

## Software for a safer, cleaner world

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When the European Union's Emissions Trading Scheme comes into force at the beginning of next year, many companies will start paying for the carbon dioxide they emit in Europe. It could fuel renewed interest in environmental and other non-financial reporting software - even now, some of the world's biggest companies are using no more than a spreadsheet to track how much CO2 they produce.

"Until now CO2 reporting has been voluntary," says Charles Donovan, commercial manager at Enviros, a UK-based environmental consultancy and software company. "The EU Emissions Trading Scheme will move people away from that. It helps to lower the payback period of investment [in software]."

Environmental, health and safety software emerged largely to deal with legislation brought in after the Bhopal chemical and Exxon Valdez oil disasters in the 1980s. Then, companies' first instinct was to develop their own IT solutions. Only in the 1990s did specialist software developers emerge, and through acquisition they are now offering a range of software designed to deal with a number of common problems in the field. Among big-name enterprise software companies, only Germany's SAP has managed to carve out a niche with its SAP EH&S product - Oracle had a presence in the field but has since retreated.

Maintaining productivity is a key reason for investing in the software. "Companies don't want highly-qualified, highly-paid professionals doing bureaucratic roles," says Jess Kraus, founder of California-based 3E, which specialises in software to help companies deal with dangerous chemicals. Another company offering a broad range of environmental, health and safety software is ESS, based in Arizona. Its software aims to answer the question, "How do we manage chemicals and the environment and how do we manage things if something happens?" says John Gargett, crisis technology manager. Many of the problems which emerged from the September 11 attacks were environmental, he points out.

Another more positive motive for companies to invest in software of this kind has emerged with the belief of some companies that there is commercial value in maintaining good reputations with investors and the public, says Elizabeth Donley of US software consultancy Donley Tech. When reports emerge of a company suffering an accident or having to pay a fine, people tend to think more generally that they are not doing a very good job, she says.

Ms Donley says that despite consolidation there are still more than 3,000 software products available. As well as tracking emissions these systems help companies keep up with regulatory paperwork, monitor health and safety, produce management reports and, in some cases, manage crisis situations. While many products deal with a single task, she says around 25 now attempt to

encompass a range of functions that are becoming more comprehensive and more international in scope. However, "there is still not a clear leader in the field and I don't see a dominant player emerging right away," she says.

While there is a lot of software about, picking the right solution is not easy. Apart from the nature of their business, factors such as the territories a company is in, its environmental pro-activeness, attitude to web-based technology and preference for a one-off software purchase or ongoing service package all make the outcome individual.

Also, some energy companies still want to get involved in the development process. Mr Donovan at Enviro says one "energy major" has shown it wants a big hand in developing new software, taking a stake in the next version of Montage, the software company's energy and emissions management product. Another company, oil and gas producer BP, is among those using Enviro's system to try to make energy savings, although it uses its own in-house system for recording carbon and sulphur gas emissions.

BP, like Enviro's unnamed business partner, has in the past tried developing software for itself with an eye to selling it on. Three years ago, the in-house software package Tr@ction replaced BP's 20 existing computer systems for tracking accidents where action is required - everything from a fatality to the spillage of more than a barrel of oil.

"It is fundamentally a safety information system, but it has a major management information spin-off use as a source of safety statistics," says Nick Coleman, vice-president of health and safety, security, environment at BP. "You can see the likelihood of a twisted ankle in each area of the US or compare the safety records of a gas station in Australia with those in Oklahoma."

As well as feeding safety and incident information back to head office the system allows each of its 30,000 users - site managers, health and safety managers and admin staff - to compare their performance with others. Fostering such a benchmark is helpful improving safety record of an enterprise as big as BP where central control over safety is impossible, he says.

In the event, take-up of BP's system by other companies was disappointing and BP abandoned its sales efforts after a year, but not before attracting custom from the likes of construction company Balfour Beatty and the US military. "Other companies just weren't geared up to use it," says Mr Coleman. "This is not a software package, this is a way of life." Another reason for its failure, according to Mr Gargett at ESS, was simply that "large multinationals wouldn't want to use the services of another."

BP was not the first big company to move in and then out of the business. US plastics and coatings company Eastman Chemical bought Aerial Research, a company compiling data to help companies adhere to laws on handling of chemicals, only to sell it late last month to 3E. US defence contractor Northrop Grumman is a counterexample, providing a system to the US Department of Defence which it continues to support and offer to other companies.

While the commercial incentives - and legislation such as the EU's CO2 emissions trading scheme - are creating an environment for incremental advances, it might yet take a terrible event for many companies to invest in state of the art technology. It is not a matter of whether such an incident happens, but when, according to Mr Gargett. "I have been in this business long enough to know that we will have an event of some sort."