



The Business Owner's Guide to Getting What You Want

TEAMWORK

SUCCESS

LEADERSHIP

TION



The 7 Important Steps to Take for Getting Quality Software Solutions That Solve Your Business's Problems on Time and Within Budget

There are many aspects to a successful software project, and many books and courses have been published on the topic. What we are covering here is a short list that SME business owners can focus on that will give them the greatest benefit.

Many businesses operate with standard 'off-the-shelf' software. There are many sophisticated software products on the market that can work well in today's business environment. Competition between these suppliers continuously encourages innovation. Yet this wide selection of software creates another problem – how do you get them all communicating? Integration is the new challenge. More on that later...

If you are using suitable off-the-shelf software product that meets your needs then that's great. There are however times when there is nothing available that meets your exact needs. If you have a requirement for something unique, something that gives you a competitive advantage, then you should consider building your own customised solution. Software development projects are potentially complex and risky if not done right. This document can give you important pointers that greatly increase your chances of a successful outcome.

Now back to integration... As your suite of software products grows the problem of sharing data between them also grows. Your staff will be entering data manually into multiple systems and, you struggle to get a composite view of your clients/suppliers/patients etc. across all your systems. These vertical silos of data limit their value to your business. This is where an integration solution can provide huge benefits to the way you run your business.

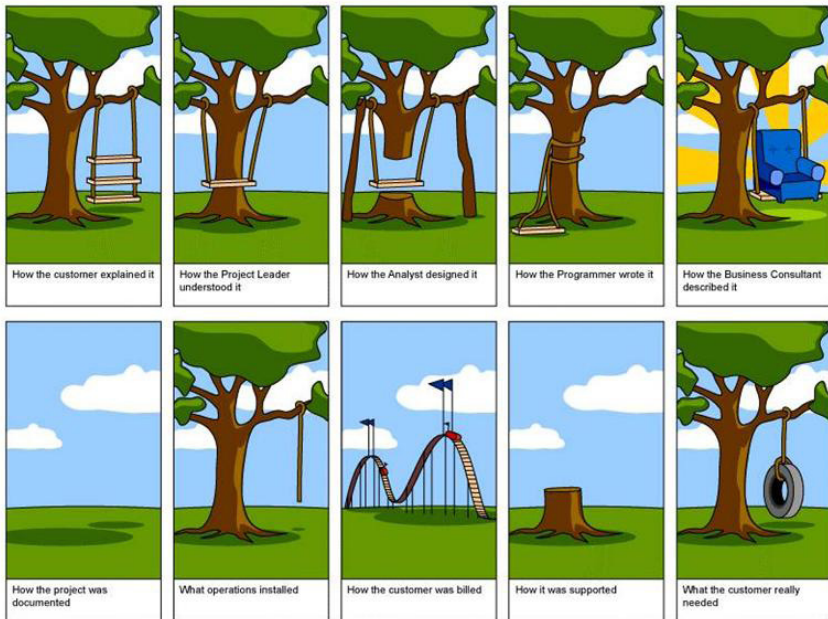
Imagine a single data entry screen that updates and maintains that information on multiple systems. Imagine being able to get enterprise-wide reports on a client, patient, supplier or other entity. Imagine having real-time KPIs that are derived from your multiple databases. Well this is possible, and can be done in less time and for a lower investment than you might expect.

Read on, and then call us for a chat to see if we can help you gain a competitive advantage or solve your IT system problems.

STEP 1 – Be clear on what you need

What you need is not always the same as what you want. No one knows your business like you do and software developers are very skilled at turning ideas into something tangible. Everyone needs to work effectively together to solve the big problem, whatever it is.

Start with the end in mind. What is the ultimate business benefit you need to implement? Work backwards from there with the help of business analysts and project managers to get a clearer picture of the task. You need the input and guidance from the right people or this might happen...



Don't think of this one software project in isolation. You probably have many other software systems and databases in your business. You can derive a much greater benefit if this new system integrates and connects with all the other systems in your business. Always strive to minimise duplicate data entry as separate records will need to be maintained separately. Duplicate work = duplicate cost or half the efficiency. If three or more systems are involved then it just gets worse!

More considerations:

- Are you allowing for growth? Don't get caught up in a new system that can't scale as your business grows. Technology selection is a very important consideration here as different systems handle expansion different ways.
- Do you have special security needs? Security considerations always need to be designed into a system from the start. Depending on your industry you may have particular security requirements either from an industry or legal perspective. How many companies have been seen on the 6 o'clock news due to a security breach of sensitive information?
- What are your backup and recovery plans? Computers fail. What will you do if you come to work one morning and your server has been stolen? We know that 90% of businesses suffering a data loss go out of business within 2 years. (<http://www.nbnnews.com> April 2005) We always install mirrored systems that can mitigate this risk.
- Consider your choice of hardware and operating systems. Computer manufacturers and hardware suppliers come and go over the years. When considering an application or integration platform pay attention to the portability of the system to a different computer system. One day you may outgrow your server or just find that it is no longer economical to support it.



STEP 2 – What are Good Specifications?

Ever asked a builder to build a house without a set of plans? Let's try a harder one... Do you think all the best engineers and workers could build a modern, complex aircraft without a proper set of plans?

What may seem obvious to you can be interpreted completely differently by someone else. Software developers need to understand what you mean when you describe something so make sure you use examples and diagrams as well as the context to explain the process to someone else.

Even the most detailed verbal descriptions will not result in the right plan being built. Do not underestimate the time and effort required to get the plans and specifications completed to the level of detail required so that every member of a team has a good chance of having the same understanding. Understand that nothing, I mean nothing, happens on a computer without the instructions (software) to command it. Software developers work at a very fine level and need sufficient detail in the specifications so that they can do their work. If a question comes up then they have to stop work on that process and get an answer from you. Questions can relate to any issues like these:

- Positions and order of items on screens and reports
- Actions that need to occur before and after a data entry field
- All the validation rules for a data entry field
- All the validation rules for an entire screen
- Default values, default actions

In general, you should have written specifications detailing all of the data characteristics and logic that goes into the software, and diagrams or images of how you want the screens and reports to look. You can do a lot of this yourself or make arrangements for someone to do it for you. The final version will be collaboration between you and the software development team.

Once the specifications and plans have been agreed and accepted by everyone work can begin. Any changes after this point need to be managed correctly by the project manager.

STEP 3 – Working Out Your Budget

Custom software development can be expensive – just as in your own business everyone that is involved has to get paid enough to make it worth their while. So, in short, you will get what you pay for. If you need a heart surgeon are you going to pick the cheapest or the best? Well your software project might be the heart of your business so be careful how you decide to spend your money. The aim is to minimise waste while getting a quality product and this will require good business decisions both on your part and the software developers. Unrealistic development budgets will simply doom the project to failure when you realise that you simply can't get a top quality product at below cost. In simple terms you can assume that the project is based on a function of time and money. While practically anything can be done if given enough time and money that is probably not going to be affordable. Also, there is a limit to how much a project can be accelerated with more money. You can quickly reach a point where putting more people to work will actually slow the project down, not speed it up.

There is another issue to consider here too. While you can get multiple quotes for the same work from different development companies assume that no two developers will end up giving you exactly the same product. Imagine asking different writers to write the same 'War and Peace' novel. Even with very detailed instructions they will still have a different style, different words and a different feel even though they all complied with your instructions to the letter. In the end you have to make a judgement based on who you think will be the best fit to work with.



STEP 4 – Keep the Projects Short

The risk in a software development project will rise the longer it goes on. Wherever possible you should break up a large project into several smaller projects. These smaller projects should typically be 3-4 months each and the result of each of the smaller projects will deliver an independently useful module. Once each of the smaller projects has been completed you should have the original, large and complex product you wanted.

This approach means that you get your product delivered in chunks that you can start using along the way, thus delivering a return on your investment much sooner.

As an example, if the new system is expected to provide \$1000/week benefit to your business, and take 4 weeks to build then consider this:

- If you build the entire system in one go then you will only start to derive the benefit after the entire project is complete.
- If you can divide the project up into 4 smaller projects and work on them one at a time then you could be better off:

	Week 1	Week 2	Week 3	Week 4	After 5 Weeks	Totals	Compare
One Project	0	0	0	0	1000	1000	1000
Part A	0	250	250	250	250	1000	2500
Part B	0	0	250	250	250	750	
Part C	0	0	0	250	250	500	
Part D	0	0	0	0	250	250	

- After week 1 you start to derive \$250/week benefit after completing the first stage.
- After week 3 you have 3 modules generating \$750/week... and so on.

STEP 5 – Making Changes as You Go

No matter how well you plan and specify what you want, ‘change happens’ during the time of the project. Whether it’s a change in legal requirements or a change in market conditions or you just came up with a better way to do it, you might need to change your software product while it’s being built. Understand that some changes will be simple and some can be very complex.

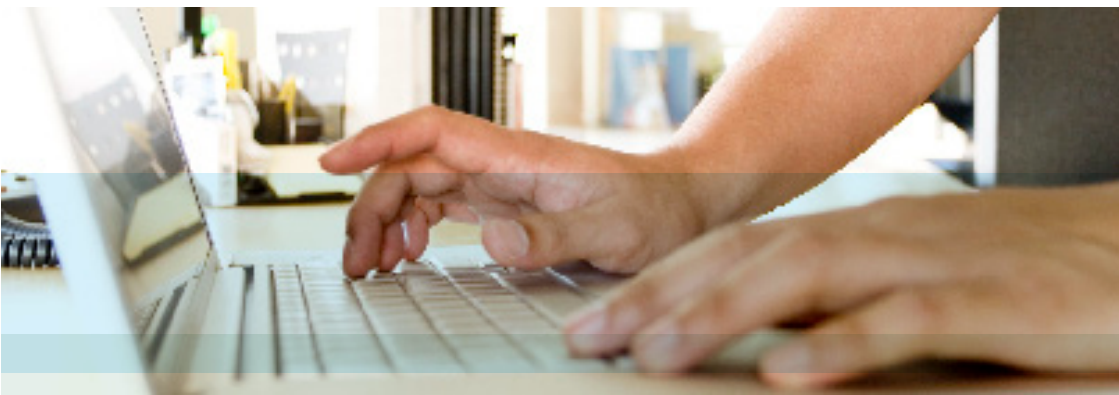
Each and every change will need to be documented and the Project Manager will facilitate that change for you with everyone involved. The cost may also change, or in the best case when changes are made early enough, there may be no change (or even a decrease!) to the cost of the project. This emphasises the need to get as much documented properly in the original specifications. Think of moving a wall in a building once it has been installed, it could cost a little or a lot! The knock-on effect can, in the worst case, cause the project to be restarted from scratch.

STEP 6 – Testing, Testing, and More Testing

All new software needs to go through a rigorous testing phase before it gets released to a business for use. This testing will be broken up into automated and manual testing. Much of the technical validation can be performed automatically by a computer to give you confidence that information in the database is being stored correctly. But it’s only when humans get involved that the final testing can be performed.

While a program may appear simple to you, the programming code behind it may be extensive to simply stop a user from doing something that is not allowed!

When you use an extensive testing phase you can all but eliminate nasty surprises after the system goes live. No doubt some bugs will get through, but they should be minor and not cause any disruption to your business.




STEP 7 – Time to Go Live

The final phase of implementing new software in your business is ‘turning it on’ and using it. Perfectly good software development development can be ruined if the implementation is not managed correctly. Your implementation plan should address these areas:

- How do you train your staff?
- Do you have new user manuals and documentation?
- Has your backup and recovery plan been tested and proven to work?
- Have you modified your other business processes that interact with the new software?
- Do your customers or suppliers need to know about the change?

If you take the time to plan this final stage, thinking about the many possible problems that could crop up, then you shouldn't be caught out by any nasty surprises!

This time can get stressful but with the proper planning you will soon be reaping the rewards of your new system.



Providing smart businesses with improved efficiency, lower costs and helping them gain an unfair competitive advantage over their competition at the same time as giving the owner peace of mind. Global Integration Pty Ltd is a wholly Australian owned company specialising in helping organisations to access and manage their data more effectively.

CONTACT DETAILS

Free Call 1800 INTGR8 (1800 468 478)

Email info@globalintegration.com.au

Web www.globalintegration.com.au

Postal Address P.O. Box 322, Wahroonga, NSW, 2076



CONTACT DETAILS

Free Call 1800 INTGR8 (1800 468 478)

Email info@globalintegration.com.au

Web www.globalintegration.com.au

Postal Address P.O. Box 322, Wahroonga, NSW, 2076