Technology Decisions Challenging the Flavor and Fragrance Industry

by Ty Nelson, Kate Nelson and Dave Josephson, RMSA, Cincinnati, OH

If there is one thing that successful technology companies have in common it is marketing and public relations. One can hardly read a business-oriented magazine today without seeing either a technology advertisement or self-promoting article. But how is a layman to separate fact from fiction? Information technology (IT) is one of the most complex issues facing the flavor and fragrance industry today. IT investment decisions can significantly impact any flavor and fragrance enterprise — for better or for worse. Despite the availability of mature, proven technologies, the industry has been slow to adopt new technologies, largely due to uncertainty regarding costs and benefits. To help companies better understand the current technology landscape, we hope to answer the following questions:

(a) What are the key technology decisions likely facing today's flavor and fragrance companies?
(b) What is the primary purpose of each technology?
(c) What are the attributes, costs and benefits of each technology that make them interesting to flavor and fragrance companies?

We've picked four technology categories that have generated the strongest "buzz" in the marketplace today, including enterprise resource planning (ERP) applications, customer relationship management (CRM) software, e-commerce platforms and Internet connectivity.

The marketing rationale publicized by companies in these technology categories generally fit one of two stories: 1) "Our software/technology makes your organization more efficient, through reduced operational/material costs and better cash management;" or 2) "Our software/technology helps you to grow your revenues/profits through new sales or through improved focus on profitability per unit, customer, channel, etc."

Claims like these are difficult to understand and more difficult to justify, even with a vendor-provided return-on-investment model. Follow us behind the curtain to see what these technologies are really all about and whether their claims are closer to fact or fiction.

Enterprise Resource Planning Software

Of all the money spent on communicating marketing messages to executives, ERP companies probably spend the most — and for good reason, they can be the most expensive technology decision a company will ever make. The food chain associated with ERP applications is vast and includes third-party add-on software vendors, hardware manufacturers, database vendors, consultants, and analysts — all of which generate revenue from their association with ERP vendors. It's no wonder that these systems can cost upwards of nine figures to implement. But ignoring the tremendous marketing hoopla, what do ERP systems really do for a company? In theory, ERPs handle almost everything inside the "four walls" of an organization.

ERPs try to facilitate almost every function within a business by connecting separate yet interrelated processes in one centrally administered application. ERPs were developed initially with manufacturing industries in mind. Most include, as standard functionality, the ability to take orders, translate them into material requirements, draw the materials from the warehouse or create purchase orders for materials not in inventory, schedule production, manage inventory, run accounting, manage human resources, and facilitate distribution. They also can handle many of the subtasks associated with each major function.

Standardized internal processes are the strong suit of ERPs. In fact, most ERPs have developed "best practices" for each industry that define the workflow for each process/function, and have built their software to fit that workflow. If ERP customers have the fortitude to follow

Definitions

B2B: Business-to-Business
CRM: Customer Relationship Management
CSA: Customer Support Automation
ERP: Enterprise Resource Planning
IT: Information Technology
SFA: Sales Force Automation

0272-2666/02/0009-0020$04.00/0—

the workflow, they can begin to achieve the major benefits offered by ERPs — operational cost reduction, inventory reduction and improved cash management. In short, ERPs were designed to help large corporations reduce their dependence on manual processes. Popular ERP vendors include SAP, Peoplesoft, Oracle, JD Edwards, SSA Global Technologies (maker of BPCS) and Lawson. Noteworthy, there is now a company that has developed a flavor and fragrance industry-specific ERP: Automation Concepts of West Orange, NJ.

What the big ERP vendors aren't telling us: There is a catch to the ERP system: to achieve the cost savings promised by most vendors, organizations must use the processes prescribed by the vendor. If ERP customers don't, there are two problems: 1) maximum operational cost reductions cannot be achieved, and 2) implementation will include expensive customization to modify workflow and functionality. Executives rarely learn these dirty secrets until it is too late (also known as the time after the board has asked to see the promised savings). You might ask, "Why is getting the full benefit of an ERP so difficult?" First, even organizations in the same industry don't follow the same processes, so a one-size-fits-all approach seldom works. Second, reducing operational costs often means reducing personnel — a difficult decision for any organization. Finally, ERPs typically require more skilled workers across the board, given the reduced reliance on manual processes and focus on pushing strategic decisions down in an organization. Hence, those employees that are not downsized still might not fit the skill set profile of the "new" ERP worker.

> "Information technology (IT) is one of the most complex issues facing the flavor and fragrance industry today."

What executives also learn about ERPs post-implementation is that the ERP, and hence the benefit, is only as good as a company's data. For many large organizations running legacy systems, this is a significant problem. Cleansing and converting the data can be a huge undertaking that is exponentially magnified by the number of legacy systems running in an organization.

So is an ERP right for your organization? If you don't have an integrated system that can run the core functions of your business, or if you have an ERP that is more than eight to 10 years old, then you would probably benefit from an ERP. Before making any decisions, talk to colleagues at other companies about their experiences with ERP software, from the sales process through implementation through day-to-day use. If that isn't enough, consider hiring an independent consultant (i.e. one who doesn't want to sell you an ERP implementation) to create a business case for an ERP in your company.

Customer Relationship Management Software

If ERP is the king of business software, then customer relationship management (CRM) is the queen. Like ERPs, CRMs can be an expensive investment for large organizations (ranging in the millions of dollars). CRMs, like ERPs, run with the same crowd of hangers-on, namely third-party vendors, consultants and analysts. CRM at the core is a philosophy focused on uniting customer data from disparate sources within an organization to ultimately improve service and sales. It has three distinct components: sales force automation, customer support automation and marketing automation — each of which can provide benefits as stand-alone systems. The triple lindy of CRM is achieved when all three components are implemented and customer data is united for access in key functions of the organization. Of course, implementing such a solution can be expensive and time consuming. Let's look at the component pieces to get a better understanding of the whole.

Sales force automation (SFA): SFA helps organizations improve the pursuit, tracking and closing of sales opportunities. The technology facilitates a process through which sales executives can manage both their pipeline and sales force on an organization-wide basis. With SFA, opportunities are less likely to fall through the cracks and resources can be more effectively brought to bear on high-value interactions. Leading vendors/applications in this segment include Sales Logix, Goldmine, Act!, Pivotal, Salesforce.com and Onyx, to name a few.

Customer support automation (CSA): CSA helps organizations provide better, faster, or more cost-effective support to their customers. Typically these technologies work through two mediums — telephonic solutions for call centers, and Internet solutions for Web-based customer support. Many of these technologies rely on knowledge bases, or databases of answers to common questions, to provide answers to customers through either medium. Leading vendors/applications in this segment include Vertical Solutions, Answer Technologies, Avaya, Nortel, Kana and eGain.

Marketing automation: This helps firms to improve their ability to identify and segment markets, target customer segments, and analyze the results of those efforts. The rise of electronic marketing has certainly contributed to the rise of marketing automation, but traditional practices such as advertising and direct mailing have been affected as well. Mass e-mail marketing is probably the best example of a technology in this space. Leading vendors/applications include Annuncio, E.piphany, Chordiant and Exchange Applications.

Some vendors tie all three CRM disciplines together in the holy grail of CRM implementations. This sort of system consolidates customer data from all sources and provides access for a variety of purposes. For example, customer support staff could access all previous questions from a customer, the revenue and profits they generate, marketing programs focused at that customer or customer segment, and the specific sales representative assigned to that account. Many ERP vendors, such as PeopleSoft, Baan, SAP and J.D. Edwards, have included full CRM functionality in their offerings. Other vendors include Onyx, Siebel and YOUCentric.

> "IT investment decisions can significantly impact any flavor and fragrance enterprise — for better or for worse."

There are several key considerations for potential CRM customers. CRM implementations are typically lengthy and expensive, due to the pervasive nature of customer data in an organization. They require process and human resource changes as well as system changes, which increases the level of complexity and cost. Accessing and unifying consolidated customer data across multiple functions, offices and remote locations with real-time data can be extremely challenging. Finally, encouraging some traditionally independent groups, such as a field sales force, to use these systems can be difficult.

A CRM system could be right for your organization if you generate significant amounts of customer data from sales interactions, support calls and/or marketing campaigns. CRM would also be important if world-class, red carpet customer service is core to your business strategy. Sales force automation is essential if you have a large sales force chasing many prospects. Marketing automation is beneficial if you are a mass-marketer. Customer support automation is ideal if you provide significant telephone-based customer support.

E-commerce Systems

Although much less prominent than ERP or CRM systems, e-commerce systems have grown significantly in importance over the last five years. E-commerce is a broad term that has come to represent many things, the most common meaning being buying and selling products via the Internet. Many e-commerce technologies and companies have evolved from business-to-consumer roots, and this lineage is still evident today. Let's look at the attributes of buy-side and sell-side applications and investigate the benefits each can bring to an organization.

Sell-side e-commerce is widely held to mean the process of selling goods and services via the Internet. Sell-side e-commerce evolved as a new sales channel for companies to offer their products to customers, and include two types; namely sales of raw materials to manufacturers of flavors and fragrances and sales of finished goods to consumer products companies. Most sell-side applications were, and still are, implemented based on several value propositions, including increased customer accessibility, increased ease of ordering, reduced cost of sales, and improved targeted marketing.

Sell-side solutions are usually an aggregation of individual processes and technologies that make up a sales process, such as product information, catalog and personalization software, order processing software, order management and payment collection technology. Each of these can play a role in the overall objective of selling goods to customers. Think about this in terms of a familiar consumer sell-side solution like Amazon.com. You can search their products using their catalog and the site "suggests" items based on your past purchases and searches. Once a product is selected, you can order it, pay for it, arrange shipping and track its progress towards its final objective — your home. The quintessential example of a B2B company that has implemented a sell-side solution is Grainger.com, the e-commerce arm of maintenance, repair and operating (MRO) supply firm Grainger. Vendors that provide sell-side software include Broadvision, ART Technology Group, HAHT Commerce, and RMSA (specifically for finished flavors and fragrances), to name a few.

Do sell-side solutions deliver value to businesses? Under most conditions, the answer is yes. As a new channel, they can reduce the cost of sales in an organization. They also can increase sales to certain customer segments and allow the organization to increase its capacity for more strategic tasks. Companies need to develop a careful balance, however, between form and function. Business customers, especially purchasing agents, value sell-side solutions that make their job easier. Flashy, graphic-intensive and slow-loading sites that don't have a strong functional orientation can frustrate these customers and increase rather than decrease barriers to buying your products.

Industries with existing e-commerce hubs are another danger for sell-side solutions. Industry hubs are designed to increase efficiencies and create savings for all participants through standardization and consolidation of information. Independent sell-side solutions in this environment are at odds with the benefits of a hub because they don't create industry efficiencies or savings due to their non-standardized and non-consolidated nature. When the costs of integrating buyers' software to multiple sell-side solutions is factored into the equation, the need to connect to a plethora of non-standardized sell-side software becomes a formidable barrier for both parties (buyer and seller), especially when the maintenance and integration costs are included.

Buy-side solutions grew out of a need to address the significant costs associated with procurement, especially indirect procurement in large organizations. Existing procurement applications fall into two camps: those for direct goods (i.e. raw materials that make up the finished or intermediate product being manufactured) and those for indirect goods (i.e. the materials that do not go into the actual product for sale, e.g., office supplies, janitorial products, etc.). The goal of both direct goods and indirect goods procurement is to extend the functionality of a buyers' ERP to a core group of approved vendors to better leverage the buyer's internal software investment and the power of electronic connections to existing and new suppliers. Furthermore, such connections create additional leverage by providing access to value-added vendor services (for example, online documentation, new product introductions, etc.).

> "Despite the availability of mature, proven technologies, the industry has been slow to adopt new technologies, largely due to uncertainty regarding costs and benefits."

Indirect goods procurement software needs to include routing, approval and spending-level controls in addition to vendor and catalog management features. Most indirect procurement applications work by allowing users to browse supplier catalogs from within their corporate software systems. These solutions can significantly reduce the operational cost of indirect material procurement, while also providing opportunities to reduce indirect material cost as well. Vendors in this space, like Ariba, Commerce One and Oracle, have generated a tremendous marketing buzz that has increased the visibility of procurement challenges on the radar screens of executives.

Purchasing materials that go into manufacturing a company's intermediate or finished products is quite different from indirect goods procurement; hence, direct

goods procurement applications have different needs. Purchasing agents require blanket order release functionality or pre-established contract order release capabilities. They desire streamlined order entry, the ability to operate with little to no approval routing, and require confirmation and regular visibility into order status. Buyers also need communication features that allow timely order-related electronic communication with their suppliers. Functionality that provides all of the information required in the procurement process, such as multivariate product attributes is also oftentimes required.

Sourcing staff benefit from contract creation and management functionality (global and local) that can be accessed and leveraged by purchasing agents. Ultimately, for firms with large ERP investments, direct procurement packages must offer integration into ERP software so that purchase orders can be generated and transmitted to suppliers automatically. With the aforementioned functionality in place, these applications can reduce operational costs associated with direct goods material procurement. Strong synergies are also created when integrated with ERPs by increasing data integrity and inducing a higher level of process standardization along the entire supply chain. Direct goods procurement vendors include RMSA (which has changed its industry hub model to sell software applications), i2, Ariba and Commerce One.

Procurement applications certainly can have drawbacks, especially in the case of direct goods, when they are not defined and built on the business requirements of the target industry. Take the example of the materials return process for goods that are damaged or out of specification. If a buyer's point of contact for order placement and fulfillment is a computer, an industry-specific "request to return goods" processing feature is a must. Order functionality must be industry-specific and strike a balance between a quick process and a thorough and complete process. Systems that cannot be easily integrated into existing product management software systems, on the buyer or supplier end, are less likely to succeed in the long run. Requiring a credit card to complete orders, although seemingly painless in the business-to-consumer space, will irritate most business customers. Direct goods procurement systems must also provide facilities for change orders and online access to product documentation and functionality to manage regulatory data, again built to suit the requirements of the industry.

Sell-side e-commerce is a good fit if your customers are either too expensive to service or impossible to access with current sales force resources. It also should be considered if you are looking to create a new sales channel for current and future customers that will reduce your cost of sales and/or increase your customer service level. On the buy-side, indirect goods procurement packages are valuable if you have a cumbersome purchasing approval process and spending limits within a large organization. Direct goods procurement packages also make sense if you want to

leverage your ERP investment and capture the efficiencies of streaming orders to your suppliers directly. Finally, if you want to standardize business processes with your suppliers, especially when the supplier base is fragmented and/or large, buy-side e-commerce could be a good fit.

Connectivity

Any discussion of technology decisions would be remiss if it didn't cover the fuel that drives business in today's Internet economy: connectivity. Speed of connection is the most important variable here, followed closely by the number of users who will rely on that speed. There are several competing technologies that supply connections to the Internet. Dial-up service, where computers are connected to the Internet through a telephone line, is the slowest, with top speeds of around 56 Kbps, but average speeds of around 30 Kbps. The fastest connection, a fiber optic cable know as a T3 line, provides connection rates of up to 100 Mbps, which is almost 1,800 times faster than a dial-up connection. Other options include DSL connection (up to 1 Mbps), cable connection (up to 4 Mbps) and a T1 line (up to 10 Mbps). Various providers exist for each option, but some of the better known national companies include Time Warner, AT&T, most of the baby bells, Cox, AOL and most local phone companies.

Why is connectivity important? As the economy becomes more and more dependent on the Internet for connecting business partners and as a means for rapid access to information, the speed at which employees connect to the Internet becomes more important. If an average employee spends just 1 hour a day on tasks that require the Internet, a 10-precent decrease in efficiency translates into a productivity increase of 26 hours per year. For a small company (say of 30 people at an average salary of $50,000), that's an improvement of almost $16,000 per year. With prices for connections between 1 Mbps and 10 Mbps ranging from $50 to $200/month, the benefit clearly outweighs the cost.

Summary

When making technology decisions, many factors need to be simultaneously weighed — something that cannot be done in a vacuum. Software vendors will continue to improve their applications and services. The potential for true operating cost reductions and increased capacity utilization is within the reach of all manufacturers and suppliers in the flavor and fragrance industry today. The authors' intent is to provide additional insights into questions that you may have regarding technology availability and capability. As more flavor and fragrance companies implement advanced technology solutions, the industry will become more informed, efficient and productive.

Address correspondence to Ty Nelson, RMSA, 10999 Reed Harman Highway, Suite 134, Cincinnati, OH 45142; tnelson@rmsacorp.com. ■