Why ERP Can't Stop
Spreadsheets

a BOARDWALKTECH Whitepaper

70.1%

affirmed heavy utilization and reliance on spreadsheets for critical portions of the business

Deloitte, "Spreadsheet Management: Not What You Figured" (2,804 surveyed)

Spreadsheets Rule ERP

Many enterprises, even under the auspices of large ERP (enterprise resource planning) implementations, still rely heavily on Microsoft Excel spreadsheets to arrive at the truth. There isn't an ERP vendor who isn't quick to disparage spreadsheets, but that may be the enterprise salesperson at work.

There are still over 1 billion Microsoft Excel users steadfast in their use of spreadsheets even when relational databases and ERP applications profess to solve an enterprise's information and process management problems. Why?

Here's the dirty little secret: ERPs are terrible at collaborative planning.

For the rank-and-file information worker who has dozens of ad hoc reports to prepare and collaborative analysis to perform, Excel is still the king. Yes, there are business intelligence (BI) tools that focus on analysis, but today, those tools are still for elite users. They also don't come right out of the box, whereas almost every business computer includes a copy of Microsoft Office.

So for the 99-percenters who aren't BI wizards or relational database SQL programmers, the analysis tool of choice is Excel and it's as ready to go as their email client.
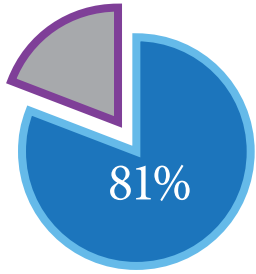
81% Percentage of users that have to combine data from multiple spreadsheets to perform a business process

5 The average number of spreadsheets business users combine at a time

56% say consolidating spreadsheets is the most time-consuming chore

## "Spreadsheets? Not in My Backyard!"

To a CIO or the upper echelons of IT management, spreadsheets are as risky as malware – in some cases worse. Where viruses and malware can shut down your systems, a spreadsheet's payload is pure data. Sent to the right people, it's completely innocuous. Proprietary data, emailed to someone beyond the firewall, is completely out of your control. Imagine what happens when your competitors get that data, or the media, or hackers.

And don't forget the impact of having the wrong data. A misaligned column or bad reference variable invariably affects calculations. A hidden artifact deep in the cell made by someone on a whim can affect a key decision down the road. Business decisions at the highest levels of an organization rely on that data. Without auditing and controls over change, you're never certain you have good data.

But to kill the use of spreadsheets in favor of only ERP solutions is not only extremist, it's downright impossible. Your users will rebel.

Statistics from Ventana Research, "Spreadsheets in Today's Enterprise"
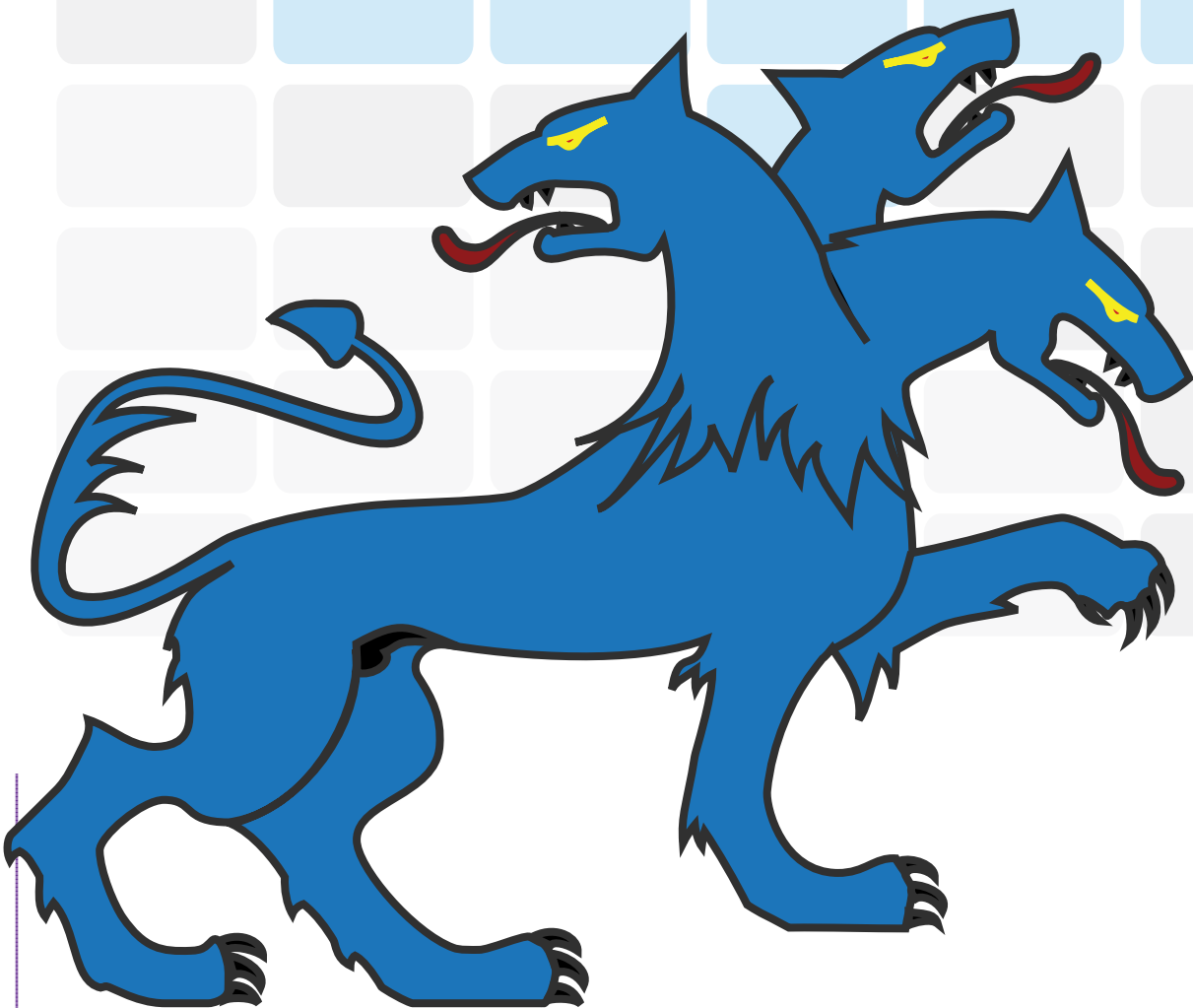
Taming the Spreadsheet Beast

Consider then, how to tame the great multi-headed spreadsheet beast. Rather than attack the tool and try to vanquish it, leverage its power and capabilities. To do so, the best approach is to control the point of data transfer.

What are the main methods for spreadsheets to spread (pun intended)? These files travel in one of two modes: email and file sharing systems. Both are the reasons why you can lose control over data.
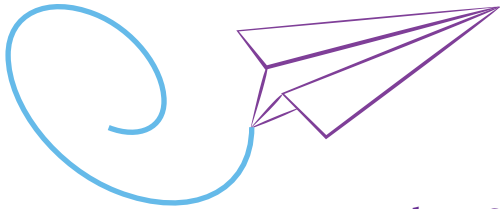
Let's examine email first, since it's the easiest, and most predominant form of spreadsheets getting into the wild.

"2/3rds

use spreadsheets to collaborate with people outside the company frequently or occasionally"

– Ventana Research, "Spreadsheets in Today's Enterprise"

Emailing Spreadsheets

Email is easy. Anyone can do it and it beats copying a file onto a flash drive and walking it over to someone. In addition, teams can comment on changes in the body of the email and offer directives.

But consider this: If a person emails a spreadsheet out to five other people soliciting feedback, those five will then email their copies of that spreadsheet back to the originator, who then has to corroborate and consolidate the changes. That can often include even more email communication back and forth, asking for clarification into the changes. Then the originator finally creates a master document and sends it to the person who needs it to make a business decision. Since most changes are iterative, you're now looking at more versions of the spreadsheet.

So if a single person shares a spreadsheet with five people, and we have three iterations, you are looking at a minimum of 16 versions of the spreadsheet sitting in everyone's inbox and probably locally on their hard drives. After all, human nature is to act like packrats with data files because in our minds, it doesn't take up any physical space, so saving an iterative copy is "good sense" "just in case" Joe loses some iteration or if we need to compare versions to identify change decisions. That's a single spreadsheet with likely 30 to 50 varied copies in the organization.

The problem keeps compounding, of course, the more spreadsheets you have or the more people you share with.

"We won't email spreadsheets then," you say. "We'll put it on a server somewhere and give everyone who needs access to it permissions."

Problem solved, right?

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File Sharing Systems Are Glorified Spreadsheet Self-Storage

Files hosted on network drives, whether internally served (e.g., shared drives, intranets, SharePoint) or externally (e.g. Dropbox or Box), face a range of issues. While you can limit who has access and certainly eliminate numerous email attachments from being shuttled back and forth, working off a single file system can cause issues when multiple people access or change the data.

Security setup is also challenging, as you have to essentially manage permissions for individual files every time someone adds a new file. Systems like SharePoint have check-in / check-out complexities where you may be able open and work on a file, but can't save if someone else has it checked out. This leads to situations where people work on a copy of the file locally and when they check-in data, they end up wiping someone else's edits or creating a copy with a new name.

If you keep multiple versions of the file to facilitate editing by multiple users, then someone still has to corroborate and accept changes manually.

If you don't have SharePoint already set up in your environment, then you likely have to acquire licensing for it (including a range of supporting IT infrastructure, such as a dedicated web and database server). It would also have to tie into your identity management system. If any of your sharing is happening beyond the firewall, there's yet another set of permissions that needs to be configured and managed.

Some organizations have moved to "cloud-based" file systems like Box or Dropbox. But these services also require file management around a simplified check-in / check-out process and downloading / uploading new files to get the most recent changes. In addition, you're dealing with files that are now no longer managed internally in an organization, so you're exposed to privacy risks. You also still have the consolidation of data issue to contend with where someone has to cull all the data together from multiple people.

80%

80% of Sharepoint users in companies of 100 or more employees continue to email documents instead of sending document links and using library services for check-in, check-out and version control

Source: uSamp Survey
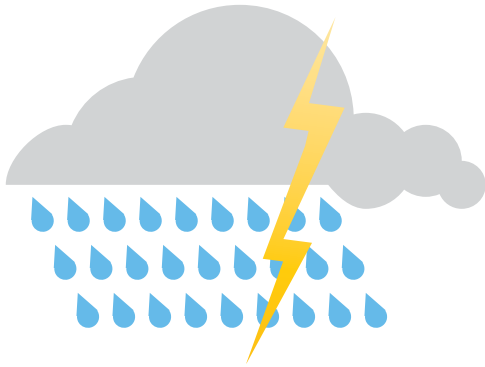
In an accuracy test of Google Spreadsheet, Microsoft Excel Web App, and Zoho Sheet, the Journal of Statistical Software report Spreadsheets in the Cloud – Not Ready Yet stated:

"Developers of cloud-based spreadsheets are not performing basic quality control, resulting in statistical computations that are misleading and erroneous. Moreover, the developers do not provide sufficient information regarding the software and the hardware, which can change at any time without notice. Indeed, re-running the tests after several months we obtained different and sometimes worsened results."

## A Word about Online Spreadsheets

One possible emerging solution to the collaborative spreadsheet problem may be for businesses to use online spreadsheets like Google Sheet, which allows multiple people, inside and outside an organization, to view and edit data from a single online source. While this certainly eliminates the data consolidation issue, since the data is all centralized and exist as a single instance, it does introduce two significant problems.

First, the reason people use Excel is its powerful calculation capabilities. The ability to program it using macros and Visual Basic for Applications (VBA), Excel's immense library of formula functions, its understanding of data types, and its support for large data sets, are all critical producitivy and analysis features that online spreadsheets don't support (either at all or not very well).

Second, and a more subtle reason, is that online spreadsheets are always on. This can be a problem if users want to test and formulate before showing their work. In an online, real-time environment, every click and change is visible as it happens. It's fine if everyone is in the same room and you're having an active dialogue together to build the data, but in the context of the way the real world works, this paradigm is actually very inefficient. You're constantly subject to second-guessing even before you can test your own theories. That's equivalent to being micro-managed at every step. It's akin to having someone watch you type up an email and comment on every word choice before you've sent it. Not only is it counter productive, it can be demoralizing.
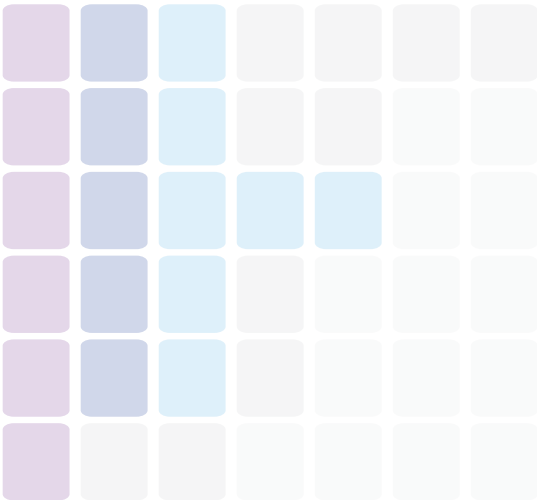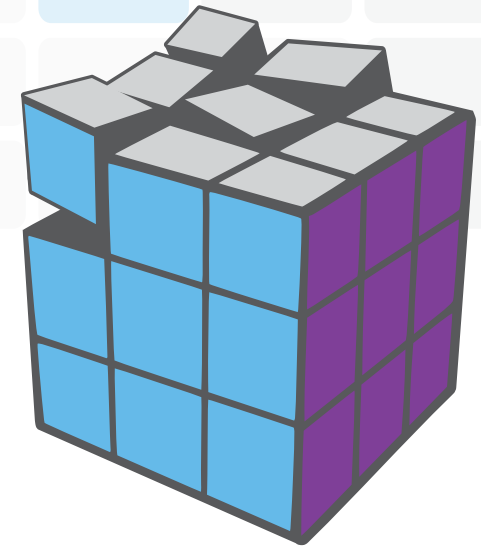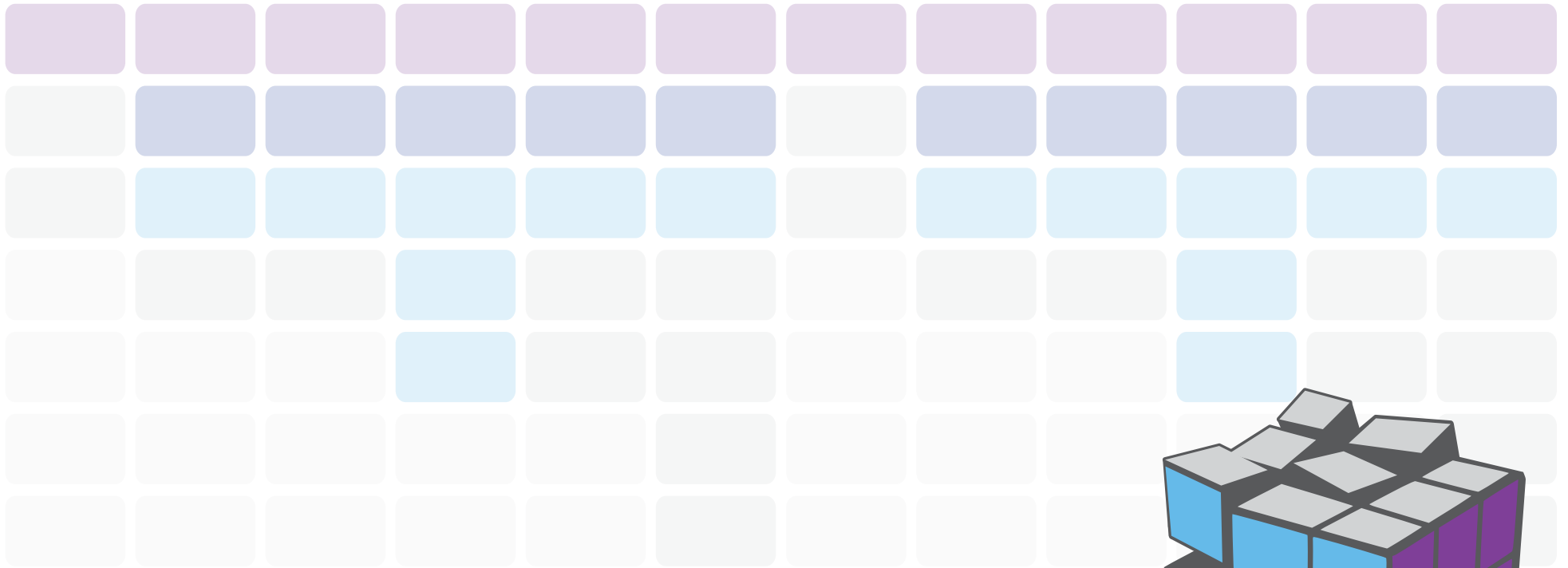
What's the Solution?

It may sound complex, but one method that has worked in several large organizations is to share the data, rather than the file.

The simple explanation is to host the data in a relational database (central to all the users) and maintain change information from one source. Users would push or submit their data to the database (only what's changed), and when needed, refresh data from anyone who's submitted changes.

All work should be done from within Excel so users do not have to abandon the creature comforts of their desktop application. And because consolidation is happening on the backend, the effort to gather and verify information is simplified into a single click. Once data is refreshed, all changes, including who made them, where, and the original values are all stored within the database. Any updates are at the cell level so users can work with their own files, without relying on copying or saving additional files.

This interaction would seemingly require extensive custom programming, but there are out-of-the-box solutions that provide this unique cell-based sharing methodology.
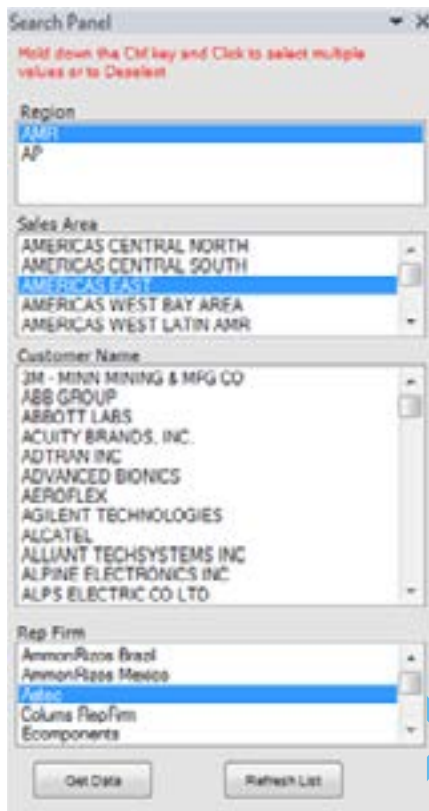
Opportunity Name	Comments	Sales Rep	Product	Units	Std Price	Sale Price	Forecast Amount	Forecast Close	Stage	Prob. Close	Weighted Forecast
Japan		Rep1	AL-2300	120	$36		$4,200	Jul	5-Budget Validated	80%	$3,360
Demo Account		Rep1	AL-2800	140	$72	$115	$16,100	Jul	5-Budget Validated	80%	$12,880
Abbot	good upside	Rep1	AL-2800	110				Aug	3-Solution Proposed	60%	$1,650
Nike		Rep1	AL-2700	50				Aug	3-Solution Proposed	60%	$1,650
Molex		Rep1	AL-2800	100	$72	$59	$5,?50	Oct	4-Sponsorship	80%	$4,608
Harley		Rep1	AL-2500	40	$48	$38	$1,536	Nov	4-Sponsorship	60%	$922
Wellpoint	short listed	Rep1	AL-2500	65	$48	$38	$2,496	Aug	2-Identified Need	70%	$1,747
Cooper		Rep1	AL-2500	80	$48	$38	$3,072	Jul	4-Sponsorship	80%	$2,458
Dupont		Rep1	AL-2800	88	$72	$58	$5,069	Jul	4-Sponsorship	80%	$4,055
Pfizer											
Cisco											

Boardwalk: Cell value changed from 102 to 140

	B	C	D	E	F	G
List of Updates on selected cell						
from October 05, 2013 12:00:00 AM to December 05, 2013 12:00:00 AM					12/05/2013 04:32 PM	
	Updated Value	Formula	Formula Updated	Updated By	Updated On	Comment
	100	=B12*1.2	Y	rep1@acme.com	10/13/2013 04:26 PM	change forecast lift 10%
	90			rep1@acme.com	11/05/2013 02:09 PM	some deals are pushing out
	102			rep1@acme.com	11/15/2013 02:23 PM	pipeline updates
	140			rep1@acme.com	12/05/2013 04:08 PM	got more upside

Boardwalk Application Engine

The Boardwalk Application Engine (BAE) is enterprise-class spreadsheet data management tool that solves many of the issues we have outlined above. BAE centralizes spreadsheet data and provides a powerful collaboration framework for automating spreadsheet-based processes. BAE provides entitlement controls, integration with other enterprise systems, and maintains a rich audit trail for tracking who changed what and when all the way down to the cell level. No emailing files or dealing with file sharing tools. With BAE, all spreadsheet-based data is kept as a single version of the truth.

BAE uses a patented, cell-level positional database environment that enables spreadsheet processes to be scalable, collaborative, secure, and persistent. Using Boardwalktech's powerful Design Framework toolkit, BAE applications can be created in a matter of weeks to automate processes in Sales, Finance, Operations, Supply Chain, HCM, IT, and many others. Using BAE, all data updates are automatically shared between all users by simply doing a submit-and-refresh, and all changes are tracked with a complete audit trail.

With options for running on the public cloud as well as behind the firewall, the Boardwalk Application Engine is an enterprise-class environment for automating spreadsheet processes and managing spreadsheet data.

Summary

Spreadsheets in the enterprise will be here as long as information workers are involved (presumably forever). Organizations need to embrace the versatility and computing power that spreadsheets provide the frontline information worker. But they can also increase their control, manageability, and transparency by improving how spreadsheet data is shared and managed. Let information workers continue to work in Excel, but share their data through a central, secure data environment that's been designed specifically to work with spreadsheet data. To learn more about BAE, visit www.boardwalktech.com.

ABOUT BOARDWALKTECH

Since 2006, Boardwalktech has been providing solutions that address the management of spreadsheet data. With its Boardwalk Application Engine (BAE), 1000s of of Fortune 500 users have taken their mission critical spreadsheet processes and created an enterprise application that streamlines data sharing, enables change management, and automates data consolidation. And these are organizations with huge Oracle, SAP, and Sharepoint rollouts, and still they're the ones who can't live without their Excel spreadsheets.

In 2015, Boardwalktech introduced Boardwalk for Microsoft Excel, making it easy for anyone to share their spreadsheets. All work is still done within Excel. Everyone gets their own view of their data. Merging and consolidating happens with a single click. And every change and every message related to that sheet is tracked at the cell level in a backend database.