LOCUS TECHNOLOGIES SEEKS TO PIONEER ENVIRONMENTAL INFORMATION MANAGEMENT THROUGH ON-DEMAND APPROACHES

Locus Technologies (www.locustec.com) is a provider of software and related services based in the San Francisco Bay area. Founded in 1997 and today employing about 40 employees, the firm's annual revenues are in the $10 million range. Locus has always been profitable and claims to have signed some of the world's largest companies as customers for its premier web-based environmental information software applications. For example, four of the top 10 Fortune *Global 500 companies use Locus' software. Locus manages environmental information for over 35,000 sites worldwide and manages over 100 million analytical records. Neno Duplancic is the company's president and CEO.*

***EBJ*: How has business been in general the past couple of years?**

Duplancic: Locus Technologies' business has been exploding over last two years. We became "the king" of environmental data. The transition from consulting services to a software company has been completed, and in the process Locus has become the industry's largest pure "software as a service" (SaaS) environmental information management vendor. We had a record 2007.

"Such a lot of data, so little information data management" has been the pet peeve of environmental industry. No longer. It is conservatively estimated that over the next decade, software for environmental information management, including sustainability, greenhouse gas (GHG) data, environmental compliance, and health and safety management and reporting will become a $2 billion market.

***EBJ*: Have you brought any new products or services to the market in 2007?**

Duplancic: Locus introduced the ePortal to its *Fortune* 100 customers in May, thereby providing a slick and user-friendly interface to environmental information, business analytics and direct integration with Locus' popular and award-winning Environmental Information Management (EIM) database. The ePortal is based on next-generation portal technology allowing seamless information integration across multiple sources. This gives users access to Web 2.0 features, and for the first time allows customers access to important data and information in a single customizable dashboard through SSO.

***EBJ*: What was the company growth last year?**

Duplancic: Locus followed up with record sales to new *Fortune* 100 customers, adding more than 30,000 new sites (a 600% increase from 2006) to EIM and more than 20 million records (a 20% increase from 2006). Locus is poised to add another 10,000 sites and millions more records to EIM and ePortal in early 2008 with existing signed contracts.

***EBJ*: What has been the principal aim of your strategy over the past couple years?**

Duplancic: Locus's principal strategy has been to capture market share for environmental information management. We have been very successful implementing that strategy. Today, Locus is the vendor of choice when it comes to environmental enterprise software. We manage more sites worldwide in a single web-based centralized system than next five competitors combined.

***EBJ*: What do you see as the main problems affecting the industry?**

Duplancic: One of the main problems affecting the industry is that customers rely on spreadsheets and consultant's home-built software to manage their environmental data and information. At present, many customers use electronic and manual methods to manage, document and report their compliance activities and other environmental data. Using these methods in a decentralized structure demands a high level of coordination between various staff, not all of whom work within the same group or department. With compliance activities increasing in number and complexity, present practices may be subject to human error, to duplicative or inconsistent effort or data, and to the risk of noncompliance. To address these potential risks, customers must address their information management needs.

Many customers are evolving their processes to a proactive system where interdepartmental, trans-consultant collaboration, and cross-functional management procedures create an organization-wide systems with self-correcting compliance programs. The responsibility for compliance performance will then extend beyond the bounds of the facility environmental manager/coordinator, involving the organization as a whole.

***EBJ*: What is the current practice of environmental information management and flow?**

Duplancic: Data is collected from a variety of sources— from consultants, contractors, labs, suppliers, customer's own field employees, or, as is more increasingly true, by remote wireless sensors. It is stored in remote locations, such as the supplier's spreadsheets or other files on the desktop, laptop, or network server of suppliers. The customer usually has no access to, or ownership of, such data. Such large, dispersed volumes of information are difficult to track and very costly to audit without relational databases and content or document management solutions software. If the customer does adopt environmental information management systems, the systems typically fall into one of two categories:

1) Stand-alone systems that project-level consultants, staff engineers, and staff geologists love, but that do not enable managers to perform corporate governance, data-mining, or forecasting tasks, or share information across a large organization or the web.

2) High-end, all-encompassing extensions of ERP systems, such as SAP, that can scale to support the needs of hundreds or thousands of users but that environmental manager refuse to use because they are complex and require costly additional programming to manage environmental data. Such enterprise systems are often characterized as being "a mile wide and an inch deep" because they typically lack domain depth, are not offered over the web, are expensive and difficult to install and integrate, cannot be used by suppliers, and are not particularly user-friendly.

As a result, too many businesses and governmental agencies are "flying blind" when it comes to managing their environmental information. Organizations with

environmental liabilities or that simply want to manage their carbon footprint often find themselves unable to reduce environmental expenditures either because they are unable to effectively and responsibly manage their environmental liability and coordinate their environmental laboratories, consultants, contractors, and regulators, or because they are unable to obtain an accurate accounting of their environmental problems or liabilities in order both to improve their environmental stewardship and to avoid regulatory fines.

***EBJ*: What differentiates your company from competitors?**

Duplancic: The ePortal platform, coupled with compatible applications, differentiates Locus from its competitors. Just as Microsoft's *Windows* platform dominance has driven an immense amount of business to Microsoft, Locus intends to leverage its ePortal platform as a means to integrate environmental information across the enterprise, and thus gain market advantage.

The other important aspect of the Locus ePortal platform is its ability to create and support a suite of applications. Historically, the emergence of a dominant suite of products has resulted in the displacement of the prior generation of vendors and the responsive growth of a new set of vendors capable of meeting the broad needs of enterprises. Microsoft's introduction of the *Office* suite enabled Microsoft to displace products that at the time were industry best sellers: thus, *Excel* overtook Lotus 1-2-3; MS Access database overtook dBase II, *Word* outsold *WordPerfect*, and so forth.

Another example, perhaps even more telling about the selling power a suite of integrated, cohesive products offers, was the emergence of ERP product suites by SAP, PeopleSoft, and Oracle. The ERP suite replaced individual products that were sold in the mainframe era to fulfill financial, supply chain, human resource, and customer relationship management (CRM) functions. Locus intends to employ its ePortal platform as a common foundation for a suite of products that meet the various environmental needs of an organization. These applications will share a common architecture, look and feel, and offer cohesive interoperability and all will be offered through SaaS. Users will be able to select those few or many Locus applications that fit their enterprise requirements. While there may be competitors with niche products in each of the market segments that are stronger than an analogous Locus application, none of these competitive products offers the support and flexibility of the ePortal common platform. Locus' portal is disruptive technology or disruptive innovation and, as a technological innovation, will eventually overturn the existing status quo products in the market.

***EBJ*: Do you still consider and position yourself as an "environmental" firm or have you found a better way to position your firm to your market?**

Duplancic: Locus is an environmental information management firm. Two-thirds of consulting dollars in this industry are spent "searching for data and information." Locus' mission is to reduce that time so that the consultant can focus on the remedy.

***EBJ*: How do you deal with the issue of sustainability or resource productivity? Are any customers buying services driven by the pursuit of sustainability? Who, where, and why?**

Duplancic: As a result of customer needs, Locus has been expanding its service to add a sustainability module to ePortal. A large European multinational company is implementing our sustainability module in over 70 countries. Industrial and governmental sector clients are increasingly requesting services in this area. Sustainability has the potential to be a significant growth driver for Locus' business, customer retention, and loyalty.

***EBJ*: What are the reasons that the environmental software market has been underserved by software companies?**

Duplancic: The historic reasons for this market being underserved are many. They include the fact that the market is driven by domain expertise that pure software companies simply do not have, and the fact that responsibility is distributed across the organization. Most organizations viewed environmental cleanup or emissions management as a short-term project based problem and assigned responsibility to each cleanup site or emission source. This resulted in separate solutions for each affected site across multiple different corporate levels and operating groups. Because the problem was distributed, insufficient funds were available to address the problem, so antiquated, inefficient processes were the norm.

Another reason has to do with the outsourcing of environmental activities. Outside consulting firms were utilized to bring in specialized knowledge of this field. Often the outsourcer took on responsibility for data management of the cleanup site or emission source. They did this using simple databases or spreadsheets frequently filled with invalidated data. Companies did not have the foresight to recognize that, by doing this, they lost all visibility of the problem—they did not have the data to compare costs and problems across sites; they could not assess liability across the company; and they could not manage the outsourcer because they did not have the data on their own sites.

Finally, there's the complexity of the data-management challenge. The perception was that the process was a very simple record keeping task that a spreadsheet could accommodate. Again, foresight was lacking as historical data needed for decision-making was found to be inaccurate or lost.

Times have changed. More and more companies are turning to workflow-based systems to address initiatives surrounding environmental operations, standards and monitoring.

***EBJ*: Why is social computing important to environmental project collaboration?**

Duplancic: The consumer social networking phenomenon is the fastest growing segment of the Web 2.0 application software. These same types of social networking tools and technologies will be demanded by customers to deal with multi-disciplinary teams and as an approach to managing environmental projects. The new "social networking" software tools have potentially huge opportunity in the field of environmental software. Having organized structured and unstructured data is only half of the problem in dealing with vast quantities of environmental data and information. Coordinating complex information workflow and project participants is other half.

The number of participants, the amount of information, and numbers of documents generated during an environmental project only add to the underlying difficulty of coordinating and scheduling the activities of all the parties involved.

***EBJ*: What areas are you considering as potential new business practices?**

Duplancic: Real-time wireless sensing and intelligent databases to automate reporting and compliance. Born out of necessity in the homeland defense market, wireless sensors are proliferating into environmental monitoring, producing even more data to analyze, store and manage. Several recent surveys indicate a huge growth potential exists for wireless sensing and remote control and automation services that can be used to automate operations at remote sites and facilities. We are already witnessing a revolution in real-time monitoring via wireless sensor technologies of emissions associated with stationary sources. Wireless real-time monitoring will, in all likelihood, occur via new technologies, such as distributed networks of embedded sensors feeding information via wireless connections to central databases.

***EBJ*: How are you evolving into new contract mechanisms with clients (e.g. leasing or paying per unit of emissions reduced, etc.)?**

Duplancic: Locus sells its software on a subscription basis only. This provides minimum risk for clients as there is no software to develop, buy, install, or maintain.

***EBJ*: What growth do you forecast for your company over the next five years?**

Duplancic: We plan to reach $100 million in five years.

***EBJ*: What overall size target and growth goals do you have in your strategic plan?**

Duplancic: Twenty percent per year for the next three years.

***EBJ*: What policy initiatives, economic instruments, and/or government activities would you advocate stimulating more demand or market growth in the environmental industry?**

Duplancic: Bringing governmental agencies such as the EPA to the 21st century to embrace wonderful Web 2.0 technologies and SaaS. They have a long way to go.

***EBJ*: How do you feel about the progress (or lack thereof) we have made on environmental issues in the past 40 years or so and the role the environmental industry has played?**

Duplancic: Huge progress has been made over the past 40 years. Back then, this industry did not exist. Today it makes headline news every day. But there is still a tremendous amount of work in front of us. Our focus is information management. Due to the lack of installed information management systems, this industry has not yet digested the data generated over the past 40 years. The environmental industry is an information-generating juggernaut. The amount of environmental data has grown exponentially over the past decade and it will continue to rapidly increase with the emergence of real-time sensing and wireless transmission technologies

***EBJ*: What do you feel are the most pressing environmental and social issues today in 2007 and in the longer term?**

Duplancic: Sustainability and global warming.

***EBJ*: Do you consider yourself a "socially conscious" consumer?**

Duplancic: Yes, but only to the point it can be proven to be beneficial. I do not believe, for example, that ethanol is the solution to our energy problems, as it brings on more environmental issues that anyone is imagining today, from pesticides and herbicides sprayed over land, to groundwater and soil contamination, to affecting the balances of food supply.

***EBJ*: What motivates you most in your work and how does that translate down to your employees and colleagues?**

Duplancic: Doing something that is absolutely right for mankind and that is not based on revenue generated from advertisement.

***EBJ*: How have the environmental problems you've been asked to solve changed over the years?**

Duplancic: By 2020, Locus estimates the environmental industry will produce more data than the Department of Defense, the Department of Energy, the Internal Revenue Service, and the financial and health industries combined. In today's complex, multi-regulatory world, business executives are challenged to quantify their companies' environmental problems, manage sustainability and GHG emissions, organize compliance and health and safety records, and accurately report to regulators. All of these tasks demand up-to-date, valid data. Yet rarely is such information well organized or easily retrieved. In fact, until recently, the robust data management systems needed to capture, store, manage, and analyze environmental information simply did not exist.

Even the most sophisticated companies acknowledge that assessing and quantifying environmental liabilities can be extremely challenging. A major reason for the increased attention is that quantifiable data has become available and, thanks to the efforts of Al Gore, made widely public. As a result, robust and multi-faceted information management systems are needed to store, analyze and present environmental data. The complexity of measuring environmental emissions and quantifying them made it exceedingly difficult for the companies and governmental agencies to reach a clear appraisal of their environmental situation and magnitude of the problem at hand. The inherent complexity of the data and reporting process blocked the progress on almost all fronts and it has been keeping companies from acting. Companies either use antiquated, inefficient processes or address one issue with a single vertical application. ■