AspenTech Poised for New Growth

Strategic decisions by producers to reduce costs should bode well for process software company

Ann M. Thayer, C&EN Houston

Chemical companies want to instill new vigor into their operations and position themselves to profit from an eventual economic upturn. Although they may be wary about spending money, particularly when they've already made considerable investments in information technology, they are looking for ways to increase efficiency and cut costs.

Aspen Technology—which supplies integrated software specifically designed for process industries, including chemicals, petroleum, and pharmaceuticals—believes it can address these needs. "Information technology is the best way to improve productivity," says Lawrence B. Evans, chairman, chief executive officer, and founder of AspenTech.

"That wasn't true maybe 10 years ago, when a new process or catalyst would have been the focus," he continues, "but IT and being able to make the right decisions based on real-time data give companies the biggest return right now."

For example, with little control over volatile raw material costs and variable market prices, "the best commodity producers can do is to try to make a mix of the most valuable products," Evans explains. "The one thing they can control is the efficiency of their operations." Last year,

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Evans was elected to the National Academy of Engineering for his leadership in developing systems for simulating and optimizing industrial chemical processes.

AspenTech's initial niche was process simulation. In 1981, Evans, then a chemical engineering professor at Massachusetts Institute of Technology, was leading the Department of Energy-funded Advanced System for Process Engineering (ASPEN) project. The project to develop software for modeling chemical processes, specifically synthetic fuel production, became the basis of the company.

TODAY, AFTER 20 years of business, many acquisitions, and an evolution in product focus and strategy, AspenTech creates software that process manufacturers can use to automate and optimize key business processes. These processes range from plant engineering and manufacturing optimization to supply-chain areas including raw material supply, product delivery, inventory management, and e-business.

AspenTech software fills the gap between the mature field of process automation and control and the newer realm of enterprise resource planning (ERP) systems, explains Kenneth Brant,

vice president and research area director at the research and consulting firm Gartner. "There's a lot of data transformation and business process workflow that needs to happen between those two domains."

AspenTech has a substantial market share, with more than 1,200 customers worldwide. Analysts say its expertise in the process industries and its product breadth are unique. Major competitors, in contrast, are active only in specific segments: In asset optimization and engineering, there's Hyprotech and Simulation Sciences; in manufacturing control, Honeywell, ABB, and Invensys; and in supply-chain planning, i2 Technologies, Manugistics, and SAP.

"In the engineering life cycle, some of its products are de facto standards," McDonald Investments research analyst Naveen Chaudhary says of AspenTech in a recent report. "And recent stumbles by i2 Technologies and Manugistics have, in reality, strengthened AspenTech's position in the supply chain as both have retreated from their focus on the process sector."

SAP, which produces ERP software used by most of the chemical industry, remains a "credible threat," Chaudhary notes. SAP offers competing supply-chain software and may be attractive to companies wanting to leverage existing ERP investments.

"Most of our customers have an SAP system as their infrastructure, and we integrate very well with it," Evans emphasizes. He sees the two companies' products as complementary, rather than competitive, with the transaction-oriented ERP systems supplying demand and forecasting data that can be fed into AspenTech

software for optimizing production and asset use. "It's important that our customers get value from their SAP systems and the software that goes on top of it," Evans adds.

Overall, Chaudhary says "in the market for integrated solutions, such as AspenTech's integrated engineering and manufacturing solution Plantelligence, or integration of the supply chain with plantwide systems, I'm not aware of any competitors." And, he points out, it's a large, and significantly underpenetrated, market opportunity.

DESPITE ASPENTECH'S enviable position, the past few years have been challenging as its customers faced cyclical downturns and general economic woes. Firms have cut back or been indecisive about spending on software, Evans explains. "The challenge is not so much competitors as it is overcoming the inertia of the industry and getting [it] to move faster."

AspenTech's revenues are split about equally between software licenses and service contracts. After steady growth in earnings through fiscal 1998, the company reported a loss in 1999 and a small profit in 2000. In the fiscal year ending June 30, 2001, revenues rose 14% to $311 million, but acquisitions and other costs contributed to a loss of $20.4 million, including one-time charges. So far this fiscal year, the company has beat expectations with breakeven performance.

AspenTech has been very aggressive, making more than 20 acquisitions since 1991 to build its business. "The positives clearly have been the broadest portfolio of advanced applications covering engineering, manufacturing, and supply-chain management," Brant says. "But the challenges have been to knit these acquired com-

panies into the AspenTech cloth and the high costs of integrating their businesses and technologies."

On the upside, major deals returned in late 2001, with eight customers signing contracts valued at about $1 million each. DuPont extended its licenses to engineering modeling and process information management systems for another five years. And AspenTech completed a project installing advanced process control systems at BASF's Antwerp cracker. Bayer and Celanese also recently signed deals.

"We are poised for sustained growth and adoption of these technologies," Evans says, predicting a return to historical internal growth rates of 25 to 30% per year. "Companies have invested in the infrastructure and, in fact, want to make money from those ERP systems. Now they want to standardize on and roll out solutions in the plant where a lot of their money is made or lost."

Dow Chemical recently signed a multi-million-dollar agreement to use AspenTech's engineering and manufacturing software and link its plants and global ERP system. About two dozen business units will deploy the Plantelligence and Aspen Engineering Suite software in more than 300 facilities worldwide.

Dow invests more than $1 billion annually in new plants and upgrades. Engineering efforts are expected to be reduced by 50% and plant costs by 5 to 10% for an annual savings of more than $100 million, AspenTech says.

Dow will pay for software licenses up front, but AspenTech anticipates continued revenue from providing services. Major rollouts of software and services are "usually one of the first

areas companies cut," Evans says, "but Dow's willingness to go forward gave us a lot of confidence that the chemical industry is turning around."

Chemical company IT budgets have been under pressure. Spending levels will at best remain flat this year at 1 to 5% of revenues, predicts Leif Eriksen, an analyst at AMR Research, but this may represent a drop in cash outlay as revenues fall. While ERP system implementation ate up about 40% of overall IT spending in 2001,

Aspen Technology at a Glance

Headquarters: **Cambridge, Mass.**

Founded: **1981**

Stock offering: **October 1994**

Revenues: **$311 million**[a]

Net income: **$2.27 million**[b]

R&D spending: **$68.9 million**

Employees: **about 1,800 in 25 countries**

Website: **http://www.aspentech.com**

Business:
Supplies engineering, production, and supply-chain software to the process industries. Revenues in fiscal 2001 were split between licensing at 47.5%, and services at 52.5%. Customers include 46 of the top 50 chemical producers, 23 of the 25 leading petroleum companies, 18 of the 20 major pharmaceutical firms, and 17 of the top 20 engineering and construction firms that serve the process industries, as well as others in consumer goods and semiconductor manufacturing.

a Financial data are for fiscal year ending June 30, 2001. b Excludes extraordinary and one-time charges.

companies that made progress in the effort did begin looking into supply-chain management and e-procurement areas.

"If an IT project can't demonstrate a return on investment," Eriksen asserts, "then it won't get funded." He says priorities are shifting to modest projects that cost less than $1 million and that can be implemented in a matter of months with a near-term return.

Evans describes four key "levers" available to companies for getting returns. One is increasing throughput or, more important, he says, making higher priced or more valuable products. Another is trimming operating costs through better raw material procurement and yield and by using less or cheaper energy. Likewise, improved inventory management can free up working capital. And capital expenditures can be pared through engineering modeling and plant design optimization.

"Bottom line, we are saying that we can help a company typically save 4 to 6% of their revenues annually," Evans says. "Projects usually take about nine months to a year to implement, and the payback usually comes in about one year."

Examples include Equistar's saving $20 million in two years—a return equal to five times its investment—by using production optimization and planning software at its Matagorda, Texas, polyethylene plant. BP Chemicals is using demand-supply planning software in 20 business units to optimize supply chains. Like Dow, the expected annual return exceeds $100 million.

ICI's paint division recently signed on to use Aspen Buy to automate purchases of raw materials at eight plants in North America via the Internet. ICI has connected about a third of its 66 direct materials suppliers to its private network. This not only allows suppliers to conduct online transactions, but key suppliers also can manage and automatically replenish ICI inventories. The technology for Aspen Buy came through AspenTech's January 2001 acquisition of the chemical marketplace dot-com e-Chemicals.

"The market for advanced applications is there, and the value propositions are very strong," Gartner's Brant says. Over time, the engineering applications have been proven to work fairly well, he believes. Nevertheless, manufacturing optimization solutions tend to be complex, he says, and the challenge is to deliver solutions usable not only by engineers but by operations employees as well.

AspenTech has more than 100 individual software products that fall into its engineering, manufacturing, and supply-chain suites. In May 2001, the company introduced a comprehensive collection—called ProfitAdvantage—that encompasses tools for asset optimization, manufacturing planning, and execution areas such as supply chain and e-business.

"**POINT SOLUTIONS** have been the basis under which we have grown," Evans explains, "but we're convinced that integrated systems are going to be the future."

To expand its focus on integrated solutions, AspenTech recently partnered with the consulting firm Accenture. The company set up another application integration alliance with PricewaterhouseCoopers in late 1999 and a

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development and marketing alliance with IBM in mid-2000.

AspenTech and Accenture will develop, market, and install ProfitAdvantage applications. AspenTech will gain valuable understanding of supply-chain concepts, additional resources, and access to higher level process industry executives through Accenture, analysts say. In addition to industry expertise, Accenture also will get $37 million worth of AspenTech stock over the next few years.

AspenTech's strategy for a few years has been to create partnerships to accelerate penetration into key markets. For example, it recently joined with process technology company UOP to sell an optimization system for naphtha-consuming plants, with consultant Trinity Technologies for asset optimization applications, with engineering firm Fluor to deliver the Aspen Engineering Suite, and with Internet-based logistics system provider Optimum Logistics to develop and market supply-chain and logistics software.

"AN ARRAY of new products and a promising new partnership program have set the stage for explosive growth," AMR's Eriksen says. "The necessary catalyst—successful sales and marketing execution—is the unproven ingredient."

However, "the company generates sufficient cash to fund its aggressive R&D program, and it continues to deliver exciting new products to the market," he continues. "Do not confuse current results with future possibilities and the company's own ambitions. Its ambition is not without merit."

One effect of the partnerships is that licensing revenues may grow faster than service revenues. Although partners will presumably help AspenTech sell more licenses, they will also be taking on responsibility for service contracts and gaining associated revenues. So far this fiscal year, 10% of licensing revenues came via partnerships; Evans would like to see that reach 25 to 30% over the next two to three years.

Another major initiative has been AspenTech's late-2001 launch of PetroVantage, an Internet-based trading and logistics marketplace for the petroleum industry that has signed on seven clients. As of September 2001, AspenTech had invested $11.3 million in the subsidiary and was expecting to spend another $6 million over the next two quarters. The investment has been somewhat of a drain on earnings but is expected to offer sustained revenues in the future.

Evans anticipates that the Internet will continue to play an important role for the company. "Virtually everything needs to be Web-based, because the Web will much more be the operating system for users in the future," he says. "And it enables so much interconnectivity and provides a great mechanism for collaboration."

But the excitement about e-business back in 1999 and 2000 was "a bit premature," he continues, with, for example, only the early adopters installing supply-chain solutions. "Still, after that you almost always find a period when the mainstream companies start adopting technology and you have a period of sustained growth," Evans says. "I think that's what we're on the verge of now."