



Case Study

The essential component manufacturer

In March 2002, Intel recognized Pulse as a repeat winner of its prestigious “Supplier Continuous Quality Improvement Award” for outstanding commitment to quality and performance, and services deemed essential to Intel’s success. Pulse components are commonly found in all the IT and communication products that have become part of our lives. And, in fact, without those components, today’s computers, networks, wireless phones and other information/communication technologies simply would not operate.

Pulse, a Technitrol company, is a global leader in the design and manufacture of products that mount onto printed circuit boards — along with microprocessors, integrated circuits and other elements — to regulate a signal’s intensity, rate of flow, timing and electromagnetic interference. Its magnetic components and modules meet the needs of every household-name manufacturer in the IT, power conversion and communications industries.

On an annual basis, Pulse registers some 2,000 new designs, produces hundreds of new products and refines hundreds of existing products with new innovations. It has design centers,



manufacturing facilities and customer care operations in the Far East, North America and Europe. This extended enterprise environment resulted in Pulse seeking to adopt a global supply chain management strategy, integrated with demand planning and manufacturing operations. The benefits, Pulse reasoned, would include faster response time to orders, lower inventory costs and more intelligent planning and scheduling.

In its request for proposals (RFP) from possible vendors, Pulse identified the following key objectives:

Improve

customer service through improved order promising accuracy

Reduce

total pipeline inventory

Provide

Internet visibility into global supply chain planning, forecasting and manufacturing execution operations

Provide

on-line problem notification and resolution tools

Shrink

cycle times for planning and re-planning

Shorten

calculation times for delivery date quotations to customers



Pulse cited: Adexa's ability to model extremely complex supply chain environments; aggregate data from multiple sites; enable collaborative planning with suppliers, subcontractors and other stakeholders; and its willingness to partner with Pulse to ensure the system would meet other unique requirements.

Further, since Pulse, like other Technitrol companies, was rapidly growing by acquisition the supply chain solution had to be massively scalable. Adexa was designed for scalability and integration with any data source, to meet the needs of a heterogeneous marketplace.

Pulse's largest volume manufacturing facilities are located in China, separated by nine time zones from the company's head office in San Diego, CA. Manual collaboration with a scheduler located 16 hours in the future is, simply, not possible.

Schedules, capacity, on-hand inventory and local Manufacturing Execution system (MES) data needed to be extracted and integrated with the planning side, to provide more accurate capable-to-promise (CTP) dates to customers, up-to-date requirements for subcontractors and suppliers, and to identify the most profitable production scenarios for Pulse. Adexa enabled all internal stakeholders to work from the same plan.

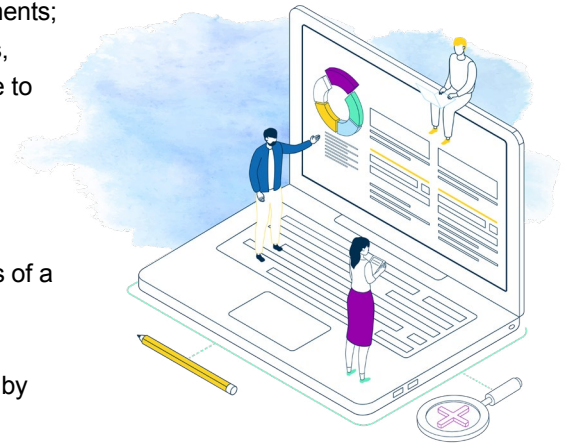
Pulse distributes many of its products directly to customers. It also has two major distribution centers (DCs) — one in the US, the other in Europe. Every effort is made to minimize inventory at these DCs, by shortening production cycles and integrating demand information with Adexa's planning system.

Some 850 EDI demand links have been established, resulting in an average of 150 demand feeds per week, through a secure virtual network. On the supply chain back end, Pulse will be using the system to automatically communicate demand requirements directly from production plans.

Both new demand and changes to existing requirements will be transmitted as they occur, reducing the cycle time of communication to a matter of seconds.

Further, buyers and suppliers, working off of the same data, will be able to better manage exceptions and maintain inventory targets.

In electronic component and module manufacturing, responsiveness and flexibility are critical factors. A product's lifecycle can be shorter than its development cycle, meaning its break-even point has to be quantified, reached and taken into account when compiling forecasts.



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Collaborative planning, based on the most accurate and up-to-date information on the demand side, supply side and execution side has become a critical business issue. Manufacturers, such as Pulse, that have integrated Adexa solutions to rapidly deal with these issues are more efficient, more responsive to changing market conditions, and better positioned for growth.

Since Technitrol acquired Pulse in 1995, it has assisted the company increasing market share with the subsequent acquisition of multiple related companies and technologies. For example, two additional acquisitions — Nortel Networks magnetic components business in 1997 and FEE Technology, S.A. in 1998 — made Pulse a global leader in telecommunications and power conversion magnetics. The 1998 acquisition of Valor Electronics (GTI Corporation) solidified Pulse's market leadership in magnetic components for enterprise networking equipment.

In October 2000, Pulse acquired various assets of EWC, a manufacturer of magnetic components primarily for the defense and aerospace industries. Pulse also acquired Electro Componentes Mexicana (Grupo ECM), a manufacturer of inductive components primarily for automotive applications, in March 2001. And Carlsbad, California-based Excelsus, a leading North American producer of customer-premises digital subscriber line filters and other broadband accessories, was acquired in August 2001.

Pulse's current research and development efforts are focused on growth opportunities in high-speed networking, customer premises broadband equipment, wireless communications, Internet telephony, automotive controls and military/aerospace electronics.

This will result in an increased product offering, expanded and diversified manufacturing operations, new customer and supplier relationships and greater volumes of data to model. The scalability of Adexa's solution is such that new data sources can be added and higher volumes of data processed in a matter of weeks.

Pulse serves a market that touches each and every person in the industrialized world. Its magnetic components and modules are critical to the functionality of all IT and networking/communication products. The price point of those finished products has been under attack by competitive forces and product lifecycles are shorter than ever, requiring component suppliers, such as Pulse, to accelerate operations and drive cost from all areas, including the supply chain.

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Pulse acquisitions

1997

Nortel Networks

(Magnetic components business)

1998

FEE Technology, S.A.

(Telecommunications and power conversion magnetics)

Valor Electronics

(Magnetic components for enterprise networking equipment)

October 2000

EWC (Manufacturer of magnetic components)

March 2001

Electro Componentes Mexicana

(Manufacturer of inductive components)

August 2001

Excelsus (Producer of customer-premises digital subscriber line filters and other broadband accessories)



Pulse chose Adexa as its supply chain solution provider to enable collaborative planning across a global enterprise to deliver a higher return on manufacturing assets with faster, more efficient operations.

Further, Pulse is ready to integrate data sources from newly acquired companies, customers and suppliers, regardless of the systems and platforms they may be running. With Adexa, Pulse has further demonstrated its commitment to the success of its own customers, which is exactly what you'd expect from a company honored by Intel with the "Supplier Continuous Quality Improvement Award."

