k3 syspro

Axiom selects SYSPRO for improved customer response and overall efficiency throughout its business.

Axiom Manufacturing Services provides specialist contract electronic manufacturing to OEMs. The company faced complex business issues due to a change of focus within the company. Axiom also sought efficiency improvements throughout the organisation. A new SYSPRO ERP and APS system from K3 Syspro (K3) implemented at Axiom's facility in Newbridge, South Wales, was to be the solution to achieving its goals. Simon Crewe, Supply Chain Manager, Axiom Manufacturing Services reports.

The contract manufacturing market is challenging, and it was evident that Axiom's existing IT solutions would not support efficient growth. The company's existing MRP system was effective at manufacturing and purchasing control, but was limited in scope. It lacked integration with the finance ledgers and most importantly key business support processes were run offline on a series of spreadsheets. Managing this complexity was becoming difficult as the scope of the business increased and new customers were established

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At a glance

Company

Axiom Manufacturing

Industry sector

Manufacturing
• Electronic equipment

SIC Code

27900
• Manufacture of other electrical equipment

Number of employees

180 +

The challenge

• Change of focus in the company
• Current solution could not support efficient growth
• Lack of integration with finance ledgers
• Spread sheets used to support business processes
• Unique manufacturing processes, unmanageable potential routes through factory
• Deliveries and schedules was driven by local knowledge

Solution & services

• SYSPRO Financials
• SYSPRO Distribution
• Engineering Change Control
• Advanced Planning & Scheduling (APS)
• Mobile Applications

The benefits
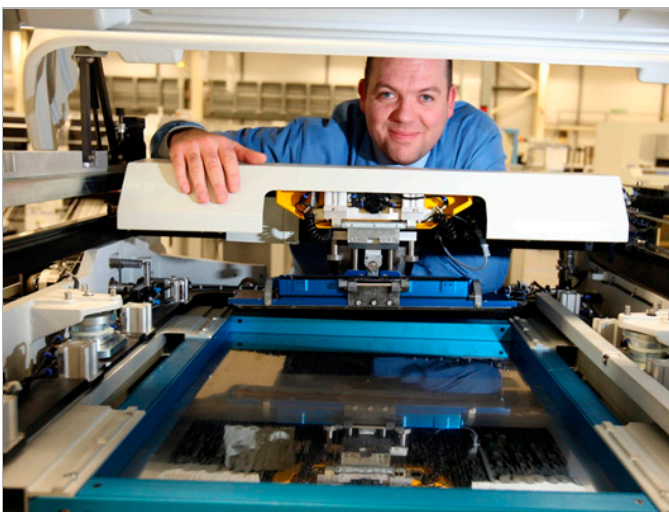
• Flexibility
• Management of data with speed and accuracy
• Easy extraction of data
• End to end real time visibility of the manufacturing process
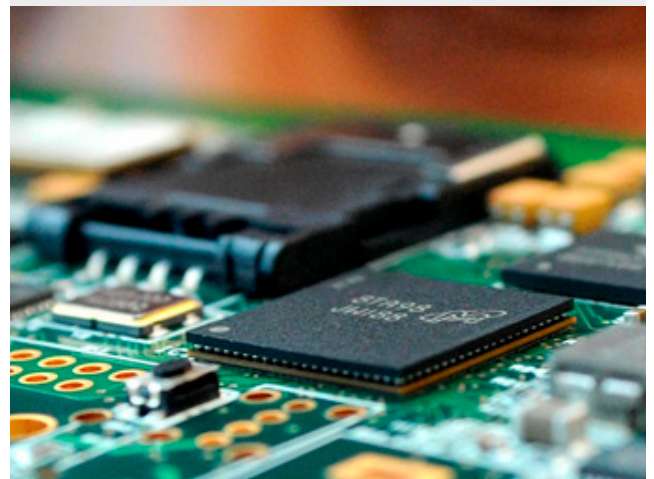• Improved customer response

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After extensive market research SYSPRO was selected as the software package that most closely met Axiom's specific requirements. In a fast moving and continually changing environment, the system provides flexibility to suit Axiom's immediate needs as well as maintaining a core of standard functionality for future upgrades.

Some of Axiom's key challenges that needed addressing included:

• The ability to manage core manufacturing data more efficiently and automatically

• To evaluate customers sales orders and forecasts and to be able to quickly and accurately commit to delivery schedules

• To relate works orders to customer sales orders and to understand in real time the status of each order

• To understand the true costs of each works order and to be able to roll up to customer level profitability

• To integrate the finance ledgers and improve efficiency and accuracy of management data

• Integrate engineering change control into the core business system

• To support AS9100 quality management for product traceability from serial tracking to component lot number traceability.

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Following K3's established implementation process, the Axiom team undertook a series of training, blueprinting and prototyping sessions to specify, test and approve the solutions to the key business issues.

The core SYSPRO ERP system was configured using Inventory Control, Work in Progress, Finance, Sales Orders, Bill of Materials and Requirements Planning modules. In addition, K3 supplied SYSPRO APS to provide real time shop floor scheduling and data capture, together with Mobile Applications for real time material issues. These sit within a fully integrated systems architecture, forming the backbone of the Axiom manufacturing solution which allows for consistent, efficient and fast data management.

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APS in action

Using core data held in SYSPRO - BOM/routes and standard times - and additional specific machine data, the new APS system has the ability to process customer sales orders in terms of capacity and material requirements. This efficiently schedules works orders through the factory and provides an accurate predicted delivery date, and highlights process bottlenecks.

A detailed manufacturing route is established for each product by Axiom's process engineering team. With over 500 live assemblies and some 30 unique manufacturing processes, the combinations and complexities of the potential routes through the factory was becoming unmanageable, and the management of deliveries and schedules was driven by local knowledge. Using APS, Axiom creates a manufacturing plan based on the sales order book, manufacturing routes and the capacity at each work centre. This is maintained in real time and displayed as a live Gantt chart. The production control team uses this to assess actual progress against the plan and understand the status of each works order.
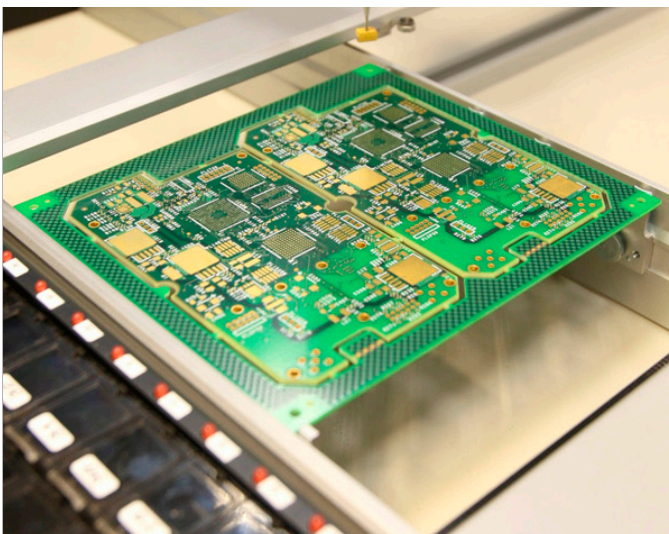
To gain maximum use from the APS system and to communicate the plan to each of the four shop floor cells, Axiom has implemented touch screen displays strategically throughout the shop floor. These communicate jobs and priorities to the workforce and capture data in progress which is fed back into APS.

> "To gain maximum use from the APS system and to communicate the plan to each of the four shop floor cells, Axiom has implemented touch screen displays strategically throughout the shop floor. "

At each screen, the manufacturing cell staff are able to see a real-time display of the status of the jobs running on each machine within their area. To initiate a new job, the operator touches the machine or process that he is running, and a list of jobs in priority order is displayed. Full traceability of labour is provided by the use of RFID (radio frequency identification) tags used by operators to log and log off jobs at the touch screen terminal.

Wherever possible automated machines are linked directly to the APS system by sensors. These count product throughout the process. This approach allows Axiom to book labour to specific jobs and top track the cost of all jobs through the factory.

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Wireless communications

Axiom launches and manages over 200 works orders each month, each of which has a kit of components required in the manufacturing process. With multiple orders using many common components, the company needed a way to issue materials to works orders real time. The solution was K3's Mobile Applications module using RF technology that interfaces directly to SYSPRO. These are used to pull down works order requirements, and write back component issues by quantity and by lot code as the operator picks the components.

This solution, coupled with the unique identification of component packages with bar coded part number and lot number detail gives Axiom a fast and efficient way to trace component lot numbers to works orders and ultimately to product serial numbers.

Serial tracking and configuration management

Many of the products manufactured by Axiom are used in medical, industrial and defence sectors. Each sector has its own demanding traceability requirements. The challenge for Axiom was to provide component and product traceability in an efficient and affordable process. K3 consultants developed a custom solution that allows Axiom to allocate serial numbers (which are laser etched onto the product), and track those serial numbers to parent products and boxed quantities. This allows Axiom to create 'Certificates of Conformity' for complex assemblies or for boxed quantities making significant improvements in accuracy and efficiency.

> "The SYSPRO solution provided by K3 provides end-to-end real-time visibility of the manufacturing process, with automated data capture and data manipulation routines built into the fully integrated suite of software."

Business benefits

Managing its data is key to Axiom's success, with speed and accuracy being of paramount importance, together with the ability to quickly and easily extract data for decision making.

The SYSPRO solution provided by K3 provides end-to-end real-time visibility of the manufacturing process, with automated data capture and data manipulation routines built into the fully integrated suite of software. Together with a fully integrated ledger, Axiom now has the capability to drill down into its business data to identify cost and profitability to works order level. This quickly identifies variances for management action. Being able to simulate capacity in a complex manufacturing environment allows Axiom to quickly assess customer sales orders allowing quicker response to changes and to requests for information.

This capability ultimately improves efficiency through better resource allocation and predictability, resulting in improved on-time delivery to end customers.

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