Cast the net

Web EDI, e-kanbans and the like entered the lexicon of manufacturing IT several years ago, but the technologies are now ready for robust supply chain use, says Brian Tinham

One of the most significant causes of excess capacity, inventories and waste in almost every supply chain on the planet is the lack of anything like real-time visibility of demand and supply. It's precisely because we don't know what's going on at any moment in time that we build expensive safety stocks and pad out lead times, as a result of which we reduce effective factory capacity, miss sales opportunities, lose out on margins, deliver lacklustre customer service and so on. We also multiply that same set of problems all the way back up the supply chain, with what the pundits term 'noise' in our demand signals.

Enlightened manufacturers now accept that the way forward is to remove, or at least minimise, the causes of 'noise' in the signals they receive from customers as well as communications with their suppliers. They accept that it is the fastest route to achieving significant cost reduction, time compression and agility. As lean guru Prof Dan Jones says: "The first very important lesson that Tesco learned is that it is up to them to identify and remove the 'noise' in the orders sent to [their] suppliers... Once you see this, you can see the huge opportunities that arise from also taking responsibility for managing inbound logistics, rather than waiting for suppliers to deliver full trucks when they have enough to ship."

Embarrassingly, there is little or no excuse for poor supply chain visibility. EDI (electronic data interchange) has been around for decades, providing automated business-to-business, system-to-system transactions, and thus visibility, albeit mostly in the automotive industry. Yes it's expensive – primarily because of cost and resource issues associated with running on so-called value added networks (VANs) – but the fact is technology has long since moved on and brought variants of EDI to the masses via web technologies.

Cheap information

Manufacturers can now get everything from full web EDI electronic demand messaging, to email alerts, invoice matching and exception reports, all over the internet. And all that is cheap for them and for their suppliers for three main reasons. First, it's web-based, using standards such as AS2, or Applicability Statement 2, the standard specification for transporting data securely and reliably over the internet, so you don't have the VAN charges. Second, many systems are hosted add-ons, meaning minimal outlay on IT and network infrastructure. And third, there's a range of access methods – from portals to EDI-like automation – to suit just about every user, so the learning curve is short and gentle.

GXS is the biggest and probably best known web EDI player, with its Trading Grid, the hosted web-based business platform that handles some $4 billion worth of supply chain transactions annually. Pradheep Sanath, GXS director of product management, describes his organisation's offering as "adding value to inter-enterprise, supply chain collaboration planning and execution by hosting the business and shielding users from installing and maintaining expensive software and systems".

It's all about helping manufacturers and suppliers to exchange information on everything from blanket purchase orders to order forecasts, advance shipping notes, and so on. This way, not only can suppliers 'see' in real time what's required when, what's changed, the status, etc, but their customers can, too – and thus make

decisions, adjust schedules, and turn on other suppliers to keep their operations optimised and meet demand.

Rod Horrocks, business development director at consultancy Procertis, believes the technology is key to enabling collaborative supply chains. "Collaboration happens when each party in a group does its 'bit'," he says. "[But] unless you know what 'bit' is expected of you, you can't determine either your cost or value to the chain... IT allows us to share information about inventory movements, rather than just relying on physical sight of the inventory to inform the business.

"For example, by exposing your inventory to other members of the chain you can enable them to make guaranteed orders, rather than inviting them to make uninformed requests and then join in a protracted negotiation around what's possible. Sharing information across the chain is a hugely profitable step to take, and has been made very much easier by the maturing of internet technologies.

As GXS' Sanath puts it: "What's different is that [manufacturers get] an extra layer that provides insights. They don't have to wait for transactions to make their way into their ERP systems.

"They can log into an online secure interface and, in near real time, understand exactly what's going on in an exception management form."

Pressure on processes

One manufacturer practicing much of this is Warrington-based Fontaine International Europe, a manufacturer of HGV tractor unit 'fifth wheel' coupling devices. More than half of its customers are OEM truck manufacturers, such as Volvo, Scania, Renault, DAF and DaimlerChrysler, and 18 months ago the pressure was on to get away from its existing non-integrated EDI system and eliminate manual processes around orders, forecasts and despatch notification.

Driven by a significant new business win from DaimlerChrysler, which was beyond the capacity of its legacy ERP, Fontaine's solution was to go for a new Syspro ERP system from K3 Business Technology Group, version 6.0 of which brings in integrated web EDI. Now, EDI messages from its OEMs are converted by Fontaine's EDI partner into XML documents and downloaded to the company's server, which is regularly polled by Syspro's document flow manager (DFM). That communicates with Syspro's sales order module, which in turn automatically informs all relevant departments via email. Additionally, the system pre-checks for correct product codes, alerting managers of discrepancies so that they can be dealt with promptly.

And much the same happens in the reverse direction, with product completion triggering Syspro DFM to create barcode files and labels, as well as raising XML despatch notes for conversion into EDI and sending to the OEMs over the web – providing them with delivery date and barcode details for scanning and delivery confirmation. Also, for Daimler, the process includes automated EDI invoicing – and that's now being extended to Fontaine's other OEM customers.

Minimal cost

Finance director and project leader Mark Lloyd says cost was minimal and it's been extremely successful. "The implementation had the immediate effect of enabling us to deliver integrated EDI functionality, along with the process efficiencies demanded by our OEM customers... We've massively reduced man hours previously spent re-keying purchase orders and the like, and there are now no issues over pricing, quantities or invoices, since everything is extracted from the OEM data at the outset... The only cost to us now is in adding new customers: there are no ongoing messaging charges."

He adds that Fontaine is now looking at adopting Syspro's web portal functionality

as well, to enable customers and some suppliers to gain partial access to its ERP system and view order progress, stock data and e-kanban information. "For example, with core suppliers we want to push out vendor-managed inventory type information so they can see stock levels and organise replenishment in real time."

He's also considering more integrated links with a third party warehouse used by one of Fontaine's OEMs to hold product and feed it, on demand, to production. Currently, the warehouse raises its own notification for transfer into the factory, and some time later Fontaine gets a fax, but still has to wait for confirmation from the OEM before it can finish processing the order and raise a despatch note.

With the web and DFM functionality, the warehouse will become an extension of the business, explains Lloyd. "Their warehouse will appear in our system, so as soon as physical products are received, contract warehouse staff will be able to update the system direct. Then as our products are moved into the factory, their staff will be able to record the transfer, which will automatically raise despatch notes via our web EDI."

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>
> *Fergal Wall, Glanbia*

Customer demands

Meanwhile, another company in a completely different industry sector, now seeing success with web EDI is £160-million turnover Lactalis McLelland, the UK's second largest cheese producer. The company has run straight EDI for years with the supermarket chains, but moved to web EDI for Asda, when it specified AS2 and the internet for all future transmissions.

Group IT manager John Breedon says that its existing Exel Efacs ERP system and Reims EDI integration server were able to pick up the new web EDI tasks – and that also, since then, Lactalis has used the same system for a great deal more. "We've used it to link to one of our distribution centres, for example, providing a two-way data link. We could have used EDI, email or even fax, but AS2 was the simplest, most cost-effective way of doing it. Reims can read and send emails, but then you're reliant on the third party having some IT capability. AS2 is more secure and is designed for the job."

And there's more: "We're also now using it to communicate with Lactalis Group HQ, using FTP instead of AS2. They're on a different ERP system so, with Reims as the middleware, we can stay synchronised with their master product data management system, which runs on SAP – bringing what we need direct into Efacs." Was it easy? "Yes. For example, the AS2 link just transfers the EDI file and replaces the standard EDI VAN service provider. AS2 works just as well as EDI to join two businesses. Also, set-up was cheap in comparison to other solutions and there's no further cost."

Staying in the food industry, it's worth also looking at international dairy and nutritional products manufacturer Glanbia – another that's moved up from paper– and fax-based communications to low-cost electronic trading using web EDI, but in this case with the whole supplier community. Again the system covers invoices, purchase orders, delivery confirmations and remittances (interfacing with SAP), but in this case, configured very much to respect the different abilities and requirements of its trading partners, some of which are small while others are very large.

Fergal Wall, group technology services manager with Glanbia, explains that he wanted a system that would not be excessively costly for these companies to implement, and that could also support low cost internet and VAN-based EDI, giving suppliers the choice of running with simple web interfaces, or fully automated electronic messaging. He chose Sterling Commerce's Gentran Integration Suite, which, like Reims, covers all flavours of EDI.

"The web trading environment resulted in cost savings and efficiencies across the board," he says. "With less effort and resource placed on maintaining the system, Glanbia's internal shared services are now able to focus time and attention on other value-added development and customer service tasks, while maintaining control of the end-to-end supply chain process."

And he adds that Glanbia and its business partners improved visibility and security of the end-to-end supply chain processes, listing benefits as: improved partner relationships; reduced errors due to automated message receipt and delivery; earlier invoice settlements; better troubleshooting, and integrated proof of delivery and notification for all AS2 messages. For Glanbia itself, achievements include: a fully automated communications infrastructure; significantly reduced VAN costs through use of AS2; controlled and auditable scheduling of all SAP communications; and acknowledgement of real-time supply chain messages 24/7.

Sounds attractive? Can you afford not to make some enquiries? ■

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