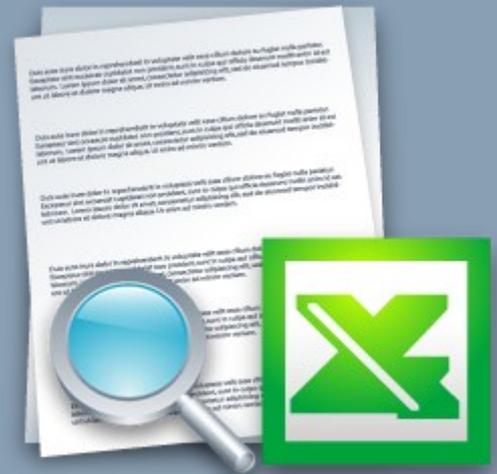


The importance of using the right tools



This paper looks at the well documented issues with using spreadsheets for estimation and provides a comparison of using dedicated estimating software systems versus spreadsheets.

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1. Pratt, D. *Estimating software systems boost productivity and accuracy of estimating: Fundamentals of Construction Estimating* ISBN-10: 1439059640

Introduction

By definition, an estimate is an approximate calculation. This inherently infers that there is a certain amount of risk involved with any estimate.

Your estimate for costs, effort or duration of any activity will affect the result, so the quality and detail of the information available when preparing an estimate is critical.

Few estimators fail because they lack technical knowledge. They fail, all too often simply because they lack control over the detail they need to do their job effectively and because they do not have access to the right tools for the job.

Using a software package for estimating can help you reduce your company's financial risk, whilst providing you with a range of other benefits, many of which may not be apparent at first¹. This document highlights some of those benefits.

Streamline your business

While there are many benefits to using computer spreadsheets for project estimation, a database driven estimating system offers businesses the ability to expand on the functionality of the spreadsheet while incorporating multiple additional processes and procedures into a single entry solution. This allows businesses to better streamline their operations and can help to reduce ongoing running costs, while increasing productivity and maximising the profit return on each individual project.

Problems Associated with Spreadsheets

While spreadsheets are widely used for their powerful ability to generate estimates through the establishment of formulas and templates that can be used over and over, this often comes at a price.

Lack of Accountability

Because you cannot easily track what has changed within a spreadsheet and by who it was changed, spreadsheets generally lack accountability. If a problem arises it can be more difficult to track and to rectify in an efficient and timely manner.

Narrow Focus

Spreadsheets cannot provide you with a complete, 360 degree view of your project where all associated detail is available from single a dashboard.

A spreadsheet was never designed to help you manage leads, generate quotes and project manage schedule changes. While it is true that it is a powerful tool when associated data is static, in a real world environment, estimating has risks that are dynamic and these risks need to be considered when providing a cost effective and accurate estimate.

Errors Can be Hard to Identify

Missing or incorrect formulas on a spreadsheet are not always easy to identify as all numbers on a spreadsheet look the same with or without formulas driving them. When numbers are changed and results are updated automatically, the formula driving the change is hidden from view. It is no wonder then that mistakes are made. Often a single mistake can be compounded by other errors elsewhere in the worksheet or workbook.

Spreadsheet Collaboration can be Difficult

Spreadsheet collaboration can be a difficult task to manage. Most estimators are part of a project team and they need the ability to

"We once sold Benchmark Estimating Software to a company who had discovered a \$250k error in a spreadsheet after submitting a tender, due to a hidden column. The IT Manager at the time told us that the flexibility of spreadsheets in estimating is their downfall."

Robert MacDonald
CEO Benchmark Estimating Software

	Spreadsheets	Estimating Software
Generates estimates through standard templates & formulas	✓	✓
Automatically tracks changes made by an individual	✗	✓
Gives 360° view of all project data	✗	✓
Errors easily identified & controlled	✗	✓
Allows collaboration & peer review	✗	✓
Entries can be validated against a set of rules	✓	✓
Accurate reports & data audits	✗	✓
Captures business intelligence	✗	✓
Seamless multi-project reporting	✗	✓
Gives 360° view of all quotes within company	✗	✓

collaborate effectively. Estimating teams can benefit from a single tool that has a standard user interface delivering predictable results with inherent security and policy administration.

Furthermore, during the peer review process, the reviewer needs to be able to see the underlying source data, helping them understand how the estimate was formulated. In using an estimating software package specifically designed for this purpose, it is easy to view underlying data as the complete estimate is built using shared data libraries and applied standards for data entry.

Consistency Issues

For consistency in reporting, it is also important that data is correctly entered. Spreadsheets have limited functionality in managing this task, but by using appropriate software, entries can be validated against a set of rules (e.g. metres vs. metres squared). Estimating software delivers accurate reports while reducing your risk of error or omissions during data entry.

Company Wide Issues

From a company wide perspective, using spreadsheets throughout an organisation introduces other business issues that impact your company's ability to be competitive. Spreadsheets have a lack of auditing control measures in place and also have an inability to capture business intelligence, like who has provided the most input into a project. This makes it difficult to integrate estimating processes into other business information systems.

Training Can Be Difficult

It can be difficult to train new employees within a corporation in the use of spreadsheets as each company may apply different standards when using spreadsheets for estimating.

Conclusions

Spreadsheets are no doubt a useful business tool, however to ensure accurate project estimates, businesses should not underestimate the benefits of an estimating software package. Estimating software allows businesses to complete estimates with greater consistency

and accuracy and improve the efficiency of the overall estimating process.

Estimating software systems can keep track of labour costs, equipment and material costs as well as subcontractor costs in a central database that can be accessed by all staff members and give permissions depending on their position.

The benefits of producing an accurate estimate will flow through to other stages of the project life cycle including procurement, project management, right through to completion.

The integrated features of an estimating software package can help boost the professionalism of your company by cutting down on mistakes and errors within estimates and can reduce overall costs all while boosting productivity by eliminating repetitive tasks.

Benchmark Estimating Software

Benchmark Estimating Software is an estimating package that streamlines and simplifies your estimating processes. With decades of estimating and construction experience, and 15 years of development by a team of innovative IT professionals, we've developed a unique estimating system.

Today Benchmark Estimating Software is used by over 1,500 users in different industries and multiple countries. We offer you an estimating system that is simple to use, powerful and flexible so it can help you price any type of project.

Benchmark Estimating Software is used by the following types of clients:

- Asphalt contractors
- Civil Engineering contractors
- Construction companies
- Consulting Engineers
- Consulting Estimators
- Drilling companies
- Facilities Maintenance companies
- Landscaping contractors
- Local Government bodies
- Manufacturing companies
- Mining companies
- Road contractors
- Road Authorities
- Water Authorities
- Water contractors

Bibliography

Caulkins, Jonathan P., et al. "Do Spreadsheet Errors Lead to Bad Decisions" Carnegie Mellon University.
<http://www.heinz.cmu.edu/research/230full.pdf>

Panko, R. "What We Know About Spreadsheet Errors?" University of Hawai'i; College of Business Administration. <http://panko.shidler.hawaii.edu/My%20Publications/Whatknow.htm>

Pratt, D "Estimating software systems boost productivity and accuracy of estimating" in Fundamentals of Construction Estimating ISBN-10: 1439059640

European Spreadsheet Risks Interest Group "EuSpRIG" (<http://www.eusprig.org/quotes.htm>)

About Benchmark Estimating

Benchmark Estimating Software's market leading simplicity and range of powerful pricing features enables designers, estimators and project managers to produce accurate, consistent estimates amazingly quickly.

Benchmark Estimating Software enables you to create estimates, quotes, project management reports, marketing analysis graphs, progress claims (valuations) and creates a program in common construction scheduling software.

Our company, Benchmark Estimating, is part of the MacDonald Group, a world leading cost engineering consulting firm focussed on major infrastructure projects.

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