

How to choose and implement an ERP

If you're about to start an ERP project or similar, then heed this advice from people that know exactly what they're talking about, writes Brian Tinham

this should be mandatory preparation for anyone about to embark on upgrading, changing, or installing a new ERP system – or indeed any substantial business IT project. Collected here is comprehensive advice on everything from system definition to selection and implementation – from consultants and IT vendors serving your community, and your peers doing it.

Some of the material comes from the ERP Vendors' Forum, comprising Infor Global Solutions, K3 and McGuffie Brunton, which runs half day seminars on the subject; and there is also input from Cranfield School of Management, the Best Practice Group and respected manufacturers, Cosworth and Britax Aerospace.

Before we get to the detail, the first lesson is that success with IT at this level is primarily about people and business culture, not departmental solutions and not actually the IT itself. Thinking it's about the latter is the first mistake. Management, company politics and your approach to inflicting or embracing change are the real project breakers. Inadequacies here don't just result in failure to perform, but business benefits (if they're ever realised) that are too little, too late.

The second concerns time scales: in the worst cases, just determining functionality and then finding a desirable ERP vendor partner – yes, partner – takes months, sometimes even years. That's serious waste of business time and effort: remember, it all has to be paid for – as higher overall system costs that in turn may mean cut training budgets and thus ongoing inefficiencies, not to mention lost business opportunities.

So top line advice may be motherhood and apple pie but important for all that: make leadership and management commitment very public priorities. Quickly identify your improvement goals, empowering those you need across the business to make them achievable. Be mindful of the scope of change management, and include KPIs and staged objectives. There is no substitute for pragmatism and good project management, but remember the power of communication and involvement. Stay on the case.

Enough of the general; let's get to the specifics. Howard Joseph, sales director at McGuffie Brunton, makes the very valid point that any implementation begins on the day you start considering a new system,

not when you start piloting. So what? So first, from day one you're spending business time and therefore money, and second, depending on how you go about it, shaping the final outcome.

That being the case, you need to do things efficiently and in logical order. "Start by producing an outline specification," says Joseph. And to do that, you need to get an initial cross-functional project team together to consider your business drivers and problems, look at existing business processes and systems and see where they need improvement. It's all about getting a unified view on how to improve work effectiveness and streamline the business.

Start at the beginning

Obvious? Yes, but done well that leads you rapidly to a good early scope and specification assessment. It also saves you from over reliance on what IT vendors, consultants and internal enthusiasts might try to sell you. Dr Ip-Shing Fan, enterprise systems integration director at Cranfield, suggests doing it by mapping your organisation and its people and all main operations into a reference framework to assess the subtleties of the way the company works at a fairly detailed level.

Next point: consultants can and often should be called in to help. As Fan says: "It depends on your skills and the costs. If you don't know the systems very well, you need to work on that so you're in a position to understand the IT choices and the associated organisational changes. For example, you need to find out about IT as an opportunity to introduce lean business and production concepts."

Cranfield, for instance, now has a software tool that helps management understand not only the organisation and its existing processes, but the areas of weakness requiring particular attention. It also offers a database, in association with GEDAS, that reveals what other companies similar to you have done. "It's not a prescriptive list of actions," says Fan, "but it does help companies to see and understand some useful options."

Bearing in mind that an ERP change, upgrade, or new installation should almost always be an opportunity to improve your business, consultancies like Cranfield are a good route to best practice and far wider experience than you. They bring objectivity, knowledge

system

and experience, as well as business analysis and project management skills. And another point: when you're paying, it focuses the minds of senior management!

Seriously, of course there's a balance to be struck: pockets are only so deep and it's important not to sacrifice those other soft costs, the education and training budgets. But sorry: you will live to regret inadequate counsel at the front end. Fan again: "Currently, many companies run out of time or money, and that means additional content later – which means companies spend twice as much to get everything they find they need." The only caveat: remember, some consultants have affiliations, or at least likes and dislikes.

Beyond that, use other sources of information and opinion. Best take advice from the likes of this journal and its website; buy the Benchmark Research report that examines existing user satisfaction with a range of ERP providers (ERP Vendor Performance Report, 01322 420378 or www.benchmark-research.co.uk); and talk to some IT vendors. Also, talk to some of your suppliers, perhaps even some competitors and your customers – see what they've got and why. It all builds understanding of what's possible – and what's necessary for you.

Implementation team

Now it's time to select the implementation team, again from across the business – usually a superset of your initial project team. A word of advice: you've got to be realistic about their day jobs and the scale of commitment they can give. Since the latter is a key governing factor for success you need to choose people carefully, and reallocate some of their responsibilities.

That done, you're ready to put together an ITT, but as McGuffie's Joseph says: "It's not about size; don't bother describing your business to the nth degree, but detail some specifics you will need, like you always need to do your put-aways that way, or you need to deal with B&Q with this interface." Specifically, the ITT should reflect the changes and improvements you want to achieve as a result of your preparation – and no more.

Joseph's point: you can produce a big ITT and have the software vendors waste man-weeks ticking boxes, or go for a day's free consultancy on-site instead. Not a difficult choice, surely, particularly when this is in part about starting a partnership.

That's not to say an ITT isn't important: it is. At the end of the day it forms the basis of a legal contract that at the very least governs your responsibilities and costs when it comes to the inevitable changes or additions. Says Cranfield's Fan: "The ITT is an important docu- ►





Chris McKellen,
lean transformation consultant

- "Ensure that potential suppliers understand your manufacturing philosophy – lean, kanbans etc.
- "Visit potential suppliers' installations and talk to several people there to get a representative view – not just that of the potential supplier. Be wary of demonstrations – it is live systems working that count.
- "Look at the organisation. How many people support the computer system rather than it supporting them? Look at current procedures: can they be simplified? How live is the system? Is it real-time or updated daily?
- "Use the new system to have a fresh start. Do we need

existing reports? Do we need new reports? Can we customise them ourselves?

● "Think carefully about which modules you really need, which you want and which you would like. But make sure that you have the ability to model 'what ifs' to get optimised production.

● "Go for a vanilla system. Don't customise it. Customisation often requires additional costs as new versions are issued. Think of Microsoft Office – we don't customise Word or Excel, so why do we customise ERP? Think about the support costs and the ongoing training as staff change.

● "Have a competent project manager. Use a multi-disciplinary team to evaluate and specify the system. Use a multi-disciplinary team to implement the new system. Make sure that the team has ownership of the new system.

● "Try to avoid transferring data across – junk in junk out. Carry out 5S on all data if it is transferred. Ask yourself, are the quantities, lead times, flags and BoMs correct? Even the simplest BoM probably has some errors.

● "Internal training sometimes leads to a dilution in the understanding of how the system works – and the perpetuation of bad habits."

► ment, but how to do it is an open question... One solution is to write the ITT in the form of the required business functions and efficiencies, rather than the software functionality."

Either way, be wary of over-specifying and under-budgeting. "You need to divide your requirements into 'must haves', 'nice to haves' and 'might want in the future,'" advises Joseph. The latter are important because you need to ensure the packaged system you finally go for is as future-proof as possible – but keep it in perspective. Most of all, you're trying to establish that the vendors can deliver the 'must haves' now and, importantly, without 'customisation tools' that you may have to use and pay for. Remember, services at £1,000 a day will soon eat into your training budget.

Joseph also suggests that where you already have a system, you should look at your existing ERP vendor first. "It might well be a cheaper alternative to stay, so give them the chance to talk to you and don't waste everybody else's time – not just ours, but your own."

Brief pause: it's worth noting that sometimes the problem isn't your system, but you. "People move on, and you may need to spend some time on re-training, re-implementing and upgrading, not changing horses mid stream," comments Joseph. Fact is, the importance of existing system audit and review cannot be overstated. As Fan says: "There will be problems not because the computer system isn't working but because the people

in the organisation don't see it as supporting their roles. Then the data starts to deteriorate because they're not using it and then people start not to trust it."

Which is when so many companies think they need a new system but might not. They just need to review the education and training – and perhaps also the business analysis and goals in light of the inevitable changes. And Fan adds: "90% of the data in most companies' ERP systems is never used. It's true that all of it will never be used, but think about the money they spent on that implementation that's not now giving the business benefit it could."

Shortlisting

If you still want to go ahead, it's shortlisting time. And first, you should check that whoever makes the final decision is up for this: that there aren't hidden agendas, corporate dictates, unknown preferences and so on. Assuming all is well, most recommend getting to a long-list of six to eight players by addressing factors like their size relative to you, scope, industry focus and internationalisation if that's important to you. Cutting down from that is about examining features, expertise and the software vendors' people in more detail, till you get to a shortlist of around two to four, then finally one with a back-up. It's an iterative process, and again, consultants can help.

Part of the process will involve demonstrations and one-day workshops, and the message here is: keep it sensible and for the shortlist only. Take the same team to each one; agree an agenda beforehand; go to the vendor and stay focused on the 'must haves'; and don't get too hung up on seeing your own data. Make sure you have a 'wash up' session as a team while the experience is fresh in your minds and ideally use a weighted score sheet to do your vendor assessment.

Remember, while the devil is always in the detail, the priorities here are confirming functionality, opportunities for improvement and integration with your remaining other systems and departments – and checking out the vendor's people. Fan's view may surprise you: "Senior management should spend a week with the IT vendor going through all the functions and business benefits. Time not spent on this will result in a lot more time and money spent later. Too many companies relegate this phase to the IT department or a supervisor."

Incidentally, software vendors would prefer you to limit reference site visits until you're at or near the end point. They make the point that not only is everyone busy, and visits consume a lot of time and favours, but, just as important, you'll lose focus as you see what are likely to be older versions of the software and the specifics of a different manufacturing company.

But go you must, and you need to get them to match the size, style and scope of supply of your company – that will tell you plenty. As Fan says: "Ask for sites with similar characteristics, not products, and ask about their experience with the software vendor. It's a learning process so how good was the company in that sense?"

Meanwhile, system price is going to be a key factor,

so it's worth understanding that 50% or less is likely to be software licence cost, with 50% at least then being required for consultancy, implementation and training. Hardware and support are then on top – normally coming out at 16–20% of the list (not discounted) software price. Typical figures are: up to £10,000 if you're just looking for accounts; £10–40,000 for five to 10 users running a full manufacturing business ERP system; and £40,000 to £300,000 for the 10–100 user range.

Sounding expensive? There are options here: and today they include leasing through a third party finance company – think of Syscap for example – and renting, either direct with system developers like Rent IT, or with ASPs (application service providers) like Wasp IT, the latter offering total deals based on Infor's Syteline ERP system. For some, the fixed cost per month, predictable exposure is an obvious benefit. But if you're not comfortable with that and it's still too much, consider first reducing the initial modules to be implemented. Don't cut training and education.

Now it's decision time. At this point you should have ticked off functionality and budget, relationship, future needs, 'safe hands' and confirmed financial viability.

Getting a success

Let's learn the lessons of failure. Richard Thomas, marketing director for K3, makes the point that reasons for failure are almost invariably people. These days, it's unlikely to be the hardware or software. For far too many companies it's still the case that implementing ERP is about shoehorning an integrated system into a non-integrated company. Again, addressing this is just as big a deal as the whole selection process.

Also everyone has limits – responsibilities, job descriptions, time, perception of what matters and the rest. Add to that the inevitable politics and personalities and you're headed for disaster unless you make changes. Again, leadership, KPIs, weighted scores, management commitment and determination are key.

Fan: "Management doesn't seem to understand the implications of implementing a new system – like the importance of changing jobs and roles, which also means education and training – which isn't budgeted... It's also important to prepare people and the organisation in time for the IT. It may take IT and the management team some six months to put the system in, so use that time wisely with education and training so that when it goes live, users are comfortable with it and understand what they are supposed to be doing."

That said, a good live project has several very specific ingredients. They include communication, involvement, the right people and some key structures. "Without these your project doesn't stand a chance," says Thomas. His suggestions: "Have another kick-off meeting for the project implementation team... Give it a name so it's got a life of its own... Make it visible... There must be top level commitment for all the meetings... Choose a project manager that you know will make it happen." Obvious maybe, but it's critical stuff.

Likewise, to get ownership in the business, rather

than in the project team or, worse, the IT department, do a proper conference room pilot for the internal and external user teams. It's a proven fact that piloting in this way not only irons out the issues most effectively, but also prepares the departments and helps individuals to gain expertise and understanding. A pilot also helps to test both the processes and the data. It's not a substitute for formal data cleaning, testing, or education and training, but it sure eases the path well before go-live, and it should be happening in parallel with those activities.

If this is a big implementation, break it down into manageable chunks with clear business objectives (milestones) mapped to your new streamlined lean processes. Do it this way and the project gains momentum as users and the business gain confidence and enthusiasm, and the project gets positive attention as the word goes out around the company. Don't do it this way and you're taking a risk.

Then when it comes to go-live – piecemeal, parallel running or big bang – prudent advice is to do a risk assessment and mitigation exercise. Set some milestones and audit against those to ensure that you are OK to meet your plan. Also, budget for sensible time scales – again taking into account the day jobs and key phases like testing (never underestimate that) and data cleaning (ditto). There are always nasty surprises – inaccuracies, poor BoMs (bills of materials) and routings, wrong assumptions.

"And it's not just these basics," insists Fan. "It's understanding the implications of modern, streamlined ►



Darren Dowding, planning and scheduling manager seconded to ERP, Cosworth

- "You absolutely have to understand the current business process and IT issues you have, and that any proposed solution resolves these.
- "You need to have a vision of where the business will be in five to 10 years time, and that the proposed solution is agile enough to cope with your vision.
- "You need buy-in, and the project needs to be driven from the top down. It's definitely not an IT project; it's the managing director's or shareholders' investment in the company – as if it were a machine tool.
- "Correct implementation will touch everyone in the business, and will change how the company does business. This needs to be communicated, and fully understood, by everyone.
- "Be prepared to open every cupboard, and remove every skeleton.
- "Agree on a glossary of terms with your vendor. For example, the word 'plan' has meaning to you, but might have a different meaning to your ERP partner.
- "Most ERP systems seem to have the same functionality. The final choice will be about the relationship and understanding you have with the implementation partner, but also with consideration to the budget.
- "They all 'do what they say on the tin' – but the tins are of various qualities and sizes. So an understanding of the IT architecture that the application is written on, or advice from a trusted source, is advised. We nearly made a choice that, in terms of end user functionality and 'look and feel', worked, but was written on a soon to be unsupported language on a platform that was decidedly antiquated."





Graham Leake, former manufacturing director, Britax Aerospace

- "The first thing is to have a clear understanding of what the business requires, and the business case for the investment. It sounds obvious, but many companies don't really think it through and have woolly statements about what they require and the savings they think they may get.
- "It does require some analysis but at least a realistic plan can be developed and optimistic wishes curtailed.
- "One company I was talking to decided they would change their legacy system because all the staff worked off spreadsheets. My question to them was 'Why?' Unless

they understood that, what was to stop the folks carrying on with Excel?

- "My hobbyhorse is to not customise the software: future upgrades become an expensive nightmare. So the company needs to be very clear about what it requires now and against future strategy. You don't want a re-implementation each time the business changes.
- "If a company does not have robust documented processes, they need to rectify that. Super people and inadequate processes lead to an average business at best. Good processes and adequate people lead to a good business.
- "ERP and Lean can coexist: the company has to be very clear on how it wishes to operate. ERP can be the planning tool executed with Lean tools, but the two have to talk to each other.
- "The main areas I underestimated at Britax were training and data. The best selection process and ERP software will fail if these two aren't exemplary.
- "The software now is well proven so it's how you apply it in detail that must be thought through. Having done that, before you train you must educate the key players. They must understand the basic principles."

- ▶ work processes. For example, if a company wants to implement a PLM [product lifecycle management] system but there are six or seven different BoMs on various desktops and in different departments, that becomes a real problem. It's a significant effort to get the engineering data alone up to standard."

Those that have gone for the phased approach also say it's worth shouting about successes by signing off each step, confirming the measures and results – and making it very public internally. Remember though, for many the business and people will change somewhat even during the implementation, so to ensure that the overall project doesn't falter or lose buy-in, you need to create a management feedback loop of regular review.

As for who runs the project, there's no harm in having it driven by the departments that have the greatest requirement – as long as they also have the greatest enthusiasm and the big picture mentality. An ideal project manager is one who knows the business in considerable detail. He or she can be from IT, but not a technician – you'll need that advice, but it absolutely must be business management-led.

Returning to the education part, it's horses for courses, but there's a lot to be said for the Oliver Wight kind of service – ideally very early in project thinking. Later on, most system vendors offer that as part of the service. One point, while it makes sense to look for best practice, don't expect books to deliver everything. Fan

again: "Best practice is about generalised lessons, but when MDs have to make decisions, they don't help him with his specifics. In particular, you can't assume they're all going to have the time, resources and money to do what's suggested in the guides."

Business case

What about ROI? In justifying your expenditure most companies focus on hard measures, like the opportunities for reduced WIP (work in progress), subassembly, raw materials and finished goods inventories, reduced carrying costs, more stock turns and better debtor days. And the issue is that, for those that have done some of this already, there may be diminishing returns.

If that's the case, here are two thoughts. First, technology has moved on, and support for tighter, more real-time integration, more advanced functionality, better reports, and more sophisticated modelling and automation may well make further improvements more attractive than you realise.

But second, consider some of the so-called soft benefits. For example, a hard benefit of automated information delivery might be reduced head count; a soft benefit could be better decisions, translating to better margins. By the same token, better scheduling will impact more than resource utilisation, on-time delivery, inventory and lead times; you can expect less clutter, fewer mistakes, less obsolescence, improved cycle times, less waste and better business flexibility. ■

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TOP 10 COSTLY MISTAKES

The Best Practice Group says that experience of more than 400 disputed projects across all number of sectors leads it to 10 common mistakes that result, almost invariably, in failure – and its consequent involvement to put things back together again. The following are those Top 10 mistakes.

1. Specifying technical requirements in the tender
2. Shortlisting a supplier based on technical expertise
3. Failing to check the supplier has indemnity insurance for when things go wrong
4. Failing to document business goals in the contract
5. Doing your contract negotiation without a technical and contract specialist
6. Indicating inadvertently that project responsibility is yours
7. Failing to clearly define system and software acceptance conditions
8. Ignoring the legal value to you of employing a specialist supplier
9. Having multiple contracts for multiple suppliers
10. Failing to take advice from internal and external business analysts and constructing the contract to take into account 'project creep'.

You can find out more details on the web by going to www.whitepaper@bestpracticegroup.com