



Mitigating Excel® Risk via an Enterprise Risk Management Solution

A Freer Consulting Co. White Paper

INTRODUCTION

Every day, corporations across the globe leverage Microsoft Excel® (or another spreadsheet package) to quickly and autonomously analyze data. This White Paper explains why this is a risk-laden practice. When the time comes to select the right data processing platform, these risks must be carefully considered. For example:

- What is the likelihood that your data processing platform could produce a corrupted financial statement?
- Would you be able to detect understated bids, or client overcharges, before financial or reputational harm is inflicted on your business?
- What do you stand to lose in terms of extraordinary fees, charges, and regulatory non-conformities if auditors detect an issue in your data processing?

This paper is intended to stimulate discussion by reviewing four key areas:

- End User Programming
- Standardization
- Quality Control
- Business Intelligence and Reports

Within each key risk area, this paper presents options for achieving stronger risk management through Enterprise Resource Management (ERM) software implementation.

END USER PROGRAMMING

Arguably, the single greatest risk associated with Excel® use in an organization is End-User Programming. Excel® can be challenging to program, yet macros and custom formulas are deployed by employees who are not computer scientists or professional programmers, and who have not been instructed in fundamental programming principles. Without a proper training baseline, not to mention a regular training program for continual improvement, organizations expose themselves to varying levels of risk through the incorporation of Excel® across its ranks.

Many organizations are simply not aware of the risks. A study conducted by researchers at Dartmouth College's Tuck School of Business indicated that "[o]nly about 18% of respondents indicated that their organization was 'fully aware' of spreadsheet risks, and fewer than this number knew of organizational strategies in place to deal with risk." Although some solutions such as auditing software have arisen, the study noted that

“less than 3% of our respondents could attest that such software was being used in their organizations.”¹

Other, more routine iterations that can undermine a spreadsheet’s accuracy are deleting, copying and pasting, or inserting rows and cells. Formulas that don’t seamlessly transfer can create errors, yet copy and paste is an encouraged mechanism for reusing previously established calculations. How a certain formula will react if moved to another cell, or what referencing issues may arise, is a common unknown in spreadsheet programming. Formulas that don’t align from one data set to another can result in improper calculation. If various spreadsheets are linked to one another, workbooks must all be open simultaneously in the event any formula or data is altered. If changes are made independently to cells connected to different data sets without all workbooks open, calculation errors can arise.

These errors can have significant consequences. Two economists at Harvard University published a paper in 2010 about public debt and its effect on economic growth, which came under fire when a student discovered an error in the authors’ Excel spreadsheet. A pharmaceutical company’s Excel errors in 2011 required it to revise its financial forecasts for that year, which negatively affected its stock value. Hence, seemingly minor errors lead to serious problems when they are not identified and corrected.²

THE ERM SOLUTION

Freer Consulting Company’s ERM team implements hub-based software solutions populated with algorithms that can immediately and safely calculate data on your entity’s behalf in a robust platform. Regulatory conformance demands, whether based on laws, standards, or other requirements, are aligned with standardized business processes deployed by your organization. Freer provides training in implementation, and as improvements and new versions are coded, which empowers employees to effectively and efficiently use the various controls and mechanisms available in a Freer Consulting ERM deliverable. Regardless of your employees’ level of comfort using software, Freer can customize the right solution to seamlessly integrate your entity’s initiatives and best practices, providing your employees a comfortable rhythm in performing their required tasks and related data calculations.

STANDARDIZATION

¹ Kenneth R. Baker, et al., “Spreadsheet Risk, Awareness, and Control”, http://faculty.tuck.dartmouth.edu/images/uploads/faculty/serp/ss_risk.pdf (accessed February 8, 2016).

² These examples, and others, are described in European Spreadsheet Risks Interests Group, “EuSpRIG Horror Stories”, <http://www.eusprig.org/horror-stories.htm> (accessed February 8, 2016).

In Excel®, following an organization's business process flow is left to the good intentions of the end user/programmer. With such end user programming reliance, an entity's ability to rigorously adhere to a business process is substantially lessened. If spreadsheet formulas are translated into an enterprise application's flowchart for example, the application can be customized to hold how instructions and processes are delivered, accepted, and tracked. Access and timing can be dictated. A simple decision-diamond of A goes to B, B goes to C would illustrate this point. However, in a standard spreadsheet, this governance does not exist.

THE ERM SOLUTION

Freer Consulting's ERM team customizes its solution to your precise needs by aligning the collection and transfer of data and reporting with your entity's stated process flow and core measurement benchmarks.

QUALITY CONTROL

Well managed processes and employee competence, in terms of skills and qualifications, are core elements of any quality control program. Yet when deploying Excel®, most organizations don't maintain any type of formal process concerning such data calculation and the application of that data. Additionally, the skill level of a particular employee utilizing Excel® is not typically accredited to any type of procedural baseline or working methodology implemented by their employer. A common example of how this poses risk to an organization, versus a well implemented ERM solution, is the access—or rather lack of access—provided by the original Excel® programmer when sharing or transferring data internally. Document control in Excel® is extremely limited. An individual can lock down a workbook so that others can only edit certain fields, yet data validation within fields is tedious and often overlooked.

Working with remote audiences is challenging because data discussion and transfer is not handled in a network-based application. A web-based Excel® interface is available for co-editing, but the set of features deployed to the online platform is limited when compared to the desktop program. Additionally, collaboration in real world business usage remains unwieldy.

How individuals within your organization utilize Excel®, and consequently leverage or channel the data spreadsheets, is not always cohesive, much less regulated. Therefore, errors in inputting data can exist, but aren't appropriately tracked. There is no corrective action trail unless your entity performs regular training of those who deploy Excel®, as well as some sort of editing mechanism by a more technically proficient employee. If a pre-existing Excel® spreadsheet programmed by another individual is being used, a key

consideration is if the original programmer inserted any hidden cells, because calculations could overlap and produce inaccurate or unintended results. Copying over hidden cells can cause pre-existing formulas to be overwritten, thus rendering the assumed accuracy of the calculations to be invalid.

THE ERM SOLUTION

A Freer Consulting hub-based software solution eliminates these risks, because various calculations are embedded within algorithms in the enterprise architecture of your custom application. One of the core characteristics of an enterprise application is that multiple people can deal in the same data set at the same time. While revisions or other ways of manipulating data can be suggested, the established process flow of an entity's governing mechanism provides administrators and management the ability to sign off or confirm any changes prior to that data being validated or integrated. Internal quality control can be maintained at a much higher level.

BUSINESS INTELLIGENCE AND REPORTS

A business intelligence caveat with an Excel® spreadsheet is, assuming data is input correctly and formulas are accurate: how do you glean or tear out the core synopses, top line summaries, and mission critical realizations? What is the process for taking data in a spreadsheet and transforming it into a useful, timely report that can be acted on to the benefit of your organization's goals? While there are features available to Excel® programmers for displaying results in charts, graphs, and tables, the ability to further manipulate that data and drill down to a core issue in a robust, elegant display is limited and requires thoughtful configuration.

THE ERM SOLUTION

Freer Consulting's web-based ERM interface uses SQL Server to instantaneously display the most critical data, on demand, in customized reports. Dashboards can be customized to provide real-time views of various data sets and correlating calculations, which are automatically leveraged against important regulatory requirements or other established parameters or targets.

IN SUMMARY

If your entity regularly deploys Excel® throughout its scope of operations, there are key critical risks to consider. Each organization must decide for itself how to best mitigate these risks. The best methods will build stakeholder confidence through the use of appropriate technology, combined with proven methodologies.

A typical Freer spreadsheet risk reduction project encompasses the following:

- A project scope meeting to characterize the company operations and the role of spreadsheets in operations and reporting.
- Identifying key spreadsheets and their purposes.
- Review of the identified spreadsheets by Freer staff, which are then assessed and ranked for risk.
- A report on the spreadsheet project including recommendations to reduce risk.
- A discussion with Freer staff about approaches to implementing recommendations.

Freer Consulting Co.'s ERM web-based software team can assess your current level of risk utilizing Excel® spreadsheets and offer a custom, hosted software solution to help your organization avoid costly errors while maximizing performance and quality assurance. Contact Freer Consulting if you are interested in an initial spreadsheet risk review.

ABOUT FREER CONSULTING CO.

Freer Consulting Co. assists government, private sector, and non-profit entities with Excel® risk assessments, and in turn offers custom Enterprise Risk Management (ERM) solutions that characterize, organize, and individually address risk factors facing your entity via Freer's tested working methodology. The Freer Consulting ERM practice implements custom, hub-based solutions, dictating your organization's process flow from a software standpoint, governing access and timing. Data currently in Excel® can be migrated into a central database system with automated reporting mechanisms and fail safes for any sign offs on the application of critical data calculations.

To learn more about Freer Consulting's ERM solutions, contact Freer at info@freerconsulting.com.



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