

Rotork Actuation has long standing success ...

The City of Bath has been continuously inhabited for over 2,000 years, so it comes as no surprise that the businesses of the area stay with an idea or a system that they find works. A relative newcomer to the Bath area, Rotork has been making valve actuators for the petrochemical, water treatment, waste treatment, and power industries since 1945. While business trends have come and gone, Rotork continues to dominate the valve actuator marketplace, adding new product lines and pushing the edge of technology with their new infrared monitored and programmed IQ actuator and running their business to its highest potential with evolution. Although Rotork only offers four main product ranges, almost no two actuators are identically assembled. Resource planning, in this environment, is an enormous challenge. Rotork Actuation is the major operating division of Rotork, plc, a 175 million dollar company, employing over 700 people, and not inclined to waste time or money.

In 1992, Rotork Actuation decided to install evolution as their ERP solution, and since then, have been able to reduce lead times on production of new products from 18 months to six months.

From the beginning, executives at Rotork were pleased with the way evolution allowed them to see their business functions in action, says Bob Slater, divisional finance director. "At any one moment, we can have 2,500 variants going through production. It is a massive planning and organisational task," Slater adds. "Our previous management information system contained a lot of data, but we just could not get to it. In the previous system, small, separate, islands of computerisation did not communicate with one another." The production of valve actuators is a make to order business, rendering planning, and communications a priority.

Rotork manufactures 50,000 actuators a year through three international manufacturing sites in England, the USA, and India. evolution is currently implemented in the UK, USA, and Dutch operations, with an almost infinite number of variants moving through the multi-site Rotork ERP system at any moment. Rotork's ability to extract mission-critical information from evolution has made a profound difference in the way Rotork does business.

According to Ivan Burnell, Rotork's engineering manager, evolution completely revolutionised the product design process. "Before, our design department and production department operated at two different speeds. The interface between the departments was laborious and getting any interchange between them was a real problem. When the design process was complete, it would be downloaded en bloc to the production department who would then be expected to get the product out immediately which was, of course, impossible. The process suffered from terrible inertia."



In 1992 when Rotork developed its latest IQ range of valve actuators, the time was right to purchase a new resource planning system. "The IQ's technology was extremely innovative and far ahead of its competitors," says Slater, "We wanted to gain maximum competitive advantage and get the new product line into production as quickly as possible, and much sooner than the 18 months that was normally required."

evolution was installed at the plant in Bath over a 12-month period. This production plant has been the Rotork International Headquarters since Rotork built the facility in 1962. While the implementation was taking place, sixty-five people were trained in the different applications contained in evolution, and the production management team was educated in business processes with the help of the evolution implementation tool, ensure. Ensure is designed to lead a user through the start up phase and achieves the targets that have been set. The ensure methodology greatly contributed to the smooth and speedy adoption of evolution at Rotork.

According to Mike Aston, head of sales at evolution, more than 80% of all IT systems fail because the implementation has not been planned in an orderly manner and the objectives of the system have not been clearly laid down. "Using ensure, we encourage a company to think about what their managers are trying to achieve through introducing evolution and we specify the parameters that must be measured to check whether the aims have been reached."

ensure also enables an evolution implementation to be tailored to an individual company's working practices. "All companies perform the same basic operations. The difference lies in how they perform them. ensure's role is to reconfigure evolution to produce the exact implementation required by a company's business model and to customise the appearance and behaviour of the system in line with business procedures," adds Aston. In Rotork's case, the business issues, which needed to be addressed, were planning, engineering change, and inventory. By making these business issues a priority and taking quantitative measurements during the implementation, Rotork would be able to see exactly how far they had come by the end of the implementation, less than a year later.

Having installed evolution, the production department could now see the progress of a new design from the point it initially entered the system through preparations for its manufacture even before the design is finalised. The key is the Product Configurator facility in evolution. All valve actuator versions are fully designed in Configurator with respect to their performance specifications. The Product Configurator provides a sequence of sub-assembly descriptions, a Bill of Materials, rules of product definitions, and definitions of validation procedures. When a customer order arrives, the contracts engineer needs only to enter 40 items of data to identify the 500 attributes that uniquely define the actuator's specifications. The Product Configurator then generates the cascades of information required for subsequent operations such as purchasing of raw material and sub-assemblies, and scheduling the actual production. The strength of Configurator was one of the main reasons Rotork selected evolution in the first place, according to Slater. "It is a slick way of inputting customer requirements to the system which is very important for a company like ours, whose customers all demand slightly different variations. It could have been developed specifically for Rotork's needs."

However, once an actuator is in the production cycle, making changes to that actuator is another essential production function at Rotork. Engineering Change Control is also a key feature of evolution, says Burnell. "The ECC module is vital to us because we have to deal with about 200 engineering changes a year and that can cause havoc if we are not careful. This module permits an engineering change to be distributed around the company but not to be implemented until after everyone concerned has given approval. Used in conjunction with the Product Configurator, ECC ensures that all components and sub-assemblies impacted by the change are updated at the same time."



Inventory is another area where evolution has given Rotork the benefit of saving time. "It used to take our people three weeks to calculate work in progress and we only did it twice a year for accounting purposes. Now we can generate reports daily if we really want to," says Slater. "We have been able to plan our future business strategy much more efficiently, now that we have much better information about who our customers are and what they are purchasing," he adds.

Having production, inventory, and engineering change information right at their fingertips, whenever they need it, has give Rotork a distinct advantage in their marketplace. In 1999, Rotork's revenue increased by \$25 million, due to more streamlined production and successful business management.

... with evolution's "Proven Value" software.