A PRACTICAL APPROACH TO CHOOSING A CONSTRUCTION INDUSTRY INTEGRATED SOLUTION
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>An integrated solution for the construction industry</td>
<td>4</td>
</tr>
<tr>
<td>Who actually uses the accounting system in a construction company?</td>
<td>5</td>
</tr>
<tr>
<td>Does construction account differently?</td>
<td>5</td>
</tr>
<tr>
<td>Why not just buy a mainstream product?</td>
<td>6</td>
</tr>
<tr>
<td>Where to from here?</td>
<td>6</td>
</tr>
<tr>
<td>Introducing IPM by IPM Global</td>
<td>8</td>
</tr>
<tr>
<td>What are the benefits?</td>
<td>9</td>
</tr>
<tr>
<td>Summary</td>
<td>11</td>
</tr>
</tbody>
</table>
Welcome

When it comes to vertical market solutions it’s important to understand all the benefits of an integrated solution before beginning your selection process. That’s why we created this paper – to provide you with the essential information you need to make the best decision possible.

This paper is designed to help you build a business case for a new integrated solution, form an effective project team, ask the right questions, identify the challenges involved and much more.

This paper outlines fresh ideas, strategies and tactics that will assist you in choosing an integrated vertical market solution for construction and project related industries. It covers the following areas:

- Understanding why it’s important to have a solution specific to your business needs;
- The construction industry does have different needs;
- Your business operation does need different tools for different roles within the business;
- Why not use a mainstream product?;
- Introducing IPM by IPM Global;
- What are the benefits?

We know how important it is to have good information before making smart decisions. What’s more, we’re confident that the more you know about the benefits of a fully integrated vertical market solution the more likely you are to seriously consider – and ultimately choose – IPM Global’s suggested solutions. In other words, we believe our solution is built for the construction industry.

We, at IPM Global, hope you enjoy reading our insight into choosing the right integrated solution for the construction industry.
When a company chooses to invest in Construction software should the rules really be very different to other software purchases? When buying software there are a number of criteria a company uses to select appropriate systems. These include a number of factors including usability, supportability, flexibility, integration to other business applications as well as the technical aspects such as the technology platform.

In the construction industry some of these factors have had to be ignored over time due to the very specific nature of the industry and its jargon. True suppliers of construction software in many cases seem to have been caught in a time warp and not moved much past the early 90’s with their products, some looking more appropriate in 1970’s banks than in the current business environment.

So why has this situation perpetuated? Is it that the construction industry always adopts a conservative approach, hanging on to the familiar, albeit sluggish, programs because they are as comfortable as well-worn sneakers?

In construction, it’s easy to justify the purchase of new construction equipment. With a $90,000 front end-loader, for example, a contractor knows exactly what it can do and how it’s going to make money for the company. He can compare models and due to competition will find that most have a lot in common with the rest of the motor industry and have kept up with current standards.

Harder to negotiate is the decision-making process involved in new construction software purchases. Significant questions such as, “how long will the new system be supported and work in today’s constantly changing IT landscape?” are often overlooked because there really aren’t that many construction products to choose from.

So what is it about the construction industry that makes it so unique that the current “state of the art” offerings from the main stream vendors don't fit the bill? The following points will try to establish whether the construction industry will be forever caught in this vertical web of ancient applications or if it can join the mainstream.
Does construction account differently?

Construction packages are usually built from the project out. Wholesale distribution systems are driven by sales and inventory focused processes while everything in a construction system tends to be focused around a job. Does this affect the way the general ledger, accounts payable, accounts receivable or cash management work? No, they still operate pretty much the same with the exception of a requirement to track retentions/retainage for both receivables or payable's.

Does this requirement dismiss the mainstream products from the sector? Certainly not! One of the advantages of mainstream Enterprise Resource Planning (ERP) solutions is that they are usually designed to be easily modified if required to accommodate specific business processes.

This actually highlights one of the weaknesses of a construction specific solution. Since construction specific solutions are usually aimed at a much smaller market than the main stream offerings, they usually offer very limited flexibility as they have been purpose built and deemed not to need any further customisation.

Who actually uses the accounting system in a construction company?

Experience shows us that in almost 100% of cases the end users of the software tend to be the accounting staff. Project staff have a strong aversion to anything that looks like accounting and therefore go to some lengths to create their own systems. These systems may be as simple as spreadsheets or more complicated databases or completely separate standalone project systems.

Job cost reporting from the accounting system is usually a source of frustration and confrontation. Job reports from the accounting system naturally report on projects from an accounting perspective although they will usually include budget and commitment information. These reports can then cause major irritation to project staff because the figures can always be supported by accounting transactions and don't evaluate a job from their perspective, which is why project staff develop an aversion to them.

What is also unfortunately relatively common is that companies try an industry specific solution and then revert to an entry level system with comments such as “the construction system is too difficult to use,” or “the program is incapable of doing what is necessary for our company”, when it clearly is. These comments and the decisions behind them are driven by inflexibilities in vertical applications that result from the relatively small installed base compared to mainstream financial systems which compete in a very aggressive marketspace.
**WHY NOT JUST BUY A MAINSTREAM PRODUCT?**

If the accounting departments are the main users of these systems then why not just buy a generic system that suits the accounting department?

The construction industry needs to evaluate the main stream products to assess their viability to meet their needs. There are many main stream accounting products that offer some level of project costing.

The main issue with these products is not the accounting which as stated earlier, most can be modified to meet the accounting requirements, but the non-accounting requirements. Facilities such as Variation/Change Order control, Forecasting, Subcontract Control are typically absent from these main stream products and the support organisations that sell them usually don’t know enough about industry specific business requirements and how they should be implemented, to add them to the standard products.

Hence, you have a strong accounting solution with silos of project related information in many different forms, basically, a non-integrated finance and project management solution or should we say, “solutions”. This will lead to many hours of merging data in order to make an accurate and/or timely business decision.

**WHERE TO FROM HERE?**

So what is the answer? If vertical products are old and inflexible and main stream products don’t do all that is needed, then where to from here?

The basic business requirements for project management control are Variation/Change Order control, Subcontract Control, Forecasting, these are all tasks that would be best carried out in an environment that was also rich in communications, diaries, and contacts with document control. It would also be a very good plan to have definable workflows around these features. For example a Variation is not just a document or a record, it is a process that is initiated and then managed through its life cycle until it is completed. Along the way, many communications may be generated about a Variation and these may be essential to the substantiation of a claim at a later date. This claim has a financial impact on the business and the relevant finance data must be transferred to the ERP or accounting system.
This environment is not typically what comes to mind when you think of ERP or accounting systems. This does however match the environment created by a CRM application, nowadays referred to as an “XRM” solution – “X” signifying the industry fit or Extended CRM. Many CRM solutions create an environment which natively integrates with Microsoft Outlook, providing a highly sophisticated communications system for creating, tracking and filing just about any communication regardless of the medium. This provides an environment with a great deal of depth from a development perspective so new applications can be created as extensions of this standard platform and tightly integrated with the core underlying data.

As stated earlier many organisations run accounting applications and then separately record and control their project data resulting in multiple versions of the truth. Reading through so far you may assume this is what has been proposed to be the solution. This is far from the end game.

The ultimate solution is achieved by combining the flexibility of a main stream ERP system with the very rich environment of an XRM solution. The ERP system does the accounting and project costing as it is designed to do and XRM does the Project Management tasks. A solid example of this is the latest offering from IPM Global - IPM which is developed on the Microsoft XRM Development platform.
**Introducing IPM by IPM Global**

IPM has been developed based on IPM Global’s 20 real years or over 60 man years of experience in the construction industry, implementing specific vertical market solutions. The product comes as a number of components from which a company can choose depending on their requirements.

The main component in this product suite is the Project Management module. It is built on the Microsoft XRM Development platform providing a fully featured Project Management system to establish, track, vary, subcontract out and bill a project. It utilizes the CRM contact and company database extensively and as well as its links to Microsoft Outlook and the other Microsoft Office products eg Word, Excel, PowerPoint, Sharepoint, Project.

IPM Project Management includes many objects including such features as variation requests, variations, subcontract variations, transmittals, meetings, site diaries, site instructions, timesheets, risk register, progress billing and issue register. All of these objects can be modified by the user or their certified Microsoft consultant as can the workflows that drive them.

The Project Management module can be run as a standalone add in to Microsoft Dynamics CRM therefore not directly impacting on the accounting operations of a firm. Alternatively, IPM Global also offers a seamless interface for two of the Microsoft Dynamics ERP platforms (Microsoft Dynamics NAV and Microsoft Dynamics AX). In addition integration can be done with many existing ERP applications already in use.

These interfaces provide bidirectional integration between the Project Management module and the ERP system so that data is managed in the appropriate area. Subcontracts created in the Project Management module will become special purchase orders, such that they can be receipted and invoiced in the in the accounting system.

Project budgets are recorded in Project Management against the project and project tasks created in the accounting system. Progress Billing claims created in Project Management will update Accounts Receivable when certified. Cost information recorded against project tasks will be visible in Project Management for reporting and forecasting purposes.

In addition to these functions IPM Global have created other components targeted at the ERP system itself to make it suitable for the construction industries. Additional functionality in both Dynamics AX & NAV facilitate retention/reinage control and multi-company operations are also offered to plug any gaps in these areas.
All of these modules integrate to create a very formidable vertical market offering based on completely standard mainstream products using the very latest Microsoft technologies.

**What are the benefits?**

**Productivity Gains**

An application is only as good as the data that goes into it. The success of an application starts with the user and subsequent user adoption. Ensuring that the platform provides a user-focused experience that is consistent across all applications is essential to achieving the goals of any system. The user interface can be a big barrier to adoption by users in the organisation. It’s frightening how many times organisations have invested years in developing and deploying large and costly systems only to have the implementation fail because users found the system too difficult to learn and use. Far better to have employees choose to use an application rather than have to mandate its use.

When users see their own productivity improved by using the system, they are more likely to enter the data that makes the system valuable to the organisation. Microsoft Dynamics CRM comes with a number of productivity tools that add value for users, including personal workflows, automatic to-do notifications, the ability to build quick custom reports and seamless integration with Microsoft Outlook.

**Information Access**

People need access to data in an increasing number of places and situations. For example, a Project Manager might need access to an application on a mobile phone, over the Internet, or on a laptop while flying in an airplane. With the project management data based in Microsoft Dynamics CRM this will allow users to access their project management data anytime, anywhere, and on the device they choose.

Offline access is important. Contrary to popular belief, there are times when you don’t have Internet access. That field service worker who is literally in the field may not have access. Likewise for those housed in the bunker-like buildings on development sites. Using off-line access to the system knowing that it will automatically by synchronised back up to the main repository is a major benefit to the organisation and ensures that appropriate data can be captured in a timely fashion.
**Security**

The security model provides a highly efficient means for establishing and changing security privileges to ensure that users always have the appropriate access.

- The security model works in much the same way that files do in Microsoft Windows, following an Active Directory model.

- Role-based security defines privileges based on roles within an organisation rather than on individual users. Users can have one or many roles associated with them, with the highest-level role taking precedence.

- Privileges across roles are additive, so users can perform many roles within an organisation and the system will automatically recognise the correct security privileges.

- Users can share individual records with other users (temporary sharing) and delegate privileges to those users based on business needs that normal roles would have precluded.

- Filtered views can be used to write queries or reports directly against the database, while adhering to the security rules of the user executing the query.

**One Version of the Truth**

With this fully integrated offering the end result is one version of the truth. In addition, user buy-in to the application will be high because each user is operating in an environment which is appropriate for their job. The benefits to the organisation are significant.

**Current Technology**

Based completely on Microsoft’s latest technologies the product set will continue to progress and evolve as Microsoft evolves its platforms. Unlike other vertical offerings, it will never stagnate.
Summary

While focusing on how the construction industry differs from others, the principles of choosing the right solution for any vertical market business are the same. You must select the solution that is a best fit for all areas of your business, keeping in mind that all the time people processes and technology are constantly changing and improvements need to be made in the business to keep competitive. Hence, your solution must achieve greater productivity for the business and this is a relentless process of ensuring the business is effective and efficient – all meeting the strategic goals and at the same time remaining competitive. It needs careful planning, good management and relentless dedication. We believe with the implementation of a fully integrated vertical market solution your business will keep moving forward.

IPM Global sponsors this guide, and hope readers gain key insight from our suggestions when looking to select a vertical market solution for the construction industry.

For more information on how IPM Global are able to streamline your business solutions:

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