

P.O. Box 4032 EASTWOOD HARRIS PTY LTD Tel 61 (0)4 1118 7701
Doncaster Heights ACN 085 065 872 Fax 61 (0)3 9846 7700
Victoria 3109 Project Management Systems Email: harrispe@eh.com.au
Australia Software and Solutions Web: <http://www.eh.com.au>

SELECTING PROJECT
MANAGEMENT SOFTWARE
BY
PAUL E HARRIS
OF
EASTWOOD HARRIS

TABLE OF CONTENTS

1	INTRODUCTION	3
2	BACKGROUND	3
2.1	REASONS FOR SELECTING NEW SOFTWARE	3
2.2	ENABLING SOFTWARE	4
2.3	FLOW OF THE SOFTWARE	4
3	THE SELECTION PROCESS	4
3.1	REQUIREMENTS ANALYSIS	5
3.2	REQUIREMENTS BASELINE	5
3.3	VENDOR SEARCH	6
3.4	VENDOR SELECTION	6
3.5	THE DEMONSTRATION	7
3.6	REVIEWING THE SOFTWARE	7
4	TRIAL THE SOFTWARE	8
5	IMPLEMENTATION	8
6	PROBLEMS AND PITFALLS	9

1 INTRODUCTION

In July 1999 Earthmover & Civil Contractor published an article by Paul E Harris outlining the different types of software packages available for the construction industry. In July 2000 a second article by Paul E Harris was published in Earthmover & Civil Contractor which outlined the steps that should be considered when selecting project management software.

This presentation is an update of the of the second article and is aimed at assisting companies in the process of selecting new project management software but could be applied to the selection of many other types of software.

2 BACKGROUND

Selecting project management software is a challenge due to:

- The existence of a large range of software and
- Very little independent information available about many of the packages.

There are usually fewer problems when selecting planning and scheduling software, as only a small number of packages have achieved good market penetration in Australia and much known about them.

Other types of software (such as Take-off, Estimating, Document Management/Control and Cost Control software) selection is a different issue, and there is quite a lot around and not much information about them. However, there are some issues to be aware of before moving on.

2.1 Reasons for Selecting New Software

Do you really need software?

- Some companies have perfectly good software and unnecessarily change due to the lack of corporate procedures, a lack of training or the poor implementation of existing software, resulting in the software being unable to meet a company's needs.
- A move to new software is often a cry for project management training, methodology and procedures.

We will have look at why this type of problem occurs.

2.2 Enabling Software

Frequently IT companies implement software as an “Enabler” to assist training and implementation of a methodology. However, by the time you put in a handful of new PCs, a network, purchase some new operating systems and desktop applications, plus add the cost of the various consultants, this works out to be very expensive project management training.

2.3 Flow of the Software

Software is developed by people who generally know what they are doing and the core functions of the software will normally work. By the same token, some packages have a flow and if you try to use a software package against the flow then the installation may fail. To gain the best results from a package, you may have to change your method of operation to suit the flow of the software. Understanding the flow of software is a key issue in the selection process that you will often not really understand this until you start testing the package.

3 THE SELECTION PROCESS

Summarised below is the process I use when a client is seeking my assistance in finding new software.

Main principals of this system are:

- Avoid spending hours creating a massive software specification (as if you were going to develop and write your own software system). Instead, keep the specification as a simple checklist of features that you are looking for,
- Minimise the time that it takes the software vendors to understand your requirements by developing a simple specification. This assists the vendor in establishing if it has a product that may be useful to you; and
- Arrive at a full short list of software products. There are a number of methods to find out what software is available on the market. I often find companies do not get a full list of software that may suit their needs. Make sure you are confident that you have explored all the possible options before you start short listing vendors.

3.1 Requirements Analysis

The first part of selecting software is creating a Requirements Analysis.

Stakeholders in the organisation are interviewed and their opinion of what is required is documented. This is essentially a list of functions required.

For example, in an estimating system, stakeholders may be asked the following questions:

- Do you require digitiser take-off?
- Do you require multi-currency?
- Do you require subcontractor bid analysis?
- What type of import and export facilities do you require?

All those with an interest in the new software, including the managing director, should sign off on the Requirements Analysis.

3.2 Requirements Baseline

This document puts the requirements analysis into measurable terms. It builds on the Requirements Analysis and addresses such questions as:

- What size drawing do you wish to digitize?
- How many currencies do you require and are they just on purchasing or do you require it on labour as well?
- How many bids and how many line items do you require in the bid tab?
- What are the data fields or file types that should be exported?

This document is signed off and kept as a reference document from this point on. It will be sent to the short list of software vendors for them to compare with their software.

To make the Requirements baseline easy to read group the Functions by Modules in the Requirements Baseline.

You may find that you require two software packages to meet all your requirements. For example a take off package could be one and an estimating and bid analysis could be a second. You may find some modules are duplicated in both packages

3.3 Vendor Search

During the process of creating the Requirements Analysis and Requirements Baseline, you should also be conducting a search of systems that may meet your needs.

There are many sources of information, including:

- Talking to your competitors and find out what they are using.
- Discuss with industry representatives the packages that they know off. Some organisations have databases of software vendors.
- Discuss with the known vendors which they think are their main competitors, and
- Conduct an internet search.

3.4 Vendor Selection

There are no strict guidelines of what you should send to the vendors, but I generally use an iterative process:

- Initially deal by e-mail and avoid face to face meetings in the early stage, this wastes a lot of time.
- Send the list Requirements Analysis to the full list of possible vendors to create a first cut based on their replies. You may do this while you are developing the Requirements Baseline.
- Create a table with Modules and Functions on one axis and Requirements on the other, weight and score each software package and create a first short list.
- Make your first short list of possible vendors.
- Send the Requirements Baseline to the first short list in spreadsheet format for the vendors to fill out and return. This enables an analysis to be created quickly by cutting and pasting the answers onto one sheet.
- At this point select between two and four packages.
- You should supply the full requirements baseline to the short listed vendors before the demonstration and ask them to ensure these functions are demonstrated.

3.5 The Demonstration

At the demonstration note the software functions against your Requirements Baseline.

Demonstrations should be arranged with only a short separation between each.

Let the vendor demonstrate the software and show the full potential of the system before you take a break and pull out the list of unanswered questions from your Requirements Baseline.

Ensure that the same people attend each demonstration.

Ensure that the Requirements Baseline is marked up at the demonstration and the vendor agrees with the comments.

3.6 Reviewing The Software

There are a few points to remember when reviewing software:

- Avoid spending too much time looking at the reports the software vendors shows you. It is more important to ensure that the software has the data fields for information that you wish to record. If the information can be entered into a database, then it can usually be displayed in a report. If the data cannot be entered into the system, then you will not get it back out. For example, if warranty periods are important for you in order to get your retention money back quickly, then don't buy software that does not have a field for holding warranty periods.
- When you are reviewing the software, do not focus on trying to find something that will duplicate exactly what you are doing now, but one that will take you into another phase of development and one that you will grow into and not out of.
- It is unlikely that you will find a package that will do everything you want it to do, and what you buy may have to be supplemented by some simple database or even manual systems.
- Be kind to the vendors that don't work out. It is a hard job selling software, that's why I gave it away!

4 TRIAL THE SOFTWARE

Before investing in a new software system, you should ask the vendor to conduct a trial using your data to confirm that their system is satisfactory for your requirements.

Vendors do not like doing this as they often have to spend a great deal of time without revenue. I suggest that you should consider offering to reimburse the vendor the trial costs if you do not purchase the software. Many vendors will bill you for trials as a matter of course.

I do not recommend purchasing software unless you are completely satisfied with the ability of the software to meet your key requirements. Again if you are expecting a vendor to spend a lot of time with you, then pay for it.

Consider employing a person who has experience with the software you are looking at so you obtain an impartial opinion of the software.

Discuss issues such as support, upgrades and maintenance costs with current users, which the vendor should be able to supply.

Where possible, seek out past users who no longer use the software and find out why they have changed software. They may often have legitimate reasons, which may not be applicable to you and should not stop you purchasing the software.

5 IMPLEMENTATION

At implementation, the software will be installed and your existing databases may be converted to the new software, training conducted and procedures written.

Ensure you have an agreement that if the software does not meet the requirements of the Requirements Baseline then a refund of the cost of the software is in the contract.

Implementation will often be many times more expensive than purchasing the software. Do not consider only the purchase price when you buy a new package. The full implementation cost may be many times greater.

Ensure you have a full understanding of the cost of running the software, many companies give up software due to the cost of maintaining it. This is not just software maintenance cost but the cost of employing people to maintain the system and enter data into the software.

Be careful with integration of two software packages. It is often cheaper to import and export on a regular basis instead of creating a fully integrated system. Fully integrated systems often provide a number of problems when upgrades come along.

6 PROBLEMS AND PITFALLS

There are many problems and pitfalls that are experienced when selecting software, here are a few:

- Software is often purchased on the promise that a feature which is key to your organisation requires will be developed. This development usually will not happen unless there is a very strong contractual reason for it to be developed. What you see is usually what you get.
- Financial packages from overseas have to be heavily tailored for the Australian market to take into account our regional requirements; such as GST. Check with other users if the "Australianisation" is complete and satisfactory.
- Don't buy software with a small or declining user base. This is a sure sign that there will not be future development and even complete halting of development and support.
- Also, be careful of overseas software. I have found when reviewing some estimating software from North America that they used measurements in metres and centimetres (rather than in metres and millimetres) and have confusing terminology that may not suit you. Then there was the German software where we had to press "J" for yes (ja), plus some of the help screens were also German. There are some versions of software that only display US date format MMDDYY, not DDMMYY.
- Speak to as many of the other users of the software as possible and gain a full appreciation of the software, the vendor training and support and the cost of running the software. Go and visit them.
- It is usually better when buying mainframe systems to select the hardware after you have selected the software. If you upgrade your hardware first, you may potentially rule out some favourable options.
- Ensure that the software you are buying meets all or most of your requirements and that all stake holders are involved in the review and decision to buy.
- Don't leave the selection process to the IT or accounting departments. This will normally result in a failure of the software to meet all Project Management requirements.
- If you think that you will require many copies of the software, then you are probably wrong. Most project controls software is operated by specialised personnel. If you really get the urge to sign up on lots of copies at a good price then sign an agreement

that enables you to take copies as you require them and not take the full number of copies on day one. I find that this is especially applicable to planning and scheduling software. There are a couple of well known examples where hundreds of licences were purchased and not nearly that many were required.

- Don't sign up to a long-term commitment for training. Agree rates and book the training as you require it. You may have a talented in-house person who will be able to train at a fraction of the cost of consultants;
- Don't think that every person will learn how to use the software, because they won't. You will have to be prepared to have specialists doing a lot of the work,
- Be prepared to train staff in the use of the software. Better productivity should be the payback for the costs incurred. If not, then why did you buy it in the first place?
- Ensure you have an induction process for new staff, they will need training.
- Consider employing an independent and qualified mediator to assist you in the selection of the software.

Further information:

Paul Harris,

Director

Eastwood Harris Pty Ltd

Tel 0411 187 701

Fax 03 9846 7700

Email harrispe@eh.com.au

Website www.eh.com.au.

Paul Harris, a Certified Cost Engineer, a PRINCE2 Practitioner and is a Melbourne-based project controls consultant who specialises in assisting companies in selecting, installing and running project controls software. He also conducts in-house courses in Primavera, SureTrak, Primavera Enterprise, Primavera P3 and Microsoft Project. He is the author of seven books on Planning and scheduling software.