

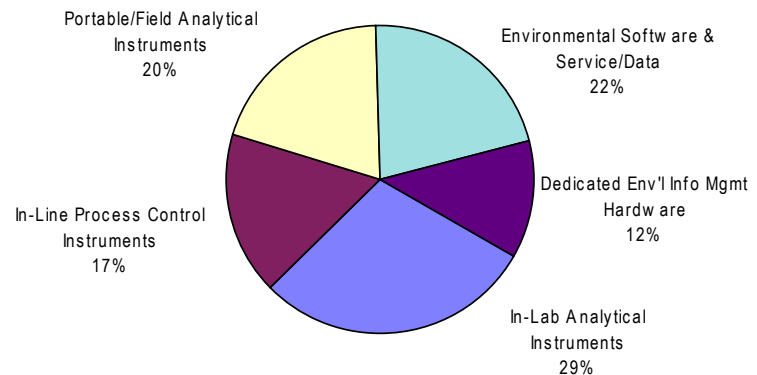
## EHS VENDORS CLAIM EARLY LEADERSHIP ON SUSTAINABILITY AND CARBON INFO

Over the past two years, it has been difficult to engage in a conversation with an executive of an environmental consulting firm without the topic of sustainability coming up. Many of these firms' clients are now looking beyond compliance and seeking a deeper level of control of their environmental issues, in order to improve operating efficiencies, burnish their brands and reputations, maintain their license to operate across all of their geographies, and generally strengthen their risk management practices.

Sustainability's status as more than a buzzword and the elevated attention to environmental management means gaining a tighter grip on environmental data. Companies and government agencies are keen to determine where critical data is located within the organization and who's responsible for it, and then analyze it and turn it into information to generate reports and support key decisions—"slicing and dicing" it, as vendors of environmental, health, and safety (EHS) software like to put it.

No surprise, then, that you can't talk to an EHS software vendor without talking about sustainability too. That's what Simon Jacobson has found. In a white paper issued in April 2010, Jacobson, an information technology research analyst at **AMR Research**, which was acquired by **Gartner, Inc.** (Stamford, CT) last December, suggested that this is only natural. Because EHS is such a core element of sustainability, EHS software vendors are "jockeying to claim what they feel is their birthright" in providing sustainability solutions. These firms' historic experience with EHS "domain knowledge" gives them a leg up on the competition, they feel.

### The 2009 U.S. Environmental Instruments & Information Market



Source: EBJ, EBI Inc. Instruments & Information Systems totaled \$5.3 billion and is one of 14 segments in the \$308-billion U.S. environmental industry in 2009. In Consulting & Engineering, \$600 million out of the \$27 billion segment is also devoted to information management.

They're finding, however, that the competitive reality in sustainability is not the same as it was in EHS. Most notably, EHS software is largely compliance-driven, and sustainability is driving a look at much broader, enterprise-wide impacts. Sustainability, and the critical carbon management component of the sustainability movement, has thus attracted the attention of enterprise resource planning (ERP) software providers and other IT powerhouses like SAP, IBM, Accenture and Computer Associates. Even large accounting firms, like Deloitte and PricewaterhouseCoopers, are getting into the sustainability software and services game, reflecting their view that sustainability is a direct extension of financial and business risk management.

Meanwhile, energy management companies like EnerNOC and Johnson

Controls and specialist startups like C3, ENXSuite, Hara, and PE International are picking off the carbon wedge of the \$5.3-billion environmental instruments & information segment of the environmental industry. The entrants to the sustainability/carbon management space are coming so swiftly that market analysts sometimes prefer to identify a few leaders rather than try to count them all.

Will EHS vendors be able to leverage their domain knowledge to leadership in the sustainability field? "I think the emphasis on domain knowledge as an advantage is short-sited," says Jacobson. "Of course, they will say that EHS owns sustainability, but our research indicates that's increasingly not the case. It's owned by people making financial decisions and dealing with risks and exposure."

### Inside EBJ

**Environmental Information Overview:** Software vendors have evolved into solutions services firms as the environmental information market changes almost at the pace of information technology. Venture investment, M&As and growth persist through the recession, largely fueled by the burgeoning market for enterprise carbon accounting. EHS vendors, IT firms, environmental consultants, energy management and accounting firms all compete in the dynamic market.

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EHS companies “have done a very good job in tracking product safety and MSDS,” notes Stephen Stokes, AMR’s head of sustainability. “They need to get their game together in realizing that this new economy is not just about compliance. It’s about taking data and turning into analysis that leads to efficiency. That’s where the new model will emerge—not just in producing reports. And the EHS guys have done a poor job so far. They need to get into the higher levels of analysis.”

ERP providers like SAP have an advantage with their top-down approach, says Jacobson. “They have the corporate buyer’s ear.... The challenge sometimes is, you optimize high-level processes versus getting down to the nitty-gritty, the granularity.”

Despite the hype surrounding sustainability and carbon management, often stoked by the media and early adopters, all players should be wary of getting too far ahead of demand. Many potential clients and their consultants are still content with their spreadsheets, or may find that the carbon tracking functionality they need is contained in their EHS packages, especially those designed to facilitate Clean Air Act (CAA) compliance, suggests Elizabeth Donley, whose firm **Donley Technology** (Colonial Beach, VA) tracks the EHS software market.

Donley also advises vendors to be wary of what happened to Form R reporting under the U.S. Environmental Protection Agency’s (EPA) Toxics Release Inventory reporting system. “Software packages popped up for Form R, and then eventually the government came out with its own Form R package, so a lot of the private sector packages simply disappeared,” she notes. “We’ve already seen some of the carbon counting packages drop away—in some cases by being bought up.”

Donley estimates that there are currently more than 800 providers of commercial EHS software. However, she and AMR’s Jacobson both acknowledge that precisely defining the market—and thus attaching a dollar figure to it—is very difficult. Where does the energy management capability of an EnerNOC or Johnson Controls intersect? How do you size the EHS portion of an IBM or SAP ERP package?

“When we look for dollar figures, we look at a specific segment, like regulatory data,” says Donley. “Nobody has the same definition for the market.” Indeed, Donley’s long-standing and evolving environmental software directory has 11 distinct categories including environmental management, water, air, auditing, safety, sustainability, toxics, etc., each with many subcategories.

Notwithstanding the definitional issues, AMR’s 2009 analysis of the market estimated EHS product revenue at \$410 million. Half of this total came from application licenses and subscriptions, the other half from maintenance, which was the only category showing year-over-year growth. Only 14% of EHS product line revenue came from sustainability-related activities. The emerging greenhouse gas information systems or enterprise carbon accounting (ECA) as it is becoming known reflects today’s market. Paul Baier, VP of sustainability consulting with **Groom Energy Solutions** estimates that in ECA, “90% of solutions are SaaS [software as a service] with yearly subscription rates of \$30K-\$150K/year (which includes software, hosting, upgrades, etc.)”

EBI, publisher of EBJ, estimates that just the EHS portion is well less than half the total environmental information software and services market that totaled \$1.1 billion in the United States in 2009 and about three times that globally. The U.S. estimate implies that Donley’s 800 providers average only a bit more than \$1 million

each. With six or seven companies with more than \$20 million in sales in environmental software and information services, the market remains very fragmented and divided along the lines of Donley’s categories. The addition of carbon and GHG information systems to the mix adds another \$300-400 million globally (with the U.S. smaller proportion) with elevated prospects for growth from this category.

Back in EHS applications, AMR anticipates a rebound in licensing sales in 2010, after a flat 2009. Of 128 client-base companies surveyed 2009, only 32 indicated plans to invest less than \$500,000 on EHS in 2010, according to Jacobson’s white paper. In fact, most plan to spend \$5 million or more. The EHS software vendors do have a strong client base to exploit for their piece of the sustainability pie, and “no one has delivered that comprehensive architecture yet,” says Jacobson. Complacency, however, is not an option. “Aligning with the broader goals of their customers is paramount if they want to succeed in value creation and enabling the new levels of business performance associated with sustainability.”

Like in other environmental service categories, the onset of sustainability and climate change concerns have brought new competitors to environmental information. With new market leadership at stake, it will be increasingly important for vendors to decide who to partner with, who to compete with and how to do it. □

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## EHS SOFTWARE PROVIDERS LEAP INTO CARBON MANAGEMENT, FACE COMPETITION FROM HEAVY HITTERS

In an obvious extension of their product portfolios, environmental, health, and safety (EHS) software providers have jumped with both feet into the market for information management as it relates to sustainability and climate change. Carbon dioxide (CO<sub>2</sub>) and other greenhouse gases (GHGs) present another category of emissions, like nitrogen oxide (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter, and mercury—although with carbon, something more than measuring what's coming out of a stack is going on—while the EHS realm offers a logical starting point for getting a grip on sustainability metrics, regardless of how “sustainability” may be defined.

For EHS software providers, however, carbon management is a game changer. Managing information for climate change, and for sustainability in general, is about enterprise-wide financial, risk, and business management as much as it is about compliance management. Probably even more so, as in many jurisdictions—most notably, the United States—the regulations don't exist yet.

When they do come (and of course they're here now in Europe), those regulations could be far more sweeping, in terms of their effect on how companies operate, than any other environmental program they currently manage. What's driving interest in carbon management and sustainability now, however, is the demand for transparency from stakeholders of all kinds—investors, employees, local communities, and non-governmental organizations among them.

Carbon also presents a kind of ubiquity not associated with emissions of NO<sub>x</sub>, SO<sub>2</sub>, and other pollutants measured at the stack, as reflected in the three scopes of carbon management. Scope 1 emissions are direct emissions, such as those from coal- or gas-fired electricity-generating boilers. Scope 2 emissions are indirect emissions associated with the consumption of pur-

chased electricity, heat, or steam. Scope 3 emissions encompass a broad range of other indirect emissions, spanning those associated with employee travel, product delivery, product use, and on up the supply chain.

It's when you go beyond Scope 1 and on to Scopes 2 and 3 that you leave the world of traditional emissions tracking and enter the world of enterprise-wide accounting of fuel use and broader resource consumption. EHS software providers are confident that they are equal to the task, but there's an additional challenge. The providers of legacy computer systems and enterprise resource planning (ERP) software, and even the Big Four accounting firms—some very big dogs—believe they have the expertise to serve the carbon management and sustainability markets and are lying in wait.

Because of the dynamism and attraction of this emerging market, it's difficult to count the number of firms that are jumping in with product offerings. In a report issued in January 2010 energy consultancy **Groom Energy Solutions** (Salem, MA) identified and analyzed 60 vendors of what it called “enterprise carbon accounting” (ECA) platforms.

In all likelihood, there are many more players in the carbon management space. Phil Tesler, CEO of sustainability software vendor **Enablon** (Chicago, IL), says there are more than 165, including his own firm. Marianne Hedin, an analyst at market research firm **Pike Research** (Boulder, CO), puts the number in the 60 to 120 or 130 range, but hesitates to pinpoint a particular number because market is too dynamic, with new entrants every day.

The Groom Energy Solutions report—the third that the company has issued on ECA since 2008—itsself arose from an effort to assess the available offerings, with an eye towards entering the carbon information management market itself, according to Paul Baier, vice president of consulting and co-author of the report. The firm

### Global Leaders in Carbon Management Software

#### Leaders:

Enablon  
Enviance  
Hara  
IHS/ESS  
Process MAP

#### Challengers:

Computer Associates  
ENXSuite (formerly Carbonetworks)  
Greenstone  
SAP  
SAS

#### Specialists:

Camco  
CarbonView  
PE International

#### Entrepreneurs:

Carbon Hub  
Cintellate  
Foresite Systems  
Green Oak Solutions  
Intelix  
Perillion  
Tradeslot  
Verteego

*Source: Verdantix Green Quadrant: Carbon Management Software report (Oct. 2009)  
Alphabetical in each category.*

is always listening to clients, identifying what they need, and putting a practice or a company around that need if feasible.

In the case of ECA software, it wasn't, in Groom's view. “The market was becoming crowded already,” says Baier. It was also clear at the time Groom was considering such a market entry at mid-decade that funding from venture capital firms for software had evaporated. ECA software presents a promising market, Baier acknowledges, but “it's nascent, growing, and over-vendored.”

The Groom report estimates that global unit sales of ECA software to large enterprises with more than 2,000 employees—“there's no business case for single-facility ECA software,” notes Baier—totaled about

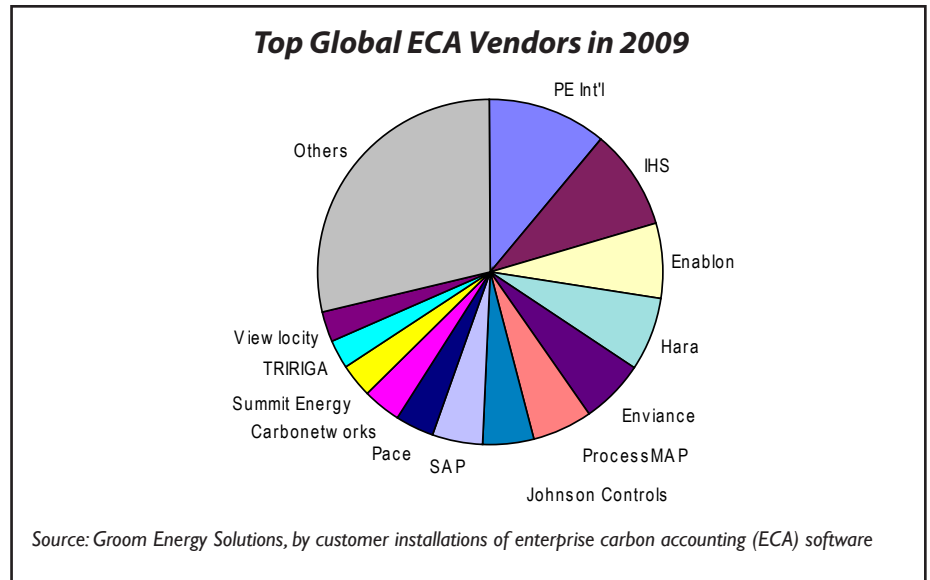
50 in 2009 and should reach 250 units in 2010 and 1,500 units in 2011. According to the report, market drivers include not only pending regulation, but also concern about corporate or brand image, requests from top customers, and investor pressure. The Carbon Disclosure Project and Walmart's supply-chain sustainability initiative are key examples of these drivers.

"Features to support basic carbon emission calculation are a commodity and do not constitute a stand-alone software product category," the report goes on to say. "Carbon emission calculation or ECA functionality are often delivered as a module of a larger energy/bill payment, EHS or ERP software platform."

Groom identified eight companies as emerging leaders in the field, listed here in alphabetical order: Enablon; **Enviance** (Carlsbad, CA), another leader in the EHS software market; **Hara** (Redwood City), a specialist start-up in the ECA field in 2007; **IHS Inc.** (Englewood, CO), which entered the EHS software market with four acquisitions over the past two to three years; energy services company **Johnson Controls** (Milwaukee, WI); software and consulting firm **PE International** (Leinfelden-Echterdingen, Germany), a firm with expertise in product life-cycle analysis (LCA); **ProcessMAP** (Fort Lauderdale, FL), an EHS software provider with a strong base in the global manufacturing sector; and ERP stalwart **SAP** (Waldorf, Germany).

As is evident from this list, ECA platform providers come from many different segments, spanning EHS software firms, specialized startups, energy management services companies (ESCOs), ERP system providers, and others with well-established niches in related fields. Add in legacy hardware/software vendors like **IBM Corp.** (Armonk, NY), global management consulting/technology/outsourcing giants like **Accenture** (New York, NY), and Big Four accounting firms like **Deloitte** (New York, NY) and **PricewaterhouseCoopers** (PWC; New York, NY), and you've got a formidable competitive field.

To be sure, they've got a rapidly growing field to carve up, by many accounts. In a report issued last January, Pike Research estimated that the global carbon manage-



ment and services market will grow from about \$384 million in 2009 to more than \$4.3 billion by 2017, representing a compound annual growth rate of more than 40%. Driven by the European Union's Emissions Trading Scheme (ETS), Western Europe represents the largest current market segment currently, but the United States take over the lead by 2013, "for the simple reason that, in the U.S., there are so many more large companies and very large companies," says Hedin.

In a series of spin-off reports, Pike Research identified the largest client segments as two obvious ones—electric utilities, growing from \$141 million in 2010 to \$788 million in 2017, and the U.S. federal government, growing from \$36 million to \$294 million over the same period. A forthcoming spin-off report will analyze a third major market segment, manufacturing. Hedin says "the retail market will be another big one, while financial services is up and coming." She sees the healthcare/pharmaceutical market as rounding out the list of top markets today and to come.

In 2009, financial and large strategic investors began to take notice of the carbon information management market. ECA specialist **C3** (San Mateo, CA), which hadn't even announced a product, reported a \$26 million investment from an undisclosed source. The firm also generated buzz through the addition of former U.S. Secretary of State Condoleezza Rice and former U.S. Secretary of Energy Spencer Abraham to its board of directors.

Generating comparable buzz, Hara raised about \$20 million from **Kleiner Perkins Caufield & Byers** (boasting former Vice President Al Gore as a partner), **JAFCO Ventures** and **Nth Power**. Hara also formed a partnership with IHS, which strengthened its offering in the carbon management field through the acquisition of one of the EHS software leaders, \$20-million **Environmental Support Solutions** (ESS). IHS acquired ESS for approximately \$60 million, with the purchase price representing "about three times revenue and a high single-digit multiple of forward adjusted EBITDA," according to IHS when it announced the September 2009 acquisition.

Other recipients of investor backing in 2009 were San Francisco-based Carbonetworks—now named **ENXSuite**—with \$5 million from **NGEN Partners**, and **e3 Solutions** (Mississauga, Ontario), with \$1 million from the New Carbon Economy Fund. In addition to IHS's acquisition of ESS, major deals included **EnerNOC's** (Boston, MA) purchase of **eEquilibrium**, **FirstCarbon Solution's** (New York, NY) acquisition of **Enverity** (FirstCarbon is a unit of data management giant **ADEC Solutions**), and **SAP's** purchase of **Clear Standards**.

So, lots of jockeying for position. Perhaps the most interesting question at this point is which of the business models will dominate. According to the Groom report, heavy GHG emitters facing regulatory risk have been partial to the EHS software ven-

dors, “despite the fact that few EHS applications are enterprise-wide.” Scope 2-centric firms “will navigate toward lower-cost offerings from startups,” while manufacturers with larger energy bills beyond office buildings “may look to existing energy management firms for an ECA solution.”

The EHS software vendors make the case that their “domain” knowledge—i.e., their familiarity with and understanding of waste management issues, environmental emissions and discharges, their impacts, and the governing regulatory regimes—give them a natural edge. “A lot of the companies in this space, including some of the new ones not in your EHS base, lack the ability to go into the facility and get the emissions data and the fuel data to do comprehensive GHG emissions tracking, management, and reporting,” says Enviance CEO Lawrence Goldenhersh. “When carbon graduated from a compliance data point to a financial data point, that type of reliable, auditable, transparent data management became very important.”

Neno Duplan, founder, president, and CEO of EHS software provider **Locus Technologies** (Mountain View, CA) provides a succinct view of the competitive field and the advantage he believes the EHS vendors hold. He sees three categories of competitors: well-established companies that originated in the compliance business; ERP software providers; and startups that have emerged over last two years.

The first group “is lead by IHS, which got there by the acquisition of ESP, ESS, and Dolphin Software, and we see them as a formidable competitor,” says Duplan. “However, they lack cloud experience and they face a huge challenge of integration of acquired companies all of which had overlapping product line.”

On the ERP side, “every major vendor is trying to get in this space, with SAP leading the pack,” notes Duplan, but “they need to acquire to get domain expertise. Another challenge for this group is cloud computing. None of the major players, including SAP, Oracle, and Microsoft, have a clear cloud computing strategy, and that may limit their potential for growth. Plus, innovation is not likely to come from this sector either. Every Fortune 100 client that

uses Locus software also uses one of the ERP vendors in this space. Each of these customers could have implemented EHS solutions from their ERP vendor as an extension of their ERP systems. None of them did. I think that tells us the story on the state of EH&S software at large ERP firms. Again, this is not about software, it is about domain expertise.”

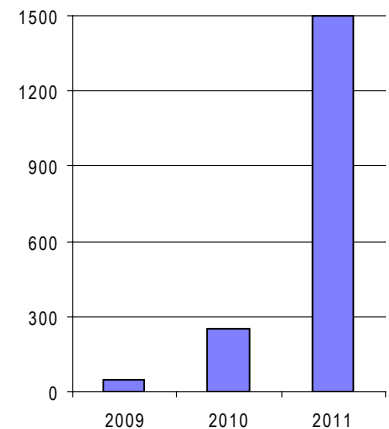
The startups are numerous, most aspiring to be software as a service (SaaS) vendors. “They did get the cloud computing right,” says Duplan, but “they are more focused on spending fresh venture capital money on public relations and marketing and courting research analysts than on spending on product development, or to gain domain expertise.” These startups need to be wary of what happened to the “dot.com’s” in the late 1990s and early 2000s, he warns.

“We see little threat so far coming from this group, as many of them will not make it through the chasm regardless how well-funded they are,” Duplan says confidently. “Environmental software is a very complex space, driven more by domain expertise than software programs. There is no quick way to riches here.” Furthermore, “the market is not ready to absorb 100-plus startups,” and clients are getting smarter and demanding vendors with references.

Whether or not they pose a long-term threat, these startups are chalking up some wins. Hara signed contracts with Aerojet, Coca-Cola, News Corp., and the cities of Palo Alto and San Jose in 2009, and it announced on June 23 of this year that Hasbro has selected its Environmental and Energy Management (EEM) package. ENXSuite has Northrop Grumman and the city of Chicago as customers, and it claims to have 16 wins in 18 head-to-head competes with Hara.

Pike Research’s Hedin is not as confident that the edge through domain knowledge is one that the EHS vendors will maintain. “I would say, yes, the domain knowledge initially is an advantage for the EHS firms. But carbon science isn’t rocket science, and it won’t take long for the other companies to gain the domain knowledge. And they’ve worked for their clients for years and in some cases decades, and that’s

### Global New Unit Sales of ECA Software: 2009-2011



Source: Groom Energy Solutions, New Unit Sales of “enterprise carbon accounting” (ECA) software to large enterprises with more than 2,000 employees

a major comfort level. At this early stage of the market, that comfort level is very important.

“It’s probably going to come down to resources,” she continues. “The large vendors like SAP and IBM are going to have incredible resources to invest into this space, and they are investing. IBM is investing billions in R&D, really leveraging all of that to be competitive. On top of that, these large vendors, have a strong services capability, and are strong in ERP implementation. They are also leveraging their client relationships, taking advantage of their long-term relationships.

Smaller niche firms have specialties they will leverage, she adds. They can leverage their client relationships too. Many clients in the small- and medium-enterprise market feel more comfortable with a small vendor, because they don’t feel the vendor will take control and push them around. ‘IBM is too big for me, and there are so many points of contact—it gets a little confusing,’ they may feel. So it depends on a customers’ comfort level.”

The Wild Wild West metaphor for this kind of market activity may be over-used, but there is certainly a Gold Rush in carbon management software. Check back in a year, and we’ll probably see more gold to be found. The map of the mining claims may be the difference. ■

## COMPLEX REGULATORY LANDSCAPE CREATES COMPLIANCE CHALLENGES

By Jytte Syska, 3E Company Europe

The last two years have given shape to a complex regulatory landscape, with the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS), the European Union's (EU) Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulatory framework, and the United States' anticipated reform of the Toxic Substance Control Act (TSCA), taking center stage. GHS and REACH in particular have become essential components of corporate account globalization plans, with their impact being felt throughout the entire chemical lifecycle and global supply chain.

In September 2009, U.S. Assistant Secretary of Labor Jordan Barab announced a proposed rule to align the Occupational Safety and Health Administration's (OSHA) Hazard Communication ("HazComm") Standard with provisions of the U.N. Globally Harmonized System of Classification and Labeling of Chemicals (GHS). This announcement heralds significant changes to the HazComm Standard in 2010 and 2011, with proposed revisions including both philosophical and tactical changes to hazard communications.

If accepted, these revisions will have far-reaching implications for Material Safety Data Sheet (MSDS) and label authoring, publishing, distribution, and management. The proposal also includes revised criteria for the classification of hazardous chemicals, as well as changes to definitions and terms used in the standards, and new training requirements for employees. When the final rule is promulgated, companies will face many challenges, including re-evaluating how their substances and mixtures are classified, re-issuing MSDSs and labels, and training staff as appropriate.

The final rule will be promulgated sometime around March 2011. Companies will be prohibited from implementing this regulation until the final rule is

promulgated. They will have three years to come into compliance with the final rule and two years to implement associated training requirements. In addition, there are 26 states and territories with their own OSHA-approved plans, and these states and territories will have six months to adopt comparable provisions of the final standard. In the meantime, individual state plans will remain in effect until they adopt the required revisions.

GHS is challenging to implement, especially in countries such as the U.S., Japan, and Korea, where multiple regulatory authorities govern different aspects of the hazard communication requirements. In the United States, OSHA, the U.S. Environmental Protection Agency (EPA) acting under the authority of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), the Consumer Products Safety Commission (CPSC), and the Department of Transportation (DOT) are working to implement GHS. Each agency has the right to adopt GHS in a way that best suits its purpose, with no consideration given to a unified approach or timeline.

Achieving compliance with the new HazComm Standard will be challenging for many companies, especially since U.S. GHS requirements are still evolving. The risk of errors or misinterpretations can persist, which demands access to regulatory expertise.

One of the most significant shifts will be for companies accustomed to complying with OSHA's regulation in the United States. Those companies will need to shift from a risk-based classification approach to a hazard-based classification approach. Instead of considering the likelihood or probability of an event occurring, classification will be absolute under GHS. The introduction of symbols and pictograms, similar to what has been used for transport of hazardous goods for many years as part of the labeling is also a relatively new concept in the United States.

Many Asian countries—including Ja-

pan, Taiwan, China, Korea, New Zealand, Indonesia, and Russia—as well as European nations have implemented GHS, but not always in its entirety, which results in differences in how the classification results are presented on both the MSDS and on the labels. In Europe, companies will be required to follow a harmonized (mandatory) classification of certain substances for certain endpoints. Korea and Japan also have official lists of recommended GHS classifications for substances.

As much as GHS is meant to drive global harmonization, individual countries are allowed to select the physical hazards, the health and environment classes, and the associated categories within each class that they wish to adopt, and most countries that have implemented GHS have chosen to keep some of their existing hazard classification and communication that is not yet part of the GHS. As a result, there will be far less harmonization between countries and regulatory authorities within each country than originally anticipated.

### "REACHING" FOR SUCCESS

The REACH regulation went into effect on June 1, 2007, at the same time simplifying and complicating the compliance work for companies manufacturing products in Europe or importing into or exporting from Europe. As a result of the legislation, all companies manufacturing, importing, distributing, or using chemical substances (on their own, in mixtures or in articles) in Europe, are required to closely examine their chemical inventory for substances within the scope of the regulation to ensure compliance. The European Chemicals Agency (ECHA) has been established to efficiently manage the system.

Key components of the REACH mandate are the following:

- Registration of manufactured/imported chemical substances;
- Increased information and communication throughout the supply chain;
- Evaluation of some registered substances;
- Authorization for use of substances of very high concern; and

- Restriction of the use of certain substances for specific applications.

Non-EU companies should establish and maintain a good and reliable inventory of substances in all chemicals that are exported to the EU. Each substance must be identified by Chemical Abstracts Service (CAS) number, European Inventory of Existing Commercial Chemical Substances (EINECS) number, etc. and the amounts exported to the EU must be known. All test data that is owned by the company must be identified as it will most likely need to be shared with other companies in the Substance Information Exchange Forum (SIEF).

If the non-EU company uses mixtures for producing the products that are exported to EU, the chemical composition of these mixtures must be known, as well as the producer of the substances.

Potential registrants should consider whether the company can handle the registration and the other requirements under REACH by itself, as this requires that the company have an EU subsidiary that can do the work. Possible alternatives are to have the company's EU customers register the substance or substances, or appoint an "Only Representative" (a person or company legally established in Europe who takes over the responsibilities for the substance under REACH). Outsourcing is also an option. In any case, the non-EU company has to play an active role during the registration of the substances. Depending on which solution the company chooses, request for information related to the pre-registration that has been done and the registration should be expected from the EU customers.

Momentum is also building for significant TSCA reform in the United States. On December 30, 2009, EPA Administrator Lisa Jackson announced a new initiative with a comprehensive approach to enhance the agency's current chemicals management program within the limits of existing authorities. This effort includes requirements for the following: new regulatory risk management actions; development of Chemical Action Plans, which will target the agency's risk management

efforts on chemicals of concern; providing information needed to understand chemical risks; and increasing public access to information about chemicals.

Many companies will be affected by these changes, as almost every business involved in the chemical industry is impacted by TSCA in some way (with some exceptions among food, drug, cosmetic, nuclear, and pesticides companies). In addition, raw materials, intermediates and finished goods are regulated by TSCA. Full life-cycle, or cradle to grave, compliance is an essential component of TSCA, and most manufacturing/importing, processing and disposal activities are TSCA regulated.

If companies do not comply with TSCA, they could face severe legal repercussions, including criminal and civil penalties, damage to a company's brand or reputation, and negative impact on a company's ability to do business. Personnel that demonstrate willful and knowing non-compliance also face imprisonment.

The risk of financial damage is also high if a company is non-compliant, as non-compliant companies may receive fines and penalties and experience a loss of business revenue if production is stopped.

To ensure compliance with TSCA, experts recommend developing and maintaining a comprehensive and detailed plan, which should include the following:

- TSCA inventory: Checking the TSCA inventory for substances imported or manufactured, including the ingredients in finished products;
- TSCA R&D exemption: Reviewing R&D exemption requirements and setting up procedures to govern related activities;
- Import certification: Obtaining import certification once the status of the substance or product to be imported has been checked against the TSCA inventory;
- Export notification: Establishing processes for tracking 12(b) exports and assisting with export notification;
- Adverse effects: Establishing processes for compliance with adverse effects reporting and recordkeeping;

- Regulatory tracking: Monitoring and tracking regulatory changes which are likely to impact business; and

- Record-keeping: Maintaining required records and auditing against various recordkeeping requirements.

Achieving environmental regulatory compliance can be a daunting task, especially with the regulatory landscape constantly shifting and changing. Strong processes, applications, and systems are needed to support the various aspects of compliance management for GHS, REACH and TSCA. The following tasks can also help facilitate compliance at your company:

- For REACH Registration compliance, conduct a detailed portfolio analysis and establish an inventory with REACH role—M/I (Manufacturer/Importer) or DU (Downstream User), tonnage, classification (current and EU/GHS), and registration requirements;
- Obtain raw material MSDSs and of full composition of mixtures;
- Identify possible registration, authorization, and restriction requirements;
- Update or re-author documents and labels according to GHS and REACH;
- Develop a full understanding of the REACH registration process; and
- Training to help with identifying responsibilities and establishing an action plan for REACH, GHS, and TSCA.

Companies that are impacted by GHS, REACH or TSCA can also seek assistance from information management service providers, such as 3E Company, that are well-versed in data and other content and information as it relates to global EH&S regulations and who thoroughly understand the global regulatory environment. These providers can also assist in implementing compliance activities into the organization, and can help facilitate compliance with these increasingly complex and changing global chemical regulatory obligations.

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## CARBON TRADING SOFTWARE PROVIDERS SEEK TO PENETRATE A SPREADSHEET-DRIVEN WORLD

Considering the vibrancy of the market for software that tracks, manages, and reports on greenhouse gas (GHG) emissions and generally plots an organization's carbon footprint, one might expect the market for software that facilitates emissions credit and offset trading to be comparably robust. These two realms of carbon information management occupy different spaces in the marketplace, however, with limited overlap to date. And as nascent as the market for GHG emissions tracking and reporting software is, the trading side is even less developed.

For those companies trying to make a market out of innovative carbon trading software, there is good news and bad news. The good news is, given the dramatic year-over-year growth in the carbon markets and large number of parties, emitters and otherwise, that are seeking to generate and sell credits, there's clearly plenty of available clients. What's more, most of those entities, and the heavy emitters in particular, are using spreadsheets to aggregate their emissions data in preparation for reporting to exchanges or conducting over-the-counter (OTC) trades, and would appear to be ripe for an upgrade in their information management capability.

The bad news: Most of these parties appear to be content to continue relying on those spreadsheets for trading purposes. Vendors of advanced carbon trading software platforms appear to have a tougher sell than vendors of platforms for tracking, calculating, analyzing, and reporting on emissions activity.

This assessment of the available market was borne out in a study conducted by **Global Change Associates** (New York, NY) and **CommodityPoint**, a division of energy and utilities consultancy **Utilipoint International, Inc.** (Albuquerque, NM), the results of which were released last De-

ember. In a global survey of utilities and commercial and industrial companies, the study found that 44% of respondents were using spreadsheets and other in-house solutions for carbon management and trading, 36% had no particular system at all, and the remaining 18% were using products from software vendors.

### IMMATURE MARKET MEANS OPPORTUNITY FOR SOFTWARE AND SERVICES

"It's a pretty immature market," says Peter Fusaro, chairman of Global Change Associates. In all, "57% of the respondents indicated a future need, but they aren't spending money. We expected more participation in Europe, which has a mandatory trading system, so we were a bit surprised by the results—which means it's an opportunity for software vendors. There's no one dominant leader."

The Global Change/CommodityPoint report divided the carbon management software market into two categories—emissions monitoring software, and commodities trading and risk management (CTRM) software. "In undertaking this study, we were particularly interested in the coming clash of the emissions monitoring and emissions trading vendors," said Gary Vasey, managing director of the Europe and Asia-Pacific regions for CommodityPoint, in the announcement of the study last December.

"In reality, while there will need to be integration between the two types of software, we feel that the evidence suggests that the existing CTRM vendors will have a relatively easy task of adding GHG trading and risk management functionality into their software and will continue to own that part of the business," he noted. "As the emissions monitoring side develops and matures, it will naturally leave an area of functionality related to tracking and managing allowances that can be likened to the 'logistical' side of managing carbon. This area will likely be fertile ground for new players such as **IHS**, but it may also be tackled by CTRM vendors."

Fusaro identifies **Triple Point Technology** (Westport, CT), **Open Link Financial** (Uniondale, NY), and **SunGuard** (Wayne,

PA) as leading carbon trading software companies. All of these are CTRM vendors that provide carbon trading as an extension of their energy or agricultural trading software. "It's another module, so to speak," says Fusaro.

Other leaders are energy trading and risk management firms **Allegro Development** (Dallas, TX) and **Navita Systems** (Halden, Norway). Other, more specialized players include **ENXSuite** (San Francisco, CA), until this June known as Carbonetworks, and **Carbonflow Inc.** (San Francisco), which specializes in tracking credit-generating project portfolios and streamlining the process of monetizing emissions reductions. "Many of these are small firms that will be acquired, providing a solution that someone will need at some point," says Fusaro.

As with trading any commodity, trading a carbon credit can take place over the counter through a broker, or through an exchange, through different media. "Exchange trading is more typical, because it is more liquid, and there are different kinds of products to trade," according to Justin Felt, manager of North American offset projects for energy and carbon market consultancy **Point Carbon** (Copenhagen, Denmark).

### EUROPE OUT FRONT

Of course, the most sophisticated credits trading market is in Europe, spurred by the European Union's Emissions Trading Scheme (ETS) and served by several exchange platforms for trading European Union Allowances (EUAs) and Certified Emission Reductions (CERs). The European Climate Exchange (ECX), which is a part of **Climate Exchange Plc** and was recently acquired by the **InterContinental Exchange** (ICE; Atlanta, GA), represents 89% of all exchange-based carbon transactions in the EU ETS, according to Adam Williams, Point Carbon's marketing manager in North America. **Bluenext**, which is owned by **NYSE Euronext** (London, U.K.), takes the second largest share of carbon-based transactions in the EU ETS. In particular, **Bluenext** is used primarily for spot trading.

"In the ECX, they have a platform you

subscribe to, and it interacts with ICE, which executes the transaction, whether a limit order or a spot order,” says Felt. With ICE’s acquisition of Climate Exchange plc, of which the Chicago Climate Exchange (CCX) was a part, the exchange platforms are now more integrated, he adds.

Bloomberg Terminal and Reuters Terminal are popular computer systems that provide access to exchanges for placing trades or tracking and analyzing financial market data, says Felt. “The carbon market is a small cog of all the things traded,” he points out. “The platform is not that much different for carbon than it is for other commodities.”

The two main players in the trading markets are, predictably, the emitters and the financial players, and right now, “I would guess the financials are driving more volume,” says Felt. “Emitters have different strategies. Large ones may have their own trading desks, although not necessarily all of them.” Meanwhile, smaller concerns—say a small chemical company, might not want to take on the additional risk posed by a commodity trading operation.

“A larger utility will want to look at additional opportunities in trading, beyond just hedging your position,” Felt adds. Meanwhile, financial firms run the gamut in motivations. “A hedge fund may be looking purely at arbitrage,” he says, adding “we’ll see how they affect this market.”

An emerging segment of the market is occupied by companies that can provide information technology (IT) infrastructure for the registries of credit-generating projects. According to Point Carbon’s Felt, APX (Hoboken, NJ) and Markit (New York, NY) are probably the leaders in this segment. In March, Markit announced a strategic alliance with **Carbon Trade Exchange** (CTX; Stockley Park East, U.K.) to connect with CTX’s global electronic platform for spot trading of voluntary market credits. In May, APX formed a strategic alliance with Carbonflow to link their product suites.

From the perspective of an auditor of emissions credits, Dave Covell, a principal working in the European energy and carbon trading practice of environmental

consultancy **ENVIRON**, sees firsthand how the two sides of the carbon management function interact at emitting organizations playing on the trading markets.

“You have the engineering or environmental teams using a variety of, generally, in-house spreadsheet and database tools to track emissions on a month-by-month basis. It’s on the basis of those spreadsheet records that, when I verify emissions, I look at that software and the interfaces with the automated data capturing systems, whether metering or whatever, and how those bits of software suck up the information from other data sets into an auditable paper chase, so we can audit the data we have on the spreadsheets.

“Once you get the consolidated data for a year, generally organizations pass that number to the procurement or buying department, which uses their own software systems to manage the buying and selling of allowances. That approach happens in both public sector and private sector organizations.” From Covell’s point of view, there are two different universes of software providers. That’s certainly true in the United Kingdom and Europe, where trading has been taking place for several years under the EU ETS and the U.K. voluntary scheme. “The mindsets fall into two separate camps,” he notes. Then there are the regulatory agencies, which set up the registries, and “they reach large contracts to manage these platforms. So there is tracking emissions, then trading them, and then the on-line registries.”

### CRC MULTIPLIES MARKET

In the United Kingdom, about 1,300 organizations are trading credits under the auspices of the EU ETS, “and generally the larger organizations have central procurement departments,” says Covell. However, the U.K.’s mandatory CRC Energy Efficiency Scheme (formerly known as the Carbon Reduction Commitment) is poised to launch with about 20,000 participants. “These are much smaller entities, and we’re waiting to see whether there will be procurement element that takes on that function at these firms, or whether they will develop their own spreadsheets to do this job,” Covell remarks.

To date, “we’re not seeing companies embrace the third-party whiz bang products; they are going with their spreadsheets,” says Lisa Grice, a principal heading ENVIRON’s North American carbon practice. Covell concurs. “Even the large utilities do this. I think the new packages could be a tough sell.

“It all depends on how complex they will be,” he continues. “One of our power sector clients has a number of power plants in the U.K., and they have a central team doing the procurement and trading, and they know what the need to buy and sell is at the corporate level, but they only need to buy and sell a little because they do a lot of internal trading. It all depends on how the corporate organization is set up and how you are registered with the ETS.”

Covell adds that some companies in Europe get help in energy management from organizations known as monitoring and targeting bureau service providers. There are about 10 to 12 of these bureaus, some run by giants like **Siemens**, which provides control systems.

These bureaus provide software services that can track metering and billing information, and while not specifically focused on carbon, “some of these providers have come up with an extra module to help you with your CRC work,” says Covell. In general, the clients for this level of service “are more mature, with larger production facilities that manage data for business operations, as opposed to a university or a hospital, which hasn’t got the same mindset yet.”

How will information management for trading carbon credits and offsets unfold in the United States? Perhaps as a “bolt-on” to trading platforms for other environmental commodities, Grice suggests. “There’s a whole set of trading tools that companies use that aren’t carbon specific. You see NOX and SOX trading tools in the U.S., not exclusively for compliance purposes, but for value optimization. I would project that they are doing the same thing with the ETS. They might not be inclined to add a new, dedicated greenhouse gas platform but rather would add the carbon component to these trading tools.” ■

## LOCUS TAKES EHS MANAGEMENT TO ENTERPRISE LEVEL

Sustainability, carbon management, and greenhouse gas (GHG) emissions reduction are getting all the headlines, and many environmental, health, and safety (EHS) software companies are jumping in to serve this need. To Neno Duplan, however, the introduction of carbon management modules and platforms isn't the most important trend in the EHS software market. The biggest development of the past couple of years, in his view, is how clients are buying, not what.

Companies are now issuing requests for proposals (RFPs) for EHS software platforms directly to software vendors, according to Duplan, founder, president, and CEO of **Locus Technologies** (Mountain View, CA), a 50-employee provider of enterprise-level, web-hosted software for environmental applications. Up until about 18 months ago, "it was a completely consultant-driven process." Now, "companies are looking to bring the mess they have back into the house and deal with it in a organized way."

The "consultant-centric" model historically dominated the field of corporate environmental data management "primarily because environmental data is not integral to the daily functioning of a company, and because the quantities and complexities of the data produced are enormous," Duplan explains. As a result, "company managers are generally quite comfortable with letting their consultants do all the querying, analysis, reporting, and then storing the data. Since the consultants derive increased billing hours from controlling their customer's data, the ultimate incentive for them is a renewed or extended contract, an outcome that, though certainly not guaranteed, is optimized by their control of the data."

Change is coming, however, Duplan insists. "The environmental data management practices of corporations and their consultants are undergoing a profound transformation as new web-based software provides a low-cost means of making avail-

able the critical information that organizational decision makers need, not only to better understand and manage their overall environmental liabilities but also to improve their operations by analyzing the valuable data. While environmental data is collected primarily for compliance reporting, when mined with the right tools it can also be used to point to weaknesses in data gathering and processing operations and provide valuable information on how to eliminate or reduce these weaknesses."

It should quickly be pointed out that Locus has not ignored carbon management and sustainability. "Like every other competitor, we too are focused on carbon/GHG management software," says Duplan. "We expect this to be a very large market, but it will not develop as quickly as many think. While Locus has a product line and some impressive Fortune 100 clients in this space, carbon/GHG is still a relatively small percentage of our overall environmental information management business. Our focus for many years has been on the water quality management business, where Locus holds a commanding position in the market place with more sites and more analytical records under management than any competitor."

The discussion of carbon management in the context of overall environmental information management brings Duplan to another key trend in EHS software—the roll-up of separate environmental management jobs and software packages into single, enterprise-wide systems.

"Locus does not believe in 'point' software solutions for every regulatory framework," says Duplan. "That is a balkanized approach to software—e.g., buying GHG software from one vendor, water quality from another, etc.—that, down the line, leads to more redundant and incompatible systems. Buying individual software solutions would be hardly any improvement over current spreadsheet-based models.

"Locus believes in the software platform approach where the customer has access to all their environmental information management from a Single Sign On (SSO) and a single set of platform-based applications—a kind of Environmental Enterprise Resource Planning, or EERP, system.

Our ePortal does exactly that. Our carbon software is only a small element of ePortal and is still less than 10% of our overall revenue; although we believe that percentage will grow in years to come."

The new "company centric" model for environmental information management is further facilitated at this enterprise level by delivery through what Duplan and other software experts refer to as the "cloud"—the latest term of art in the software business, essentially synonymous with "web-hosted," "on-demand," and "software as a service" (SaaS). "The cloud computing model puts companies back in charge of their own data," he notes. "At the same time, it offers individuals with the appropriate login privileges unfettered access not only to relevant data, but also to tools needed to analyze these data. If users can find information on something they are looking for on the web in seconds and for free, why should they have to pay a consultant to dig into their own data to give them information they already own?"

The cloud mode of delivery dramatically changes implementation times and costs, Duplan adds. "At the site or facility level, the tedious work of data collection and input is still the same and largely delegated to consultants serving the site. However, with the enterprise software model, software is set up at the corporate level. This reduces the deployment time to weeks instead of months or years and brings early success to the company.

Another benefit is the imposition of discipline and standardization across a company's portfolio of sites, according to Duplan. Implementation is accelerated and can be monitored in real time—indeed, almost every aspect of deployment is faster in the cloud, he points out. Training is also web-based and requires less time than with on-premises installations.

"Our software is typically fully deployed in less than 30 days. We don't breakdown costs by setup, implementation, etc. as that is the process associated with the old client server model. Our software is subscription-based, and customers pay for what they use. We charge based on the number of sites, the number of users, and the number of records in databases.."

Sales growth for Locus's EHS line of products was unaffected by the recession, according to Duplan. "We have experienced continued and uninterrupted growth in this segment as our EHS software is designed not only to provide companies with an EHS compliance management tool, but also to improve operational efficiencies and ultimately the bottom line. The companies that went through staff reduction in their EHS departments still have the same amount of work to do but with fewer people and less help from consulting companies. Our software fills the gap. We continue to project a double-digit growth."

The principal driver for the business is still regulation and enforcement. The need to manage emissions of sulfur dioxide (SO<sub>2</sub>) also remains a strong driver, Duplan reports. Over the last 18 months or so, however, the firm has seen a slight shift towards voluntary action in certain segments, notably sustainability and GHG emissions management.

"Many smart companies are implementing reporting strategies ahead of new regulations, not only to stay in compliance with anticipated climate change-related regulations but also to reduce their operating cost," says Duplan. "All of a sudden, companies are realizing that the vast amounts of environmental data they collected to comply with various environmental regulations over last two decades can be reused, mined, and visualized to provide them with very powerful tools to reduce the waste, improve their operations, and lower the operating cost. That is a very compelling and natural driver."

Looking forward, Locus will continue to build upon its recent success in penetrating the utility, food, pharmaceutical, and chemical segments. The firm remains "very bullish" on water quality management "while keeping our eyes on carbon," says Duplan. In addition, "our consulting practices are strong, and our recent investment in carbon verification services is already paying nice dividends.

"It's a very fascinating time," he concludes. "Now we have a real market and real competition. Five years ago it was very different. It's more fun for us now." ■

## CONSTANT INNOVATION FUELS GROWTH FOR EARTHISOFT

An inch wide and a mile deep, is how Mitch Beard, CEO and founder of EarthSoft, Inc. (Concord, MA), describes his firm's offering in the environmental, health, and safety (EHS) software market, in sharp contrast to other EHS products that, in his view, try to be everything to everyone. Sticking with a core competency in environmental sample data management and relying on constant, unrelenting innovation of its EQUIS suite of products to maintain a competitive edge, EarthSoft has followed this philosophy on course to impressive growth, even through the recession.

In fact, Beard hastens to point out that the firm is not an EHS software provider in the classic sense of a compliance-oriented vendor providing packages related to ISO 14000 or material safety data sheet (MSDS) management. Instead, he characterizes EarthSoft as a company engaged in the business of technical or scientific data management.

"We've been very successful by being very focused, on sample data management," he says. "We're certainly an environmental software vendor, but I segregate our business as a different piece of the puzzle. Anyone who has contaminated property or environmental issues has samples they have to manage. That's our specialty, and we've worked hard not to stray from that core competency—and I feel that the market has rewarded us."

The evidence suggests that it has. EarthSoft, which employs about 50 people, was an EBJ Business Achievement award winner for 2009, for growing sales of its EQUIS software by 54% during the year. The firm continued to gain new clients in 2009, including the Montana Department of Environmental Quality, the Tennessee Department of Environment & Conservation, the North Carolina Department of Transportation, the French energy ser-

vices giant Areva, New York City, Shaw Environmental & Infrastructure, HDR Engineering, Booz Allen Hamilton, Geoklock, several cities and counties, and many others. In addition, EarthSoft delivered its 600th EQUIS 5 Professional license, as part of a large configuration sold Critigen, the geospatial and information management services firm spun out by CH2M HILL (Denver, CO) last year.

It's a niche that Beard believes offers substantial opportunity for growth. Citing sources saying that the world will collect more environmental data in the next five years than it has throughout history to date, Beard notes "that data has to go somewhere." Put another way, he quotes an airline industry executive who recently observed that "data multiplies like rabbits, and you can't stop it, but you can domesticate it."

EarthSoft's EQUIS (Environmental Quality Information System) is currently in its fifth version and provides functionality across data collection, management, verification, analysis, and reporting, as well as geographic information systems (GIS) connection and the ability to interface with a broad range of commercial packages. Specific products include EQUIS 5 Professional, EQUIS 5 Enterprise, EQUIS for ArcGIS, EQUIS LakeWatch, and others.

## ROLES OF CONSULTANTS CHANGING DRAMATICALLY

More than half of EarthSoft's clients are consulting firms, and "our role with them has changed dramatically," says Beard. "We're seeing consultants face pressure to do more fixed-cost pricing rather than time and materials pricing, which makes them focus more on efficiency and productivity. We've also seen a number of consultants build their business by acquisition." As Beard points out, these firms will integrate the newly acquired operations by standardizing their data management capabilities rather than allowing each separate operation or office maintain its own idiosyncratic system.

Consultants are also finding that their clients will no longer foot the bill for data management system development that can then be marketed to other clients. That

was the historical model, says Beard, but “that has stopped.”

In general, “neither of these parties—the consultant and the industrial client—wants to be involved in software development,” Beard observes. “This has been a long, slow change—over the past 10 years,” he adds, stressing that, because of the availability of inexpensive, off-the-shelf software, it’s irreversible.

“What we do see industrial companies willing to pay for is a consultant to come in and set up a consistent way to handle the data,” he continues. “Clients change consultants every three years and pare the list, and they don’t want it to cost too much when they do. They don’t want to be charged \$100,000 when changing from consultant A to consultant B.”

Another trend benefiting software vendors is the globalization of data standards. “If you are an industrial company working around the world, you don’t want 25 different data management systems,” says Beard. “With the web today, you can have one system. And you can get all your consultants and labs on the same standards and adopting corporate best practices.”

EQUIS is offered both as a web-hosted system and a desktop-licensed product. Web-hosted software—also referred to as on-demand, or software as a service (SaaS), or the latest buzzword, the “cloud”—is certainly a rapidly growing mode of delivery, Beard acknowledges, but it’s still a very small part of the software market. Buyers should also beware of the hype surrounding “cloud computing,” he warns.

“If you have a poorly formed database, whether it’s hosted or not, it’s not going to save you,” he remarks. In addition, “if you use a proprietary system that nobody but the vendor can run, you can easily get into a data hostage situation. It’s a tough sell to say to a government agency, ‘send us all your data; trust us with all your data.’”

Many customers start with hosted systems as a pilot project. “The plan is, bring it in house within a year, or sometime in the future,” says Beard. However, “we still see most clients wanting to run their software on their own private network and keep control of the systems and data.

That’s especially true with government and large industrial clients.”

One of the keys to EarthSoft’s success is its adoption of an open systems strategy, according to Beard. “In the software world, you can’t keep secrets. In two or three years, your competitors and others have reverse-engineered your product. Keeping your product proprietary or secret doesn’t give you much of an edge time-wise. So part of my calculation is, within two years, my competitors have knocked this thing off and have a copy.”

Such pressure compels a need for constant innovation. “One of the facts of life is the world of constant and rapid change, and we accept the challenge,” says Beard. “We want to obsolete our own product as quickly as we can. The last thing I’m going to do is sit here and let somebody else obsolete my product. Innovation has to continue at a rapid pace, and will not stop. If we stop, we’ll be dead.”

Recent innovations include the EQUIS Data Gathering Engine, which collects real-time data from sensors, loggers, and field instruments. “We’re seeing a real race for people to network a system of wireless or some sort of automated electronic data collection equipment in this manner, rather than sending a person out to do it by hand,” Beard says. “We see an explosion of business for that product. It will drive down the cost of collecting the data.”

The keys to innovation for EarthSoft will be listening to customers and anticipating technological innovations in software development such as platforms—Microsoft, Oracle, ESRI for GIS, and Google—without being dazzled by the initial hype. “The challenge is picking the right platforms and not getting fooled by fads, while at the same time recognizing game-changing technologies.”

Such a balancing act makes it difficult to look out more than a year strategically, but Beard feels he doesn’t need to. “Our plan going forward is to try to execute. I see insurmountable opportunity. We don’t need to be visionaries. We need to be opportunists, because the opportunity is right here, right now. I can’t imagine being in a better business than we’re in right now.” ■

## IHS MAINTAINS AGGRESSIVE M&A PACE THROUGH ACQUISITIONS OF ESS AND EMERGING ENERGY RESEARCH

In 2008, EBJ conferred a Business Achievement award on IHS Inc. (Englewood, CO) for its splash into environmental, health, and safety (EHS) software waters through the acquisition of three firms: EnvironMax, Inc., Dolphin Software, Inc., and Environmental Software Providers (ESP). These three acquisitions immediately established a broad platform in environmental information management, from chemical life cycle, material safety data sheet (MSDS), and supply chain management to emissions tracking and greenhouse gas (GHG) management.

With the addition of the environmental platform gave, the IHS offering spanned four strategic information management “domains”: environment, product life cycles, energy, and security. For IHS’s clients, these domains often intersect—for example, for energy companies, the firm tracks every gas and oil well drilled in the world, providing up-to-date information on what the wells produce, whether they are active, what’s left in the ground, and more. For companies planning new drilling operations, IHS will also provide information on the regulatory regime and the geopolitical situation in host country, reflecting the security domain in its offering.

It became clear that environmental information constituted a key component of that strategic information package following IHS’s acquisition of Cambridge Energy Research Associates (CERA) in 2004. CERA brought clients who were CEOs, COOs, and other strategic planning-level executives at the largest oil and gas companies, and these people consistently told IHS that their biggest emerging strategic concerns over the next 10 to 15 years will center on environmental risks, carbon management, and sustainability.

Far from being done building the environmental domain through the 2008 deals, IHS followed those with a more substantial transaction in September 2009—the acquisition for \$59 million of **Environmental Support Solutions, Inc.** (ESS; Tempe, AZ), a provider of EHS and crisis management software. ESS brought new modules, filling in gaps in IHS's existing EHS software platform, and a strong support services capability, according to Scott Lockhart, who came to IHS in the ESS deal and is now IHS's vice president of environmental solutions.

Then in February of this year, IHS executed a deal for a different kind of company, but one that complimented the environmental domain, particularly where it intersected with energy and GHG emissions management. IHS acquired **Emerging Energy Research** (EER; Cambridge, MA), an advisory firm claiming core competencies in market and competitive analysis, business intelligence, strategy assessment, and global reach as it relates to the development of emerging technologies such as wind, solar, biomass, ocean energy, nuclear energy, carbon capture and storage, and hydrogen-based systems.

Lockhart explains the synergies between these elements as fully in keeping with IHS's value proposition. IHS's mission is to serve “as a source of critical information and insight, critical information being the types of information that the organizations we sell into cannot operate without, even in an economic downturn.” Supporting that mission is an information management offering that is “enterprise level, rich in domain expertise, a deep installed base, and very content and data hungry,” says Lockhart. The EHS software acquisitions provided the enterprise-level platforms with the domain expertise and installed base, while the hunger for data is fed by the expertise of entities like EER and CERA.

Lockhart sees the EHS software acquisitions as providing the critical vector into addressing clients' sustainability programs. “Even though sustainability is not well defined at this juncture, and means something very different depending on what vertical market you're selling into, no

matter how you define it, EHS and sustainability are inextricably tied to one another,” he observes. “The same calculations for supporting compliance for EHS are the same as those for sustainability reporting—the same underlying master data. So the stronger we are in EHS, the broader and deeper our platform, the better we can get a handle on what sustainability means to our clients. We see a big growth market in what sustainability means in 2012, and EHS is key to the way to access the data to support sustainability as you go forward.”

### “ECOSYSTEM” OF PARTNERS INCLUDE ERM AND IBM

On the software side, ESS brought critical scale, in the form of the support services, an extensive installed base, and what Lockhart calls the “ecosystem” of partners. To get companies up and running on the ESS systems, the firm works with partners such as \$700-million global environmental consulting firm ERM and IBM during the implementation phase, which can run three to five times the cost of the actual system—itsself a \$2 million to \$7 million capital expense for an enterprise-wide project at a large, asset-intensive client, according to Lockhart.

“The ERMs and URSs have traditionally been in this space, and over the past three to four years, we've seen more of the IBMs and the Deloittes” he says. “They are getting a lot more engaged now than they were five years ago.”

By “ecosystem of partners,” Lockhart means the relationships established with clients' legacy information technology providers. A typical customer has an enterprise resource planning system provided by SAP or Oracle, for example, and “we said, we're not going to rip up the investment in these systems,” Lockhart notes, “so we've built strong relationships with these companies.”

Compliance remains a strong driver for the environmental domain business, says Lockhart, and continues to be the core element in presenting the value proposition for most clients. In Europe, for example, the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) directive has been a major sales driver.

There are other drivers as well. For its clients, which tend to be “asset-intensive,” energy efficiency initiatives to reduce consumption and emissions are increasingly popular. In addition, the large multinational companies IHS serves are seeking consistency in data management and reporting across all geographies and up and down the organizational chain.

“If you used separate systems for the corporate report and for the emissions tracking in, say, Texas or Louisiana, you have a liability issues,” says Lockhart. Another driver is the need to replace outdated and unconnected systems. “Many of our customers, because we sell at the enterprise level, are retiring hundreds and sometimes even thousands of siloed systems. There are lots of cost savings to be gained from that effort.”

### GROWTH BUT SOME DELAYS

IHS's environmental and energy domain business continued to grow through the recession—at a faster pace than the rest of the business—but the company did experience impacts. Some planned capital projects turned into pilot projects, or a web-hosted implementation might have supplanted an on-premises, behind-the-firewall implementation, according to Lockhart. “There were more six-figure deals, rather than seven-figure deals, and everybody was doing two, three, or four reviews of any significant capital spend.” He adds, “that's been changing over the past four to five months.”

IHS will continue to acquire on an aggressive pace to fill in gaps, Lockhart affirms. Perceived gaps include the “H” and “S” in “EHS.” Also, the firm aims to build a broader offering to help clients better manage their overall resource allocation and efficiency, with energy at the top but water a close second.

Key challenges will be “not selling past demand” and helping clients clarify what sustainability means to them. Selling the value proposition is an evolving art, Lockhart remarks, adding that IHS has benefited by working for a large number of early adopters. “They get it at the enterprise level. I think the market has a couple of years before these concepts are normative.” ■

## ENVIANCE ATTRIBUTES 50% GROWTH THROUGH RECESSION TO DELIVERY OF “MUST HAVE” TECHNOLOGY

**D**uring recessionary times, the companies that survive are those that show discipline and patience in selecting budgetary items for cutbacks and strategically investing for a solid position when the economy rebounds. Information technology and data management expenditures require particular care to assess; you can certainly survive a delay in spending on the “gee whiz” technology that would be nice to have, but you take risks if you put off the addition of capabilities that can improve data flow and analysis and contribute to operating efficiencies.

Continuing its run of 50% year-over-year growth, environmental, health, and safety (EHS) software provider **Enviance, Inc.** (Carlsbad, CA) is confident that its offering has demonstrated essential value to its clients. “Our experience was, while the recession clearly forced companies to evaluate their budgets, we were fortunate to be included in the must-have applications,” Enviance CEO Lawrence Goldenhersh. “It sharpened the focus on technology they needed to have for competitiveness versus the nice-to-have technology. So we had nice growth, and I attribute that to the need for reliable, auditable, transparent data management, compliance management, and carbon planning.”

### GHG AND CARBON SYSTEMS FUEL THE SALES ENGINE

A big part of that growth was the success in sales of the company’s evolving “engine” in carbon and greenhouse gas (GHG) emissions management. Goldenhersh hastens to explain, however, that this success builds on an established reputation for supporting other aspects of environmental data management. “The base of that engine was our 10 years of experience in reliably managing air, water, and waste for a number of industries,” he notes.

That said, several factors have conspired to bring carbon management to the forefront, and to raise its profile as a manage-

ment issue within client organizations, according to Goldenhersh. A critical factor was the U.S. Environmental Protection Agency’s (EPA) final GHG emissions reporting rule, issued last fall. The rule affects 10,000 facilities in the fossil fuel, industrial, motor vehicle and engineering manufacturing sectors, and other facilities that emit 25,000 tons or more of carbon dioxide equivalents (CO<sub>2</sub>e) annually. They must file their first reports in 2011 on their 2010 emissions.

Another factor was earlier action by the Commodities Futures Trading Commission (CFTC), which issued a rule to make a determination whether the Chicago Climate Exchange (CCX) was a significant price discovery mechanism. Those actions by EPA and CFTC “sent a pretty clear message that carbon management would not just be an issue of compliance, but an issue of competitiveness,” says Goldenhersh. “That precipitated some attention in CFOs’ offices, which changed the way companies are looking at systems like Enviance.”

### GUIDANCE BY SEC AN ADDITIONAL MARKET DRIVER

Yet another factor is one that Goldenhersh refers to as “graduation day” for carbon management—the guidance on disclosing climate change-related exposures issued this past February by the Securities and Exchange Commission (SEC). While not strictly speaking a “rule” as some media reports described it, the guidance would carry weight in any legal proceeding regarding climate change reporting and makes it clear that, to say the least, assessing

the financial, operational, and competitive risks associated with any existing or future climate change laws and regulations is not something companies should neglect.

“I call it graduation day because it brought carbon management up from the environmental management office to the CFO office—from a compliance data point to a financial data point that needed the attention and the management of the office of the CFO,” explains Goldenhersh.

Enviance has had a carbon management engine, or platform, since 2005. That year, the company implemented an internet-based GHG management system for American Electric Power (AEP), claiming that installation to be the first such system in the world. “We’ve used web-based services since 2003, and we used them in cooperation with AEP’s systems to show all CO<sub>2</sub> emissions from its plants on the dashboard,” says Goldenhersh. Today, Enviance claims to have about 35% of the generation capacity in the utility sector using its system.

Meanwhile, in general manufacturing—“outside of what people would consider the normal target zone,” says Goldenhersh—the company includes such large firms as Fuji Film Holdings, Koch Minerals, Syngenta, and Adchem among its cli-

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*The SEC guidance “brought carbon management up from the environmental management office to the CFO office—from a compliance data point to a financial data point that needed the attention and the management of the office of the CFO.”*

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ents. In addition, in 2008, the Department of Defense (DOD) used the Enviance platform to establish what Goldenhersh refers to as DOD’s first GHG footprint at an installation—or as DOD calls it, a “bootprint”—at Fort Carson in Colorado. Today, the system is deployed throughout all Army commands, according to Goldenhersh.

In March, Enviance introduced the latest function for the GHG platform, one the company believes to be a differentiator in the carbon management software field through its deep level of data “granularity.”

GHG FastTrack is based upon the firm's library of more than 300 data management models for a variety of stationary and mobile emissions sources.

"Each model contains the way the data should be collected, the protocols for missing data values, and the set of tasks we know are required to execute on the facility floor to collect, manage and report emissions data," explains Goldenhersh. For FastTrack, "we built a web-based wizard on line, and if you fill it within 60 days, you will be up and running on the Enviance system to collect the data and do the calculations, so that when you have to report to EPA next year, you can push a button and file the report."

Many of the other companies that have jumped into the carbon management software market offer "80,000-foot reporting systems that don't really know how to collect the data," explains Goldenhersh. "They convert data at the gross level and convert to carbon emissions through calculations. That can be done fairly straightforwardly. It would be static, not something that a CFO would use to report on, but if you want to file a report on what your footprint was, you might be okay.

"There may be 100 new companies rushing in to capture gold in the carbon field," he continues, "but none have done the hard work of capturing granular data. And those things are required to achieve an auditable report. This means getting down to connecting to sensors, to fuel-loading databases, and the like." For SEC reporting requirements, the 80,000-foot calculations "won't cut it," he adds.

Not to neglect the rest of its offerings, Enviance introduced in April version 6.4 of its environmental enterprise resource planning (ERP) system. The company says that version 6.4 enhances ease-of-use while adding new features and functions like customizable dashboards, workflow reports, quick links and flexible data entry forms.

What gets Goldenhersh more excited, however, is a forthcoming version of the environmental ERP system—one that the company has been showing "in stealth mode" to its customers. This version fo-

cuses on the financial ramifications associated with all aspects of environmental management.

"We have a proprietary algorithm that allows us to track 1,600 environmental factors, including carbon and water, and using 30 years of Nobel laureate research ascribe a dollar number in revenue associated with those numbers. So we can produce a heat map of environmental risk," says Goldenhersh. "If you're dealing with water, for example, should it become a regulated commodity and costed out at a certain rate, we can calculate the dollar risk."

The product is not commercially available yet, but "it's our vision of where compliance is going," says Goldenhersh, adding that, while carbon has graduated, "water's next. As the externalities become cost centers, management will have to manage them." He hastens to point out that this type of functionality has nothing to do with reporting to the EPA. "It's a matter of driving costs down."

### C&E FIRMS BUILD A DUAL SALES CHANNEL

Enviance began by selling directly to the customer initially, but more recently has added a value-added partner channel, according to Goldenhersh. Partners like **ARCADIS**, **CH2M HILL**, and the **Shaw Group** are licensed to sell the Enviance platform to clients and provide additional services drawing upon their environmental domain knowledge. "These consulting and engineering firms can offer our product to their customers through our partnership, or we can sell directly to customers and then use these firms to do the implementation work," says Goldenhersh. "It provides a lot of scale, instantly."

Looking forward, "our strategy is to continue to leverage our deep domain experience in emissions management, preserve our leadership position in GHG, leverage our 10 years of experience in cloud-based computing, and introduce to the world environmental ERP, which is where management is going," he concludes. "The future will be about managing the financial aspects of emissions management, not just the compliance aspects." ■

## ENABLON EXPANDING SUSTAINABILITY PLATFORM; TAKING MARKETSHARE IN EHS

**B**randing itself as a software supplier with a focus on sustainability management, **Enablon** (Chicago, IL) was a relatively early arrival on the sustainability scene. The company launched operations about 10 years ago focusing on the non-financial aspects of business management and recognizing that there were few, if any, companies providing an integrated approach to the control of environmental, social, and other non-financial risks.

"There were lots of separate tools for air, water, and chemical management and the like, but in terms of integrated platforms covering these issues, there was nothing," says Phil Tesler, Enablon's CEO. The company started with sustainability reporting functionality, moved quickly into environmental, health, and safety (EHS) information management and compliance tracking, and on up to a broad platform that's second only to SAP's in the scope of its sustainability offering from an enterprise software standpoint, according to Tesler.

Tesler breaks down Enablon's offering into four categories of platforms: corporate responsibility; EHS management, referred to as "QEHS"; air, carbon, and energy management; and enterprise risk management. Cutting across these platforms is a "new kid on the block," Global Initiatives, an initiative that involves going through industry associations and industry-focused organizations to reach up supply chains. For example, Enablon is working with the **Supplier Ethical Data Exchange (SEDEX)** in the United Kingdom.

"The idea there is to allow members to share sustainability information about their suppliers and improve social and environmental practices," says Tesler. "In the case of SEDEX, you're selling into 300 companies and thousands of suppliers."

Tesler claims his company is the fastest growing firm in the EHS software market, and the fact that the company increased

its staff from about 120 people in 2009 to more than 200 worldwide by mid-2010 is evidence supporting that assertion. In addition, a recent report by energy consulting and engineering firm **Groom Energy Solutions** (Salem, MA) identified Enablon as one of eight “emerging leaders” in the field of enterprise carbon accounting (ECA) software. The others are, in alphabetical order, Enviance, Hara, IHS, Johnson Controls, PE International, ProcessMAP, and SAP.

### **COST SAVINGS PACE GROWTH**

Enablon has an underlying dynamic that allows the company to withstand ups and downs in the economy, according to Tesler. The recent recession did prompt a repositioning of its products, however. Speaking of the North American market, in which Enablon increased sales by 100% last year and took market share, Tesler pointed out that clients became less focused on compliance and more attentive to ways in which their EHS software products could save money over the short term and the long term.

“We announced new modules for air and carbon management, identifying opportunities to reduce raw material use, water use, and energy use,” Tesler says. “All of these initiatives have impacts on the bottom line.” The dynamic U.S. market brought some major new clients, such as Accenture, UPS, and Nike. “These were large carbon and sustainability solutions. Many times, the job starts with carbon and extends it to broader sustainability issues.”

There’s been substantial growth in sales of the carbon platform, Tesler says, although the segment is “not as big as people think it is.” The supply chain initiatives are prompting solid growth as well. Leading buyers are companies in the consumer goods and retailers, and then food, textiles, and the fragrance industry.

Enablon has recently experienced some shifts in its sales channels. “We used to sell directly to the customer,” says Tesler. “What has happened is, more and more, we’ve grown a partnership network. There are lots of vendors in our space—more 165 in carbon management—and if you are identified as a leading vendor, you have the ability to establish these partnerships.

In this partnership network, the firm pursues three types of partnerships: delivery, distribution (mainly in countries or regions where the firm doesn’t have a direct presence, like Asia, Africa, the Middle East), and then complimentary partnerships. The last category is designed to address a major client need—content. “Our customers don’t require just technology, but also content, so one of the key objectives was to add the content to our solutions.”

An example of a partner providing this type of value is the global environmental, health, and safety consultancy **Enhessa** (Brussels, Belgium). “They helped us build protocols into our solutions, allowing us to provide pre-built systems with regulatory content,” notes Tesler. **AECOM Technology Corp.** (Los Angeles, CA) is another example of a content-provider partner.

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*During the recession, clients are less focused on compliance and more attentive to ways their EHS software products could save money over the short term and the long term.*

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Implementation of a “simple” carbon management platform can cost \$50,000 to \$100,000, according to Tesler. Outlining the breakdown of a typical implementation assignment, he notes that the first step is to identify the stakeholders, and for that job, Enablon provides a stakeholder management tool. Once the stakeholders are identified, their expectations in terms of data and transparency requirements are determined. Sometimes consultancies perform that function, and sometimes other organizations can support the task. The Global Reporting Initiative (GRI), for example, provides metrics related to the relevant activities of various industries, like textiles.

The next step is to identify where the data is, and who within the organization is responsible for it. The locations can range from the corporate level to the process level. Once these determinations are

made, the actual software platform can be established.

Training, interestingly, is a minimal step. “For many companies there is no training needed,” says Tesler. “The on-line capabilities are very user friendly. For a slightly more complex platform, we do a training webinar, and the only training that takes place is for those who need to analyze the data or administer the platform. That’s typically one to two days.”

Platforms can be hosted or provided on desktop; Enablon is “agnostic” with regard to this choice, according to Tesler. For carbon management and sustainability applications, users tend to choose the on-demand approach, although in Europe, the desktop approach appears to be preferred. In general, where the platform is meant to interface with a large, existing enterprise resource planning (ERP) system, Enablon provides application program interfaces for on-premises implementations. “It’s rare in that case to use the on-demand approach when you need that big integration capability,” Tesler notes.

Strategically, Enablon’s goal is to strengthen its presence geographically, particularly in the United States and Europe. “One of our objectives in the U.S. is to grow from number 3 to number 1 in the EHS space,” says Tesler. “Then internationally, Asia has been flagged as a region to develop. Another key objective is to accelerate product development, because competitive pressure has increased, and we need to keep differentiating our platform. There is still a lot of work to do to make our product deeper and broader.” □

### **EBI Report 4000: The Climate Change Industry**

After almost four years of research, EBI released its second edition of EBI Report 4000. Designed as a comprehensive source of market intelligence the 830-page report features market quantification, annual growth, forecasts, trends and profiles of numerous companies in each of 14 climate change industry segments.

Go to [ebionline.org](http://ebionline.org) for TOCs.

## CARBONETWORKS CHANGES NAME TO ENXSUITE, HIRES NEW CEO TO TAKE COMPANY TO THE NEXT LEVEL

Just this June, energy management software provider **Carbonetworks** (San Francisco, CA) announced major changes designed to brand the company in line with the broadened scope of services that customers were asking the company to take on. The two key actions were a name change to **ENXSuite, Inc.** and the hiring of software industry veteran Beatrix Infante to take over as CEO. Along with these announcements, the company also disclosed that it had completed another round of venture funding from existing investors to help further expand the executive team and support continued growth.

These moves follow previous growth-oriented steps. In 2008, the company closed on its Series A funding. It also moved from Victoria, British Columbia, to San Francisco to better penetrate the growing U.S. market.

Infante comes to ENXSuite with an impressive resume in the software and information technology industry, working in multiple high-growth business areas and claiming a number of successful exits for her firms. As chairman, president, and CEO of Aspect Communications, she led the company's transformation into a leading global provider of voice-over IP contact center solutions, achieving 300% year-over-year license revenue growth, record revenues of \$600 million, and record profitability and cash flow. She also served as a senior vice president at Oracle, ran the company's billion-dollar open systems business units, and initiated and led the acquisition of the Rdb business from Digital Equipment Corp. Most recently, she was an executive-in-residence at US Venture Partners and prior to that was CEO of VoiceObjects. She replaces ENXSuite founder Michael Meehan, who will now serve as the company's executive vice president and chief technology officer.

Joining ENXSuite was the outcome of a search for the next growth sector in the software industry. After many years in the

industry, including stints with a handful of early-stage startups, Infante found herself looking about the prospects for market growth over the next 20 years and concluded that "many of the larger issues have been explored and solved."

One area stood out as ripe for growth, however. "As I looked at how we manage energy and the quantities of data being managed by spreadsheets and consultancies, this looked like a promising area," she says. "I started having conversations with Carbonetworks, talking with Michael Meehan to find out if there is a better way to manage carbon and energy by more than spreadsheets."

The name change and re-branding "was something that our customers led us to," Infante tells EBJ. In response to customer demand, Carbonetworks was managing energy sources across a broad array of company activities, including electricity, water, and waste management. "Most companies began to see the value of all this data and having a single source to which you can upload emissions tables and emissions metrics, and to track when they change and who changed them," Infante explains. "The new name reflects that we were doing much more than carbon management. Customers took us there, to full energy management performance."

ENXSuite's core value proposition is the provision of an on-demand software platform, consisting of the products ENXSuite Information Manager, ENXSuite Business Intelligence, and ENXSuite Connect, that facilitates the evaluation of alternatives for reducing emissions and energy consumption. "We do cost modeling and sophisticated data slicing and dicing," says Infante. A company may, for example, want to evaluate an alternative lighting system for 1,000 warehouses and would use the ENXSuite platform to "figure out the return on investment and the net energy reduction and greenhouse gas emissions reduction," she notes.

"Our software models the goals and monitors performance, and then we have a link into the executive systems so that the executive compensation is matched to the scorecard of reductions. We're planning the reductions, monitoring the facilities, and doing the feedback loop regarding whether or not you are on plan."

Infante adds, "we view ourselves as the Hyperion of energy management," referring to one of the leader in performance management software (acquired by Oracle in 2007). She also claims that in head-to-head competition with Hara (Redwood City, CA), the Kleiner Perkins Caufield & Byers-funded energy and environmental management software provider that has been associated with Al Gore, ENXSuite has won 16 of 18 competes.

Major clients include Northrop Grumman, which is replacing hundreds of spreadsheets with more sophisticated and up-to-date information management tools. The company has end goals and a budget for energy reduction across all of its facilities, through a range of projects from lighting to refrigeration upgrades.

"At Northrop, we're integrating with 56 different environmental data systems that are updated at different intervals," Infante explains. "We don't replace those systems. The information we're gathering now lets the corporate officer or risk management decision-maker manage the data. There are companies that have done this kind of management at the facility level, and now they have a corporate reporting requirement. One warehouse may want to reduce an electricity bill and decides on a lighting program, and then hires a consultancy for millions of dollars. We can go in and help them model proposed projects across different facilities and geographies and help them make better ROI decisions."

### AVOIDING "EXCEL HELL"

As in the Northrop case, products like the ENXSuite platform address a persistent issue throughout the potential client base—spreadsheet syndrome, or as Infante calls it, "Excel hell." "If you think back to the early 1990s, how did every company manage the sales pipeline? They had Excel and mailed their lists to the corporate

function, which would roll up the spreadsheets and pop something out in a couple of weeks. You have the same thing today in environmental, health, and safety (EHS), with people updating spreadsheets every day, maybe handing them over to a consultant. Now we allow you to keep the pipeline within the system.”

ENXSuite is finding traction in a number of markets. The retail and consumer packaged goods segment is a strong buyer, motivated by corporate branding initiatives, according to Infante. Developing a reputation as a green vendor—and now, of course, meeting Walmart’s supply chain performance requirements—has become an elevated corporate priority and is driving sales of information management systems. The financial services sector is a key target because these companies are managing projects involving investment in reductions of energy consumption.

Taking more of a risk management than a branding view, government contractors have been solid clients as they strive to meet government reporting requirements. Then there are municipal governments, including the city of Chicago, a recent win for ENXSuite, which is supporting about 50 projects and is looking to leverage the city’s Climate Action Plan initiatives into the private sector and surrounding communities for further opportunities.

Another target market is multinational companies that are selling into countries with strict reporting requirements, such as the United Kingdom’s Carbon Reduction Commitment (CRC). “Three quarters of the companies in the U.K. have no ability to report at all,” Infante points out. “We do have some traction in the UK. We’re an emerging company, so we do have to do some due diligence.”

Infante sees the traditional EHS software providers more as potential partners than as competitors. “They white-label us into their markets. Some might decide we’re competitive and want to provide their own product, but we can help these firms in time to market. They will take us into deals because we’re bringing value they didn’t have before.” ■

## ADEC BOLTS ON ENVIRONMENTAL MANAGEMENT CAPABILITY THROUGH LAUNCH OF FIRSTCARBON SOLUTIONS

In its relatively brief lifetime spanning about a dozen years, data management firm **ADEC Solutions** (New York, NY) has grown into a global concern employing about 5,000 people in North America, Europe, Asia, and Australia and providing outsourced data management services in finance, human resources, accounts payable, budgeting and expenses, and more. Customers have included FedEx, First American Title, and other large, blue-chip companies processing millions of data points every day.

It’s now well-established that utilities and heavy greenhouse gas (GHG) emitters won’t be alone in having to assess the risks and opportunities associated with carbon management. They are being joined by firms like the above, as well as others across the retail, consumer goods, finance, real estate, and other industries, as well as municipal governments and federal and state agencies. And they are asking their existing data management vendors, like ADEC, to solve the problem.

“In 2007, ADEC’s clients told us, ‘you’ve been doing a great job, and we see this thing on the horizon called carbon; we don’t know how to handle it,’” says Dailey Tipton, vice president of sales and marketing at ADEC’s FirstCarbon Solutions unit. “ADEC looked at the market, saw the opportunity, and said ‘we can leverage our expertise in data management to support our clients’ requirements around environmental management outsourcing.’”

ADEC launched FirstCarbon Solutions’ precursor in Australia and the United Kingdom in 2007 to “test the market,” according to Tipton. FirstCarbon Solutions was formally announced late in 2008, and in early 2009 entered the North American market “with a bang,” by which Tipton means the development of a sales and marketing program and the hiring of staff to implement that program.

In November 2009, FirstCarbon Solutions acquired environmental software provider **Enverity** (Burlingame, CA), whose product FirstCarbon will use for its technology platform. In March, FirstCarbon Solutions formally announced that platform, called **ghgTrack**, the software as a service (SaaS) component of the company’s technology and services offering. Today, FirstCarbon has about 40 dedicated employees essentially working for clients from back office of ADEC, leveraging the parent’s full range of capabilities from virtual assistance to the ADEC outsourcing model, as Tipton described it.

FirstCarbon Solutions characterizes its offering as fourfold. The first element is “expert consulting, doing thought leadership around sustainability, energy management, water management, greenhouse gas (GHG) verification, and AB 32 accreditation,” says Tipton, referring in the last case to California’s ground-breaking Global Warming Solutions Act of 2006. The next two elements involve the development of a data management plan for the client and then the implementation of the Enverity tool set along with other tools such as smart meter integration platforms and ISO 14000 management tools.

“All of that is shored up by the outsourcing capability,” says Tipton in reference to the fourth element. “Consulting, supported by technology and data management, is the end-to-end project. Or you could look at it as data management and technology supported by consulting.”

The target markets for this offering consist of three separate areas. The first—what Tipton describes as the “smokestack” industries—is “very crowded, with robust EHS staffs and consultants serving them.” To these companies, FirstCarbon Solutions offers the data management outsourcing capability, entering the relevant corporate data into the FirstCarbon platform and providing “immediate transfer of responsibility for data management at a lower cost

and higher quality,” says Tipton. “We’re able to go into those smokestack industries and show them more cost-effective data management, and show them how they can use the time gained to enhance the rest of their core operations.” He gives an example of one for which FirstCarbon was able to unlock about 9,000 extra man-hours of productivity annually.

The next market is the so-called “mid-market”—essentially companies along supply chains that are distinguished from the more regulation-driven smokestack industries by a greater concern for what their immediate customers are demanding in terms of sustainability, carbon footprinting, and overall environmental performance information. FirstCarbon Solutions is providing these firms with gate-to-gate and process-level information, such as carbon equivalent (CO<sub>2</sub>e) per unit measure of product or production run that they can then pass along to the likes of Walmart or other companies requesting carbon production data.

“We are capable of doing that within ghgTrack, which is a real differentiator for us,” says Tipton. “Our system can turn the amount of energy usage for a production run into a unit rate that’s coming out the back side. We generally add per-site data management with the offering for the technology tools. We have experienced that our customers don’t have the tools or resources. They’ve been using spreadsheets, and with their reporting requirements, they can’t keep up, so we’ll pick up the invoices, the meter reading, or whatever format the information resides in to provide an end-to-end outsourced process at a very attractive cost model.”

The third target market is the one Tipton finds most exciting—“clean industries,” which consists of firms in real estate, hotels, banking, building management and other areas with small environmental footprints compared with utilities and industrial companies, relatively no environmental staff, but still a real and unmet need to deal with their environmental impacts. These impacts are not insignificant, Tipton points out. Some 42-48% of CO<sub>2</sub>e worldwide is generated by buildings, for example.

These companies “want to try to turn CO<sub>2</sub>e into business advantage,” says Tipton. They want to increase building occupancy through the establishment of a reputation for “green”—accomplished often by certification under the Leadership for Energy and Environmental Design (LEED) program—or they want to improve property values, or they may be simply interested in improved energy management. “We enter these companies at a very high level—senior management, vice presidents, etc.”

FirstCarbon Solutions prices the technology platform on a site-by-site basis, scaling downward for multiple sites. A ghgTrack installation will cost \$900 per month for an industrial site, or \$500 per month for two sites. For non-industrial sites, prices start at \$500 per month, going down to \$250 per month for two sites, and falling from there as more sites are added. “There’s a lot of economy of scale,” says Tipton.

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*Presenting the value proposition presents a challenge, because clients often don’t know where to start in specifying what they want. They know where they want to get to.*

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Presenting the value proposition presents a challenge, says Tipton, because clients often don’t know where to start in specifying what they want. “They know where they want to get to.” In specifying the specific steps towards achieving the end state, “it all comes back to capturing the data and creating the management program, as opposed to just saying ‘I want to do a lighting program.’ You put the data management function into a technology tool, continuously collect the data, and base business decisions on that audited data, just as you did for years in finance and accounting.”

FirstCarbon has established what it calls the channel partner program, under which

it forms alliances with two types of partners—resellers who simply take the product directly to market, and environmental consulting and engineering firms that are engaged in environmental management, remediation, and other data-intensive projects. The firm also sees the CH2M HILLs and AECOMs of the world as potential clients, with large data management operations of their own and the potential to improve margins and focus more tightly on their core business by outsourcing those operations.

Looking forward, FirstCarbon Solutions anticipates turning two to four technology upgrades per year, driven heavily by the directions that their clients point them, according to Tipton. Clients have begun inquiring about the ability to track and manage their Scope 3 carbon emissions, for example. Also, a new carbon trading consulting service is arising around the growing need to generate and manage carbon offsets, says Tipton. “The data management capability is driving the back of everything, and the cost-effectiveness is the ultimate message.” □

### **EBI Remediation Market Research & Data for 2010**

In the first quarter of 2010, EBI completed its comprehensive analysis of remediation markets and companies and the results of the research are available in a number of forms:

**2010 Remediation Datapack:** A 10-tab workbook for \$495 with market breakdowns, forecasts, top 150 companies and survey results

**2010 Remediation Survey Results:** Complete response summary to EBJ Feb-March 2010 remediation market survey for \$195

**EBI Report 318:** Remediation & Industrial Services: A 482-page comprehensive report. Purchasers will also receive all data products above.

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