

Linking your back office and online systems together can make your business more efficient and ultimately lead to greater customer satisfaction.

WHAT ARE BACK OFFICE AND ONLINE SYSTEMS, AND WHY DO THEY NEED INTEGRATING?

BACK OFFICE SYSTEMS

Back office systems take care of all your business administration processes. Back Office systems can be manual based on sales ledgers, typewriters, invoices and so on, but these days they are more commonly an automated set of processes run by a piece of software on your computer. A back office system typically set up in an accounting package such as Sage, Pegasus, Quickbooks, Exchequer Enterprise, or in a database such as Microsoft Access will:

- record all sales transactions
- record all purchases
- update inventory records accordingly
- generate all appropriate paperwork such as invoices, receipts, etc.

Many back office systems can also carry shipping information and can produce reports that are invaluable in monitoring business performance, and predicting future trends.

ONLINE SYSTEMS

An online system is basically a web-based storefront where your customers can browse your products and order and pay for goods. Typically an online system will contain a catalogue of your products, shopping cart software, check-out software for payment processing and shipping and delivery information.

If you were setting up an online trading presence from scratch it might seem obvious that the back office and the online storefront

should be integrated that is that they should be in seamless communication with one another with all the functionality of the back office available to the storefront, and all the information from the storefront immediately passed to the back office for processing. So why are so many web stores not integrated with their business's back office?

- Many web stores were opened on a trial basis, at lowest possible cost, to see if an online market existed for particular goods and services. Or it was thought that the low volume of web orders could be manually transferred to back office systems for fulfilment.
- The task of integrating back office and online systems threatened to disrupt existing business processes, either through negative impacts on day-to-day operations, or negative impacts on IT infrastructure.
- Many of today's successful web stores started out with no expectation of the high level of traffic they now have to deal with or the burden that manually processing these orders can bring.

What is integration?

Now that online sales volume is expanding and the internet as a sales channel has been proven for many products and services, integrating the web-based front end with the back office has never been more vital. Companies with a growing volume of web trade simply don't have the time or resources to transfer all the incoming orders and e-mails to their back office systems

for answers and then transfer those answers back to the internet to be relayed out to customers again. In practical terms integration means connecting the two systems, so that whenever a customer places an order online, your web store and back office deal with the sale as one the online system accepts the order and then relays all this information back to the customer, whilst the back office records the transaction, adjusts inventory levels, generates an invoice and fulfils the order.

The benefits

The practical benefits include:

- Greatly improved customer service the back office and the web store can deal automatically with almost every order and customer query.
- Much faster response time.
- Enhanced capacity greater automation allows you to deal with much larger volumes of business.
- Reduced costs in the medium and long-term. Although set-up will be a one-off cost, integration will save time and money in the future.
- Improved accuracy with web store and back office accessing the same data the chances of errors are greatly reduced.
- Staying competitive efficient, timely service is vital: if your competitors run a more efficient, responsive service you could lose your customers to them.
- Better use of staff time: if back office and online systems stay separate you are constantly wasting staff time and resources duplicating data from one system to the other and back again.

Integration solutions

The integration solution that is right for your

business will depend very much on the systems you already have in place.

Existing web store and back store

If you have a web store that you built or acquired from one vendor and back office software that came from another source, it is quite likely they will not be able to communicate easily.

- If your web store and back office use open-source protocols, such as XML or EDI, you could use off-the-shelf software.
- If not, you may have to employ a specialist software firm to create an interface between them (middleware). Have a look at bespoke integration for more details on this.
- The other option is to use an ASP.

Starting from scratch

- If you are starting a web store from scratch, be sure you acquire software that includes built-in back office functionality. Take a look at back office systems.
- Conversely, if you are acquiring a back office system make sure it will work with whatever front end web store solution you plan to put in place.

1. Off-the-shelf solutions the simplest way of integrating web store and back office is to use off-the-shelf software for the integration, such as Actinic Business (guide price £800). This will only work if your web store and back office solutions use opensource protocols, such as EDI or XML. Actinic Business and products like Oracle Small Business Suite, IBM Websphere, and Microsoft's Retail Management System, would also be a good solution for businesses setting up web trading, and conventional commerce, from scratch. These systems will support a proprietary front-end web store and will work

with popular back office products such as Microsoft Access and leading accounting packages. Actinic also works with delivery firm UPS to provide online tracking for you and your customers.

All these products would be suitable for small to medium-sized businesses looking to rationalise their operations. Although the simplest of solutions, these software packages will require expert programming assistance.

2. Bespoke integration the costs and complexity of such an interface vary hugely depending on the volume of traffic your website handles and what legacy systems you have in place, for example. It is a question of analysing the systems and processes you already have and considering how much you've spent on them, how well they work for you and how willing you are to move to a different solution. As a rough guide you can probably integrate a simple back office to web store (or web store to back office) for somewhere in the region of £15,000.

This type of interface is known as middleware and would be most suitable for organisations that see their internet-based trading activities as increasingly important to their overall business strategy. There are many companies who provide bespoke integration services type 'back office integration' into any search engine.

Providers of the integration software for bespoke systems generally fall into two categories either they provide back office systems with ERP (enterprise resource planning) functionality to which a web store front-end may be bolted on, or they supply web stores which may work with certain types of back office systems (although many suppliers insist you source the entire solution from them).

If you do commission bespoke software for web store front ends, back office systems, or the

middleware that allows them to communicate, you should always ask that it be platform independent (that is it will work on any of the major operating systems such as Windows or Linux) and written to open standards which generally means employing XML (extensible mark-up language) or EDI (electronic data interchange). That way the software will be able to work with other applications in future even if your relationship with the provider comes to an end.

You should also consider whether you want the two parts of your system to communicate in real time, or through batch processing. Real time communication means that the web store can search the back office for data instantaneously. Batch processing (which is cheaper) means that the back office software and the web store communicate at regular intervals customers may have to wait a little to get the information or order confirmation they were seeking, but most online customers will accept a delay of up to two hours before receiving an e-mail dealing with their requests).

3. Application Service Provider (ASP) this actually involves renting a web-store through the ASP and isn't really true integration, but simply XML messaging back and forth to your in-house systems. An ASP solution may be adequate for small and medium-sized web trading operations, but if the volume of sales grows it may not provide sufficient integration. Since you are basically having the integration managed for you, this is one of the least complex solutions, though you will need to reassure yourself that the ASP can deliver what it claims ask to talk to some existing customers for reference. Cost-wise an ASP-rented web store that can communicate with your back office is likely to run somewhere between £15,000-£20,000 per annum.

4. Back office systems with bolt-on front ends. System vendors such as G2, which provides the popular EuroMACS system, or ACCPAC, who provide accounting and business operations packages, can support web store front ends through interfaces such as Webpass (EuroMACS) and eTransact (ACCPAC). EuroMACS can also work with some other legacy software you may already have in place, such as your accounting package. Costs will vary according to the functionality you are after, but will be in the tens of thousands. This could be a good solution if you are starting from scratch and have no back office systems you wish to retain.

5. Web store systems with bolt-on back ends. Although many web store software solutions will claim some integrated back office functionality, the back office side of things is generally more complex than the web interface, so the solution you will probably arrive at is integration if you have back office systems in place that you want to retain. Alternatively, some storefront vendors, such as Intershop, have developed back office modules for procurement, content management, and supply chain management. Such solutions start from around £15,000 and are suitable for small to medium sized business with moderate e-commerce requirements.

6. Fully integrated systems for a fully-fledged purpose-built bespoke e-commerce solution that comes with integral back office and web store functionality, the cost will start from around £100,000. The complete EuroMACS package from G2 is one of the leading examples of such a system, and can be configured to work exactly as you require. E-inbusiness.co.uk also provides full system solutions in a similar price range. Fully integrated systems are best for businesses with complex and multiple e-commerce

requirements, which anticipate major volumes of trade through their websites.

IMPLEMENTATION CHECKLIST

Research & analyse

Set objectives

Set clear measurable objectives for what you want to achieve.

Do you want to make better use of staff time?

Increase your capacity for doing business?

Improve the accuracy of your data?

Cost/benefit analysis

Establish the costs of integrating your back office and online systems, including installation, training and maintenance. Balance these costs against the benefits, such as greater efficiency, reduced costs and improved information management.

Which integration solution?

Off-the-shelf software?

Bespoke integration?

ASP?

Other considerations

When looking for software solutions, make sure they support open standards such as XML (extensible mark-up language), which is commonly used by e-tail sites, or EDI (electronic data interchange), which is commonly used by B2B websites.

Make sure your solution has the flexibility to deal with moving into new markets (if that's your aim) having the ability to price in other currencies, for instance. Think about which sets of data you want back office and web store to share.

Think carefully about which web store processes you want your back office to have access to, for example you only need to know

the availability of shopping cart items once the customer actually moves to the checkout to pay for them.

Consult

Professional advice

If you lack the skills in-house, contact a Business Link adviser (or equivalent if you are in Scotland, Wales or Northern Ireland), in the first instance, for help on how best to:
outline your requirements establish how much you can afford to pay scope the project
advise on implementation provide training and software support.

Talk to your trading partners

Do you want your web store to have access to inventory information (useful for showing product availability), to customer histories (to help customers with re-ordering) and to shipping information (so that customers can track their own orders, saving you time and money)?

Plan & test

Evaluate options

The more standard the software you choose, the easier it will be to integrate. Bespoke software at either end, or in the middle, will require bespoke integration.

If you do need 'middleware' to connect an existing back office to an existing web store, make sure it is written to open standards.

Make sure the systems you adopt are scalable so they can grow with the demands of your business in terms of sales volume both through e-commerce and conventional channels.

Plan the roll-out phase

Look at training implications what will the cost be? Decide which staff will require training and allow time for them to adjust to the new system.

Act

Implement

Encourage staff involvement and feedback. This will help smooth implementation, as staff buy-in can make or break a technology project.

Evaluate

Monitor and review the impact on your business and against your objectives.
Get feedback from staff, customers and suppliers on the changes.

Evaluate the impact after 6 months and 1 year. Have you achieved your objectives? Establish how you could improve things further.

FURTHER HELP AND ADVICE

Off-the-shelf

Providers of online web store software which works with a variety of popular back office products and accounting packages:

<http://www.actinic.co.uk> Actinic.

<http://www.ibm.com/websphere> IBM's websphere.

<http://www.oracle.com/appsnet/products/smallbiz/content.html>

Oracle's Small Business Suite.

<http://www.microsoft.com/businesssolutions/retail%20management/>

default.mspix Microsoft's Retail Management Systems.

Bespoke

<http://www.oracle.com/uk> provider of software services to businesses of all kinds.

<http://www.seebeyond.com> developer of technology for uniting disparate computer systems.

<http://www.internetware.co.uk/bespoke.htm>
bespoke projects ranging from Windows
applications through to multi-user webbased
applications.

ASP

<http://www.apview.co.uk> ASP based web store
and back end integration provider.

<http://www.sscsinc.com> provider of online back
office and home office management systems.

Back office

<http://www.accpac.com/worldwide/eu.asp> provider
of back office solutions (mostly accountancy
based) with bolt-on web store front ends.

<http://www.caliach.com> provider of back office
ERP systems with online functionality available
too.

Webstore

<http://www.symshop.com> site with free web store
software for all businesses who hold credit and
debit card merchant accounts.

<http://www.web-fulfilment.com> warehousing,
shipping and all fulfilment services for your web
store.

<http://www.kapowtech.com> web application
software integration provider.

<http://www.intershop.co.uk> web store provider
also able to supply bolt-on back office modules.

Fully integrated

<http://www.euromacs.com> provider of fully-
integrated e-commerce solutions to leading
companies.

<http://www.e-inbusiness.co.uk> provider of fully
integrated e-commerce solutions to leading
companies.

GENERAL BUSINESS ADVICE

For more information on achieving best practice
in your business contact your local Business Link
advisor by visiting the website at
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