

prime

innovation in manufacturing and resources

IN THIS ISSUE

Waste not, want not

Managing waste to create greener manufacturing operations

Making a connection

The technology at the heart of today's customer relationships

All in the plan

Why scheduling remains essential for manufacturing success

MOVING FORWARD

Lean manufacturing boosts productivity and saves cash at Continental Automotive

Visit onwindows.com for news and views in manufacturing

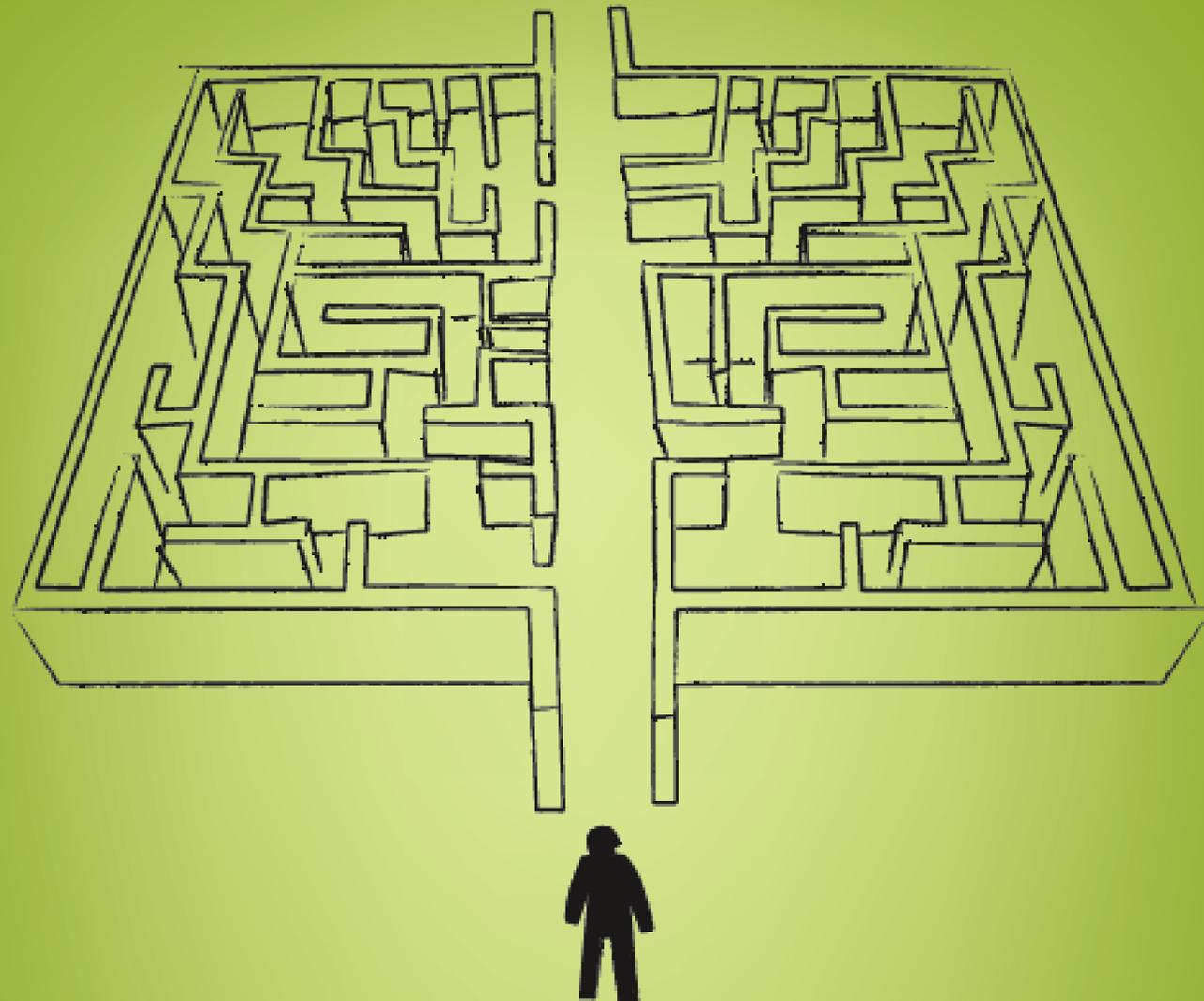
Wonderware to lead world's largest industrial SQL Server project on China's railways. **Page 8**

"Extraordinary times can create major business opportunities. Many energy companies used rising commodity prices as an opportunity to reduce debt and bolster their balance sheets. Now, we expect to see an uptick in mergers and acquisitions of companies with proven reserve positions."
Dr Albrecht Ferling, Managing Director, Worldwide Oil and Gas Industries, Microsoft



foreword

SUMMER 2009



Find Your Way Through Product Development with PTC's Windchill® ProductPoint®.

A Windows® SharePoint® Services based solution to vault, share and reuse product information.

Better Decisions. Fast and Easy.

LEARN MORE AT ptc.com/go/prime

Windchill® ProductPoint® 

Editor

Jacqui Griffiths
jacqui.griffiths@tudor-rose.co.uk

Editor-in-chief

Adam Lawrence
adam.lawrence@tudor-rose.co.uk

Editorial team

James Dodd
Lindsay James
Rebecca Lambert

Contributors

Jürgen Biffar, DocuWare
Chris Caren, Microsoft Dynamics
Matthes Derdack, Derdack
Yves Dufort, Wonderware
Jonathan Dutton, Dassault Systèmes
John Dyck, MESA
Dr Albrecht Ferling, Microsoft
John Fox, PTC
Greg Gorbach, ARC Advisory Group
Graham Hackwell, Preactor
Haresh Khatwani, Microsoft
Maria Jesús Llorente, Qarius
Eric Murphy, MatrikonOPC
Mike Novels, Preactor
John Pearson, ConsultCRM
Ari Pihlajavesi, Predisys
Mark Rewhorn
Steve Sacco, Invensys
Gokhan Sarpkaya, Continental
Tom Shoemaker, PTC
Marina Stedman, SalesCentric
Michael Sternesky, Microsoft
Jukka Valkonen, Tieto
Romke Wijmenga, Asysco

Subscriptions

Ritwik Bhattacharjee
ritwik.bhattacharjee@tudor-rose.co.uk

Green IT advisor

Dr Bernd Kosch, Fujitsu Siemens Computers

Partner director

Paul Simpson
paul.simpson@tudor-rose.co.uk

Partner managers

Christian Jones
christian.jones@tudor-rose.co.uk

Ben Mayer
ben.mayer@tudor-rose.co.uk

Ricky Popat
ricky.popat@tudor-rose.co.uk

Design and production

Bruce Graham
Paul Robinson
Kelvin Jones

Reprints

Stuart Fairbrother
stuart.fairbrother@tudor-rose.co.uk

Publisher

Andy Clayton-Smith
andy@tudor-rose.co.uk

SPONSORS



www.ccc.fi



www.matrikonopc.com



As the economic downturn continues to affect organisations across the manufacturing and utility sectors, many are looking not only to maximise today's opportunities, but also to position themselves for growth once the economy recovers. This issue illustrates that future profitability depends on looking beyond immediate challenges and taking a long-term view.

Sustainability is at the forefront of many manufacturers' minds right now. Not just in terms of green issues; manufacturers realise that a sustainable operation is more agile, reduces costs and complies more easily with industry regulations. But as they look at in-house systems, manufacturers need to be aware of what's going on outside. They can't afford to sell on products alone; they need to focus on customers and make the best use of the information that resides across the organisation to offer impeccable service and meet growing expectations.

Throughout this issue of *Prime*, you will see how Microsoft and its partners have been working with manufacturers to help them achieve these goals. And now, you can read the magazine online by visiting our new digital edition. Visit www.onwindows.com/digitaleditions.

Charles Johnson

Worldwide General Manager, Manufacturing & Resources Sector
Microsoft

PUBLISHING PARTNERS

Prime is produced as a partnership between Microsoft and selected key organisations from the manufacturing sector. These partners help set the editorial direction of *Prime*, and collaborate to provide you with content that covers the key issues facing manufacturing, and technology solutions that can address these issues.



Dassault Systèmes is the world's leading product lifecycle management (PLM) software applications and services provider. Its solutions enable the digital simulation of products and the definition of manufacturing and maintenance processes and resources. Central to Dassault Systèmes' solutions (CATIA, SolidWorks, DELMIA, SIMULIA, ENOVIA, and 3DVIA), 3D offers realistic visualisation, unambiguous communication and true collaboration.
www.3ds.com



PTC, our business is product development – our objective is to provide the best product lifecycle management (PLM) and enterprise content management (ECM) solutions. For more than two decades, PTC has delivered leading software solutions to the manufacturing industry. We have offices in more than 30 countries and over 50,000 global customers.
www.ptc.com



Fujitsu Technology Solutions – a Microsoft Gold Certified Partner – employs more than 10,000 people and is part of the global Fujitsu Group, which delivers IT-based business solutions to customers in 70 countries through a workforce of more than 160,000 employees. With its Dynamic Infrastructures approach, the company offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure-as-a-Service. www.ts.fujitsu.com



Wonderware, a business unit of Invensys plc, is the market leader in real-time operations management industrial software which includes: Supervisory HMI, GeoSCADA, Production Management, MES, Performance Management, EMI, and integration with asset management, supply and demand chain and ERP applications.
www.wonderware.com



The OPC Foundation is dedicated to ensuring interoperability in automation by creating and maintaining open specifications that standardise the communication of acquired process data, alarm and event records, historical data, and batch data to multi-vendor enterprise systems and between production devices. www.opcfoundation.org



Xterprise is a leading developer of highly scalable, enterprise-class RFID software applications, combining our Clarity application framework technology with Microsoft platform technology. Recognised by Microsoft as the 2008 RFID Partner of the Year, and ABI Research as the market leader in the emerging RFID software solution market, Xterprise delivers fast ROI, high value and low total cost of ownership. www.xterprise.com

Your potential. Our passion.™

Microsoft

In a people-ready business, people make it happen. People, ready with software. When you give your people tools that connect, inform, and empower them, they're ready. Ready to collaborate with partners, suppliers, and customers. Ready to streamline the supply chain, beat impossible deadlines, and develop ideas that can sway the course of industry. Ready to build a successful business: a people-ready business. Microsoft. Software for the people-ready business.™ To learn more, visit microsoft.com/peopleready

ready_

ready_

ready_

ready_

ready_

Welcome to the **people**  **ready** business.

How can I juggle 524 desktops,
71 printers and a private life?



MANAGED OFFICE

With tailor-made service concepts for more efficiency.

- Optimized Service Bundles with minimum costs
- Remote Services from the Systems Management Center
- Intelligent financing concepts for migration and consolidation
- Proactive monitoring
- Use of best-in-class service and logistic processes



Green IT

Operation and support of your IT infrastructure is now easier than ever before. Managed Office by Fujitsu provides an end-to-end view of all individual solution stacks at any time. This ensures a dedicated lifecycle management with highest standards of connectivity, security and manageability. Together with optimized products such as the LIFEBOOK S6420 based on Intel® Centrino® 2 Processor Technology, Managed Office by Fujitsu makes sure your dynamic infrastructure is always easy to handle. Find out more about the heart of your infrastructure at ts.fujitsu.com

FUJITSU



26



32



44



54



36

CONTENTS SUMMER 2009

Frontline

08 Wonderware is to implement a SCADA system for the entire Chinese railway network in the world's largest industrial SQL Server project. Plus, more news from the manufacturing IT sector around the globe

Viewpoint

18 *Toward zero breakdown*
Notification workflow software is a step towards zero downtime, says Matthes Derdack

20 *All in the plan*
Mike Novels says scheduling remains crucial to manufacturing success

22 *United we save*
Standardised communications technology is key to saving money, says Eric Murphy

24 *Migrating to Windows*
Asysco's Romke Wijmenga advises on moving from legacy environments

Cover story

26 *Moving forward*
How a lean manufacturing project helped global automotive supplier Continental

Features

32 *Waste not, want not*
Sustainability is a vital part of efficient manufacturing operations. We look at how technology can play an important role

36 *Making a connection*
The technological solutions that help manufacturers get closer to what their customers want and need

Industry forums

42 *Automotive*
Automotive manufacturers are turning to e-learning to control training costs

43 *Oil and gas*
Microsoft experts discuss how the oil and gas industries can beat the financial crisis

44 *High tech*
Product development processes are becoming increasingly complex

46 *Utilities*
Effective document management is central to best practice operations

48 *Pharmaceutical*
Microsoft has a growing presence in the pharmaceutical and life sciences sectors

49 *Consumer goods*
Yves Dufort of Wonderware explains the importance of materials management

In practice

50 *Walking the walk*
Footwear manufacturer improves collaboration and visibility in product development operations

51 *Streamlining documents*
How John Deere Forestry sped up production of technical documentation

52 *Driving efficiency*
Truck firm boosts its use of business intelligence tools

54 *Globally networked*
Metabo is connecting its head office and subsidiaries around the world using Microsoft Dynamics NAV

55 *Information flows*
Efficient management of a Canadian water treatment plant

Signing off

56 *The plant floor at centre stage*
MESA's John Dyck explains why the shopfloor is increasing in importance to manufacturers around the world

Microsoft

Prime is Microsoft's quarterly customer magazine for the manufacturing and resources sectors. For further information or to subscribe, visit www.onwindows.com/prime

Microsoft (NASDAQ 'MSFT') is the world leader in software, services and solutions that help people and businesses realise their full potential. The company offers a wide range of products and services designed to empower people through great software – anytime, any place and on any device.

www.microsoft.com

ISSN: 1747-1370 Issue 17

Tudor Rose

Published by Tudor Rose, Tudor House, 6 Friar Lane, Leicester LE1 5RA, England. Tel: +44 116 222 9900. Fax: +44 116 222 9901. info@tudor-rose.co.uk. www.tudor-rose.co.uk. Managing Director: Jon Ingleton

© 2009 Tudor Rose Holdings Ltd. All rights reserved. No part of this publication may be stored or transmitted or reproduced in any form or by any means, including whether by photocopying, scanning, downloading onto computer or otherwise without the prior written permission from Tudor Rose Holdings Ltd.

Printed in Great Britain by The Manson Group

Active Directory, BizTalk, Microsoft, MSN, Outlook, SharePoint, Visual Studio and Windows are either registered trademarks or trademarks of Microsoft in the US and/or other countries. The names of actual companies and products mentioned herein may be the trademarks of their respective owners.

Views expressed in this magazine are not necessarily those of Microsoft or the publishers. Acceptance of advertisements does not imply official endorsement of the products or services concerned. While every care has been taken to ensure accuracy of content, no responsibility can be taken for any errors and/or omissions. Readers should take appropriate professional advice before acting on any issue raised herein.

The publisher reserves the right to accept or reject advertising material and editorial contributions. The publisher assumes no liability for the return or safety of unsolicited art, photography or manuscripts.





The Chinese railway system is to be transformed over a ten year project

WONDERWARE TAKES ON HUGE SCADA PROJECT FOR CHINA RAILWAYS

China's Ministry of Railways is to implement the Wonderware System Platform as the SCADA system to operate the country's national railway.

The project will extend to 2020 and involves the automation of all power monitoring points for a majority of the Chinese railway system and will feature three million I/O points. The system will be the largest-scale industrial project to date involving the Microsoft SQL Server platform.

The project integrates a large part of the country's railway lines running from Beijing in the north to Guangzhou in the south. The project's estimated budget is approximately 3.5 trillion yuan (US\$512 billion). The organisation expects a six year return on investment.

"When the China Railway system is completed it will carry both passengers and goods, reaching a distance of 4,000 kilometres in just a few hours," said Chen Qizhi, vice general manager of Chengdu Jiaoda Guangmang Industry, the Wonderware system integrator managing the project. "This is a big leap from the normal multi-day trip it takes right now and is a huge improvement in our

country's transportation system."

The initial rollout of Wonderware System Platform software involves approximately 100,000 I/O points. By the end of 2009, the SCADA solution will expand to 300,000 I/O points as more stations are added, and will increase to 1.5 million I/O points by 2010. It is expected that by the time the project is completed in 2020, the Wonderware SCADA solution will manage more than three million I/O points and will include the Beijing-Shanghai high-speed railway currently under construction.

"This is a big leap from the normal multi-day trip it takes right now and is a huge improvement in our country's transportation system"

"Wonderware System Platform was chosen by the China Ministry of Railways because it is able to accept large I/O systems into a single, integrated solution,"

said Mark Davidson, the company's vice president. "The scalability of the software makes it possible to execute the project in stages, enabling China Railways to operate only the system that is required at a certain time. This allows railway managers to budget resources properly."

Wonderware has standardised its automation and control systems on Microsoft's industry-standard platforms, such as Microsoft SQL Server. "The China Ministry of Railways selected the Wonderware System Platform on SQL Server to meet its unprecedented scalability challenge without sacrificing reliability and security," said Chris Colyer, Microsoft's global director of manufacturing operations strategies. "Microsoft and Wonderware offer a solid and secure SCADA system built on an open, highly scalable and fully integrated architecture. Together, we remain dedicated to providing robust, easy-to-use automation software based on Microsoft technology."

www.wonderware.com
www.china-mor.gov.cn

Dassault Systèmes brings Italian bridge plan to life

The Italian province of Piacenza has kicked off a major manufacturing project by developing a 'virtual bridge' with help from Dassault Systèmes.

The Piacenza province covers an area of 2,589 square kilometres, is located in the North West of Emilia Romagna and is two-thirds mountainous. For around 30 years, the inhabitants of Piacenza have been waiting for the construction of a bridge across the Trebbia river.

The Dassault Systèmes project is expected to help the Piacenza authorities anticipate work procedures, as well as to feed local curiosity. Once the three-year construction phase begins, citizens will be able to take virtual tours of the bridge through the Piacenza Government's Web site.

The Piacenza authorities provided Dassault

Systèmes with the chorography curves from its geographic information system, as well as the architects' drawings of the bridge. In addition, the composite model used satellite map imagery taken from Microsoft Virtual Earth, as well as some onsite photographs.

The 3D terrain reconstruction was achieved using Catia Imagine & Shape, while the bridge model was created using standard Catia solid modelling. Finally, 3DVIA Virtools was used to combine the various sources of input to create the final virtual bridge. The entire project took around ten days from start to finish.

The resulting solution is highly interactive, enabling Web-users to virtually walk on the bridge, travel the bike lane and change the time of day to their liking.

www.3ds.com

Lockheed Martin Aeronautics expands its horizons with Teamcenter

Lockheed Martin Aeronautics, the builder of the advanced multi-role fighter the F-35 Lightning II Joint Strike Fighter (JSF), is expanding its use of Teamcenter software, Siemens PLM Software's digital lifecycle management solution. This will enable a fully digital product lifecycle management (PLM) backbone for design, manufacturing and maintenance support for the JSF programme.

"Lockheed Martin's decision to use Teamcenter to manage and protect its intellectual property is a testament to our commitment to provide a robust, open PLM platform," said Helmuth Ludwig, president, Siemens PLM Software. "Teamcenter will provide a solution that enhances collaboration and innovation while delivering design anywhere; build anywhere capabilities that are required for the global market of the JSF."

Lockheed Martin's extended use of Teamcenter, which runs on Microsoft technology, will allow for increased collaboration between the company's engineering and manufacturing environments, which will reduce the time required to incorporate changes and enable critical production rates. The technology, for example, will be a key tool in enabling the company to reach a projected production rate



of one F-35 aircraft per day. It will also allow Lockheed Martin to much more effectively perform reconciliations to help improve quality and reduce cost while delivering on time, by tightly coupling engineering efforts with manufacturing.

The integration of processes and tools that enable data flow will be instrumental in driving future standards, maximising global partnerships, and providing world class products and services. The F-35 JSF programme exemplifies efforts to enhance the product value stream and realise the benefits of product process lifecycle management system integration to be gained in the aerospace and defence environment.

www.siemens.com/plm
www.lockheedmartin.com

IN FRONTLINE THIS ISSUE

Manufacturing companies

A & A Contract Customers Brokers	12
Aberdeen Group	12
China Railways	8
Efore	13
Gartner	10, 12
Lockheed Martin Aeronautics	9
Nalco Chemicals	10
Opinion Research Corporation	12
Piacenza Government	9
SAAB	10
Warwick Manufacturing Group	10

Solution providers

Accenture	15
Anglia Business Solutions	13
Arrow Electronics	14
Atrion International	12
Dassault Systèmes	9, 14, 15
Fujitsu Technology Solutions	10
Iconics	10, 12
iStore	16
Jet Reports	15
Kepware Technologies	12
MatrikonOPC	12
NetApp	12
OSisoft	10, 15
Preactor	12
Predsys	13
PTC	13
Rockwell Automation	10, 12
Siemens PLM Software	9, 10, 12
Siemens	15
Solugenix	13
speakTECH	10
Supply Chain Systems	13
Telligent Systems	10
Transcore Link Logistics	14
Wonderware	8, 12
Worldtech Security Technologies	12

Microsoft technologies

.NET	14
Communicator	10
Dynamics AX	13
Dynamics	15
FAST	14
Hyper-V	10, 12
Office Communications Server	10
SharePoint	8, 10, 13
SQL Server	10
System Center	12
Virtual Earth	9
Windows CE	12
Windows Server	10, 12

News in brief

Rockwell Automation has released *Perspectives on sustainable production: delivering economic value and serving the greater good*, the latest title in its 'Manufacturing Perspectives' white paper series. The paper features insight from Rockwell Automation customers The Boeing Company, Coca-Cola, and General Mills, as well as Rockwell executives. It can be accessed at <http://literature.rockwellautomation.com>

Warwick Manufacturing Group (WMG) at the UK's University of Warwick has been working with **Siemens PLM Software** to provide its researchers, students and businesses with access to more than £22m (commercial value) of technology in its new digital laboratory. Siemens PLM Software's NX, Teamcenter and Tecnomatix products will be used in 40 seat bundles, which have been integrated into WMG's Microsoft IT infrastructure.

The **Social Enterprise Alliance**, a strategic collaboration between Microsoft Gold Certified Partners **Telligent Systems** and **speakTECH**, has been established to deliver an integrated social networking solution for customers in the manufacturing and consumer goods sectors. Through this 'Social Enterprise Solution', companies will be able to connect with key customer communities through social networking and analytics technologies.

Fujitsu Technology Solutions has released its third-generation x10sure solution, designed to provide SMBs with a cost-effective, high-availability alternative to clustered hot-spare servers. Benefits of the solution include hypervisor-level support for virtual machines, integration with Microsoft Hyper-V and higher levels of system protection against unplanned downtime.

Thriving in uncertain times

Microsoft's Empowering Excellence 2009 series of manufacturing and resources workshops has been hailed a great success, with well-attended events taking place between January and April.

With a theme of 'thriving in uncertain times,' the events were dedicated to an audience of IT and business decision makers. They provided participants with information and support on how they could use leading-edge technologies to help realise cost savings, increase efficiency, enable change and foster innovation. The success of the workshops is evident in the fact that Microsoft now plans to extend in regions such as the USA, Latin America and Asia Pacific during FY10.

Feedback from both customers and partners was excellent, with the demonstrations and case studies proving

popular with customers. "It was interesting to evaluate how Microsoft could help with cost savings and better use of existing investments," said a representative from SAAB, which attended the event in Sweden.

"The seminar was a great success," said Roberto Penso, sales manager at Iconics, who attended the workshop in Istanbul, Turkey. "I had to extend my stay in Istanbul to manage the follow-up requests from customers."

"This is a great way to inform our customers on what Microsoft can offer, and specifically what we can offer together with our industry partners," commented Freek Armbrust, partner industry manager for manufacturing at Microsoft, following a successful event in the Netherlands.

www.microsoft.com

did you know?

Wireless connectivity will be the main focus for vehicle manufacturers by 2012.

Source: Gartner

Nalco chooses OSIsoft PI

Nalco Chemicals is to use the OSIsoft PI Infrastructure and Microsoft SharePoint platform, deployed via a Software-plus-Services (S+S) model, to improve customer asset protection, operations efficiency and throughput.

Nalco's global distribution of this system will provide automated data collection from customer oil and gas and chemicals production sites along with data streaming to a centralised mission-critical repository and analytics engine based on the PI System.

The implementation will include the PI System infrastructure, which is built on Microsoft Windows Server 2008 and integrated with Microsoft SQL Server 2008. The PI System also uses Microsoft SharePoint Server 2007, Excel Services and PerformancePoint Services to transform a site's operational data into intelligent information for use in real time by Nalco's process chemistry experts. It will further leverage Microsoft Office Communications Server 2007 and Communicator 2007 as well as SQL Server 2008 Analysis Services and Reporting Services. The S+S deployment makes real-time information and analytic tools

available so Nalco technicians and customers can more easily collaborate across an enterprise to monitor and analyse data, while solving complex process problems in real time.

"In today's business environment, people need to be empowered with insight to make quick, informed decisions," said Chris Colyer, global director of manufacturing operations strategies, at Microsoft's manufacturing and resources sector. "OSIsoft's Managed PI S+S solution delivers this capability, allowing companies to make more relevant decisions based on advanced data collection automation and analytics."

"This solution allows us to offer our customers high-quality performance data, and allows them and our service engineers to optimise treatment programmes for maximum cost, performance and sustainability credits, as well as benchmark their operations," said Steve Taylor, president of Nalco's Energy Services division.

www.osisoft.com
www.nalco.com



PLM Europe welcomes you to Siemens PLM Connection 2009

SIEMENS PLM CONNECTION 2009

5-7 OCTOBER 2009, NEW YORK CONVENTION CENTRE, MARNE LA VALLEE, PARIS



PLM Europe's annual user group conference targets users of NX™, Teamcenter® and Tecnomatix® software. Siemens PLM users have the opportunity to learn about the latest Siemens PLM Software developments and participate in the latest customer showcases from various leading companies on their successful adoption and implementation of Siemens PLM Software technology.

- Learn about the latest software tools to improve productivity
- Invaluable networking with other Siemens PLM Software users
- Enhance and share your knowledge
- 1-2-1's with the Siemens PLM Software development team
- Large Partner Solutions exhibition
- Microsoft keynote presentation

For more information and to register, visit www.plm-europe.org

PREMIUM EVENT PARTNER



News in brief

Visualisation and manufacturing intelligence software provider **Iconics** has entered into a working relationship with **Keeware Technologies**, a leader in communications for automation. Through the partnership, the companies will deliver Microsoft Windows CE communications solutions for use with Iconics' embedded SCADA and visualisation products for machine and panel original equipment builders.

The **Gartner Enterprise Architecture Summit** will take place this year on 14-15 September at the Royal Lancaster Hotel in London, UK. Attendees will learn how to reduce costs in their business and why Enterprise Architects should be used as instruments of change to play a central and significant role in the future of the business. For more information, visit www.europe.gartner.com/ea

PLM Europe's annual user group conference, Siemens PLM Connection 2009, takes place this year on 5-7 October at the New York Convention Centre, Marne La Vallee, Paris. This conference targets users of NX, Teamcenter and Tecnomatix software. Users can learn about the latest **Siemens PLM Software** developments and participate in the latest customer showcases from various leading companies on their successful adoption and implementation of Siemens PLM Software technology.

Product compliance specialist and Microsoft independent software vendor **Atrion International** has recently acquired a whole host of new mid-market and enterprise customers including Teknos Group Oy, Dubois Chemicals, BG Products, Kuwait Petroleum and Champion Technologies. All of these customers have implemented Atrion's product compliance suite to address REACH and GHS regulatory compliance demands.

Worldtech Security Technologies, a provider of cyber risk and compliance management solutions for industrial automation industries, has formed a strategic partnership with **MatrikonOPC**. The alliance involves the incorporation of Wurdtech's Achilles Satellite testing platform and certification programme into MatrikonOPC's range of solutions.

Freight broker reduces storage needs

Canadian based customs and freight broker A & A Contract Customs Brokers has achieved significant IT efficiency gains by using Windows Server 2008 with Hyper-V technology and Microsoft System Center with NetApp storage solutions.

"Our antiquated direct-attached storage system was not meeting our growth and management challenges," said Dan Morris, systems engineer at A & A. "We were continually adding more disk drives as a short-term solution to scale storage capacity. And we desperately needed to consolidate our servers as well. While server virtualisation alleviated part of our problem, we still experienced disk capacity issues that constrained our virtualised environment."

A & A turned to Microsoft and NetApp, a storage and data management solution provider, to consolidate its server and storage infrastructure and has achieved a number of benefits in the process. The solution has helped the company to administer both physical and virtual assets using the Microsoft System Center suite of systems management tools; improve overall system availability using the

built-in clustering capabilities of Windows Server 2008 to automate the failover of servers; defer the purchase of additional storage for up to 24 months by freeing more than 25 per cent of primary storage for reuse; and quadruple retention times for disk-based backup data from one week to one month to significantly bolster data protection and recovery efforts.

"A & A is an excellent example of how our customers are reducing their storage requirements by 50-70 per cent using our storage efficiency technologies," said Patrick Rogers, vice president of Solutions Marketing at NetApp. "We understand the challenges our customers are facing to do more with less and reduce costs and unplanned downtime. Microsoft's server virtualisation platform gives customers a powerful solution to consolidate their IT infrastructure. Together, we're helping customers maximise the value of their storage and servers in their virtualised environments."

www.microsoft.com
www.aacb.com

did you know?

More than half (54 per cent) of Americans strongly believe that highly automated and modern factories are important in order to improve or grow the economy.

Source: Rockwell Automation; Opinion Research Corporation

Preactor partners with Wonderware

Preactor International has received certification from Wonderware, and will provide the Finite Capacity Scheduling module for the Wonderware Operations system, formerly known as Factelligence. The two companies worked closely together to ensure a seamless integration between Wonderware Operations and the Preactor 400 advanced planning and scheduling (APS) system using Wonderware's supply chain connector technology.

The agreement follows research by Aberdeen Group, which found that the 20 per cent best implementers of lean manufacturing used lean scheduling tightly integrated with manufacturing execution systems and enterprise resource

planning technology.

"Wonderware is used in over one-third of the world's plants and facilities, and many of these sites can make further efficiency gains by integrating their plant floor and production planning capabilities," said Preactor CEO Mike Novels. "Preactor has a long history of its systems being used in an enabling capacity with Wonderware solutions in many different industries. This is a logical extension, providing the proven benefits of two leaders in their fields to manufacturers the world over."

www.preactor.com
www.wonderware.com

Efore secures a clearer vision with Predisys

A leading global power supply solutions provider Efore has implemented Predisys Manufacturing Analytical Suite to replace its enterprise-wide legacy system. Predisys' solution connects Efore's global manufacturing network into a single operations performance measurement platform. The solution provides the organisation with global visibility over its entire product life cycle, bridging R&D with manufacturing.

"Predisys is rapidly becoming a vital management and decision-making tool throughout our whole organisation from top executive level to R&D and manufacturing operations," said Panu Kaila, executive vice president, Operations, Efore. "Thanks to the global visibility and highly refined, real-time intelligence it provides us with, we are able to make more accurate

and fact-based decisions faster than ever before and move from reacting to preventive actions. We selected Predisys because of its leading-edge Web-centric software architecture and strong domain expertise in our industry."

Predisys' solution at Efore consists of a number of applications for managing and harvesting the quality information from automated test systems, inspection stations and customer support and repair centre, as well as a uniform platform for analysing this data and online reporting tools running on Microsoft SharePoint. In the plant floor level the system is used for online statistical process control of the assembly processes.

www.predisys.com
www.efore.com

News in brief

PTC has partnered with **Solugenix** to provide an integrated solution for manufacturers. Companies using the PTC Windchill and Microsoft Dynamics AX solution will benefit from enhanced communications and a reduction in time spent and errors made manually moving product data from engineering applications to their ERP system.

Anglia Business Solutions, one of the UK's leading providers of Microsoft-based business management solutions to the fresh food industry, has acquired **Supply Chain Systems** in Norwich, UK from its US parent AgriWise. In a share purchase agreement on undisclosed terms, Anglia has acquired both the UK business and IP rights of the company from AgriWise.

axpact

The World's Largest
Microsoft Dynamics AX
Delivery Team

- 120 Offices Worldwide
- Covering 76 Countries
- Over 1500 Certified AX Experts
- 1200+ Separate AX Projects
- 600+ Manufacturing Projects

AxPact brings together the world's very best Microsoft Dynamics AX expertise to work together in delivering high quality multi-site, multi-national, Microsoft Dynamics AX projects.

Since AxPact was formed in 2001 we have successfully delivered more than 1200 Microsoft Dynamics AX implementations, which is over 10% of all AX projects worldwide.

To discuss how we might assist your company please contact:

Paul Blatherwick, Business Development Manager
Telephone: +44(0)845 456 3433
Email: paul.blatherwick@ax-pact.com

Visit our website...
www.ax-pact.com

News in brief

Global electronic components and computer solutions provider **Arrow Electronics** is providing greater access to its product data and simplifying the search and ordering process within its components database through the launch of new online features. Building on the strength of Microsoft FAST, Arrow's new parts search engine, the enhancements represent the next step to provide greater tools and information via Arrow's online resources.

Dassault Systèmes' Delmia Automation solution has been recognised in the Information Technology category at the 15th annual *Automotive News* Premiere Automotive Supplier's Contribution to Excellence awards.

Truck show release for TransCore

TransCore Link Logistics launched an upgraded version of Loadlink Online at this year's ExpoCam – Canada's national trucking show.

The enhanced online freight matching system is built on the Microsoft .NET platform, which provides increased computing speed and flexibility, as well as a broader tool set. The new system is one of the few in the freight matching logistics marketplace to take advantage of .NET technology.

"Speed, reliability, and ease of use were the essential criteria for users," said Claudia Milicevic, general manager of TransCore Link Logistics. "Many of the enhancements are the direct result of suggestions by dispatchers who use the system in day-to-day operations and needed an online application that provides alternative posting options and instant results."

Subscribers now have the ability to edit



postings, mark leads as being contacted, chat with other subscribers and view live leads in a new, larger tab that provides them with all the information at a glance.

A new template posting functionality enables customers to select the loads and trucks they need to move for that specific day, as well as giving them the ability to upload all selected postings with a single click.

www.transcore.com

People power focus at Global Energy Forum

The Madinat Conference Centre in Dubai played host to the second Microsoft Middle East and Africa Global Energy Forum in April.

Sponsored by leading partners including Dassault Systèmes, Siemens, Accenture and OSIsoft, the one-day conference focused on people as 'the real energy in oil and gas'.

Delegates learned how the technologies of Microsoft and its partners could help them drive performance by empowering insightful decision-making and developing sustainable business strategies – key needs in today's uncertain economic climate with its volatile crude prices.

People were foregrounded as the most valuable resource for organisations, and sessions focused



Dubai was the venue for the forum

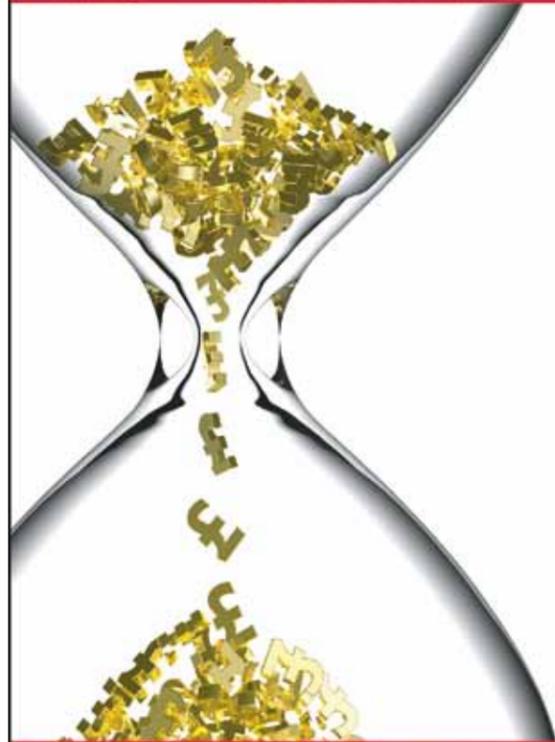
on how companies could leverage existing technology assets to enable staff to innovate and drive the business forward.

www.microsoftmeagef.com

News in brief

Jet Reports, the independent reporting solution for Microsoft Dynamics products, is undergoing a period of development and certified users are being offered a preview into both the new Jet Reports roadmap and new product approach to be announced in September 2009. The solution company is also increasing its number of certified trainers, professionals, and specialists. These new measures are all keyed towards broadening the manufacturing solution's reach, improving operational reporting for customers.

BECAUSE TIME IS MONEY



You need to save both

Advanced planning and scheduling software can save you both

Easy to say
Hard to deliver
Harder to prove

We can prove it

Over 110 case studies at proof.preactor.com

What are you waiting for?

World Class Planning & Scheduling, Locally Delivered



Meet your goals : with KUMAvision business software



Flexibility, speed and the courage to take unconventional decisions are key priorities for medium-sized companies. Success is not guaranteed by having the right resources, but by optimally applying them.



You set your goals – we provide you with the required efficiency.

Experience maximum flexibility coupled with economic transparency, with a range of functions optimally adjusted to your needs. This results in quick return on investment – with investment security provided by the internationally proven Microsoft Dynamics NAV base. KUMAvision offers specialised ERP sector solutions for industry, trade, healthcare and service providers. Whatever your goals are – with KUMAvision industry solutions you opt for maximum efficiency.

KUMAvision AG Tel. +49 (0)7544 966-300 www.kumavision.info dynamics@kumavision.info



INTEGRATED DATA FOR THE OIL AND GAS INDUSTRY



iStore's customers include Shell, which requires data to make better-informed decisions about drilling activities

The Information Store (iStore) is now offering oil and gas companies the ability to seamlessly integrate exploration and production (E&P) data from IHS, a global source of critical information and insight in industry, with their own data into digital oilfield platforms using PetroTrek Digital Oilfield.

The solution from global company iStore, which helps petroleum companies access E&P data wherever it resides and whose customers include Shell and BP, allows users to access, view, and analyse the IHS oil and gas well and associated production data along with content from other data sources on Microsoft Office SharePoint Server 2007 and Virtual Earth.

"IHS and iStore customers now have a seamless and easy way to combine proprietary internal data with external data in an integrated view," said Barry Irani, president and CEO of iStore.

"By integrating IHS information into PetroTrek Digital Oilfield, oil companies can extract, view and analyse all available data more easily, enhancing their ability to make timely, better-informed decisions about their exploration, drilling, production and acquisition and divestiture activities."

"IHS and iStore customers now have a seamless and easy way to combine proprietary internal data with external data in an integrated view"

PetroTrek is a Web-based software tool that allows the retrieval and viewing of data stored in disparate database systems without having to

move data to a new storage location. This data can be retrieved in real time, leveraging existing IT investment and infrastructure, and PetroTrek then presents it in recognisable formats that include text and graphics for quick analysis of oil assets.

"As oil and gas companies are increasingly seeing the benefit in merging financial and operational data, more people than ever need to have access to business intelligence tools for right-time analysis and heightened decision making," said Craig Hodges, US energy and chemicals industry solutions director at Microsoft. "SharePoint Server provides an infrastructure that allows PetroTrek users to quickly get up to date, collaborate and manage multiple data sets from a single location."

www.istore.com

POW! We just broke all our productivity records.

THANKS TO
Powerful
Open
Wonderware

iwensys.
Wonderware
Software Solutions for Real-Time Success™

The powerful and open Wonderware System Platform software supports people with faster, real-time collaboration and decision support. Plant and facility operators, managers and IT departments in over 125,000 installations around the world rely on the power of Wonderware to achieve operational success. Put some POW! into your operation. Get Wonderware. www.wonderware.com

TOWARD ZERO BREAKDOWN

Notification workflow software helps manufacturers move a step closer to zero downtime, says Matthes Derdack



Matthes Derdack is the co-founder and co-owner of Derdack, an independent software company that specialises in mobile messaging platforms and notification workflow software. He founded the company in 1999 and holds the position of managing director. He is responsible for the vision and strategic direction of the company

During uncertain economic times operational excellence becomes an even more important factor in retaining existing customers, staying competitive, cutting costs and reducing business risks. To a large extent operational excellence is based on business continuity, and the ultimate goal of business continuity is simply zero-downtime.

Researchers have described how Japanese companies gained a competitive edge by pioneering lean manufacturing methods. Another key area of lean manufacturing that turned companies like Toyota into super-manufacturers was their fanatical drive to achieve a 'zero breakdown regime' on production lines. IT systems for controlling production lines or managing just-in-time processes have become an integral part of contemporary factories. Accordingly, the struggle for 100 per cent uptime now also includes IT systems that have become the mission-critical backbone of many enterprise processes.

Systems for monitoring, managing and pre-emptively servicing business and manufacturing systems, assets and IT have been the focus of risk managers, CIOs and other responsible staff for some time now, and good progress has been made in developing capabilities for detecting critical events. The next move toward operational excellence and zero-downtime consists of software and services for automated event notifications, notification workflows and automation of problem

resolution by means of technology and wireless communication, already offered by a few specialised vendors.

As humans are still the ultimate decision makers in unexpected situations, a key element of achieving zero downtime is the inclusion of people in the communication cycle in case a serious issue cannot be resolved without human intervention. For such cases, proper man-machine interfaces are essential. But having intuitive process management consoles is not sufficient. A comprehensive and reliable approach requires smart and super-fast communication solutions – for example, for submitting alerts and critical information to field personnel.

In a real-time business process, man-made decisions need to be made quickly. Automated communication cannot stop at the console screen indicating a problem by a blinking symbol. Such scenarios too often result in dispatchers manually dialling phone numbers to find a proper person for problem resolution. Having an unnecessary manual interaction in an otherwise fully automated chain can jeopardise the benefits of process automation as unnecessary human latencies become the bottleneck in the overall process.

Automated notification workflow software can provide the required speed and guarantee the highest level of reliability. It leads to the removal of human latencies from communication chains, directly connecting responsible decision makers or technicians with

“In a real-time business process, man-made decisions need to be made quickly. Automated communication cannot stop at the console screen indicating a problem by a blinking symbol”

machine and IT managing systems. Gartner calls this 'communication-enabled business processes'.

These contemporary software systems deliver critical information based on presence of personnel; they choose the proper communication channel and work with predefined high-speed escalation chains. If they are based on closed-loop communication principles they also ensure the delivery of business-critical messages as they track the delivery of notifications and can automatically act in case of a failed delivery attempt – for example, by choosing a different communication channel or the next person in the notification chain. The closed-loop communication principle also involves feedback of the notification process back to the very system that initiated the communication chains, so it knows when a responsible person has been informed and acknowledged the problem.

As an example, Boehringer Ingelheim Netherlands recently invested in an automated notification workflow system which increased IT uptime and has already saved US\$500,000 in lost staff productivity company-wide. The impact of such systems in the manufacturing business is usually a lot higher and grows with the cost of any downtime in a linear manner. The impact of automated notification systems is even higher still if, in addition to informing the service technicians responsible for solving the problem, the actual workers affected by the unexpected downtime of a business-critical system are included in the notification workflow.

A second aspect of automated notification systems is the important role of centralised notification systems for automated machine-to-person communication. Enterprises in all verticals have different monitoring and business process and equipment monitoring systems in place to assess the status of various parts of their infrastructure. Vendors of monitoring solutions naturally focus on detecting events, not on communicating them.

Today, some vendors of data mining, IT monitoring or manufacturing execution systems have added basic capabilities for notifying people, often following a 'send-and-forget' approach



that is far from reliable. Many have implemented rudimentary features for one-way notifications via e-mail or text messages, without essential features like delivery tracking, automated processing of replies (such as a 'busy' response via SMS), communication escalation procedures (for example, using voice with text-to-speech if the SMS did not trigger a response from the notified person) and audit trailing.

Moreover, they lead to a zoo of multiple notification systems, which is difficult to manage and maintain and creates multiple-notification confusion among service workforce members. A 'notification zoo' actually endangers the very business continuity it was intended to increase. The ability to react quickly and efficiently to critical conditions is heavily impacted by the variety of monitoring and alerting applications that builds up over time with different sources, multiple notification formats, different reply paths, non-homogeneous communication media for alerts and so on.

With all business, facility, manufacturing and IT monitoring and management systems feeding into a

central notification system, all alerts are handled in a structured way with clear responsibilities, employing two-way communication channels like SMS and voice using defined notification and resolution workflows.

Obviously, a suitable notification system must have the mechanisms and connectors to integrate with a variety of information and event sources in the enterprise, ranging from manufacturing systems (for example via OPC), facility and security management (via serial bus protocols and so on) and IT (preferably via SOAP or through specialised monitoring product connectors, for instance for Microsoft Operations Manager).

Boehringer Ingelheim France is a prominent and recent example of implementing a centralised hub to consolidate notification systems and resolve confusion. With a central hub at the heart of its monitoring infrastructure, the company has been able to increase uptime of its IT systems to more than 99.9 per cent.

Notification workflow software helps enterprises in their endeavour to achieve operational excellence and brings them another step closer to zero downtime. 

IT'S ALL IN THE PLAN

Manufacturers can reap rewards if they give careful thought to planning and scheduling, says Mike Novels



Mike Novels is chairman and managing director of Preactor International, a leading independent planning and scheduling company based in the UK with offices in Europe, India and the USA. Preactor provides software, support, training and consultancy in scheduling applications to over 2,400 companies throughout the world via a dedicated partner network of over 1,000 accredited professionals in a wide range of industrial and commercial sectors.

Preactor International is an independent company focusing entirely on the creation of innovative tools to help organisations plan and schedule their demand against the finite capacity of plants or businesses. We asked president and CEO Mike Novels about the company and its work in the manufacturing industry.

Tell us about your area of expertise - is there a difference between planning and scheduling?

Absolutely. Planning systems typically plan in 'buckets' of time – such as a shift, day or week – and do not consider the sequence of operations on specific resources within a time bucket. Real scheduling systems take into account the sequence of loading on each resource and retain that sequence as part of the schedule. This can be very important for many if not all companies. For example, a company may want to give priority to one order over another within a time bucket to stop an order being delivered late. In other applications there may be sequence-dependent changeover times, so optimising the sequence of batches on resources can maximise efficiency and minimise non-value-added activities. An easy way to distinguish them is to ask the vendor to give you a work-to or dispatch list for each resource after running the system. If they can give you the start and finish time of each operation on each resource, then you have a detailed scheduling system.

We hear a lot about APS. What are your thoughts?

APS is a much maligned and badly used acronym. It should stand for 'advanced planning and scheduling', and was originally defined by APICS, which

included generating a detailed schedule based on the simultaneous consideration of finite constraints and materials availability. Some vendors call it an advanced planning system, and most of these do not attempt detailed scheduling or offer the ability to use multiple constraints in their model.

How can you help manufacturing companies to optimise planning and scheduling?

Companies need the visibility to manage resources and orders more efficiently, so they can reduce costs and improve customer service levels. The Preactor family of products is aimed to help small, medium-sized and multinational businesses achieve this. They can run on a standalone basis, but are more typically integrated or linked to other legacy software packages such as enterprise resource planning (ERP), supply chain management (SCM), manufacturing execution systems (MES), accounting and shop floor data collection systems. The primary objective of these products is to provide planners with an interactive decision support tool to generate feasible schedules that meet the business goals of the company. Unlike spreadsheets, wall boards and other less capable software tools, Preactor can model any type of process to any level of detail to generate achievable schedules.

We have more than 100 case studies that demonstrate a very impressive return on investment. Obviously the benefits vary from one company to another, but central to them is the visibility that planners have when a schedule is generated days or weeks ahead, telling them where any problems will be – it's like a crystal ball.

The planner then runs 'what if

scenarios without touching the live schedule, to test possible solutions to problems such as changing priority of orders or adding further capacity. Once the new schedule has been decided upon, this can be used to synchronise materials delivery so you don't have unwanted inventory absorbing capital in the stores.

It's not untypical for companies to reduce inventory and work in progress by 50 per cent. Reducing non-value-added activities and bottlenecks has also produced a 25 per cent improvement in efficiency, increasing throughput using the same resources. And, just as important when competition is at its fiercest, on-time delivery performance is dramatically improved.

How do you use Microsoft technologies?

Preactor has been a Microsoft Gold Partner for many years, and Microsoft tools, databases and operating systems run like a thread through our cloth of products and culture. Our products run on Windows XP and Vista and have tested well on Windows 7. The database it runs on is SQL Server and the development tools and languages we use are all Microsoft. And of course, our products readily integrate with and add value to Microsoft Dynamics GP, NAV and AX. Many of our partners sell these products, and it enables them to differentiate against other ERP systems that do not have state-of-the-art advanced planning and scheduling capabilities.

We have many installations and reference stories to tell when it comes to Microsoft Dynamics ERP systems. We have standard links to GP, NAV and AX. Each of these has a different level of capability for scheduling but there is a place for Preactor in all of them.

How do you maximise market presence?

We sell mainly into the discrete manufacturing and process sectors though there are also ports, airports, maintenance operations and other logistics and service companies using Preactor. More than 2,500 companies have purchased Preactor since the first version came out in 1993, and our installed base is unrivalled in planning and scheduling business world.



We have a predominantly indirect model. As you can imagine, it would be hard for a company of our size to dominate the market and sell into 65 countries without help! We have a network of partners around the world who sell, implement and support Preactor. These companies range from small consultancies to mid-range ERP companies and their distributors.

We train them and provide technical support where needed. Local support can be very important – not only is telephone support given in the local language, but also multinationals can roll out a Preactor solution to multiple plants with local expertise.

Are you seeing a slowdown now, and do you see one coming?

Not so far. In fact we had our best ever year

in 2008. Companies tell us that they don't want to commit at the moment to 'big bang' projects. They want smaller projects that attack specific pain points. Predictions from analysts suggest that shop floor operational software products like ours, which help companies both to become more agile in process execution and to respond effectively to a more unpredictable demand, will have the highest growth in the next five years.

We grew by 20 per cent last year, and we hope to maintain that even during the downturn. We have some exciting new developments coming through for our next release and we expect to maintain the number of new companies buying Preactor at 250-300 per year. We continually look for new partners to work with to open up new opportunities and markets, and many of them I am sure will come from the Microsoft ecosystem.

UNITED WE SAVE

Standardising communications with the OPC Unified Architecture standard can help manufacturers to save money, says Eric Murphy



Eric Murphy, BSc, PEng (Alberta), is a chemical engineer with a process control specialisation, and an OPC expert. Eric has been a part of the OPC community since its early beginnings, and is a member of the OPC Foundation Technical Advisory Council. Eric has acted as chief consultant on hundreds of OPC projects. You can follow Eric on the OPC Exchange blog: <http://blog.matrikonopc.com>

The saying, ‘united we stand; divided we fall’ is as old as Aesop. When people and systems work together, the results are better. With the state of the global economy and particularly the challenges faced by the manufacturing industry, everyone is looking for ways to save time and money. The industrial communications standard OPC Unified Architecture (OPC UA) unites the enterprise, from disparate control systems to business applications running across the Microsoft network.

Regardless of industry, geography, size or market, the key issues of cost control, productivity, flexibility and responsiveness are among the ten most pressing challenges for manufacturers. While revenue is falling for many, the costs of doing business are on the rise. The business changes required to respond to market pressures or keep pace with innovations create costs. Competitiveness and survival depend on driving down costs, improving operating efficiencies, and a continued focus on delivering higher value products and services to customers. Today, more than ever, the customer rules, and meeting their needs is vital to success. Whether they are individuals or organisations, customers are demanding innovative products to meet new needs and better products to fulfil old ones. They expect quality to be high, products to be delivered on time, and prices to be low.

It’s an accepted fact that enterprises can cut costs by standardising on equipment and infrastructure. Standardising includes everything from having everyone use the same Windows operating system to consolidating functionality with Microsoft Dynamics CRM or installing the same type of wiring everywhere. Standardisation provides opportunities to save money by identifying overlapping functionality, eliminating redundancies and phasing out unused or underused systems.

The same thinking holds true for standardising data connectivity within the enterprise.

Manufacturers’ success depends on responding to a wide variety of dynamic product demands in order to achieve on-time delivery and maintain competitive pricing. Automation solutions require the integration of a number of components: hardware such as controllers, drives or sensors; and applications for operator control, monitoring and process data management. The combination of devices, applications and business needs from different manufacturers within a single manufacturing environment causes problems. To overcome this, companies are pursuing standards like OPC for linking plant-floor systems with enterprise systems.

“Tightening budgets mean manufacturers can’t make a business case to replace every legacy automation device with state-of-the-art automation products. OPC UA allows interoperability between plant floor and enterprise and a link between generations of automation products”

OPC UA specifications standardise how data is exchanged in industrial automation. The standard unifies all data collection aspects into one single address space capable of dealing with current data, alarms and events and the history of current data as well as the event history. A powerful feature of OPC UA is the Address Space Model, which can expose a rich and extensible information



model using object-oriented techniques. OPC UA scales well from intelligent devices, controllers, distributed control systems and Scada systems up to MES and ERP systems. OPC UA communications also provides a way for manufactures to deal with multiple generations of automation products. Tightening budgets mean manufacturers can’t make a business case to replace every legacy automation device with state-of-the-art automation products. OPC UA allows manufacturers not only to provide interoperability between plant floor and enterprise, but also to provide a link between multiple generations of legacy automation products.

Using a standardised communication interface between all manufacturing applications not only reduces implementation and support effort, but also creates the flexible environment needed to react to customer or business demands. For example, suppose regulatory compliance or other circumstances mandate increased security measures. Since all applications follow the same communication standard, an OPC-enabled security gateway that provides the required authentication and encryption could be easily integrated into the architecture without having to redesign the system. Having a system that is adaptable to

changing needs is another aspect of reducing costs.

OPC-UA provides a uniform, standards-based protocol for transparency, integration and a central view of all data and functions from the plant floor to the enterprise. OPC UA provides complete data access and exchange services for such functions as configuration, diagnostics and runtime operational data, enabling greater asset utilisation and performance that impacts the bottom line. As companies look to equipment and application standardisation for savings opportunities, interoperable OPC UA communications should be part of that thinking. 

TIPS AND TRICKS FOR MIGRATING TO WINDOWS

Romke Wijmenga advises on how to migrate legacy systems to a Windows environment



Romke Wijmenga is chief technology officer at Asysco. He is responsible for Asysco's long-term research strategy and for developing the company's product roadmap. Wijmenga joined Asysco after graduating in information technology in 1988. His main interest and expertise have always been in the world of mainframes. Since the mid 1990s, Wijmenga has managed numerous migration projects for customers worldwide who want to move their Unisys mainframe applications to the Windows platform

Today, many organisations rely on legacy systems to run their critical business applications, and some are paying the price for the rigidity of these systems. Many are crying out for a fast and easy way to move to a Windows environment. Asysco's technology enables the largely automated migration of mainframe applications directly to the Windows platform, with its Lion technology preserving the business logic that formed part of the legacy application.

But even with an automated migration, companies need to be prepared. Many legacy applications date from the 1970s or earlier, so much of the technical and content-oriented knowledge has disappeared. People have moved on and the documentation is often substandard, making it difficult to test the converted code properly. Thus, the testing phase can sometimes take longer than the migration itself. Plan this phase carefully, and you can avoid serious delays in future projects.

If there is nobody left who knows how an application works, the testing process is going to be time-consuming. The application will first have to be tested in its old environment, to see what it does and what it is capable of. After that the migrated application must be tested again, to enable a comparison between the old and the new. Time-consuming? Yes, but it's the only way of reducing the risk of errors.

The legacy application's source code is also vital. Generally this isn't something that concerns IT, but with these kinds of projects, all sources must be complete or the migration project cannot begin. In practice, this can be problematic. Large Cobol systems can consist of a thousand or more sub-programs. A complete overview of where the application gets its functionality must be included in the migration. If not, you could find a module missing, causing extra work and expense.

Shadow processing is a term less often heard in the Windows world than among mainframe users, but it is vital. Test procedures should include a period of parallel operation, where

the migrated application and old system carry out the same functions. The mainframe capacity will still have to be used for a while so it can create situations like a database-restore, or work with different types of input files.

It is also necessary to take a good look at the performance of the new environment. Load and performance testing is crucial. You have to simulate a particular system load, which takes time because scripts have to be written for it. In addition, many applications have security features. For example, it's not possible to use the same records a hundred times in succession. Temporary solutions may be required for performance testing.

The end user won't notice anything about the migration if things go well. They may see a Windows-type interface rather than a terminal-type screen, but otherwise the only thing users may notice is the huge investment in time and money in the project. However, it is easy to determine the return on investment for these projects and investments are usually recouped within 12-18 months.

When modernising legacy applications, rehearsing the 'go-live' moment is extremely important. Not every organisation sees the need for this, but such changes have a major impact on the business. If something goes wrong, then turnover will suffer or customer service will malfunction. Very unexpected things sometimes go wrong during the first rehearsal, and sometimes two or three rehearsals are needed before the switch goes smoothly. And don't forget to involve all the necessary departments in the rehearsal and final switch. They must at least be on standby in case something goes wrong.

Finally, errors in the programming code are often discovered in automated migrations. They were present before, but for some reason they never caused problems. Now, we suddenly see them and have to fix them. It's extremely important that experienced Cobol programmers are involved in the migration of these kinds of legacy applications.



Manage the Shifting Sands of Change

Gartner Enterprise Architecture Summit 2009

europe.gartner.com/ea

14-15 September 2009 | Royal Lancaster Hotel, London, UK

The ability to predict and respond to change has become the most critical success factor in any business — and enterprise architecture is fast becoming the defining discipline.

Today, you are pulled in two directions: containing costs for the tough times while positioning the business for tomorrow's inevitable return to growth.

The Gartner Enterprise Architecture Summit is here to help, with new research, analysis and case studies on the essentials of EA. Three powerful tracks help you accelerate your EA plans, deepen your understanding and connect your strategy to related disciplines.

No matter where you are in your EA learning curve, there is plenty of insight and practical advice for you: the foundation principles; the leading trends and cutting edge technologies; and the latest ideas in the revolt against frameworks.

There is only one Enterprise Architecture Summit that gives you the independent authority and expert advice. Join us.

Book your place today.



Register before 17 July 2009 and save €500 on the standard delegate rate!

europe.gartner.com/ea
Tel: +44 20 88792430
E-mail: emea.registration@gartner.com



Gartner
Enterprise Architecture
Summit 2009

14-15 September | London

europe.gartner.com/ea



“RFID provides a way of killing two birds with one stone. It enables us to streamline our receiving processes and track our returnable containers inventory in real time”

Gokhan Sarpkaya

cover story

CONTINENTAL AG

MOVING FORWARD

When Continental, one of the world’s largest automotive suppliers, embarked on a lean manufacturing initiative, it chose Xterprise to develop a solution that would boost productivity and save money at one of its major plants. Jacqui Griffiths found out more

When it comes to automotive manufacturing, the sheer size of the industry and the number of parts involved can be quite breathtaking. In addition, where cars are involved, both safety and performance depend on precisely manufactured parts, rigorously tested every step of the way. In this business, companies need to monitor and manage every part of the manufacturing process, from supply chain to inventory, to reining in costs.

Global automotive supplier Continental AG is well aware of these issues. Continental’s Automotive Group prides itself on uncompromising attention to quality, specialising in the development of innovative technologies for vehicle safety applications, enhancing fuel efficiency, reducing vehicle emissions and information management. In fact, Continental has a 137-year history of developing and producing a wide variety of components.

Continental strives to live up to its motto, ‘forward thinking’, and continues to explore new aspects of automotive safety and performance. That’s no mean feat in today’s economic climate, but Continental’s project leader for logistics at its plant in Huntsville, Alabama in the USA, Gokhan Sarpkaya, is unfazed. “In the US especially, the economic downturn has brought upheaval to the automotive industry,” he says. “But these dynamic changes are also generating significant cost savings opportunities.”

Hence, the company instigated a ‘lean thinking’ initiative to identify where those cost savings could be

made. “Lean thinking is not only about manufacturing,” explains Sarpkaya. “It’s about manufacturing logistics. It is a supporting function for logistics. At our manufacturing facility in Huntsville, we were more involved in the process side of the inbound raw material than in the use of it.”

“Huntsville is an approximately 850,000 square foot facility in the south-east US,” explains Sarpkaya. “This region is the new synergy centre for the automotive industry in the US, and we are located in very close proximity to many major automotive OEMs. Our facility has 15 assembly lines, supporting five Continental business units which manufacture all kinds of electronic parts for major automotive OEMs. That translates into a very complex logistics process. Every day, we receive eight to ten truckloads of shipments containing some 5,000 types of electronic and mechanical parts, from approximately 160 suppliers, and all these parts are followed into our facility through three on-campus third-party logistics providers.”

The logistics suppliers repackage the supplies using one or more of Continental’s 80,000 reusable containers or pallets, which are transported to the Continental facility. The personnel who receive the shipments have traditionally used barcode scanners to check the incoming supplies against the shipping orders in the company’s SAP enterprise resource planning system, while forklift drivers hunt for available space to randomly store the supplies until they are needed. The containers and pallets are

“By adopting the RFID solution, we’ve done more than improve the receiving-cycle time and cost. We’ve also freed personnel to work on other parts of our lean thinking initiative, multiplying the impact of the solution on Continental”

then moved to another on-campus, third-party firm that processes the empty containers and returns them to the logistics suppliers.

“Our goods received process was manually intensive, and our cycle times were longer than desired,” says Sarpkaya. “This was resulting in time-consuming delays and sometimes inaccuracies in our inventory. We use over 80,000 returnable containers, which is also a significant amount of investment.”

Shrinkage was one result of errors made because the locations of parts were noted manually. Time-consuming delays occurred if the advance-shipping notice sent by the logistics suppliers did not match the parts that were actually received by Continental – or if the advance-shipping notices failed to arrive on time for the company to compare them to the shipments.

Compounding these issues, it was too easy to damage barcodes on the shipments, which prevented accurate reading by scanners. The manual scanning of barcodes and manual comparison of shipping notices with the orders in Continental’s SAP ERP system were time-consuming, non-productive and expensive processes that were very much at odds with the idea of lean manufacturing.

In support of its lean initiatives, Continental’s Huntsville plant identified these areas as an opportunity to save costs. “We looked at various different technologies and chose radio frequency identification (RFID) because it provided a way of killing two birds with one stone,” says Sarpkaya. “It would enable us to streamline our receiving processes and track our returnable containers inventory in real time. These are important areas to focus on, and the savings are significant, especially in the tough economic times everyone is experiencing today.”

Once the technology had been decided on, Sarpkaya and his team began a meticulous selection process to find the right partner. “I contacted more than 30 systems integrators,” he says. “The request for proposals was about 100 pages and our criteria were mainly focused on the system integrator. It was crucial that the vendor was experience with SAP, especially remote function codes. We also needed ruggedised, reliable hardware conforming with EPC global standards and we were looking for some tags that could survive in a harsh environment. After researching for about six months, we were able to find all those.”

Continental decided to adopt a receiving solution from Xterprise, a Microsoft Gold Certified Partner. The solution is based on the Microsoft BizTalk RFID technology platform, along with Xterprise application software and Motorola hardware. Continental chose

Xterprise based on its track record with RFID, SAP integration and reusable pallets, as well as its expertise on the Microsoft application platform.

“We were already a Microsoft shop, so the choice of a Microsoft-based solution was the fastest, easiest and most cost-effective way to deploy and maintain a solution in our environment,” says Sarpkaya. “We have coordinated and managed the project with Xterprise, and the implementation took just six months. In fact, it took only a year overall, from generating the whole idea and putting the project to work. We were expecting it to take longer because it was a brand new technology. Two more Continental plants had implemented it in Europe, but because of frequency differences the whole philosophy for our project had to change, from text selection to hardware selection to system selection. So we were expecting a longer implementation time but it took us shorter to finish the project.”

Of course, any implementation of this size is not without its challenges, and the solution at Continental’s Huntsville plant had to meet several key criteria. In addition to integrating with the SAP system, it must also be able to transfer data between the Huntsville facility and the third-party logistics providers. “We had to work with three independent on-campus third-party logistics providers, all with their own systems,” says Sarpkaya. “Aligning every one of them was a big challenge, and a very serious coordination effort was needed.”

“Then we needed to select between different methodologies of SAP integration, which is iDocs versus remote function codes. Again, our SAP team did an excellent job to perform the integration part of this project. Since we were planning to exchange a huge amount of data which was subject to strict information security requirements, we had to think seriously about the connectivity protocol for this project. After considering VPN and Soap, we decided on FTP as the optimum solution for our structure right now. So the network topology for the project was very complex.”

In addition, the company faced some wireless communication challenges, which impacted the frequency selection. “We use automated guided vehicles at the facility, and those communicate on SHF (microwave) frequency,” explains Sarpkaya. “We’re also very close to Huntsville International Airport and could detect their air search radar signal. So while we were making the frequency decision, we had to take all of these into account. That’s why we decided to use UHF tags, but because our containers were electrostatic discharge friendly, the tags had to be too. Otherwise the carbon fibre material of the containers would absorb the electronic energy and we wouldn’t be able to read the tags. However, Xterprise and the tag provider did an excellent job of tuning the tags and overcoming that problem.”

The solution has enabled Continental to reengineer and streamline its receiving processes. At Continental, Xterprise Clarity Reusable Transport Items (RTI) software automates the workflow associated with incoming shipping notification, using Microsoft SQL Server 2005 as its database. Microsoft BizTalk Server 2006 R2 acts as a bridge between Clarity RTI and the SAP ERP system,



“What about putting a gym in the plane?”

Laura, age 10.

With 3D, your customers are your best designers.

Working in 3D lets you integrate your customers’ preferences into your project more easily than ever, even online. Together, you can create, share and experience your ideas - all in 3D. With Dassault Systèmes solutions, your company is empowered by a new, universal language to invent the products of the future.

Discover SolidWorks, CATIA, SIMULIA, DELMIA, ENOVIA and 3D VIA at www.3ds.com



See what you mean

www.3ds.com

and forwards the Clarity RTI information to SAP. When Continental workers unload the incoming shipments, RFID scanners on the forklifts automatically read the tag numbers. Xterprise Clarity Automated Goods Receipt (AGR) software confirms that the received shipment matches the original request and forwards that information to the SAP system, which identifies a storage location for the shipment.

All information now residing in the ERP system is made available to the finance department to perform a three-way match of the purchase order, shipping notice, and received goods. Clarity AGR receives the storage information from SAP, through BizTalk Server, and transmits it to a screen on the forklift – then the driver moves the shipment to the identified location. Empty pallets and containers are sent to the third-party processing company, tracked by another RFID scanner, and forwarded to the logistics partners to be used again.

The solution's foundation of Xterprise, Motorola and Microsoft technologies has delivered immediate reductions in time and costs, as well as increased productivity and more accurate performance due to the new receiving-cycle solution. "The receiving-cycle time has been cut in half, saving 20 minutes per incoming shipment," says Sarpkaya. "The costs associated with that process have been slashed by 30 per cent."

Given those reductions, Sarpkaya anticipates an annual return on investment of about 100 per cent. Some of those savings come from increased labour productivity. Before

implementing the new system, incoming shipments were received by two workers – one who scanned the barcodes and logged shipments into the SAP system, and a forklift driver who looked for, and place the shipment in, a storage location. Now, automated scanning and logging of the shipment enables the forklift driver to manage the process without additional effort. Advance-shipping notices from the logistics partners no longer arrive late, eliminating the need for personnel to manually confirm that incoming shipments match the goods released by those partners.

"By adopting the RFID solution, we've done more than improve the receiving-cycle time and cost," says Sarpkaya. "We've also freed personnel to work on other parts of our lean thinking initiative, multiplying the impact of the solution on Continental."

The receiving cycle is not only faster and more cost-effective; it's also more accurate and efficient. Errors due to manual data entry have been eliminated, boosting the accuracy of a variety of processes, from inventory control to accounts payable. "We now have greater visibility into our inventory and flow of materials," says Sarpkaya. "That gives us the potential to reduce on-hand inventory and the costs associated with it. We envision inventory costs coming down significantly. We're already seeing reductions in shrinkage, which means reductions in cost."

Management of the company's 80,000 reusable containers and pallets is also improved. For the first time, Continental now knows where its containers and pallets are at all times. In addition to the continuing savings resulting from more efficient operations, Continental saw immediate purchasing savings by choosing the Xterprise and Microsoft solution instead of a proprietary, UNIX-based solution. Sarpkaya estimates the one-time savings at about 50 per cent.

"Because this solution is based on the Microsoft application platform, especially BizTalk Server, it was faster and less costly to deploy than any other RFID solution we considered," says Sarpkaya. "We used BizTalk Server to speed the integration of the solution with our SAP system, which could have been a fare more costly and time-consuming process otherwise."

Continental's employees were quick and enthusiastic in their acceptance of the solution, and have been quick to suggest additional ways that the RFID technology could be deployed – and Sarpkaya says that the use of the Microsoft application platform makes those extensions easy to contemplate. For example, the solution could be extended to track the company's finished goods shipments to its customers, the major automotive manufacturers. The same solution infrastructure could be deployed on the shop floor to track components and monitor the manufacturing process. Sarpkaya also envisions enhancements to the already successful receiving application. "In this tough economy, we are moving with care, Sarpkaya concludes. "However, we've decided to analyse, explore and implement all feasible opportunities regarding the deployment of RFID technology. Otherwise we won't be able to maintain our competitive advantage." 



Asysco PO Box 156 / 7740 AD Coevorden / The Netherlands / phone +31 (0)524515386 / salesoffice@asysco.com



WWW.ASYSCO.COM

SAVE COSTS ON YOUR MAINFRAME ENVIRONMENT

Are your legacy applications difficult to manage and expensive to maintain? Do you find it impossible to link your applications to the Internet? You want faster time to market for new applications? It's time to migrate to an open platform.

Thanks to its fully automated conversion process, Asysco Migration Technology migrates mainframe environments to a Windows platform in a rapid and cost-efficient manner. With a return on investment of six to twelve months.

Profit now from the robustness of mainframes and the flexibility of open systems. Call for more information +31 (0)524-51 53 86 or take a look at www.asysco.com.



feature

SUSTAINABLE MANUFACTURING OPERATIONS

WASTE NOT WANT NOT

Monitoring and reducing waste is essential to creating leaner, more profitable manufacturing operations. Lindsay James investigates

Sustainability has long been a buzzword in manufacturing but, in recent times, many organisations have put it on the back burner in order to focus on other more seemingly pressing issues. But sustainability is something that manufacturers can ill afford to ignore – it has become critical to success.

“Recently, there has been a massive paradigm shift when it comes to manufacturers looking at their business from the perspective of sustainability,” says Chris Caren, general manager, product management and marketing, Microsoft Dynamics. “Environmental actions that were once dismissed as soft benefits, meaning they were relegated to the realm of ‘tree-huggers’ or organisations that were not focused on shareholder value, are now rightly identified as constituting sound business acumen.”

The pressure to meet new, increasingly complex regulations is just one incentive for manufacturers to look at sustainability solutions. “Recent environmental regulatory legislation such as RoHS, WEEE, and Registration Evaluation Authorisation and Restriction of Chemicals (REACH) have had a major impact on the way manufacturers design and build products,” says John Fox, director of product and market strategy at PTC. “Manufacturers now need to track the substances used in their products. This can be a daunting task, but with the right data and the right tools it can be a straightforward process.”

“Manufacturers will also feel the pressure to meet new environmental and social requirements directly as a result of market place demand,” says Greg Gorbach, vice president of collaborative manufacturing at ARC Advisory Group. “For example, in 2008 former Wal-Mart president and CEO Lee Scott stated in the company’s *Global Sustainability Newsletter*: ‘We will require all suppliers who work with us through global procurement, who are domestic or importers, or who manufacture Sam’s Club or Wal-Mart private brands, to demonstrate that their factories meet specific environmental, social and quality standards. We have already started doing this, and we hope to extend the requirements to all of the above-mentioned suppliers within three to five years. We

will only work with suppliers who maintain our standards throughout our relationship, so certification and compliance will be part of our supplier agreements. We will favour – and in some cases even pay more – for suppliers that meet our standards and share our commitment to quality and sustainability. Paying more in the short term for quality will mean paying less in the long term as a company.’ With this in mind, it is apparent that sustainable manufacturing must deliver a new level of quality product – one that is compliant with dynamic emerging environmental, regulatory, social, and market place requirements.”

Sustainable manufacturing covers a range of concepts that help manufacturers monitor and cut waste in a way that promotes efficient, economic and green practices. Creating a business that embodies these principles should not be a fad, but a foundation for reaping long-term benefits. “There is no need to implement a strategy all in one go,” says Ari Pihlajavesi, president and CEO at Predisys. “Tackling it piece by piece will be hugely beneficial. Once the foundation is laid for measuring the success of the improved manufacturing process, you can continue to implement the major changes.”

“Achieving sustainable manufacturing is a process that itself must be nurtured and sustained,” says Gorbach. “Short-term and medium-term goals must be identified, and programmes must be resourced, instrumented, and managed. Although certain priorities such as energy consumption will merit immediate attention, over time, every system and asset throughout the enterprise may be involved in some changes to enhance sustainability.”

Smart sustainability initiatives start with measurement. Every organisation is different, but measuring sustainability and monitoring for improvements are the first steps toward being sustainable. “In the current economic climate, when everything on a company’s balance sheet is under the microscope, businesses’ overhead accounts, where all energy and operations costs come from, are ripe for an overhaul – the hardest part can be where to start,” says Caren. “Companies need ways to get that information in order to make smart decisions about where they can reasonably

“Manufacturers can realise many benefits from a sustainable operation. They can reduce costs by efficiently using new raw materials for production, conserving energy and water, and eliminating all forms of waste”

Steve Sacco, vice president,
environmental affairs and sustainability at Invensys

cut back, and that's why Microsoft believes strongly in the mantra 'if you can measure it, you can manage it'. Measuring your true impact allows you to mitigate the outcome."

"Ultimately manufacturers must focus on the impact their operations and products have in the usage of natural resources, the emissions of pollutants, and the contribution of equivalent CO₂ into the atmosphere," says Jonathan Dutton, head of automotive strategy at Dassault Systèmes. "So the first actions are to measure, track and set targets to reduce the impacts. Having accessible tools to do this is key."

Unique challenges

Given the benefits of measuring sustainability you might wonder why more organisations are not already well on their way. But sustainability is often broader and more complex than anything organisations have reported on in the past. Measuring it involves a web of interrelated data that cascades from the very top of the organisation to the very bottom, affecting every office, factory, data centre, building and employee – often permeating boundaries that connect suppliers and customers.

"When planning and implementing a sustainability strategy, many companies take a generic approach and try to follow in the footsteps of their competition, or best-in-class companies," says Steve Sacco, vice president, environmental affairs and sustainability at Invensys.

This leads them to fail in customising their strategy for their specific business. They also fail to engage leaders and employees from all aspects of the business in developing their strategy. If a business doesn't engage all employees to participate and communicate their vision it is very difficult to get traction and support."

Today, measurement and reporting of sustainability often comprises manual processes without the controls needed to consistently measure performance across the organisation

that would not stand up to any substantial scrutiny or audit. Inaccurate or absent sustainability performance measurement results in decisions based on hunches or abstract calculations rather than real, subjective data. This uncertainty has served to relegate sustainability issues to the fringe of the organisation and, in absence of conclusive data, prevents decision makers from confronting issues.

"Many manufacturers use a variety of different tools and methods to measure sustainability," says Dutton. "This is because of the disjointed systems used by key players in the supply chain. For example, a manufacturer may source its raw materials from Africa, design its components in India and the US, manufacture in France and Poland, and recycle precious metals in Germany. The key is to monitor and track the measurements and enable all actors worldwide to input and access their part of the information easily in one system."

The challenge for organisations is clear – to measure sustainability accurately and drive real, lasting change. "The right technology can help them achieve this goal," says Caren. "Earlier this year Microsoft Dynamics launched a free tool called the Environmental Sustainability Dashboard. This dashboard integrates with the Microsoft Dynamics AX enterprise resource planning solution and helps businesses to capture data based on key indicators of energy consumption and greenhouse gas emissions, helping them cut their energy consumption and costs."

The data from the dashboard can help manufacturers become aware, often for the first time, of their impact on the environment so that they can choose to implement environmentally sustainable business policies and practices. After these are in place, businesses can use the Environmental Sustainability Dashboard to track and display their effects.

"The value of the collected data comes not simply from numbers, but also from how an organisation chooses to act on the information," says Caren. "Because Dynamics AX integrates Environmental Sustainability Dashboard data with business data, manufacturers can make decisions that consider their environmental impacts. When manufacturers understand the resource consumption of their operations, managers can make fiscally sound decisions about the way their companies are run."

Further technology such as product lifecycle management (PLM) solutions from companies such as PTC and Preactor can help manufacturers to collate data on all of the materials that make up a product, enabling them to run complex product analytics to make sure a product is compliant to every regulation. "PLM solutions can tie together data from engineering, manufacturing, and suppliers to bring unprecedented benefits," says Fox.

"There are thousands of hazardous substances that are targeted by product regulations – no manufacturer can keep track of these without the right technology. The recent problems Mattel has faced, when it had to recall 800,000 toys worldwide because of excessive amounts of lead paint, highlight the devastating consequences of not adequately measuring and managing the chemical makeup of a product."

A sustainable operation can bring with it significant benefits, not only for the environment, but also across the

business including leaner processes, more attractive working conditions, and considerable cost savings. "There is money to be saved here," says Pihlajavesi. "A customer of ours abolished paper-based records, optimised manufacturing processes, reduced scrap and has saved over US\$8 million a year, while at the same time offering better customer service."

"Manufacturers can realise many benefits of a sustainable operation," says Sacco. "They can reduce costs by efficiently using new raw materials for production, conserving energy and water, and eliminating all forms of waste. They can minimise risks by staying compliant with laws and regulations, maintaining positive relationships with local communities, understanding the business performance of their critical suppliers and avoiding negative press coverage. Finally, companies can create business value through improving their image and reputation with stakeholders, satisfying customer expectations, opening up new markets and introducing new and efficient products."

Agility can also be achieved through sustainability, as Graham Hackwell, technical director at Preactor explains: "A sustainable business will be leaner and more efficient, allowing products to be manufactured to order in smaller batches. Using a good planning and scheduling system can really help here – allowing manufacturers to cut waste, create more productive sequences of work and create an extremely agile business that can thrive in any market condition." 

customer solution

Encore Automation

Encore Automation required a more efficient solution for building robotic work cells to customers' individual requirements. The company developed a standard robot cell design called EncorFlex – an entire pre-engineered and pre-packaged single robot system based on a standard platform which allows for installation within an hour on the customer floor and the ability to run parts the same day. To achieve this level of flexibility, Encore relies upon Dassault Systèmes' Delmia Robotics simulation solution for modelling and off-line programming of the complex workcells. This eliminates trouble-shooting on the plant floor, saving time and money as well as minimising the need for paper documents to gain customer confidence.

customer solution

Seventh Generation

Seventh Generation is the leading distributor of home cleaning, personal care, and baby products made from natural, recycled or renewable materials. The company constantly seeks to minimise its environmental impact. Seventh Generation sought an ERP solution to support its supply chain more efficiently, including monitoring the environmental impacts of its suppliers and individual products. With help from Microsoft Gold Certified Partner SCS, Seventh Generation implemented Microsoft Dynamics NAV with added functionality to track carbon footprint, safety of ingredients, and efficiency of packaging and transportation throughout its supply chain. With Microsoft Dynamics NAV, the company automated business processes and streamlined supply-chain management while pursuing its mission of corporate responsibility.

Want to Significantly Improve New Product Introductions?

Need to Tear Down the Walls between Engineering and Production?

Concerned about Growing Scrap & Rework in the Production Process?

Want More Value from Your IT Spend?

The PTC/Solugenix Partnership is Your Answer!

With more than 40 years of IT consulting experience for some of the nation's leading brands, we offer cost-appropriate integrated solutions for Product Lifecycle Management (PLM) and Enterprise Resource Planning (ERP).

With a PLM/ERP integrated solution and our customer-focused team we will help you:

- Introduce new products with up to 2X the typical success rate
- Reduce time-to-market for new products of up to 40%
- Increase quality while reducing cost by enhancing collaboration between engineering and production
- Ensure a profitable product mix necessary to compete in today's competitive climate
- Replace legacy systems & reduce IT maintenance costs of up to 15%

The PTC/Solugenix & Microsoft Dynamics AX partnership meets the vast needs of a company's engineering group, while supporting the customer service, production, supply chain, and finance processes of a manufacturer. As products undergo the typical changes which occur between concept to market, you can be assured your product roll-out will be completed on-time, within budget, and with the highest level of customer satisfaction.



Call 866-749-7658 or email dynamicsax@solugenix.com to discuss how our consultants can help you make a positive impact for increasing your business capabilities and boosting your bottom line.





SHELTER FROM THE STORM

At a time when the manufacturing industry is at its most competitive, businesses cannot afford to let relationships with their customers slip. Lindsay James takes a look at the CRM technology that is enabling manufacturers to better connect with existing customers, and weather the current economic storm

Customer-centricity is something that many businesses work towards, especially in the retail and hospitality industries. However, manufacturing has traditionally been a different story. For years manufacturers have been product-focused, relying on their goods to sell themselves.

But, as competition reaches an all-time high, manufacturers can no longer sell on products alone. While the latest Confederation of British Industry (CBI) survey found that the outlook for the manufacturing industry has improved, with many firms in the sector expecting the pace of decline to slow in the next three months, a fall is still expected, albeit at a much slower rate. Across the world, the story is much the same.

“At the moment manufacturers are focusing on activities that have an immediate, measurable impact such as workforce productivity rather than spending on IT where the benefits tend to be realised over a longer time period,” says Marina Stedman, vice president of marketing at SalesCentric. “However, for manufacturers in developed economies to compete effectively with those in emerging

markets which have much lower costs, they need to move up the value chain by adding value to the manufacturing process. This requires an in-depth understanding of customers and their needs and desires.”

For these reasons, manufacturers are fast accepting the fact that in order to boost sales and increase profits they need to pay more attention to their customers. Customer Relationship Management (CRM) is the technology that manufacturers are choosing as they are finding that consumers require more and more attention.

“Manufacturers need to make customers the pivotal point in the business processes,” says Maria Jesús Llorente, director of Qurius Advanced Solutions, Spain. “Our economy has switched from being a seller-driven economy to be a predominately buyer-driven economy. By leveraging the voice of the customer, manufacturers get a competitive advantage in redefining all customer-facing operations.

“That is where CRM takes centre stage, by being the vehicle to implement and execute strategies where knowing customers and manage the relationship with

them is a priority. However, we should not forget that CRM is not only a technology, but a strategy. The strategy needs the technology and vice versa.”

Modern manufacturing theory refers to the idea of integrating the customer into all aspects of the supplier’s business and vice versa, as Hareesh Khatwani, worldwide director for EPG at Microsoft explains: “Customers’ needs generally extend to issues far beyond the suppliers’ proposition, and will often include the buying-selling process, the way that communications are handled, and the nature of the customer-supplier relationship. This implies a relationship that is deeper and wider than the traditional ‘arms-length’ supplier-customer relationship. The modern approach to CRM technology is based on satisfying all of the needs of the customer’s people, systems and processes.”

An enabler for success

CRM is a technology that allows manufacturers to track and leverage every customer interaction to maximise revenue opportunities and improve customer loyalty. But CRM does much more than just track customer interactions. It also helps organisations optimise their operations by automating routine tasks and standardising best practices. Ultimately, CRM allows organisations to better acquire, manage, serve, and extract value from their customers while improving operational efficiency -something that is critical in today’s economy.

In fact, customer relationship management was noted as a leading priority of business executives by AMR Research in 2008 (Fletcher 2008). This trend has continued, with Forrester Research showing that more than a third of enterprises plan for CRM upgrades in 2009 (Marston 2009). And Nucleus Research goes on to state: “If there is one technology area where you should increase your investment today, it’s CRM.”

With many traditional CRM solutions, users are often forced to make significant behavioural changes to use the system. However, Microsoft has taken a different tact. “By providing users with a familiar look and feel through

a commonly-used tool like Microsoft Office Outlook messaging and collaboration client, Microsoft Dynamics CRM helps them get up to speed quickly and complete tasks with minimal hassle,” says Khatwani. “For example, with just a click, users can promote existing Office Outlook contacts to Microsoft Dynamics CRM. E-mail messages and calendars are automatically synchronised with Office Outlook, which alleviates tracking information in multiple sources.”

“With the Microsoft offering, users will want to use CRM, not have to use CRM,” says Llorente. “It is fully integrated with Microsoft Outlook, with the entire Office platform in fact, and uses SharePoint as the main collaboration and information worker solutions.”

Furthermore, when compared to setting up a new manufacturing plant, hiring a cadre of new sales and customer service representatives, or raising capital to acquire other companies, CRM is a technology that can be implemented rapidly with relatively limited costs. In fact, once implemented, Microsoft Dynamics CRM can help to reduce costs dramatically. It makes it easier for organisations to deliver cost-effective customer service, and it enables organisations to minimise IT costs through system consolidation.

A better understanding

In an era when customers are disloyal, manufacturers need a CRM system that allows them to truly understand the needs and wants of their customers, and one that enables them to offer impeccable customer service. “Customers want a high degree of account management,” says John Pearson, sales director at ConsultCRM. “They want to be understood, and ideally be ‘intelligently anticipated’ with timely communications and offerings. This only happens through deep client insight and regular contact.”

“Customers are expecting more value, lower prices, global capability, agility, high quality and a better service experience,” says Jukka Valkonen, director of marketing and communications at Tieto. “In order to live up to these expectations, manufacturers need tools that automate business processes, are available around the clock globally, and are mobile and intuitive for the users. Last but not least, the same systems should serve all the parties: manufacturers, partners, suppliers, distributors and customers. All of this can be achieved through Microsoft’s strong portfolio of CRM solutions.”

In order to further examine customer expectations, analytics solutions, such as Microsoft’s PerformancePoint Services, can be implemented to gain a better understanding of the customer. “One of the more difficult, yet more precise, types of measurement is the ability to understand the actual intentions of customers in their own words,” says Khatwani “What services did the customers actually need? Did they ask for something completely different from what they needed? Was the manufacturer able to discern the actual need and convert the interaction into a sale?”

In fact, while many manufacturers think they have a healthy customer service operation, this type of analysis can prompt them to think again. “There is often a gap

customer solution

Scania GB

Truck manufacturer Scania GB has implemented Microsoft CRM from ConsultCRM, integrating it into its existing dealer management system. This provides not only vehicle centric information but also customer centric data and helps after-sales by automatically creating warranty renewal alerts for the sales staff. PerformancePoint Server has also been added to provide business intelligence reporting.

SWITCH ON YOUR HEADLIGHTS!

Predisys Analytical Suite™ is a Microsoft SharePoint based analytical solution for development and engineering teams in the hi-tech industry.

It turns high volume quality data into accurate decisions with advanced statistical analysis, quality control and collaboration tools.

Predisys Analytical Suite connects your disparate manufacturing systems and bridges your supply chain with live visibility.

Unleash your engineering power by making real-time analysis easy and accessible to all professionals in your organisation.

Act now and ask for more information
sales@predisys.com

Predisys... navigating with knowledge

feature

CUSTOMER INSIGHT AND ENGAGEMENT

between the service customers expect and the actual service experience,” continues Khatwani. “Pinpointing this gap is key to improving service. Furthermore, manufacturers should align the expectations that marketing and sales set with customers in terms of customer service. This can be done by isolating both customer intentions and expectations when they contact customer service, then comparing delivery against those expectations to find what’s clogging the system.”

Microsoft’s PerformancePoint Services is just one of many solutions that can add value to Microsoft’s CRM solution. The Microsoft Partner network is allowing manufacturers to choose from a wide range of tools that enable them to tailor CRM to their own needs, and that can provide competitive differentiation. One such solution comes from Sales Centric, as Stedman explains: “SalesCentric’s Graphical Relationship Charts uses the information already in Microsoft Dynamics CRM to facilitate easy account mapping, opportunity qualification and cross-selling working the way that sales people work and helping them to be more successful – while at the same time providing the forecast information needed across the entire supply chain. Understanding relationships with and between clients and seeing them in a user-friendly, visual format makes it easy to devise plans of action for improving and strengthening them to

customer solution

Arch Chemicals

Arch Chemicals is a global biocides company with manufacturing and customer support facilities worldwide. Due to its diverse portfolio of businesses, the company needed a better way to manage and analyze its sales force and customer service. Through the flexibility and simple integration of Microsoft Dynamics CRM business software with its existing systems, Arch Chemicals is increasing sales productivity and customer service performance while gaining valuable insight into its business data.

shorten sales cycles and close deals faster.”

Microsoft Gold Partner Jet Reports offers another solution – a reporting system that draws information from Microsoft Dynamics CRM straight into Excel, allowing manufacturers to explore tables and fields for a better

understanding of where the data is and what it means. “Jet Reports can pull from multiple companies and databases to consolidate information into one report or one cell,” says Phil Bride, president of the company. “The result is a combination of data that offers much more accurate reporting of the manufacturing business. Data from a legacy system need not be migrated, as Jet Reports allows the legacy data to be consolidated with new system data.

A customer-focused future

It seems clear that manufacturers of the future will have CRM technology at the forefront of their business. “A CRM system will become a self-evident must for every manufacturing organisation, equal to ERP or office tools,” says Jukka Valkonen, director of marketing and communications at Tieto. “A customer master data base together with all the knowledge and transactions associated with customers will be seen as the crown jewel asset of a competitive business. More and more manufacturing companies will see that their sustainable competitive edge is not in the costs or its products but in its customer intimacy.”

“The future of CRM is bright indeed,” concludes Llorente. “CRM will become deeply ingrained as a business strategy for most companies. Technology will evolve while technical and organisational challenges are

customer solution

Tower Semiconductor

Tower Semiconductor employees held customer and sales information in disparate systems, making it difficult to monitor projects and measure market demand. Working with Microsoft Gold Certified Partner Advantech, the company deployed Microsoft Dynamics CRM 4.0. This integrates with existing systems, and offers clear, accurate data to help users manage project life cycles, make smart business decisions, and enhance customer support. As a result the manufacturer has strengthened customer relationships and saved US\$30,000 a year.

overcome. Much will change in the years ahead, but one thing is certain: CRM is a journey, not a destination, and customers have their hand on the roadmap and the steering wheel. The rest is up to us.” 

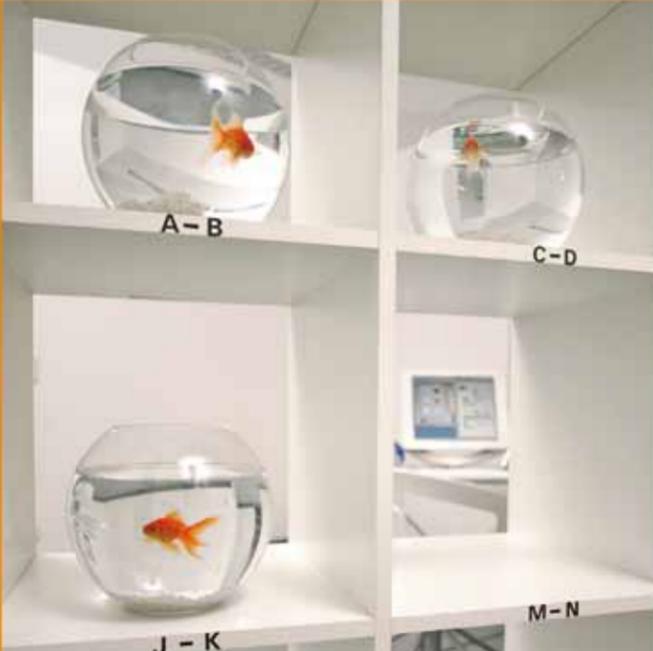
DocuWare UK
+44 (0)1932 268455
sales_uk@docuware.com

DocuWare

Integrated Document Management

- Reduced costs
- More knowledge
- Higher efficiency
- More time for customer service

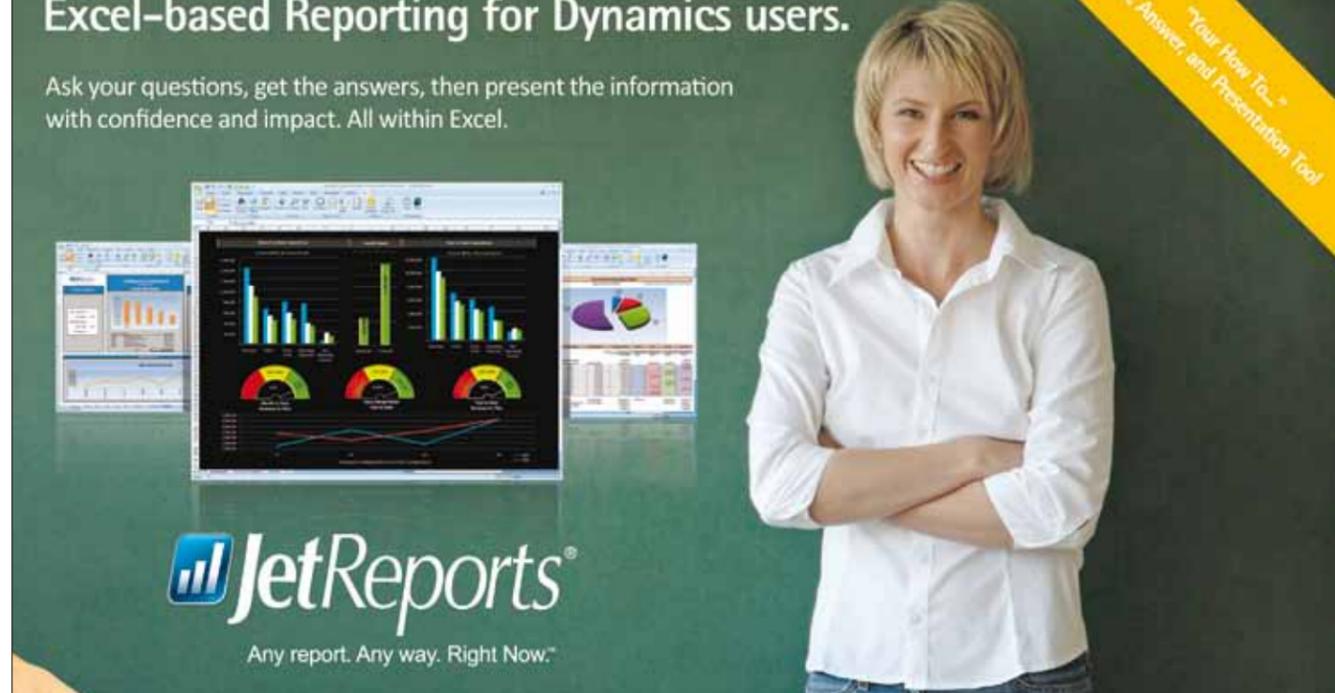
An organised office is a successful office.
Help your clients make their work lives run smoother by integrating their documents with their business processes. They will see a positive result – just like the tens of thousands of happy customers in over 70 countries that have made Integrated Document Management a part of their day.



Microsoft Excel + Microsoft Dynamics

Excel-based Reporting for Dynamics users.

Ask your questions, get the answers, then present the information with confidence and impact. All within Excel.



JetReports
Any report. Any way. Right Now.™

Ask, Answer, and Presentation Tool
"Your How To..."

Contact your Dynamics dealer today and ask about Jet Reports.
See an online demo at www.jetreports.com

Microsoft
GOLD CERTIFIED
Partner

ISV/Software Solutions
Microsoft Business Solutions

E-learning and the motor industry

As the recession continues to bite, automotive manufacturers are turning to e-learning to invest in staff while controlling costs, says Mark Rewhorn

As the recession continues to bite, it is fair to say that the motor industry is at present bearing the brunt of it in the manufacturing sector. But while the industry is faced with laying off staff, firms still have to find ways of meeting customers' ever rising expectations – if they fail, there are plenty of hungry competitors waiting in the wings.

Companies know that investing in training is essential to survival, as it is likely to leave them best poised to prosper as the recession ends. But the industry can no longer afford expensive off-site conferences or half-filled courses. Companies need to utilise what they have to the maximum.

Ever a leader in innovation, the motor industry has never been shy at taking on board and investing in the latest technologies – just look at how it pushed forward the use of computer aided drafting and manufacturing (CAD/CAM). Now, it is turning to e-learning to help improve skills and abilities.

E-learning uses the whole suite of technological equipment the motor industry has at its disposal. For example, what proportion of the corporate IT network or computer stations are fully employed during the working day? And how many staff are actively employed all day, every day? E-learning can help take up the slack periods and increase utilisation rates, so companies can maximise the return on their assets.

When staff aren't required for a period

of time they are able to learn new skills.

E-learning is really training on demand. Staff can access courses at any time, and in bite-sized chunks that are possibly more easily remembered than traditional classes. Should an emergency arise, they can stop the course and return to it later.

E-learning eliminates the need for the physical proximity of teacher and students. Contact might be maintained simply by e-mail, and trainees can log on virtually wherever they are. Usual course expenses, such as travel and meals, can be minimised if not eradicated altogether. Because of the method of delivery (usually the Internet) it is easy to share the training material with others. E-learning can also be used both upstream and downstream in the supply chain.

Ford Motor Company has rolled out an e-learning programme to its dealerships, targeting approximately 225,000 people. The programme ensures that all visitors are treated to the same experience no matter which dealership they visit, with the objective of improving customer satisfaction and experience in new and used vehicle sales, service, and finance and insurance.

It's not just soft skills that can be passed on via e-learning. Most motor companies offer training to their approved suppliers. Typically this will involve quality standards and expectations; troubleshooting methodologies; and methods of improving efficiencies.

The benefits to manufacturing companies far outweigh the costs of setting this learning up. Better quality components and sub-assemblies mean fewer reworks in the assembly halls, and fewer warranty claims to be administered. Overall, it makes for happier and more satisfied customers.

Improving troubleshooting methods ensures that suppliers are able to act quickly and decisively if a problem occurs, again shielding the manufacturer from unwanted and preventable costs. By showing suppliers how to improve efficiencies, manufacturing companies are assisting themselves with reduced parts cost.

While e-learning has plenty of benefits, there are a few pitfalls to consider. This type of training is not suited to everyone. People have different styles of learning and those that are more tactile in their preferences might not adjust to e-learning. In addition, e-learning material isn't quick or cheap to develop. The cost benefits are only realised as the programme is rolled out through the company, the cost per user dropping as user numbers grow. Further, because e-learning is self-study, students follow their own schedule and aren't held accountable by an instructor. Unless learners are enthused in the topic, they may not complete the training, and an estimated 50-90 per cent of Web-based courses started are not completed.

E-learning is definitely a product of our time, and it is likely to grow over the coming years, not least because newer entrants to the workforce are more comfortable with computers than their predecessors. The motor industry has always taken the brightest and best that the education system has to offer; assuming it continues to do this, e-learning will grow by default.

However, there will always be a requirement for hands-on training. Traditional courses are likely, in the short term, to continue to fill this need. But one wonders just how far away a hybrid of e-learning and traditional methods is. Some say this 'blended' learning is the future – and if that's the case, you can bet that the motor industry will be among the first to adopt it. 



A combined solution for high tech manufacturers

High tech manufacturers face an increasingly complex product development process, but there are ways to optimise the process while reducing cost and risk, says Tom Shoemaker, vice president of product marketing at PTC

When did making products get so complex? Perhaps the real question is: was it ever easy? It seems with each passing day comes another hurdle thrown in the mix to test the mettle of the product development professional. In particular, the consumer electronics and high tech markets are rife with evolving challenges. Demands for shortened development cycles, ever-increasing electronics technology, smaller, more complex form factors, and more comprehensive environmental regulations are a few of the more pressing issues faced by this market. But it's not all doom and gloom. Those companies that are positioning to deliver killer products, especially during depressed economic cycles, stand to make considerable gains when market spending rebounds.

Having worked in partnership to jointly bring valuable, compatible technologies to market for 15 years, Microsoft and PTC offer a successful set of solutions for manufacturers of high tech goods. Windchill, for example, is PTC's content and process management software and a production-proven cornerstone solution for effective product development. It is deployed in high tech companies of all sizes, around the world as a means to choreograph the activities and to manage the valuable intellectual property generated by globally dispersed product teams. With an ability to be deployed on a SQL Server database and to have key product lifecycle management (PLM) information presented within SharePoint sites, Windchill offers manufacturers the rich and powerful solution they need, in a flexible, familiar low total cost of ownership environment they want.

High tech manufacturers need a number of capabilities from their content and process management software. For example, a Web-based product data management repository such as Windchill, running on Microsoft SQL Server, will enable global access to current, accurate data from multiple, diverse sources including mechanical computer aided design (MCAD) data, electrical computer aided design

(ECAD) data, embedded software, technical documentation, illustrations and engineering calculations. This enables manufacturers to access relevant, real-time data from multiple sources, a high priority among manufacturers facing increasingly complex supply chains. A seamless connection to desktop applications and enterprise resource planning (ERP) systems is also achievable when running Windchill on SQL Server, as well as seamless operation with PTC's Pro/Engineer mechanical CAD and other Windchill solutions for distributed, cross-enterprise collaboration on data acquisition and product information. Manufacturers can present product content such as task assignments within a familiar SharePoint environment.

A system such as this offers key benefits to manufacturers. By controlling and automating product change management processes, the risk of design errors is significantly reduced, while a single, secure repository for all product data will eliminate mistakes associated with duplicate, incomplete or manual data. Indeed, automatically sharing product data downstream with manufacturing systems and engineers will go a long way in helping to reduce scrap and rework, and efficiency is increased as engineers can quickly find and manage multiple forms of digital product content.

The combined expertise of PTC and Microsoft in providing solutions for the high tech manufacturing sector is built on years of joint experience. In fact, the combined PTC-Microsoft offerings began with the support of Pro/Engineer on Windows NT in 1995, and evolved to 64-bit support while staying in lockstep on desktop operating system versions. Additionally, ProductView, PTC's solution for visual collaboration, is offered on Microsoft technologies, providing high tech manufacturers with unique industry standards-based MCAD-ECAD collaboration capabilities built to handle the intricacies of sharing design information and resolving design problems across the electrical and mechanical domains.

This notion of a combined solution where all the applications have been built and tested to work together to completely support the needs of product developers is called PTC's Product Development System (PDS). Companies that standardise on this system can differentiate themselves from their competitors by being able to:

- Manage multiple design variants in a single unified bill of material (BOM)
- Reduce time-to-production ramp-up by deploying one change management process across distributed engineering disciplines
- Link engineering and manufacturing BOMs to rapidly identify and resolve conflicts and changes
- Make better decisions at the beginning of the design process by leveraging content in other systems like ERP. 

Case in point: Humax

Humax is a leading developer of digital consumer electronics products and a top manufacturer of digital TV set-top boxes in Korea. With exports to more than 90 countries, the company has grown into a global brand powerhouse that must consistently deliver state-of-the-art products and services to strengthen its leadership position. Humax required a single system that could manage all its design information from mechanical, electrical and software engineers and the interdependencies between these disciplines. It chose Windchill because its secure, Web-based architecture would enable all of its design teams to collaborate and identify cross-discipline issues and capture dependencies that enable design validation early in the design phase. This solution, deployed by PTC Global Services on Microsoft SQL Server, is enabling more than 500 users to manage MCAD (Pro/Engineer) and ECAD data (Cadence) while optimising key business processes including change and configuration management and variant design and generation.

Taking advantage of turbulent times

Dr Albrecht Ferling, managing director for worldwide oil and gas industries and Michael Sternesky, oil and gas industry development manager at Microsoft, discuss how the oil and gas industry can beat the financial crisis

Following the collapse of the global financial markets, oil and gas markets have suffered a huge setback since July 2008. Energy demand is falling across the global economy, due to falling economic activity. Lack of credit availability and the seizing of credit markets have had an immediate impact on economic activity in all sectors, at all levels, signalling the beginning of a deeper and longer recession than we have seen in the last 30 years.

These turbulent times require fast and immediate reaction. Agility is required not just to survive and thrive in the new economic environment of industry consolidation, pricing pressures and cost containment.

Industry consolidation

Extraordinary times can create major business opportunities. Many energy companies used the last four years of rising commodity prices as an opportunity to reduce debt and bolster their balance sheets. Now, as energy company stock prices drop, we expect to see an uptick in mergers and acquisitions of companies with strong and proven reserve positions in politically stable host countries. The ability to quickly integrate an acquisition into the

enterprise, which can save millions of dollars, is an additional agility requirement in these troubled times.

Today, technology can enable the faster integration of an acquired company's assets with overlapping assets within the enterprise. Using Web-based systems and Microsoft's software plus services approach, a virtual consolidation of the underlying enterprise systems can be quickly achieved at the presentation layer, pulling data from the different legacy systems in one unifying view. This virtual consolidation enables the quick integration of overlapping assets with consistent work processes, resulting in faster realisation of economies of scale and elimination of redundancies, and gives the acquisition integration teams more time to thoughtfully achieve harmonisation of the legacy business systems. This agility results in a higher return on investment and improved operating performance.

Pricing pressures and cost containment

Downward pricing pressures will require renewed attention to costs. This price/cost push dynamic will require new levels of innovation to stay competitive. New, more effective technologies will deliver the business outcomes desired, with more efficiency and accuracy. New systems and capabilities are required to track innovative ideas through a robust vetting process, ensuring that the most promising and profitable come to market. Ideation is a competitive advantage to those who can develop it as an enterprise capability.

Increasing the focus on working capital management, credit and collection is also required in today's fragile financial environment. Credit, even for good customers, may be suddenly cut off because their underlying financial institutions are troubled, creating an unexpected liquidity crisis. Today's customer relationship management systems can help improve intelligence gathering on a customer's financial condition and provide a platform for improving order execution and service delivery. Additionally, robust reference architectures for integration of work order management (including field data capture) with revenue billing systems reduce cost

and working capital in both inventory and receivables by increasing inventory turnover and reducing days sales outstanding.

The drive for productivity enhancements

Over the years, geology and geophysics, supply chain management, manufacturing execution systems, enterprise resource planning and point of service systems have either evolved from legacy systems or through packaged application deployments, or some combination of the two. Due to increasing demand for flexibility and agility enforced by the current business environment, oil and gas industry workers need information across these silos, processes need to be automated for efficiency and performance, and people who are not trained experts in the use of line-of-business systems need role-based access to data and information across these systems. Role-based productivity solutions address the need to fundamentally change the way people work.

Knowledge capture and best practice dissemination also pose a major challenge to the entire industry with the impending loss of a significant share of the most experienced people. According to the Society of Petroleum Engineers, 50 per cent of its existing global membership of some 67,000 professionals will retire in the next ten years.

The need to capture the institutional knowledge of this retiring generation remains a high priority for most large companies. This imperative will require the implementation of an IT platform to capture knowledge, publish best practices and transform these into flexible workflows to guide the next generation of oil and gas professionals. This capability will not only enable knowledge to be transferred, but will also make it widely available in expert systems that can support consistent high-quality decision making.

To sum up, there is increasing pressure on oil and gas companies to achieve more with less. Greater business agility is required to cope with the fast changing volatility of the new business environment. Speed and faster reaction times are needed, supported by business systems that are flexible and adaptable to any business conditions. 

Capital Asset Maintenance Streamliner

The Capital Asset Maintenance Streamliner powered by Microsoft®

The Program Framework Capital Asset Maintenance Streamliner enables organisations to easily schedule, resource, track and report on complex planned and reactive maintenance activities on large capital assets.

The Capital Asset Maintenance Streamliner enables organisations to:

- Effectively schedule complex maintenance activities across multiple assets
- Identify resource constraints and maximise utilisation of key resources
- Track completion of activities and rapidly re-schedule ongoing work
- Dynamically report on key metrics such as progress, upcoming work, backlog and risks

www.programframework.com

Tel: 08000 74 29 29

Email: pt@programframework.com

Breaking through the paper barrier

Efficient document management is essential to best practices for a multitude of companies working across the utilities sector, explains DocuWare president Jürgen Biffar

The utilities industry has undergone rapid change over recent years. Following the decision by many countries to abandon state ownership of public utilities in favour of private ownership with state regulation, a more open market has emerged, bringing with it an increasingly intense competitive environment for utilities organisations across all sectors – from gas and electricity to water and sewerage.

Even as they work to differentiate themselves in this evolving market place, utilities firms face the challenge of global environmental concerns and high profile stories about monopoly abuse and corporate governance, which have resulted in tightening regulations and a need for companies to prove their green credentials. On top of all this, the global economic downturn is now putting even more pressure on budgets and increasing the need for competitive differentiation.

Today's utilities companies are looking for new ways to create value while addressing issues of management and service quality. In an industry that has been evolving for as long as there has been a need for processing or transporting products such as water, oil, gas or electricity, it is not surprising that the sector is both complex and diverse. Now, in a depressed global economy and amid increasing demands for accountability, better performance and regulatory compliance, many different companies in the utilities sector have to deal with a radically different business environment

to the one they worked in a decade or two ago.

The issues go far beyond simply providing a supply to customers – the utilities industry involves a wide variety of companies such as suppliers and equipment providers, and each of these has to deal with a vast array of management issues, from property and planning to pipes and valves. DocuWare has a long history of working with companies within the utilities sector, and our experience has shown us that throughout this industry, like many others, document management is increasingly important.

A case in point: when the Mougins and Montargis Regional Centers of Lyonnaise des Eaux needed to archive its landed property plans and deeds, it implemented a document management system from DocuWare. The result was a lot less frustration and increased productivity. Whereas previously document searches would often end in frustration, now a few clicks are all that's needed now to access all available data. Instant access to plans has reduced the cost of construction works, and the area needed to store documents has decreased by 95 per cent.

At the heart of any utilities business lies a complex system of instruments, from pipes to computerised control systems. In power stations and recycling plants, for example, a bewildering array of pipes, valves, converters, heaters and coolers are brought into play, to ensure safe and efficient production, metering and supply. Much of the work involved in the processing and supply of utilities is arguably the work of harnessing potentially dangerous forces – water, oil, gas and electricity are all lethal if treated without respect, so there is no room for error. Every element of the process, from the pipes and valves to the product itself, must be transported, monitored and well documented.

Efficient document management can help to address many of these issues, as part of a broader best practice approach. As the following examples illustrate, an integrated document management system (DMS) can act as an additional safety valve, ensuring not only that processes are followed, but also that the company can respond quickly to customers'

requirements and make the best use of information to support decision-making, while reducing the amount spent on storage and filing management.

For example, customers from around the world depend on the modern plastic piping systems generated by Georg Fischer Deka, known for its custom manufacturing to meet the special needs of different industries. For many years, the company has been archiving extensive production data with a DMS from DocuWare, implemented on Microsoft technology. The technology has answered two key issues facing the utilities industry among others: it has helped to free up warehouse storage space and therefore reduce costs; and the company's customer service and inner-office communication were significantly improved.

A further example is German-based manufacturer Samson, which specialises in heating, air conditioning and ventilation systems for industries that require the flawless measurement and control of vapours, gases or chemical substances. The company supplies a wide range of instrumentation, controls and integrated automation systems – from simple valves to steam pressure-reducing stations – to power stations and recycling plants across the world. Information management is vital to Samson's business, and the company relies on DocuWare, implemented, on a Windows Server, to automatically archive around 150,000 documents a month. As a result, service both to customers and to other employees has been significantly improved. "There are very few things that pay for themselves so quickly while at the same time being accepted so readily by members of our staff," says Uwe Löffler, IT specialist at Samson.

In these uncertain economic times, one thing is clear: the utilities industry is not going to stand still. As it continues to evolve not only the volume of documentation, but also the number of different types of documents that need managing will grow with it. As these examples show, an efficient, integrated DMS can play a key role in enabling companies to spend less time wading through files, and more time creating business value. 



Helping to piece together your future.

25 years of experience with our own technology.
Rehosting • Migration Assessment • APM



High Technology World Company Srl • Viale America, 125 • 00144 • Rome • Italy
Tel +39 06 51 96 42 53 • Fax +39 06 50 36 309 • Email info@htwc.com



Clinical collaboration

Microsoft is a growing presence in the pharmaceutical and life sciences arena, where it is working to foster collaboration and security

To improve the efficiency of clinical trials, life sciences companies need secure technology solutions that help them manage the flow of information at investigator sites around the world, many of which use such disparate data systems as EDC, IVR, Labs and eDiaries.

These solutions must foster collaboration among remote clinical researchers and ease the exchange of data across technological boundaries. To manage these important and complex relationships, life sciences firms need solutions that are flexible yet secure, so that intellectual property is available to just the right people.

Unfortunately, existing technologies use widely divergent data standards, hampering integration and putting crucial information beyond easy reach. Clinical site managers waste valuable time converting critical data files into usable formats – a cumbersome step that opens the door to human error. Real-time collaboration among global partners is impossible.

Because information from investigative sites is poorly aggregated, study managers can't get a complete, up-to-date report on an entire trial. This means managers lack the information they need to make their best decisions about whether to continue or halt a trial or possibly modify its protocol. Without a standard technology platform, clinical trial

information is fractured and hard to access. Productivity slows, increasing the cost of bringing new drugs to market.

Life sciences companies need secure intuitive technologies that seamlessly aggregate data from many sources into a common, accessible format. These solutions should get the right information to the right people – exactly when they need it. They should be flexible, familiar, and easy to use, so clinical collaborators anywhere in the world can manage and share information in real time – whenever they need to, wherever they are.

Microsoft is a growing presence in the life sciences industry, partnering with industry-leading solution providers to enable life sciences firms to collect, manage, and share the right information with the right people. The latest example of this is the company's recent agreement with Merck & Co to acquire assets of Rosetta Biosoftware, a business unit of Merck subsidiary Rosetta Inpharmatics. The move will enable Microsoft to incorporate genetic, genomic, metabolomic and proteomics data management software into its recently launched Amalga Life Sciences platform for enhanced translational research capabilities. In addition, Microsoft will establish a strategic relationship with Merck to enhance the Amalga Life Sciences platform to meet emerging pharmaceutical research needs.

"This agreement establishes a stable and sustainable platform for the Rosetta Biosoftware technology," comments Rupert Vessey, vice president of Merck Research Laboratories. "In addition, we look forward to collaborating with Microsoft to develop new bioinformatic solutions to enable and expedite drug discovery and development."

"The newly combined offering resulting from this collaboration will enable customers to improve the management and analysis of genomic, biological and research data, helping to bring life-saving drugs and therapies to market faster and accelerate the realisation of personalised medicine," adds Peter Neupert, corporate vice president of the Health Solutions group at Microsoft.

Systems built on the Microsoft platform

address the challenges posed by disparate data formats and standards, helping to deliver key information in an accessible, user-friendly way, building on familiar Microsoft Office applications to enhance collaboration. For example, one of the company's partners automates clinical trial protocol documentation, reducing the time and resources needed to maintain regulatory compliance. Global teams update documents using a shared workspace that fosters real-time collaboration.

Based on these technologies, vendors are creating products that can track all clinical trial activity, giving a complete up-to-the-moment scorecard on the early data collected in a trial – and providing the ability to drill down into the details of any trial. Study managers can access the right information to help them make the best decisions.

Microsoft technology helps make it easy for global clinical collaborators to find, aggregate, and share the right information – precisely when they need it. These solutions facilitate the seamless transfer of information from a variety of formats to one that is familiar and easy-to-understand. Clinical site managers are freed from burdensome data-crunching chores, reducing the cost of data entry and the risk of human error.

This blend of familiar and efficient technologies enables clinical researchers to foster secure, real-time communication among global investigators, providing them with a shared workspace where they can safely exchange information. It gives study managers all the information they need to make their best decisions about continuing or halting a clinical trial, or possibly adding a protocol amendment for a specific trial.

Leveraging technology in this way, to reduce the risk of error and enhance collaborative research, can help to prevent costly mistakes such as continuing with a clinical trial that is not delivering the desired results when resources could be diverted to focus on a more fruitful investigation. Life-saving drugs can be brought to market quickly and safely, with the confidence that all compliance obligations have been met. **P**



Manufacturing competitive advantage

In the time-sensitive consumer goods sector, manufacturers are leveraging IT to ensure efficient materials, process and quality management, says Yves Dufort, director for the food and beverage and CPG sectors with Wonderware

The consumer packaged goods sector is unique within the manufacturing industry; and yet the huge variety within it – from home furnishings to mobile phones to cleaning products, and a whole spectrum of products in between – defies any strict definition. For example, how can you compare the lifecycle of a mobile phone with that of a T-shirt or a duvet? And how does a bar of chocolate fit into this scheme?

Consumers might have a different attitude to any one of these items. Some will treat a fashion item as disposable, whereas others might want to cherish a favourite garment for many years. Thus, it is perhaps more meaningful to describe the consumer packaged goods industry in terms of a set of consumer behaviours, rather than tying it down to a list of products. Where some manufacturers might build products for durability – for example automobiles or houses – the key behaviour that best describes the market is that of replenishment on a regular or frequent basis.

What does this mean in terms of technology? First of all, the needs of consumer goods manufacturers, like those of consumers, vary greatly. But key to those needs are inventory and process management. However quickly the consumer replaces them, consumer goods are subject to rapid depletion. Whether it is a perishable snack food or a high fashion item, entire warehouses can quickly be emptied of their stock, and no manufacturer wants to be left unable to fulfil customer demands, or expectations of quality.

High performance organisations such as consumer goods manufacturers are now leveraging their IT capabilities to selectively integrate important operational aspects of their organisations; to extend their enterprise to suppliers, vendors and customers; and to create execution speed, agility, maintain quality and measure actual performance.

In these organisations core processes include three main activities: generating demand, supplying demand, and planning and managing the enterprise. In an industry characterised by low margins, continuous

market changes and eroding brand recognition, high performance organisations need to become both lean and agile.

Indeed, over the last decade the consumer products industry has experienced a shift in power from manufacturers to retailers, with the effect that manufacturers are now striving even harder to protect their margins by accelerating the supply chain. Shorter replenishment time and the need to control costs, combined with the increasingly global nature of compliance requirements, have cascaded into an increasing importance given to manufacturing operations management.

In particular, when it comes to manufacturing consumer goods, reducing the make cycle by increasing material velocity and inventory turns can pay dividends, but it is also essential to maintain the quality of the goods produced. Implementing the right software system, which can cope with the unique and changing needs of consumer goods manufacturers, can go a long way toward ensuring competitive advantage.

Our experience of working with consumer goods companies at Wonderware has shown us the importance to manufacturers of scalable, configurable software solutions for manufacturing execution systems that feature a complete set of functional capabilities for consistent and effective execution of operational activities. Leveraging the ArchestrA software architecture, Wonderware manufacturing execution systems are completely scalable and configurable, enabling a unique, incremental approach to operational improvements where low-risk deployment of increased application functionality can be realised one step at a time.

For consumer goods manufacturers, Wonderware Factelligence technology can deliver the tighter production scheduling and dispatching capabilities that enable consumer goods manufacturers to optimise queue management. Manufacturers can set per-product parameters for equipment set-up, and carry out in-line quality measurement, maintaining control and specification limits by product. In addition, real-time material tracking, reporting consumption as it occurs

as well as where, helps to ensure compliance in an industry that is subject to increasing and changing regulations.

A case in point is Beam Global Wine & Spirits, which prides itself on the consistent high quality of its Jim Beam bourbon. The company's use of Wonderware technology has been a major factor in achieving greater control of its production processes as it strives to maintain consistency while efficiently meeting increasing demand.

For instance, the company's engineers use Wonderware's InTouch Human Machine Interface software to view an intuitive graphical interface showing plant operations in real time. They can easily start and stop any process, reset faults and monitor productivity from a central console. Then, before the bourbon is distilled and bottled, Wonderware InBatch software enforces recipe procedures and verifies that operators execute activities in the proper sequence, such as sending the correct measures of grains to specific silos, adding water to form a mash and introducing yeast. It also controls cooking and fermenting. For analysis and reporting, Wonderware ActiveFactory software is integral to the system, enabling trouble-shooting and rapid identification of plant inefficiencies as trends are identified quickly and reports are prepared and exported to Microsoft Excel.

Nathan Crosley, operations manager for bottling at Beam Global, sums up the importance of this integrated approach: "In regards to metrics, what we're seeing is a consistency in throughput," he says. "Through the trending information, we're able to tell when problematic areas arise. And by having that information readily available and having it automated, we're able to take preventative action and maintain a consistent operation."

In an industry as diverse and fast moving as consumer goods manufacturing, competitive differentiation results from a combination of speed, quality and consistency. Leveraging IT to ensure efficient management of materials and processes can help to generate demand, ensure customer satisfaction and deliver competitive advantage. **P**

Walking the walk

PTC's FlexPLM solution was key to improving collaboration and visibility within product development for footwear firm Brown Shoe

Brown Shoe is a US\$2.3 billion footwear company with global operations. Its retail division operates the 1,100-store Famous Footwear chain, as well as over 300 speciality retail stores in the US and *Shoes.com*, its e-commerce subsidiary. Through its wholesale divisions, Brown Shoe owns and markets leading footwear brands including Naturalizer, LifeStride and Via Spiga; it also markets licensed brands including Franco Sarto, Dr Scholl's, and Barbie, Fisher-Price and Nickelodeon character footwear for children.

As the first step in implementing its enterprise-wide information technology initiatives, Brown Shoe wanted to improve collaboration and enhance visibility within its global product development process, from concept through to commercialisation. The company's product development team across the US and China began an analysis of its systems and how its global supply chain could become even more streamlined, efficient and disciplined while cutting costs. The company sought a product lifecycle management (PLM) solution that was created specifically to serve the needs of the footwear industry.

Following an extensive review, Brown Shoe selected and implemented FlexPLM, from manufacturing software and services solutions provider and Microsoft Gold Certified Partner PTC, because it supports footwear industry best practices, offers global access to a centralised library with version control, provides the ability to manage, streamline and reduce product development cycles and enables Brown Shoe to easily connect and communicate with its global suppliers and factory partners.

Based on PTC's Windchill technology, FlexPLM is an intuitive, Web-based solution that streamlines communication, tracks milestones, pre-empts performance bottlenecks and provides instant visibility throughout the product development value chain. Highly scalable and fully configurable, it enables global product teams to work more efficiently and productively. The solution delivers a single product lifecycle management (PLM) platform to Brown Shoe, and is expected to enable the company to gain early visibility into its product development processes, improve collaboration, effectively manage costs

and reduce development times.

Brown Shoe uses FlexPLM to connect the development of its line calendar, the structure of line planning/sample planning, and the management of product specifications in one system that is accessible to everyone involved in the process. It offers the company critical visibility for planning and budgeting, and enables product developers to focus on creating great footwear for consumers.

"Ultimately, we expect FlexPLM to enable Brown Shoe to be an even better partner to retailers, factories and suppliers, while introducing trend-right footwear into the marketplace," says Dan Friedman, the company's senior vice president for product and sourcing. "This solution is designed to create a more cohesive product development process, which is important to managing our business well. It is still up to our teams to put in the work, but we expect FlexPLM to make it easier for product teams to speed up the development process, obtain visibility at every step and streamline one system for planning."

"PLM is one of the fastest-growing areas of technology investment in the footwear and apparel industry because of its ability to deliver product development efficiencies," said Kathleen Mitford, vice president of vertical market strategy at PTC. "Brown Shoe understands the value of PLM because it offers process standardisation that can maximise collaboration across the business. We are happy to work with Brown Shoe and offer our expertise to help it achieve its strategic objectives." 

Brown Shoe

www.brownsheo.com

Industry: Apparel
Country: US, global
Solution: Product lifecycle management
Partner: PTC
Technology: FlexPLM, PTC Windchill

John Deere Forestry streamlines info

John Deere Forestry streamlined production of technical documents with CCC Group's MultiMaker publication platform

John Deere Forestry is one of the world's leading manufacturers of forestry equipment. In 2005, as the company was engineering its innovative E-series forestry machines, it realised that the tools it used to produce technical documentation were outdated.

As they were already busy with daily support work, it was difficult for the support team find time to help the documentation group keep all the manuals updated and provide information for the company's dealers and customers. In addition, rather than creating new and valuable information, the documentation group spent a lot of its time doing administrative work required by the company's old-fashioned authoring tools. A simple change in the content could mean hours of work with manuals for different models and different language versions.

John Deere Forestry wanted a comprehensive documentation process to save time and money in managing, publishing and applying the documents for different purposes. It chose CCC Group's MultiMaker publication platform as the solution.

With CCC's MultiMaker software, the company can use the same process to produce a limitless number of different documents from the same material. Updates to the source material have to be made only once and the new information is then made available to all user and service manuals, training materials and onboard help systems. The material is available faster, and information is always up-to-date and available in one location in a high-quality, standardised format. The same information can be used for different needs quickly, easily and flexibly.

"In the past, our training materials were PowerPoint presentations available typically only in English," says Sami Törmä, technical information manager for product support at John Deere Forestry. "Technical training for dealers was based purely on instructor-led classroom sessions, often involving translation to the audience. Now, HTML courses created with MultiMaker are offered on the Internet through our global training portal, John Deere University. We can also create the test part of the online training module directly with MultiMaker, enabling a lot of different question types."

Automation support materials, which were previously available only in PDF format, can now be effectively viewed on the onboard PC display. "We have built integration between our TimberMatic automation systems and the support information," explains Törmä. "Our cut-to-length machines include a lot of highly advanced technology.



Harvesters have been equipped with Windows PCs for years, and increasingly, forwarders also have onboard computers."

Because MultiMaker publishes the material in HTML format, users don't need special software to view it. Using MultiMaker, John Deere Forestry has improved the production of its information and training materials. There is better management of different language versions, and because the information is always up to date, quality has also improved. In addition, the company enjoys shorter documentation cycles and cost savings. The documentation process is more straightforward, with fewer errors, and the materials are available quicker.

"Our cooperation with CCC has moved our documentation to a totally new level," concludes Törmä. "With CCC's expertise we are now able to produce material efficiently to several different interest groups with the same documentation process." 

John Deere Forestry

www.deere.com

Industry: Automotive
Country: Finland
Solution: Documentation authoring software
Partner: CCC Group
Technology: MultiMaker publication platform, Microsoft Windows

Driving efficiency

When Kleyn International Trucks needed to make better use of its information, Jet Reports provided the solution

Kleyn International Trucks is one of the world's largest trading companies in used commercial vehicles, with 100 staff and an annual turnover of €165 million. The organisation sells 8,000 vehicles on a yearly basis.

Kleyn wants to be the world's leading distribution network for used commercial vehicles. Its head office is located in Vuren, the Netherlands, where all vehicles are examined for a test report. Kleyn is thus the only supplier of used commercial vehicles that provides complete information about the technical state of its goods.

Kleyn is a progressive company where logistics and communication are playing a major role in its business growth. "Kleyn is an international player that grew dramatically in the early 1990s," explains Reinier van Drenth, the firm's ICT manager. "We do business with 110 countries and are one of the biggest dealer-independent trading companies for used commercial vehicles in Europe."

Unsurprisingly, Kleyn Trucks relies heavily on being able to access and act on information quickly

and easily. "Some years ago we noticed that our organisation needed more information, such as trend analysis," says van Drenth. "During our investigations into suitable tools, we came across many solutions that were too expensive, and difficult to work with. Through our partner Watermark, now Qurius, we were directed to Jet Reports."

According to van Drenth, it is imperative for the organisation to know the actual status of purchases, sales and delivered vehicles at any time. "As a capital-intensive company it is important to keep the considerable tension within these three groups extremely well-balanced and under control," he says.

The Jet Reports solution enabled the company to generate and use information in a more relevant way to support its business goals. "Jet Reports works independently from underlying software programs," explains van Drenth. "With the Jet Reports for Open Database, we can generate reports from several technologies, including Microsoft CRM. In the future, this will keep us flexible in the front and back office; even if we decide to work with another enterprise resource planning system. As a matter of fact, Jet Reports supports our goal to increase efficient financial management. The CFO is fully focused on the management information he obtains from Jet Reports."

Van Drenth continues: "Jet Reports led assignably to savings. That is the first thing we see back in the financial policy. There we are able to obtain more information from our system using less manpower. Another nice matter is the low purchase price." 

Kleyn International Trucks

www.kleyn.com

Industry: Automotive distribution

Country: The Netherlands

Solution: Reporting and information management

Partner: Jet Reports

Technology: Jet Reports for Open Database, Microsoft CRM



message master® Enterprise Alert is faster than disaster®



Visit www.derdack.com/enterprise/alert for your complimentary copy of the latest illustrated whitepaper on "Closed loop notification software"

notification workflow software

When business critical episodes need resolution, Derdack's message master® Enterprise Alert enables enterprises to reach the right people – FAST. Within seconds of an event being triggered, closed-loop communication is underway utilizing a variety of routes including 3-way SMS, MMS, mobile email, voice, fax and instant messaging.

When it really matters, you can trust Derdack's Enterprise Alert to ensure automated notification chains and processes are implemented and prompt action is taken. Leave nothing to chance – join industry leaders who have the security of knowing Enterprise Alert is looking after their enterprise.

Globally networked

Metabo is connecting its head office ERP environment to its worldwide subsidiaries with Microsoft Dynamics NAV

Power tool manufacturer Metabo has over 25 sales subsidiaries worldwide. The company's head office in Germany uses an SAP solution for corporate controls, but this ERP system is too large for its subsidiary sales offices. Following an investigation of options that would integrate easily with the SAP technology while delivering a global support network with the flexibility and scalability needed to map current and future corporate processes, Microsoft Dynamics NAV emerged as the most suitable solution. Metabo chose Dynamics NAV specialist KUMAvision as its implementation partner.

Metabo is applying uniform global processes across the group using a hub-and-spoke mix of SAP solutions at its head office and Dynamics NAV in the subsidiaries. The system enables automated workflows through an electronic data interface. Information such as product data is stored and updated centrally and electronically replicated to the subsidiaries without manual intervention. Sales offices create orders electronically using NAV, and the head office system automatically retrieves the relevant data and posts the process as a sales order. The systems automatically exchange the necessary documents, such as delivery note and invoice, via electronic data transfer.

Concealed behind this smooth workflow is a group-wide uniform baseline system, which KUMAvision developed based on the Microsoft Dynamics NAV standard. Metabo's individual

processes are mapped within this, enabling the group to offer the same high standard of customer service at every office. "The baseline system provides the processes as a template, giving us a very good resource for implementing our work processes according to a uniform standard globally," explains Alexander Lutz, ERP subsidiaries team leader at Metabo. "This is one of the central added values of our homogenous ERP structure."

As strategic core partner, KUMAvision also supports Metabo with CRM. "It is very important to us that the CRM functions are accepted and supported by the employees", says Lutz. The great advantage of Dynamics NAV is that the CRM module constitutes a functional extension within the existing ERP environment. This integration provides the flexibility needed to tackle an efficient global rollout before the end of this year.

"CRM must not be an end in itself – its tangible role is to support our sales objectives," explains Lutz. That's why care is also taken at Metabo, using the business intelligence features of Dynamics NAV, to ensure that an expedient sales measure can be derived from each function. As a result, an intelligent mix of contact management, visit preparation and visit reports has emerged. "This process also results in a communication improvement between office and field staff," says Lutz.

KUMAvision has worked with Metabo for seven years. "Since the beginning of our collaboration we have benefited from ever-competent and consistently flexible consulting," concludes Lutz. 

Metabo

www.metabo.com

Industry: Power tool manufacture
Country: Germany/worldwide
Solution: Hub-and-spoke ERP system
Partner: KUMAvision
Technology: Microsoft Dynamics NAV



Information flows for water plant

When the City of Thunder Bay built a lake-to-lake water treatment plant, Wonderware provided the technology to ensure its efficient management

The City of Thunder Bay is a growing community on the shores of Lake Superior in Ontario, Canada. In order to provide safe drinking water and protect the environment, Thunder Bay decided to implement 'lake-to-lake' water management – taking water from Lake Superior through the treatment process to the distribution system, and then back through the pollution control plant before returning it to the environment. It built the Bare Point Water Treatment Plant using an advanced ultra-filtration system to purify the city's water while expanding daily capacity from 14 million gallons to 25 million gallons (53-95 million litres).

Finding a supervisory control and data acquisition (SCADA) system, that could meet the current and future needs of the new facility, was crucial. Bare Point required accurate, real-time data gathering regardless of location; data recording and logging; alarms for threshold conditions; and secure information storage in an easy-to-use system that could provide comprehensive reports. After evaluating the options, Thunder Bay chose a solution from Wonderware.

The Bare Point plant is controlled by a Microsoft Windows-based system utilising Wonderware Terminal Services software located in the operations centre of the main plant. Wonderware InTouch Human Machine Interface software forms the core of the solution, while Wonderware Historian provides a high-performance, real-time and historical database to integrate the operations centre with the plant floor. As an extension of Microsoft SQL Server, it collects comprehensive operating statistics and integrates these with event, summary, production and configuration data. For desktop-based analysis and reporting, Wonderware ActiveFactory software – part of the Wonderware ArchestrA architecture – was designed into the system. Process engineers can spot trends in real time and prepare historical reports, which can be exported to Microsoft Excel.

The solution's intuitive interfaces enabled rapid design, installation and testing. Canadian system integrator Automation Now, supported by Wonderware Canada East, ensured that Bare Point was operational within one year.

Today, engineers enjoy end-to-end control of plant processes, while employees in the operating



centre can see real-time representations of the water moving through the facility. Scada terminals enable access to the system throughout the plant. Wonderware SCADAalarm notifies employees – both on the SCADAalarm screen and a plant-wide alarm system – if a reading is out of a predetermined range. Redundant servers securely store plant data for retrieval in the event of a failure, while Wonderware Historian's reporting capabilities enable management to maximise plant efficiency and accelerate expansion plans.

Return on investment has come in record time. Real-time reporting has enabled more effective regular maintenance for reduced downtime, and historical trending reports have led to greater visibility and increased operational efficiencies. The biggest ROI is anticipated as remote stations are added. Automation Now expects development time for these to be halved, realising efficiencies and cost savings during expansion. 

City of Thunder Bay

www.thunderbay.ca

Industry: Water supply
Country: Canada
Solution: Supervisory control and data acquisition system
Partner: Wonderware, Automation Now
Technology: Microsoft Windows, Wonderware Terminal Services, InTouch Human Machine Interface, Historian, ActiveFactory, SCADAalarm

Plant floor takes centre stage

John Dyck, chairman of the Manufacturing Execution System Association (MESA) explains the coming importance of the manufacturing shopfloor and its relation to enterprise work processes

“Perhaps the economic challenges we’re facing will prompt us to think differently, and to shine the spotlight on some of the less glamorous but high-value solutions that can consistently and dramatically cut costs, reduce waste and reshape our work processes to be more effective”



landscape need to work together to better understand the complexities of the workflows on the shop floor and how technology must be applied to identify constraints, provide meaningful and standardised metrics, and dramatically cut costs. The best practices of the enterprise players need to marry with the wealth of value uncovered and harnessed by the plant players for so many years, and we’re proposing that 2009 be the year when the plant floor finally arrives at centre stage. The brightest minds of industry (yes, from operations and IT) and academia must join to focus their attention and budgets on this great challenge.

Perhaps the economic challenges we’re facing will prompt us to think differently, and to shine the spotlight on some of the less glamorous but high-value solutions that can consistently and dramatically cut costs, reduce waste and reshape our work processes to be more effective. MESA is the largest body of production and operations management thinkers and doers in the world, and there’s no organisation better suited to facilitate this crucial dialogue. Our board of directors has challenged our leadership teams to meet the challenges of 2009 with programmes, materials and tools to show our membership ways to dramatically cut costs while improving productivity in manufacturing. We ask manufacturers to engage with us, and to engage their peers and leadership teams with us in our efforts to work together toward these vital objectives.

We look forward to working with *Prime* over the coming months to achieve these goals. **P**

About MESA

MESA’s mission is to provide industry professionals with innovative thinking and leadership to drive operations excellence. Through member-driven working groups, industry events and educational forums, MESA enables members to connect, contribute, cultivate understanding, and exchange strategies to facilitate operations excellence.

From these events, MESA generates white papers, podcasts, guidebooks, research studies, Web casts and other resources that accelerate learning and knowledge transfer. MESA also provides best practices guidance to drive greater operations performance and profitability.

Could 2009 be a transformative year for manufacturing? At MESA International, we say: Yes! We suggest that it’s time for the shopfloor – and its ability to make enterprise work processes more responsive and reliable – to get the attention it’s been lacking for so long. After all, that’s where most of the value creation actually happens. Sound like a pipe dream? Let’s look a little deeper...

Large-scale enterprise IT rollouts became possible largely because of IT’s long-term view of standards and their focus on implementation process rigour. Along the way, they learned how to create, justify, procure, implement and sustain large-scale projects. The shop floor, on the other hand, has been characterised by a tendency to ‘build it’ and ‘fix it’ at the lowest possible cost and with speed as the imperative, making standardisation an elusive goal and process rigour a luxury few could afford.

These dynamics have influenced the evolution of two unique systems integration (SI) ecosystems – one that serves operations (plant-centric) and one that serves IT (business-centric). They operate in different realms, at very different price points. There’s another small group of SIs focused on the operations management space between the shop floor and the enterprise, but few have been able to scale due to the differing dynamics of the two worlds they bring together, leaving us with too small a community of these valuable partners.

We at MESA contend that for manufacturing to take a significant step forward in terms of productivity and cost competitiveness – in spite of, or perhaps because of difficult economic times – all of the constituents in this

Make Your Supply Chain Lean, Green and Mean...with Clarity™ solutions from Xterprise

Leverage RFID and Sensor technologies to gain unprecedented visibility and control of your supply chain.

- Supply Chain Visibility
- Automated Receiving
- Reusable / Returnable Asset Management
- Work In Process Visibility
- Item-level Inventory Management
- Critical spares Inventory
- Yard Management
- Capital Asset Management





Create, share and experience in 3D.

Working in 3D lets you integrate your customers' preferences into your project more easily than ever, even online. Together, you can create, share and experience your ideas—all in 3D. With Dassault Systèmes solutions, your company is empowered by a new, universal language to invent the products of the future.

Discover SolidWorks, CATIA, SIMULIA, DELMIA, ENOVIA and 3D VIA at www.3ds.com

© Dassault Systèmes 2010. All rights reserved. CATIA, SIMULIA, ENOVIA, DELMIA, SolidWorks and 3D VIA are registered trademarks of Dassault Systèmes or its subsidiary in the US and/or other Countries.



See what you mean

www.3ds.com