EXEL
COMPUTER SYSTEMS

Case Study

ondrives
Precision Manufacturing

Facts at a glance

Customer Profile

Established in 1976, Ondrives are a family owned and run precision manufacturer of gearboxes and associated parts.

The Challenge

The variety, complexity and sheer volume of orders, as well as a move to a more manufacturing-oriented focus necessitated a change from a collection of IT systems and spreadsheet based workarounds to a fully integrated solution.

The Benefits

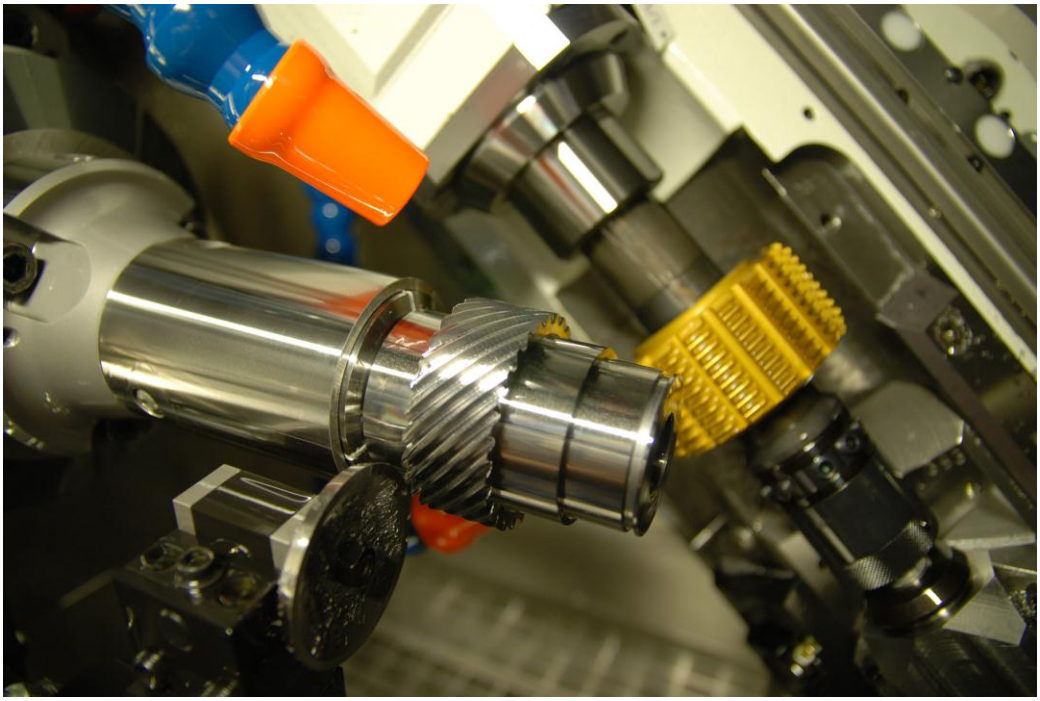
Increased visibility of Orders & BOM's, increased traceability, time saving through easy access to documentation, improvements in production scheduling as well as confidence in stock reports.

The Future

EFACS has enabled Ondrives to change various ways of working in order to take advantage of its wide ranging functionality. It has brought them into the 21st Century and enabled them to be more efficient and make informed business decisions at every level.

Ondrives Limited

Ondrives takes advantage of wide functionality and flexibility offered by EFACS



With EFACS we have the best of both worlds. It is flexible enough to fit around the way we need to run our business BUT with its wide ranging functionality, it has also enabled us to change various ways of working in order to take advantage of the potential the system as a whole offers.

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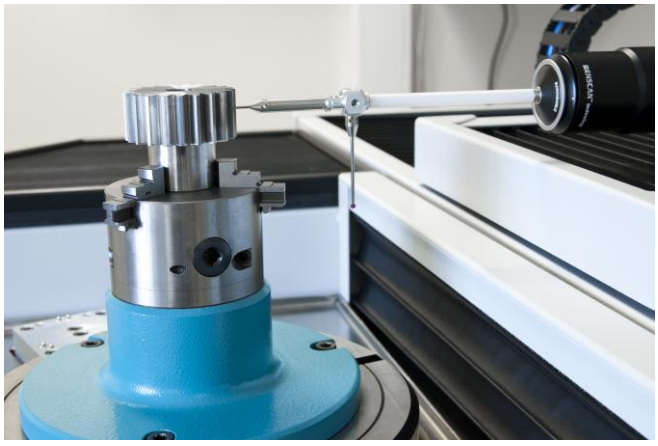
Family owned and run, Ondrives Ltd is a precision manufacturer of gears, gearboxes, and bearing housings and mechanical drive components supplying to a large number of customers of all sizes across a diverse range of industries. Established in 1976, the company has consistently invested in the latest technology to ensure that every customer, from individual end users through to the US military, receives the highest quality standards. The past decade has seen the 50 strong workforce increasingly involved in the design and manufacture of ever more unique and specialised products and the company prides itself on being a 'one stop shop' for all gear-related solutions. Serving mission critical components to the most demanding customers means that quality has to be at the heart of everything, so when the company invested in a new ERP system, the only solution was EFACS from Exel Computer Systems. This was deployed on an Oracle/Linux platform.

With over 3,000 live customer accounts, 600 active orders and 40,000 components in stock at any time out of a theoretical maximum of 80,000, Ondrives has a lot of business going on at any one time. The company handles approximately 100 orders per day with sizes ranging from individual "off the shelf" components through to 10,000 components called-off over a given time period. 20% of the company's activity is pure distribution with the remaining 80% being split between standard manufacturing (60%) and bespoke work (40%). With the latter ranging from a custom alteration to an existing part, through to fully designing and manufacturing a gearbox completely to specification, Ondrives' business is also incredibly varied. Fulfilment times range from same day delivery for in-stock components, up to 6 weeks for the most complex standard orders and bespoke work taking as long as required.



This variety and complexity of activity combine to put pressure on what ought to be a relatively straight forward set of business processes. Orders are received by phone, email, fax, catalogue or directly via the web, with the Sales Team determining whether each is a standard or special order. If the former, the relevant works orders are generated and these are released to production. If the latter, the order is passed to the Technical/Design team which then determines the extent of any custom work. Once everything is confirmed with the customer, the relevant works orders are generated and then released to production. Production itself is a complex balancing act between 28 specialist machine resources – some of which are single use only while others can handle a number of different functions. Depending on the type of order, individual components may need multiple visits to different machines, all of which may require an operator of a specific skill level, of which there are four. Again, depending on the order and customer, different levels of testing may be required which in some cases may even necessitate third party, off-site specialist control testing. What each product does have in common is a unique, laser etched serial number from which the entire production history of each component can be traced, even down to the provenance of raw materials if required.

Andy Higgs is Sales Director at Ondrives and outlines the many and varied challenges the company has to overcome in order to be successful, beginning with the sheer range and scale of products involved. "We have materials issues, machine resource issues and human skill issues," he says, "on top of which we have to get the sequence right for every component of every order to ensure everything comes together in the right place so the customer gets their order on time." When it comes to materials issues, the biggest problem lies in the specialist and exotic nature of some of the materials required. "The lead times for the more exotic materials can comfortably outstrip the lead times our customers require which means we have to keep these in stock. However, sourcing these can be difficult because often different suppliers will sell at different prices and in different amounts." Bought-in components also present a challenge as somehow the company needs to keep accurate track of over 40,000 live line items at any time. As Higgs states, "It's not acceptable to promise a part to a customer only to find someone else has already used it and not accurately recorded having done so."

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ondrives
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The need to provide complete traceability as well as demonstrate an ongoing commitment to working with only the latest levels of technology are vital considerations for Ondrives' more demanding customers. "When dealing with Aerospace industry customers, you have to be able to provide levels of traceabilty that most other companies simply cant, including who worked on what, when, right down to the origins of any component/materials." He continues, "And not only do our customers expect us to be using the latest technology, they also expect this to enable us to work with lower lead times. The past decade has also seen a much greater emphasis on the need to ensure you hit these deadlines, every time." Another challenge lay in the need to manage vast amounts of paper-based drawings, with timely visibility of the correct version of documentation a key ingredient for success.

Ondrives had historically sought to manage and overcome these challenges through a variety of disparate IT systems, all designed to assist a different area of the business. As Higgs recalls, "We had separate systems for Accounts, Sales/Purchase Orders, Works Orders, Design, as well as Stock Control and Despatch. Despite this, we still couldn't cope with complex manufacturing." In addition to the time spent duplicating data in all these systems and the subsequent data variance issues that arose, the main problem was a complete lack of up-to-date visibility not just in different areas of the business but across the company as a whole. As the systems aged, they also became more reliant on the human/spreadsheet based workarounds that were put in place to keep everything functioning, which Higgs refers to as "the human glue that kept everything together." Inevitably, in-depth knowledge of each system became the preserve of the few and if these people were ill or not available, everything would potentially grind to a halt.

As trust in the system naturally decreased, people's commitment to using it correctly understandably followed which added to the levels of wasted time as people would double-check physically if goods were available because they distrusted the system so much. Higgs cites one example which shows the impact of this. "Somebody out of administration or management manually and routinely needed to make sure we had enough parts available for a week's manufacturing, up front, before we even began making anything." Understandably, as the business continued to grow and customer requirements became more demanding, the systems inevitably began to reach breaking point with Higgs explaining that, "eventually, instead of helping us, these systems were actually holding us back as a company."

The key factor driving the need for change however was the company's increasing move to a more manufacturing-oriented focus. This brought into sharp relief the inability of the former collection of systems to deal with day to day manufacturing requirements, as Higgs recalls, "We began to see clear warning signs that we could not ignore – deliveries were beginning to run late, materials were not arriving on time. While we had invested heavily in buildings and cutting edge machinery, we lacked the modern business management system required to control and get the

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COMPUTER SYSTEMS

ondrives
Precision Manufacturing

Case Study

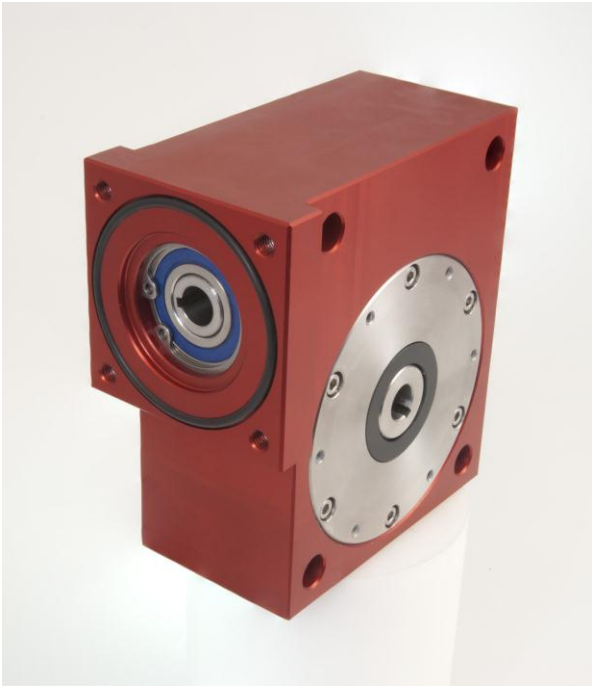
best out of our resources." Higgs already had considerable first-hand experience elsewhere of seeing the benefits of working with such systems and soon the company came to recognise that if it wanted to keep on progressing, it would need to do something different. "We knew we had lots of data within the company but couldn't access the business information we needed, not just to improve our productivity but the direction of the business as a whole."

The process of sourcing a state-of-the-art, fully integrated Enterprise Resource Planning (ERP) system began in early 2010 and drew heavily on Higgs' own experience in this area. "I've worked for several companies that have gone through lengthy shortlisting processes, but in each case it was always EFACS that demonstrated it had the best manufacturing management capabilities." In fact, looking at EFACS, it was clear that not only was it the only system the company would need to cover every area of the business, it had areas of functionality Ondrives hadn't originally considered but which it quickly saw that it would be able to take advantage of. Higgs again, "I could see straight away the time savings, increased efficiency and visibility that EFACS would bring. And, with EXEL being UK owned and based just down the road, we knew we had the best possible access to those who knew most about the system."

A decision was taken to invest in EFACS in September 2010 with implementation beginning shortly after, albeit with a less than orthodox implementation strategy. Key stakeholders in each department undertook the relevant training and were tasked with then training others in their department. Exel consultants helped set up the basic parameters of the system and did what Higgs can only describe as "a fantastic job" in getting enough accurate and usable data out of the legacy systems to enable Ondrives to go live, much sooner than Exel or anyone anticipated. As Higgs explains, I called Exel and told them we would be going live on April 1st 2011, which was only a matter of a few weeks away, I then told everyone involved at Ondrives they were going to have a headache for a few weeks." And go live the company did, successfully, on April 1st, and while it undoubtedly was hard work, Higgs credits the success to "everyone pulling together, including the help we received from Exel."

The benefits were visible from the outset. "Right from day 1," recalls Higgs, "we could see all the new orders on the system as well as what was happening with each order, how far through it was, and when it would be finished." In addition to this, Ondrives, for the first time ever had visibility of a proper Bill of Materials (BoM) for each works order as well as accurate stock levels for its entire live stock items list. And, because EFACS was configured with automatic replenishment levels across all live items, this business area enjoyed a massive saving in time. Another major timesaving came from the huge reduction in paperwork as Higgs explains. "Prior to EFACS, the time taken to raise all the necessary paperwork held within all of our different systems for just one gearbox before manufacturing could commence took a week. Now with EFACS, orders are received and sent to manufacture the same day."

As the company settled into using EFACS, it began to explore and develop other areas of functionality, beginning with a range of custom reports and workflows. For example, it used to be a manual process to generate and to send agents worldwide a list containing current stock levels and associated pricings. With EFACS, this is now generated automatically, using live real-time data which saves a significant amount of time each week. Moreover, this can now be integrated with the company's website for live order entry so customers can see whether an item is in stock and how many there may be. This also helps reduce delivery deadlines as well as making them more accurate.



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The next major area of development was the implementation of touchscreens at strategic locations on the shop floor. This meant that operatives could now record the start and stop times of every process for every job, providing real time production information that enables actual production to be compared to planned production. Not only does this provide another layer of business information about machine utilisation, capacity optimisation and how each worker is performing, it also means that customers can be continually kept up to date should a problem occur. This also provides the company with the maximum amount of time to react as well as keeping production on schedule as much as possible.

The most recent area of development has been in the area of Document Management and the implementation of a fully auditable document revision control system. This has necessitated investing in a number of high quality scanners and scanning all relevant documentation, including design drawings, so that these can be immediately accessible from EFACS at the point of need, wherever this information is required. Higgs quantifies this in time saved as follows. “Prior to having electronic documentation on the system, each of our 3 staff responsible for filing typically would spend up to 1.5 hours per day simply walking between different rooms and filing documentation.”

Looking ahead, the company has a number of medium to long term development goals including utilising the quality control functionality of EFACS to tighten up a range of business processes and further custom report development. The final word however belongs to Higgs, who is understandably very enthusiastic about all the company has gained so far. “With EFACS we have the best of both worlds. It is flexible enough to fit around the way we need to run our business BUT with its wide ranging functionality, it has also enabled us to change various ways of working in order to take advantage of the potential the system as a whole offers. In that sense it has brought us very much into the 21st Century and has enabled the company to be more efficient and to make the most informed business decisions at every level.”

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