



Paul Deis
Essex of Oak Park, Inc.



Success Story – Consumer Electronics Products Company

Situation – this work started small then grew, encompassing multiple, concurrent, large, complex projects that addressed a set of interrelated crises resulting from very rapid growth in an entrepreneurial, informally run company and its transition to larger-scale, more formal management.

- **Company** – Alesis Corporation was a very rapidly growing, very profitable, entrepreneur-driven, 8 year old company running at about \$40 million per year. It sold electronic products to musicians, and about 40% of the company’s young employees were actual, working musicians (employment drug tests were out of the question...). The primary founder, who owned 2/3ds of the company, lived 6 months out of the year in Taiwan, where most of the products were manufactured. Day to day operations were led by the President, who owned 1/3d of the company.
- **Products** - The typical Alesis product was a single printed circuit board, on a metal box, with lights and switches and a single, very cleverly designed digital signal processing chip. Easy to make, with market-driven pricing and a very effective design-to-cost engineering process conducted by its design team, many of whom looked like they were still in high school, and none of whom had degrees. The ADAT engineering project lead was 23 years old. These guys “thought out of the box” because they didn’t know what the box was, and were very successful in the process.
- **Unique business model** – Alesis kept tight control over all components, buying them on its own POs and drop-shipment to Taiwan vendors. Chips purchased in the Phillipines, other components in Japan, but all on Alesis POs. They understood the value of their IP, and that it was in the design and production of key components. It also allowed them to utilize very low cost production sources in Taiwan who did not have effective material systems, saving a lot of cost. All products had a 50% gross margin, plus a 50% margin for the 256 distributors globally. They introduced new products overseas *before* the US to pre-empt counterfeiting and design theft.
- **Challenges & crises** – Alesis was making money, lots of it, and so was not an insolvency turnaround. However, its new blockbuster product and the effort to grow very rapidly resulted in multiple, interrelated crises that I led over a period of several years in total:
 - **Background** - I was originally hired by a software vendor to lead the implementation at and customization at Alesis of their 3rd purchased ERP systems, with the prior 2 having failed due to fit

problems, mainly their 100% outsourced material flow and production, most of which was off-shore. Standard ERP system were then, and still are, very weak in this situation.

- **Blockbuster new product; the ADAT** - Four months before I started, the company had announced a new, blockbuster product called the ADAT. It was revolutionary, and enabled a low-budget musician to record high-quality digital sound in his apartment or bedroom. Recording studios at the time used \$150,000 digital 24-track tape recording systems that required an engineer to operate. The ADAT blew these right off the shelf, with its ability to be daisy-chained into a 24 track system for under \$12,000, and could be stacked into a 96 track system. Demand went through the roof, with 8,000 on back order, no more were accepted.
- **Initial ADAT production** - the ADAT was being assembled at a vendor in San Diego who was shipping about 50 a week, against the 8,000 on back order. The ADAT It had 27 subassemblies, each of which had 50+ component parts, including 13 separate printed circuit board assemblies. None of these had been designed so it could be tested independently, among other problems. A team of engineers was working at the vendor to resolve problems. It was a nightmare of material logistics, especially with complex off and on-shore components and subassemblies.

However, when the ADAT was put together and worked, it was incredible and the market was screaming for these. A friend, who owned a recording studio asked me if I could get one, and I told him “if you were Sting, I couldn’t get you one, the orders are so tightly controlled.”
- **Strong competitive challenger** - Alesis only had a few months to get this right, as Teac was introducing a competitive design using its compact DAT technology, versus the VCR cassette technology of the ADAT. If successful, it would leave the ADAT in the dust. The TEAC product did gain some traction, but not like the ADAT, which set the standard that TEAC competed against.

Multiple, concurrent, overlapping crises - to get the ADAT into production, and keep it reliably there, produce and ship what would eventually total over 150,000 units, revolutionizing the recording of music all over the world,

resulted in my leading several, overlapping, concurrent projects that ran for several years:

- **Vendor Assessment** – After an on-site visit at the vendor’s in San Diego, interviews of his production team and management, interviews of the engineering team, and a detailed product analysis, I recommended that off-site production be terminated and it be brought in house, with design engineers being assigned to work on the production line to debug, and rework it. The 50% margin allowed for a lot of rework and still be profitable, and if done fast, would enable the company to capture its small market opportunity window from Teac.
- **In-house production facility** – I designed an integrated, synchronized production line that was built and on-line in 3 weeks in a space in an existing warehouse. Production went from 35/day the first month, to a stable 125/day by the 3rd month. It was “overmanned” to allow identification of subassemblies that didn’t work right.
- **Operations & supply chain organization** – the informal band of amateurs had to be replaced by a professional team, so I recruited these leaders and supported/coached/trained as needed:
 - VP Operations & Supply Chain
 - Director of Purchasing
 - Production Line manager – to run the 80 person ADAT production team.
 - Master Production Scheduler
 - Warehouse manager – An internal person with good background and upgraded his skills via training.
- **Build a new ERP system** – the founder of the ERP firm that had brought me in initially had died, and his successors completely botched the relationship with Alesis. Totally exasperated and struggling with a lack of an effective system in the face of very rapid growth, the Alesis management asked me to lead a project to develop an ERP system that would work for their business model. I did. This project included:
 - Recruit and lead a technical team of developers, a small team (3 to 5) using a very high productivity software development toolset called Advanced Revelation.
 - Setup and oversee software configuration management
 - Planning the project, including overall and detailed design of the software.
 - Concurrent implementation of modules as each was completed. It became known as the “module of the

month” club, as a new module was implemented about every 6 to 8 weeks.

- Go-live with the base system (inventory, product data, work & purchase orders) occurred 5 months after startup.
- Writing of what eventually totaled 1,400 pages of detailed specifications.
- Reporting to management as to status, cost, plans, training and implementation schedules.
- Resulting system statistics – over 1,000 screens/windows; 6,000+ data fields, an advanced, “beyond MRP” detailed on and off-site scheduling and tracking of material & production, multi-channel sales, return/repairs and a host of other advanced, unique functions.

Results achieved – successful completion of these multiple, concurrent projects enabled:

- **Stabilized, profitable volume growth** – volume climbed rapidly to a peak of \$96 mil, then stabilized for a time at about \$88 mil/yr. During the earlier years, good margins were maintained, enabling working capital to be furnished entirely from retained earnings. This growth from \$40 million/year was accomplished in less than 12 months.
- **ADAT success** – eventually sold over 150,000 units, at retail list of \$4,000 each, although as the product matured, the price came down to about \$2,500. It literally revolutionized the recording of music all over the world until it was replaced by direct-to-disk recording technologies. The Teac product never got off the ground, having been buried by ADATs.
- **Strong organization** – the team I recruited lasted long enough to introduce good material management and production practices into a totally rogue, almost out of control informal culture, enough to sustain them for some time after I completed work at the company. This team’s capability included skills such as vendor capacity management. The ADAT’s volume strained several vendors. The new team knew how to negotiate and “sell” them on capacity enlarging investments in new equipment.
- **New product development** – the success of the ADAT, along with its other products, enabled Alesis to develop new products for its market, including digital sampling keyboards and high-end speakers, and others. These were underway during the time I worked with the company.

Paul Deis, Agoura Hills, CA is a operational turnaround and crisis resolution leader. He leads large, complex projects at manufacturing, and other types of companies that enable the company to survive a crisis and return to stable, profitable operation. This work involves re-organizing, re-designing how the factory operates, streamlining processes, sometimes recruiting new leaders, changing software and procedures, changing suppliers, which products are sold and other activities to achieve quick, lasting overall productivity gains and positive cash flow. He is a published text-book author in the field of production & inventory management and has done this type of work with over 60 companies in his career of over 25 years. Visit his web site at www.pauldeis.com. Email: paul@pauldeis.com – (818-706-0160).