

Zenith Media -a case study

Zenith Media are experienced Lithographic Printers based in Taffs Well, north Cardiff. Established in 1993, Zenith employs 60 people across two sites in south Wales.

In November 2005, as part of a manufacturing review carried out by the MAS, it became obvious that Zenith Media had a huge potential for manufacturing improvements. These were to be realised as part of an ISO system implementation in which the company was aiming to achieve accreditation of ISO 9001, 14000 and 18000 in 2006.

Recent advances in printing technology and machine capability have been tracked by Zenith over recent years and investment in new machines has been made at the right time to ensure that changing customer requirements are not only met, but further developed to provide the best possible solution. What has been missing to date has been some of the more stringent procedures required to maximise the effect of the investment and minimise the potential for wasted material and effort.

Creation and implementation of an Integrated Management System (IMS) has been a testing time for everyone in the company. Not only have all three standards have been applied for at the same time, but the company have received impractical advice from external consultants which without any prior experience, the company has found difficult to apply.

However through two separate MAS projects, Richard Barton of the MEC has provided effective, practical advice and guidance on the implementation and auditing of policies and procedures aimed at meeting and exceeding the ISO standard



The Zenith Media plant

requirements. Consequently the system is now becoming a useful tool for the company, enabling them to quantify some of the many improvement activities undertaken so far, to initiate a variety of further improvements.

Benefits are already being seen in massive reductions of material being sent to landfill, reduced energy and chemical usage in production, a reduced instance of product non-conformance and a continual improvement in market share in an ever-shrinking market. Savings are already in the order of £35,000 even before considering the effect of new business won and existing customers maintained.

The accreditation, scheduled for July 2006, will demonstrate the ability of the company's new procedures to cope with increasingly demanding customer requirements. Without it, the company stand to lose both existing contract customers and future contract tenders which would be a huge blow to this forward-thinking and expanding company.



Max Moody, MD, Zenith

"The ethos of the company has always been one of traditional service values and the production of quality printed goods. The implementation of the ISO Integrated Management System (IMS) has provided a structured environment in which we can measure and ensure that quality standards are maintained and improved upon.

The IMS has also increased our ability to provide better and safer working conditions for our employees; together with making significant reductions to the company's impact on the local environment.

Richard Barton has worked in harmony with our ISO manager and all employees of the company and has provided invaluable guidance and support. Indeed such has been the impact of implementation of the IMS that all of Zeniths employees are embracing and enjoying the benefits of the improvements. Most of all, we are now more able to provide a higher quality of service to our clients"

mas

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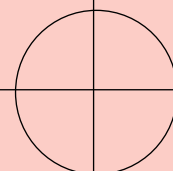
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Collaborate.....

During a recent visit to the MEC, Andrew Davies AM, Welsh Assembly Government Minister for Enterprise, Innovation and Networks said:

'The MEC has a proven and outstanding track record of improving commercial practices and providing solutions to assist the global competitiveness within the manufacturing sector.

Since its foundation in 1996, the Centre has gone from strength to strength in developing an international reputation for its leading edge research in advanced manufacturing and IT.

As we continue to develop our knowledge economy in Wales, it's crucial that Centres of Excellence - like the MEC in Cardiff - continue to collaborate and support industry throughout Wales, and beyond.'



.....and win!



Richard Wothers- "Without the MEC the ridge line would not have happened"

BVG Airflo, which we featured in our Summer '05 Newsletter, has been recognised for its collaboration in Cardiff University's Innovation Awards.

BVG Airflo have developed a new line for fly fishing, allowing the angler to cast further with greater control and accuracy. The product represents a major improvement on the current industry standard and has opened up new markets for the company.

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Micro-seminar

On the 11th April, Cardiff University Innovative Manufacturing Research Centre hosted a one day workshop on behalf of UK and European micro-manufacturing industry and academia.

The day had an exciting agenda aimed at bridging the gap between university and company approaches to micro-manufacturing technology development, so as to enable far greater uptake of current research outputs by European manufacturers. The day comprised a mixture of talks, networking opportunities and poster sessions and culminated in a open

expert panel session; "Setting a commercially viable agenda for the transfer of micro-manufacturing technologies between research organisations and industry in Europe".

Industrial speakers included Mike Hagland from Gyrus ACMI, based in the UK and the USA and Joseba Perez Bilbatua from IDEKO, Spain. Other expert speakers were Roger Carline from the DTI MNT Network, Professor Lars Mattsson from KTH Sweden and Dr Liam Blackwell of the EPSRC.

For further information and to access the presentations given on the day visit:

http://www.cuimrc.cf.ac.uk/News_Micro

The micro-seminar was co-hosted by the following projects, bringing together expertise from across Europe:

I*PROMS (EC)
4M (EC)
MTC (ERDF)
SUPERMAN (ERDF)
Launch-Micro (EC)
MicroBridge (DTI)



Speakers and hosts of the event: left to right, Dr Sam Bigot (MEC), Joseba Perez Bilabtua (IDEKO Spain), Dr Todor Dobrev (MEC), Prof. Lars Mattsson (KTH, Sweden), Dr Roger Carline (DTI MNT Network), Dr Liam Blackwell (EPSRC), Prof. Stefan Dimov, Prof Duc Pham (MEC), Dr Andrew Glanfield (IMRC) Dr Robert Hoyle (MEC)

BVG Airflo - from Page 1

Richard Wothers, production director of BVG Airflo said "the ridge line has created considerable excitement throughout the fly fishing industry. Japan in particular has embraced this new technology, and we are also having a major impact in the US market"

He continued "Without the MEC the ridge line would not have happened. I searched



nationally and internationally for a company capable of making the very precise extrusion dies required. The MEC not only had the necessary equipment, but also the expertise to do what was needed."

Contact the MEC by telephone on 029 2087 4

LAUNCH-MICRO

The MEC is involved in a project aimed at re-launching European machine tool SMEs through micro-technologies.

LAUNCH-MICRO was initiated in order to make sure that European machine tool SMEs will be able to achieve a competitive advantage when micro manufacturing on a mass scale becomes a reality. Solutions for mass manufacturing of micro components are expected to be required due to the predicted increase in market demands for micro products with a high added value. Therefore, it is important that European machine tool manufacturers do not lag behind competitors from Japan, USA and future producers in non-European countries in providing such solutions.

The LAUNCH-MICRO consortium is composed of 28 partners from Spain, Poland, The Netherlands, Germany, Austria and the UK. It brings together 8 research centres and 20 SMEs that range from machine tool manufacturers to component producers through to machine end-users.



- Dissemination and training.
- Management and governance.

A Virtual Consulting Office in Micro-technologies (V-COM) has been created as a dissemination channel for the project. In particular, V-COM is a web-based training tool which will help EU SMEs in introducing micro-manufacturing technologies into their business. Through V-COM the LAUNCH-MICRO members now have access to the combined expertise of the consortium in:

- Micro product characteristics and related micro manufacturing technologies.
- Micro machining technologies and machine tool requirements.
- Approaches and strategies for micro parts and micro tools production and quality assurance.

This work will now be used in the on-going

Launch-Micro Project partners:

- Soraluze (Spain)
- Kugler (Germany)
- Nekofa (The Netherlands)
- Anger (Austria)
- Ideko (Spain)
- Ona (Spain)
- Mondragon Assembly (Spain)
- Hemtech (The Netherlands)
- FUSO (Austria)
- MEC (UK)
- Microsystems (UK)
- GX Design (UK)
- TNO (The Netherlands)
- Lumera (Germany)
- Marcosta (Poland)
- Laser Zentrum Hannover (Germany)
- Profactor (Austria)
- Akustik Design (Austria)
- Andrychowska Fabryka Maszyn (Poland)
- Kendu (Spain)
- Warsaw University (Poland)
- Westcam (Austria)
- FOP AVIA (Poland)
- Van Hoorn (The Netherlands)
- Mondragon University (Spain)
- Laser Akademie (Germany)
- Bremen University (Germany)
- IBS Precision Engineering (The Netherlands)



In order to achieve the different objectives of the project, its activities have been divided in different work packages:

- Analysis of micro technologies scenarios regarding SMEs.
- Equipment for micro manufacturing.
- Processes for micro manufacturing.
- Demonstrators and pilot applications.

effort that focuses on equipment and processes for micro-milling, micro-EDM and laser.

LAUNCH-MICRO is a four year Integrated Project for SMEs funded under the European Commission Framework Programme 6. To learn more about Launch-Micro visit:

www.launch-micro.org



Llywodraeth Cynulliad Cymru
Welsh Assembly Government

Visionary Concepts Wales

The MEC, in its capacity as a service provider for the Manufacturing Advisory Service (MAS), has recently assisted a company in getting its new product closer to production.

In January 2005 when Visionary Concepts Wales (VCW) approached the MEC, they had developed an innovative urine sampling system - the U-sit. Testing and design phases had been completed to improve both the design and operational concept of the product. The company had also invested heavily in a patent and as such the innovative concepts and design embodiments contained within that patent had to be preserved.

The company had progressed to considering the manufacturing processes and which would be the most suitable to manufacture limited volumes cost effectively for primary testing of the product in the field. The MEC was able to provide assistance here, considering the various manufacturing processes available and identifying cost effective tooling requirements of the product.

Ultimately the company would like to move towards the preferred high volume manufacturing route of pulp paper pressing and has gained support from one manufacturer. However the cost of tooling, without the guarantee that the final product would work, was seen as too much of risk at that stage in the developmental process.

The MEC were involved with a number of key design meetings with Mary Harris, Director of the company in which the possibility of limited volume tooling along with suitable low volume manufacturing routes were considered. Finally, it was decided that vacuum forming of 0.25mm thick polypropylene would enable low volume manufacture to be achieved for part proving and concept testing the field.

The MEC has also assisted in the procurement of tooling. A suitable patternmaker was sourced and asked to attend

design meetings with the company. In conjunction with the consultant, the patternmaker worked on proposed modifications to the design concepts and manufactured an



The U-sit

initial tool for the urine tray. Subsequent analysis of the tray showed that the geometry at the front end of the tray was insufficient to enable lamina flow of the urine off the tray. This prevented flow into the urine capture area. Further iterations of tool design have been made to address the problems with lamina flow and to prevent the patient coming into contact with the urine.

In December 2005 Mrs Harris was invited by the MAS to present her design to key manufacturers and decision makers from the NHS at a medical seminar. Since then, the company has received an offer from a local company to develop tooling to mass manufacture the product and has received significant interest from the NHS in adopting the product for widespread use in the NHS.

"Hopefully the three way collaboration between VCW, NHS and the tooling company, that was facilitated by the MAS, will allow the product to reach its intended market in the near future" said Mrs Harris.

To learn more about the U-sit contact:

mary.harris@vision-twentyone.com