Locus Technologies' Duplan Advises on Navigation of Rapidly Changing World of EHS/Sustainability Management

EBJ recently caught up with Locus Technologies CEO Neno Duplan, who discussed the information management challenges facing the regulated community during a time of rapid technological change.

Software Trends in EHS & Sustainability

EBJ: What are the overall software trends in EHS and sustainability that you are seeing in the marketplace?

Neno Duplan: Businesses are becoming more fluid in order to stay competitive. As a result, the need for speed, technology agility, and access to real-time data is an absolute imperative. A new order of business is upon us, in which executives must make intelligent decisions more swiftly in a dynamic and global marketplace.

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In the EHS and sustainability world, the software trends are mirroring this new mindset of business fluidity. There is growing demand for fast application development and deployment; mobile solutions; and new guidelines for software security. To stay competitive, business and EHS leaders require compliance software to meet their ever-changing needs and reduce the impacts of non-compliance or unidentified risks.

Software flexibility for an EHS and sustainability deployment is necessary as the demand for agility grows. The days of fixed, 100% vendor-managed applications—where customers have to wait months or years for enhancements—are now history. Applying end-user configurable software-as-a-service (SaaS) or platform-as-a-service (PaaS) approaches will allow for configuration and application development to be pushed out from the software vendor to the customer for a more efficient and time-conscious implementation. Going forward, software vendors must be willing to invest in both depth of content and software functionality in a user-friendly, end-user-configurable environment to be successful.

As for mobility, mobile usage has infiltrated all sectors of the corporation, with EHS and sustainability departments now entering the fold. According to LNS Research, 5% of EHS department have implemented mobile deployments, and 25% are planning to incorporate mobile into their system over the coming year.

Then there are the security issues. Software security has captured world headlines in recent months due to cyber-attacks that have shown that any system, cloud-based or on premise, can be hacked. In addition, sustainability demands by investors and the public are pushing companies to be more transparent. The challenge for companies is to balance this public/business need for transparency with their obligation to ensure security for their medical records and their compliance information.

EBJ: To what extent are regulated companies still relying on spreadsheets to manage their EHS information, and what disadvantages do they suffer by doing so? What are the top reasons they should invest

in up-to-date EHS compliance and sustainability management enterprise software?

N.D.: Spreadsheet use in the EHS and sustainability world is deeply entrenched and widespread. Amazingly, numerous studies report that over 50% of companies continue to use stand-alone spreadsheets as the tool of record for compliance activities. As the need for increased operational performance and alignment filters to EHS and sustainability departments, new, more modern data management and analysis tools will be incorporated.
The real breakdown arising from the use of spreadsheets comes when data volumes hit the millions, or when collating the data across an enterprise becomes a daily reporting need. Errors can be egregious enough to make headlines, as was the case with the $6 billion dollar London Whale loss experienced by JP Morgan. The error in this case was allegedly due to the copying and pasting of incorrect information from multiple spreadsheets. And lest we forget, the data must be maintained and accessible for years or even decades. EHS and sustainability software and calculation engines are built with versioning, auditability, and long-term storage in mind. Spreadsheets are not.

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EBJ: What is the role of a consulting firm in the EHS purchasing process?

N.D.: Consulting firms in the EHS and sustainability space play a unique role for software vendors. There are multiple types of consulting firms (engineering, management, integration, etc.) with multiple roles that they can play in the purchasing process. A firm's role can be minor, such as providing a framework of the deployment, or it can drive the entire process from vendor identification to selection to deployment to support.

Companies need to determine if they need a firm, and if so, what type and level of consulting they are willing to finance based on their operations and enterprise requirements. The following are a few factors to consider.

Most important, software vendors should represent and discuss their own technology stack and the technical architecture of the software. New developments and product plans can be missed, so a direct conversation with software vendor is recommended.

Also, remember that there are different types of consultancies. Engineering consultants firms that use the software for multiple clients or have implemented it several times can provide insight into "real world" experiences. IT or integration consulting firms might be best if several systems must be integrated together for the software solution to work effectively. Management consultants have broader experience across many industries and large implementations and could provide valuable advice.

You must also get the right players in the room. If the discussion is functional, have your company experts in the room along with an engineering consultant familiar with the vendor's application and a subject matter expert (SME). If the vendor doesn't have an SME, then the engineering consultant needs to ensure the software meets requirements of the end user.

The purchasing process usually involves vendors responding to a list of requirements. Consulting firms can help create requirement lists based on the specific customer's needs.

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Finally, the cost of evaluating and implementing software can be up to four times the cost of the software itself, so pick your consulting firm wisely. The firm should be trustworthy and should understand your business and the software it is evaluating. Some software vendors certify individual consultants, but this is not always the best indication of a consulting firm's capabilities. A consulting firm that has implemented a variety of vendor applications should be able to discuss the pros and cons of each offering to assist in the selection process.

Pros & Cons of Select EHS Software

EBJ: What are the pros and cons of selecting EHS software as a complete suite versus separate software application for each vertical (e.g. water quality management, air emissions management, GHG management)?

N.D.: The main arguments for a complete suite are lower cost, ease of use, and single vendor support. The added benefit for IT is the simplicity of supporting only one technology stack that keeps integration issues to a minimum. In addition, training may also be less expensive.

Truly siloed packages—meaning no integration with existing master data or reporting systems—should be completely avoided. Applications for specific verticals are a great option for companies that have complex verticals to address. The best software on the market for each vertical can help end users, but it will come with additional IT support costs.

For example, if your environmental group is completely separate from your health and safety group, is a consistent user interface between the air module and the ergonomics module really that important? Moreover, if the ergonomics module really doesn't meet the needs of the health and safety group, does it make sense to force them to use an inferior product just because the air module is the best on the market?

On the other hand, if everyone in the company will use the incident, training, compliance task and sustainability applications, your training costs will be lower if they all have a consistent way of operating.

EHS & Sustainability on Mobile Devices and in Cloud

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EBJ: The demand for mobile device and app integration in EHS implementations is on the rise. What should companies consider when considering a mobile deployment?

N.D.: Mobile has completely transformed the way enterprises conduct business on a global scale. Mobile apps and BYOD—bring your own device—not only have touched functional departments, but their rapid adoption is felt by all corners of a company.

From an ease-of-use perspective, customers should be able to configure mobile apps with the same ease as they do other applications. In particular, users should be able to easily configure business-specific data collection needs, enter data offline, upload on demand, and synchronize data back to the corporate systems of record without any loss of data during the synchronization processes.

From a usability perspective, the key questions asked include: Is the level of interoperability and seamlessness between the mobile application and the customers' system of record meeting business needs? And, Does the mobile app work both online and offline to ensure continuous access and interaction?

Mobile apps should also offer real-time data validation in the field, GPS mapping capabilities, and a complete audit trail of who, what, when and where, all insuring that customers and their consultants operate with a significantly higher degree of confidence and that, as a result, their environmental reporting and decision making are based on the most accurate information possible in real time.

Lastly, the devices your mobile applications operate on should be safe to operate with your facilities. Having mobile solutions is not worth adding safety risks.

EBJ: How do you see the market adjusting to the rapidly growing SaaS/cloud model of EHS information management—as opposed to on-premise management?

N.D.: There is confusion in the EHS information management space because many vendors have SaaS pricing models, but they aren't truly providing SaaS software. SaaS is a type of cloud computing that delivers applications through a browser to thousands of customers using a multi-tenant architecture. The focus for SaaS is on the end user as opposed to managed services. Applications, architectures, and processes are built from the ground up to produce superior, leading-edge alternatives to the traditional on premises software and maintenance model.

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Customers must be careful when selecting a SaaS vendor. The SaaS architecture must be multi-tenant, as that is the only proven SaaS delivery architecture that eliminates many of the problems created by the traditional software licensing and upgrade model. It is thus extremely important to know whether a provider uses a multi-tenant architecture. A provider should be able to answer this question with a simple "yes" or "no" and prove its answer. Multi-tenancy ensures that every customer is on the same version of the software. As a result, no customer is left behind when the software is updated to include new features and innovations.

The benefits of SaaS are hard to dispute: lower cost of entry, reduced implementation and maintenance costs, increased mobility for a workforce, reduced time to benefit/rapid prototyping, pay as you go, flexible and scalable infrastructures, IT department transformation (focus on innovation versus maintenance and implementation) because the SaaS vendor is responsible for upgrades, uptime and security, integration and scalability, and increased availability of high-performance applications to small and medium-sized businesses.

Still, some companies prefer the in-house option offered by traditional on-premise enterprise software, believing that on-premise is more secure. Where SaaS and vendor-managed updates all come together and really payoff is having more predictability around your total cost of ownership (TCO). However, many companies forget to consider the TCO of their on-premise investment, including hardware, network, backup, upgrades, and the disruption they bring to the business. The TCO includes the cost of human capital, such as project management, database, server, firewall, security, backup, and help desk resource—not to mention the overtime pay for weekend work to install emergency hot fixes, hardware repairs, or security issues.

With SaaS there are no more highly unpredictable projects, with the most common among those being software upgrades. One thing that can kill any software implementation is cost surprises. With a valid cloud application, companies can determine what it is going to cost them over the next five years. Such predictability lends transparency to the budget process and means customers will not have to fight budget battles for unexpected costs.

A huge benefit to EHS executives, CIOs, and other business technology managers that deploying cloud applications confers is the ability to free up valuable resources for other strategic activities. By spreading out costs over time via a subscription license, customers can better manage their EHS and financial risks.

Security Risks

EBJ: What are the legitimate security concerns of cloud-based systems?

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N.D.: Every CIO is concerned about security. The solutions for ensuring security and mitigating risk in the EHS and sustainability industry the subject of much debate. Recent cyber-attacks have shown that on-premise installations are no more secure than SaaS.

That said, today's SaaS solutions are extremely secure. Security is the top concern for any SaaS solution provider, and the applications must have a reliable and secure infrastructure in place for varied customer needs. For an on-premise solution to match the security of a good SaaS provider, it requires a major investment.

My advice is to always choose the most secure solution depending on costs and the risks to the enterprise if the system and data were to be compromised. For example, if a company's greenhouse gas emissions data is compromised and made public, but it was previously reported to a public agency and therefore already in the public record, the risk is minimal. If the social security numbers and health records of employees are compromised, the risks can be great.

Customer Support

EBJ: What should a company expect regarding software service and support for an EHS and sustainability deployment?

N.D.: Companies and the government have grown accustomed to a new level of best-practice service and support offered by enterprise software suppliers such as enterprise resource planning (ERP), customer relationship management (CRM), and supply-chain management firms. EHS departments should expect the same level of support for EHS applications that they experience with their other applications.

EHS applications are highly complex and require vendors, their partners, and consultants to have a high level of expertise in house, so that they can offer the best possible support to their customers. Ideally, the vendor support should not only focus on software, but also offer domain and content support wherever possible.

About Locus

Locus Technologies (Mountain View, CA) is a provider of environmental, health, and safety (EHS), sustainability, and water quality management software, providing associated support and consulting services to public- and private-sector clients worldwide. The company, which employs approximately 70 people at offices in Silicon Valley and Ashville, North Carolina, provides the Environmental Information Management (EIM) database, Locus Platform, Locus Mobile, and ePortal applications through a software-as-a-service (SaaS) platform and supporting clients such as DuPont, Honeywell, Monsanto, Del Monte Foods, and Los Alamos National Laboratory.

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