Selecting an Enterprise Resource Planning [ERP] system

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Preface

An Enterprise Resource Planning (ERP) system touches many parts of a business. Chosen and implemented properly it can underpin growth or stability. If done poorly, failure can result in wasted expense, opportunities and careers.

So how do you pick the right ERP?

Well the first thing to note is the software itself is but a part of an overall successful ERP deployment.

Stakeholders of successful IT projects recognise that people, more than technology, are often the deciding factor in determining success. Look at this quote from Michael Krigsman in Computerworld's article *The worst IT project disasters of 2013,*

"People mistakenly believe that IT failures are due to a technical problem or a software problem, and in fact it has its roots into the culture, how people work together, how they share knowledge, the politics of an organisation. The worse the politics, the more likely the failure..."

A positive take on this perennially challenge is explored in the blog *People make your projects great or just good, it is all up to you,* which arose after one of our customers asked the question "Tell me, what are the issues you most frequently encounter when upgrading an ERP site?" Notwithstanding that this question related to an upgrade, many of the insights ring true for a new ERP.

Now let's get a definition, before we continue too much further.

What is an ERP?

Enterprise Resource Planning software is used by organisations to capture, track and manage business critical data across all departments. These days, ERP is often synonymous with a financial system – since a modern finance system goes well beyond basic accounting. The traditional areas of ERP generally include one or more of the following areas: financials, distribution, HR, manufacturing, service management, and sales & marketing. Alternative sub-groups or specialised systems such as CRM (customer relationship management) or MRP (manufacturing resource planning) are often brought under the ERP umbrella.

In this whitepaper, we will review many of the aspects associated with engaging a new ERP, recognising that the technology is but one component. Whether the selecting a new or replacement ERP this whitepaper explores 5 core steps: Create a vision; devise a set of criteria; establish a budget, perform the selection; and commit to the process.

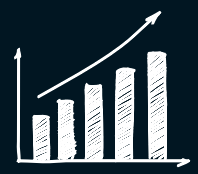## 5 Core steps for selecting an ERP

1. Vision > 2. Criteria > 3. Budget > 4. Selection > 5. Commit

1. Vision

1.1 Question:
"Why are we choosing a new ERP?"

You may feel this question is so obvious that it does not warrant a response. But, simply saying we want to grow our business is a hollow statement. Is there a business that doesn't want to grow?

By articulating a clear rationale or vision, especially if this can be neatly captured in a formal sense, provides an anchor point for yourself, the project and the wider business. Knowing why you need a new, or upgraded, ERP will act as a compass, guiding decisions and helping keep your selection process true to its objectives.
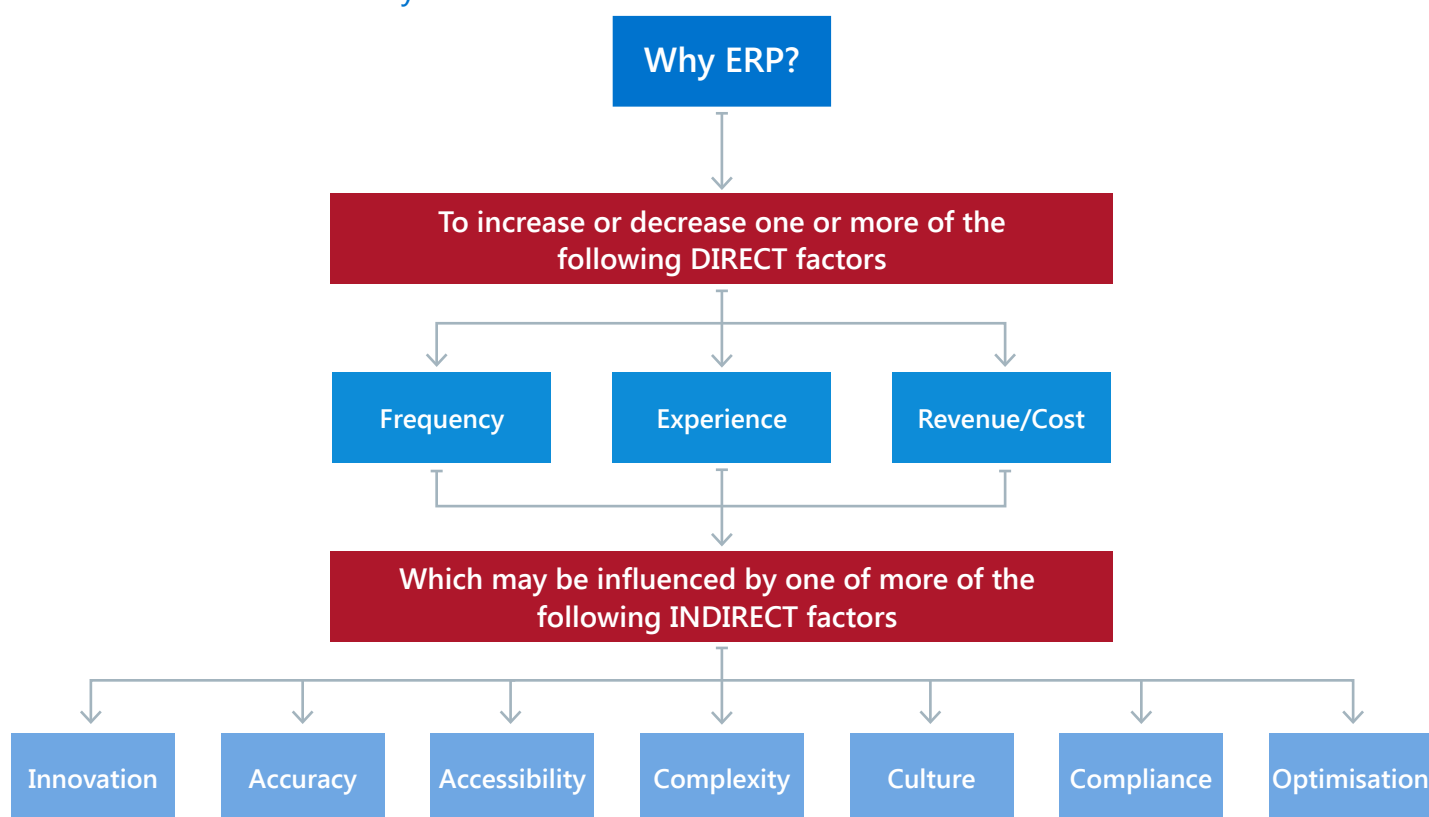
The statement, "I want to buy a car", doesn't say very much. However if the statement was reframed to say "I need a 4WD vehicle, capable of towing a kayak trailer, so that I can compete in next year's Hobart Kayak International championships", I end up with a much greater sense of what I need to buy.

Remember, ERP is a software tool which will change the status quo within a business. So pay close attention to what change you are hoping to achieve. Deploying any enterprise wide IT project will inevitably play a part in shaping the framework of the organisation. With an ERP, we generally see an effect on one or more of following three levers:

- **Money** – either help to maximise revenue or minimise costs

- **Experience** – streamline business processes and drive a positive experience

- **Frequency** – improve efficiency to process more transactions

Typically, we want to either *increase* or *decrease* a variable across one or more of these three areas.

Understand the vision for your ERP

Why ERP?

To increase or decrease one or more of the following DIRECT factors

Frequency | **Experience** | **Revenue/Cost**

Which may be influenced by one of more of the following INDIRECT factors

Innovation | Accuracy | Accessibility | Complexity | Culture | Compliance | Optimisation

What does this mean in real terms? Well, here are some tangible examples which will help bring the diagram to life.

Increase	access people have to data [experience via accessibility]
Decrease	the number steps in a process [frequency via optimisation]
Increase	data integrity [experience via accuracy]
Increase	use of technology to give exposure to new markets [money via innovation]
Decrease	the raw material wastage by optimising orders [money via optimisation]
Increase	the ease of generating or lodging tax returns [experience via compliance]

As a first step, give some serious consideration to answer some of the big questions. For example, do you need an ERP to provide an innovative platform growth or is regulatory compliance more important? Do you want to focus on optimising existing business processes or provide greater accessibility to reports for decision making? The answer may be all of the above and more.

Having gained some insight, it is important to try and encapsulate this into a brief statement. Look at the following examples:

- Over the next five years, to expand our operation into SE Asia we need an ERP to unify our order and fulfilment process that will cater for the anticipated 50% growth in sales.

- An integrated financial and warehouse ERP means we can expand our operations without incurring significant labour costs and duplicating current inefficiencies.

- Implementing an ERP will help us comply with new regulatory standards necessary to maintain our gold certification and compete competitively for government contracts.

These examples go some way to showing what a vision statement for your ERP selection might look like.

Note, two organisations with different visions or objectives may choose the same software application. The crux is not so much "what is the vision" or "which software" do I pick. The key is understanding what you want to do and why. Having a clear vision statement will lead to better decision making, better choices and better execution.

2. Criteria

Like any purchasing process it is easy to be swayed along the way by different organisations as they pitch their wares. Friends, colleagues or external references will all provide their input. Of course, being open to new ideas, new features or new technology is important. Technology vendors are often at the forefront of new innovation and having an open mind to rethink your approach can be really beneficial. However, these influences should always be reviewed against a broad selection framework. You want to make sure that 'hype' and 'promise' do not lead you to a destination that does not fulfil any of your core business objectives.

Whether you are detailed or abbreviated in your requirements' definition, the selection criteria should broadly cover three different areas:

What do you want	the key success factors
Who will be involved	the people involved (your team, the vendor, the implementation partner)
What will you buy	the technology; can it meet my business requirements

Let's look at all three in turn.

2.1 What do you want - Identify key success factors

"Begin with the end in mind" is the second of Stephen Covey's seven habits of highly effective people and the same principle can be applied to large scale IT projects such as ERP.

Having established a vision it is also pertinent to highlight the objectives. A convenient way to think of this is to complete the following sentence, "I know we will be successful when we can ...". Here are some fictional examples:

- I know we will be successful when we can close month end accounts and deliver board reporting within a 3 day period.

- I know we will be successful when we can reduce our inventory holding levels by 50% and automate the stock ordering process based on committed sales, shipments and returns.

- I know we will be successful when we can reduce our sales order entry process to one screen that is the same for all regional and corporate offices.

- I know we will be successful when we can achieve a 98% fulfilment rate on scheduling service management requests within 24 hours of notification from the client.

Try to formulate your own responses to this question half a dozen times with answers that focus on your significant business goals. It will help build a picture of what is really important for the business and getting this clear in your own mind will help feed into the selection criteria for picking an ERP.

In our experience, ERP implementations which have shown the greatest returns have always had an executive sponsor who was able to articulate and maintain focus on 3-4 key success factors from the beginning, i.e. the selection process, right throughout the implementation and beyond go live.

2.2 Who will be involved
– Identify people and cultural fit

As mentioned in the preface, the success of most large scale IT projects comes down to people as much as the technology. The technology is obviously important, let's keep that in mind. However, before rushing to see demos, pour over features or get swept along by the glitz 'n' sizzle, remember that whichever product you choose, the implementation and user adoption will be the signature of its success.

There are four audiences to consider:

- the organisation
- the immediate project team
- the vendor/partner you choose
- any third party assistance (Optional)

Your organisation

Your selection of ERP will be influenced by your assessment of the current organisational backdrop. For example, putting SAP into an organisation that has not previously operated any sophisticated IT software and manages day-to-day with MYOB may not be the easiest (or most successful).

Make a note of the company culture and think about the business landscape. Is your organisation:

- resistant to change?
- open to innovation?
- familiar with technology and new systems?
- integrated or decentralised?
- operating in a fast moving environment?

These questions may be more geared to how you may implement the system rather than "select" the system, however the selection of software will greatly influence your implementation. For example, if your organisation is naturally resistent to change you may select software that is easily tailorable, enabling you to configure the modules to suit your current business practices. Bear in mind that a more typical or best-practice approach would be to implement 'vanilla' systems (i.e. without customisations) and adapt your current business processes to meet the software.

What about a decentralised workforce? The criteria in your selection of ERP implementation partner may be based on their ability and willingness to travel to your remote regional offices.

Your immediate project team

There is truth in the old saying, "you can lead a horse to water, but you cannot force it to drink". There is no value in selecting a new ERP if the end-users refuse to use it. So as part of your process of selecting a new ERP, give serious consideration to who is part of your selection/project team.

Make sure you have a mix of people from the business. Don't leave the decision solely in the hands of IT; the executive; or one outspoken individual. Each stakeholder involved in the process will have their own opinion, background and level of understanding. Their perceptions of 'how will this affect me?' will influence the selection process.

Selecting and implementing a new ERP requires time. Be prepared to allow your selection team the opportunity to give this task appropriate attention. That may mean they relinquish or share some of their current responsibilities and hence free up time to devote to this exercise.

Your vendor/partner

Every day ERP vendor(s)/partner(s) are involved in implementing new ERP systems. It's their main job, i.e. they repeat the process regularly and have significant experience in this space. In contrast, most organisations only go through this process themselves once or twice a decade. Therefore, prudence suggests organisations draw substantial involvement from vendor/partner the experts to help guide them through the process.

An ERP system typically operates at the heart of an organisation. Depending upon its scope, multiple departments are affected and potentially many users are involved. With this in mind, the criteria used to select a vendor/partner should be very high on the list. Who would you want to deliver your next baby, an accomplished team of mid-wives together with a qualified and reputable obstetrician or a band of graduate medical students? Both have qualifications in the medical profession, both can claim to know the process. Yet the choice is clear, experience and understanding count.

There are some fundamentals that should always make the criteria list: experience, reputation, professionalism, etc. However, you may also want give consideration to some less tangible qualities. Do I like this firm? Can I work with them? Do I feel a connection when I discuss our business issues? Do they hold dear the same values as our firm? One-off transactions for commodity products do not require a relationship with the seller.

You may despise the seller, and once you have completed the transaction you need not see them again. In contrast, an ERP system is about to penetrate the depths of your business operations, you are going to need to work collaboratively with the vendor/partner and make sure this investment meets the business' and users' requirements. If you buy the cheapest ingredients, don't trust the chef and engage a rude waiter. Your dining experiences will likely be unsavoury.

So in addition to experience, reputation and professionalism, perhaps look for trust, competence, communication, and shared vision. Look behind the sales team and look at the broader organisation. Talk to the actual people involved in the implementation. Think about how you tackle difficult conversations with this organisation; ERP projects require some tough decisions. Are they willing to compromise? Do they operate by a set of sound principles?

Third party assistance (optional)

As previously mentioned, the selection of an ERP requires time. It also requires a base level of knowledge and discipline to see the process through to completion. Occasionally, some organisations feel the need to supplement their existing team with some third party expertise.

There are pros and cons with this approach.

On the pro side, it can be valuable to lean on a fresh set of independent eyes. Engaging someone to guide you down a path they have previously trodden can certainly help. It's also useful to engage external assistance to keep the momentum moving forward. An internal team can sometimes be easily distracted on to operational issues that inevitably spring up.

Conversely, the pro side only yields benefits if the third party is truly independent and humble. Their purpose is to serve your interests and not foster their own agenda. This is a fine line, and despite the best of intentions can easily be blurred.

2.3 Establish business requirements

In this paper, we've deliberately moved business requirements out of the limelight of the number one selection criteria. That is not to say that the business requirements are not important, they are crucial. However, the purpose of this white paper is to try and elevate the other aspects which are also crucial to a successful ERP selection. If a stool requires three legs, it is pointless that the carpenter only focuses on making one of these legs. It is sad when we see a request for proposal (RFP) issued with a massive matrix of questions that pour over intricate product features and yet provided no insight into the vision, culture or innovation requirements.

The process of defining business requirements can be a project in itself. Before you start, think about what you are trying to achieve. ERP systems have evolved over many years and catered for thousands of businesses. Most of the technology offerings available today can cover the basic fundamentals and more. Therefore, the starting point should be focused more towards what is 'unique' about your business. Look for unusual processes within the organisation, especially if they are central to the operations.

That said, an ERP system is an ideal opportunity to review business processes. Documenting an *as is* set of processes and procedures, if done properly, is a good starting point and can end up being an invaluable aid. It gives the benchmark of what currently happens within an organisation and as a result often throws up areas for improvement or integration. From here, *to be* processes can be mapped out or the *as is* can be used as a basis to compare/evaluate standard ERP functionality.

As a final consideration, when thinking about business requirements, it is worthwhile evaluating them using some form for priority mechanism. For example, maybe draw up a criteria matrix using the following categories:

- Frequency: how often does the requirement surface
  - daily, weekly, monthly, quarterly, annually
- Impact on the business if the requirement is not met
  - catastrophic - the business would collapse without this
  - critical - one or more parts of the business operations would fail without this
  - important - one or more parts of the business operations would be severely hampered
  - medium - one or more parts of the business would be frustrated without this
  - low - one or more parts of the business could manage with or without this

- Audience: which group of people are affected by this requirement?
  - the whole organisation
  - our customers
  - the executive
  - a particular department

Consider this example. Suppose you have one customer who places an unusual order once a year. It is so unusual it requires custom pricing and a different order form from all your other customer transactions. Just because you have identified this as a business requirement does not mean the selection of the ERP must meet this requirement. If there is only one ERP that can met this one-off requirement but it is three times the price of the competition, you may be better off processing the one-off sale as a manual workaround. In general the 80/20 rule comes into effect. Most ERP systems can be customised, extended or moulded to fit some unique requirement, but of course this also comes with direct and indirect costs and implications.

Lastly, when thinking about business requirements it may also be useful to think about a phased implementation approach. A good criteria from which to evaluate an ERP selection is the ability to deploy modules in a progressive manner. Your selection of product/vendor/partner may be influenced by the ability with which the pace of roll-out can be managed. Do you need to tackle every department in round one? Could you stagger the rollout of modules? These questions may be useful to ask as you proceed through your selection process.

3. Budget

3.1 Money, money, money...

What you want, what you need and what you can afford?

They are three very different things.

How much does an ERP cost? Well how long is a piece of string? To read more about this vexing question check out this blog *Why does the price of ERP implementations vary?**

Suffice to say there are four golden rules about setting a budget when embarking on an ERP selection:

- formulate an initial budget
- be prepared to adjust the budget (significantly)
- you get what you pay for
- always allow for a contingency

Formulate an initial budget

You need to begin somewhere, and without doubt your starting budget will be wrong. However, you do need to know before you start shopping that there is some money in the bank. If you get halfway down the selection path and the board give an emphatic *no* to any additional expenditure this year you are wasting everyone's time. Do some investigations and get a feel for what you think you may need. Are you looking to spend $50,000, $250,000 or $500,000 or more?

Be prepared to adjust your budget

Secondly, despite your best initial investigations your selection process will expose you to new ideas, new technology, different players and overlooked requirements. During your evaluation, you may recognise you need more training; you may find you need different hardware infrastructure; the sales team may stress integration with the website is critical for a new ERP system. Some of these observations bring big ticket costs. Just because you didn't think of them at the outset does not mean they aren't worth spending the money. Hence, a good practice to adopt when reviewing budgets is to be cautious in setting numbers in stone before your evaluation is complete. Take time to educate internal stakeholders, the executive or board, explain that a realistic budget cannot be firm until a certain degree of evaluation has proceeded.

You get what you pay for

Thirdly, there will always be exceptions but generally 'you get what you pay for' is also a truism with ERP. The more money you spend on software the more comprehensive and sophisticated it is likely to be. Now, this statement should not be confused with the notion that 'If I spend more I will get a better system'. The best system for your organisation is the one that meets your business goals and objectives. This may not necessarily be a complex, comprehensive and sophisticated system. In the next breath, when selecting an ERP, you will need to consider the expenditure on consulting services from the vendor/partner. More money spent in this area may not be an indicator of complexity but rather simplicity or experience. Getting good quality consultants to design and implement an ERP may result in clean, coherent processes; whereas a team of graduate associate consultants may fumble through a module's configuration. What may seem cheap at the outset could well have long term (costlier) implications.

Always allow for a contingency

And lastly, always have a contingency set aside. Projects by their very definition chart new territory, they unearth new challenges; and tackle unforeseen problems. Planning is an essential aspect of any project, but even the best laid plans can stumble on unexpected eventualities.

*Blog: Why does the price of ERP implementations vary? blog.pa.com.au

3.2 Other considerations

There are several ways to fund an ERP and in turn this may effect your selection process. Here are three common mechanisms:

- Upfront purchase - a capital outlay
- Finance - spread the costs over time and treat the expenditure as an operating cost
- Rental - this model dominates cloud-based offerings

There is no right or wrong model it is just a case of what works for your organisation. Some organisations use a combination, e.g. they may pay outright for the software, but choose to host (rent) the ERP on a private cloud. Other organisations may obtain finance to purchase the software and hardware, but fund the implementation fees from ongoing operating costs.

3.3 Total cost of ownership

As previously mentioned, the cost of an ERP can vary enormously from one organisation to the next. This topic is further explored in this blog *"ERP Total Cost of ownership (TCO) considerations".** The following list will provide the broad categories that go into the mix when setting a budget for ERP selection. This list is appropriate for on-premise implementations, however, the same components are still relevant for cloud deployments. It is simply a case that the categories get bundled together and presented as one rental option.

- software licences
- externally provided services or consulting costs (implementation)
- ongoing software maintenance costs
- externally provided services or consulting costs (ongoing upkeep)
- infrastructure / hardware or supporting costs
- internal resource / people costs

Blog: ERP total cost of ownership considerations. blog.pa.com.au

4. Selection

4.1 Vendor / partner

For fear of sounding like a broken record, in this whitepaper we have emphasised the importance of picking an appropriate implementation vendor/partner alongside the selection of an actual ERP software application.

This blog, *"Are you implementing a product or picking a partner?"** builds on the principles already mentioned. Suffice to say that people over machines are inherently more complex, more challenging, and harder to manage.

4.2 Technology platform

On-premise vs cloud vs hosted

Which is best? Well that depends on what your organisation needs. On-premise is likely to give you much greater control, however a cloud deployment may get you up and running quicker and with less ongoing maintenance requirements. Some ERP providers provide the option of deploying the ERP in whichever platform you decide, i.e. you pick the ERP you like, then choose how you'd like to deploy it. Other ERP systems are only available in the cloud.

Do you need mobility?

If your workforce is truly field-based and does not operate in a 9 to 5 classic office environment, you may want to investigate mobility options or business portals. Once again, think about what your business needs rather than what the ERP vendor promotes. If you have a specific requirement, such as mobility, and it's an essential part of the sales team's operations, ask the relevant ERP vendor/partner to explain how their ERP system handles this.

Other considerations

ERP systems rely on an underlying database. The two predominant vendors of SQL databases are Microsoft and Oracle. Before embarking on selecting an ERP system, an internal discussion with your IT department would be a worthwhile investment. If your organisation is a 'Microsoft shop', i.e. your internal team has depth and experience with Microsoft products and other applications within the organisation already use Microsoft, picking an ERP based on Oracle could bring unexpected costs and complications.

4.3 The ERP application

There are two main categories of ERP: tier 1 and tier 2. The following table presents the most popular choices in each camp.

Tier One	Tier Two
SAP	Infor SunSystems
Oracle	Microsoft Dynamics GP
Microsoft Dynamics AX	Microsoft Dynamics Nav
	Netsuite
	Epicor

Picking a tier 1 or tier 2 ERP will be driven by a range of factors such as: organisational complexity, transactional volume, system scalability, size of operations, budget, etc. As a 'very' approximate guide, an organisation whose turn-over is less than $100m would typically manage with a tier 2 system. Organisations whose turnover is greater than $250m may use a tier one solution, but there is a large grey shadow between the two camps, and an organisation's turnover is only one (crude) indicator.

When selecting your next ERP, think about the time-horizon and growth plans of your organisation. Will the ERP suit my organisation's needs today? Will it cater for the needs three-years hence? Is it flexible? Can I integrate it with other systems? Can it cater for my regional and international operations? Are tools available to extend its present functionality? In essence, try to keep an open mind and a holistic outlook when making a selection don't just focus on the here and now.

Blog: Are you implementing a product or picking a partner. blog.pa.com.au

4.4 Third party additions

Whist ERP systems are notoriously flexible they ultimately cater for the majority or generic case. Your organisation may have specific needs, or belong to a vertical industry that has specific attributes.

Many ERP applications can be extended or supplemented by 'third party additional software'. These 'add-on' solutions typically refine the baseline ERP system into niche areas. They are a useful addition in the mix, since they typically extend the functionality or user experience and do so without the risk and headaches of building your own customised extensions.

4.5 References

Before committing to any large investment, it is only prudent to do some reference checking. i.e. what do other people say about their experiences. Asking for the good old fashioned reference call has merit, but in a limited sense. You can use this as a litmus test to validate an organisation's basic standing. If the ERP vendor or partner cannot provide you with any referencable client then you should be concerned. But remember, you are only likely to be put in touch with other people who will talk about positive stories. To that end, reference calls add moderate value, they can be used to reinforce your choice.

Of course, the web provides an alternative research tool, from which you should be able to gain a wider view of the product and/or the vendor/partner. In addition to seeking independent material, look at the websites, blogs and related material from the vendor/partner themselves. It will undoubtedly be bias towards themselves, but it will also give a window into the organisation themselves or their products. It's reasonable to assume that an organisation that is passionate, excited and active in their web-presence would take a similar approach to other aspects of their work.

4.6 Other

How much software should you buy, i.e. how many modules, what breath of software? Corny though it may seem, the best advice is to buy as much as you can in the first round. There are two practical reasons for this:

- External. The more software you purchase initially the greater the incentives are likely to be from the vendor/partner. Put simply your bargaining power increases if you purchase a wider portfolio of products.

- Internal. Replacing or acquiring a large ERP system is not typically an annual event in most organisations. Thus having made the bid internally to replace such systems, it is not necessarily easy to return to the board the following year, cap in hand, and ask for additional funding on top of last year's expenditure.

5. Commit

"Crying is all right in its way while it lasts. But you have to stop sooner or later, and then you still have to decide what to do."

– C.S. Lewis

An important aspect of selecting an ERP system is the ability to actually make a decision. Projects that require large investments and impact multiple people are not always easy to manage. Not everyone is likely to see eye-to-eye and compromises are inevitable. Against this backdrop, it is as well to devise a plan to keep things moving forward. Perhaps, consider the ERP selection process as a mini project in itself. To that end, it requires executive commitment, a defined process, a timeline, and a team. By preparing in this way you are preparing to make a decision, a decision which is based on a rationale and not a whim.

To start with, make sure you get the executive commitment, a project of this scope requires strong leadership and visibility. Type 'how to run a successful project' into Google and you have multiple ten-point plans returned in a fraction of a second. At the top of most of these will be the need for executive commitment.

What will be your process? You need not spend hours or days documenting an exhaustive process, but a few hours of careful consideration and the drawing up a sequence of milestones will be invaluable for you and your team. Build a series of steps that lead you from inception to awarding a contract. Put your process down on paper, highlighting milestones, dates, next steps, key stakeholders etc.

Put together an internal project team. Remember that the ERP is the platform for future operations, you want your best team on the task. Don't be fooled into whoever is 'available' to help you select and design your next ERP. The ERP is the foundation, you want the best people in your company, the proverbial engineers and architects to help you pick and build this next phase of the organisation's core systems.

And, lastly give consideration to what timeframes are applicable. Most of us have an innate sense of over-estimating our abilities, so in general things can tend to take longer than we expect (or want). Rushing a process or selection (or worse the subsequent implementation), especially when trying to meet self-imposed deadlines is no recipe for success. You need to strike a balance between impetuous zeal and laconic disengagement. An ERP project from initial inception, through selection, implementation and then go live can often take many months or even year(s). Everyone in the process needs adequate time to engage in the process, that includes both internal and external stakeholders.

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