertise to make it manageable. **em**