



R.I.P. THE SPREADSHEET HAS BIT THE DUST”

by Al Baker
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“EXCEL IS DEAD”

“THE SPREADSHEET IS BEING PUT OUT OF ITS MISERY”

“EXCEL WAS JUST TOO DIFFICULT”

“SPREADSHEET DATA MAKES OUR EYES BLEED”

“EXCEL CAN’T CONNECT TO ERPs AND CAN’T HANDLE LARGE VOLUMES”

“EXCEL IS BEING REPLACED BY ...” take your pick: ERP, BI, CRM, CPM, SAAS, FP&A ... the list goes on.

Excel has been around since 1987 - isn't it time to say BUH-BYE to the Spreadsheet ? I mean let's face it...Excel is too complicated, it's confusing, it's hard to look at all those numbers, IF-THEN-ELSE statements are maddening; and what about VLOOKUP – Fuggedaboutit. Ever try to do a macro? OMG shoot me now, please! What about charts - so much maintenance! And how about simple copy+paste - why the (bleep) do we have to bother with those dollar signs ?!?

WAKE UP FROM YOUR EXCEL NIGHTMARE



Ok, you can wake up now – you were just having a horrible nightmare. Don’t worry, you can still play with conditional formatting, filters, pivot tables, and cool formulas. You don’t even mind dealing with the pesky dollar signs.

Excel is FAR from dead. To be sure, Excel has its detractors – mostly those connected to the big software and consulting firms who want to protect their revenue streams.

And I was one of them.

As a Senior Principal Consultant with SAP for many years, my career was selling, building, and managing financial models with these tools and applications for large companies. Well, when I say, “large companies”, I mean any company that had the budget to pay for these systems. And not only pay for the software, but for the consulting, training, and support that went with it, not to mention flights, nice hotels, rental cars, and the per diem meal allowance.

ERP APPLICATIONS AND PROJECTILE- (you can guess)



My reputation in that world was good; I helped my company gain many millions of dollars in billings over the years. My billing rate was an incredible \$390 an hour in 2009, more than the highest paid doctors; it is truly unbelievable that any company would pay such exorbitant fees. In case you're wondering, my salary was only about 13% of that rate (when you factor in the actual hours I worked, not to mention the two failed marriages because of it!) - ok, too much information.

The reason I'm mentioning about the money is because when I look back over my career, and think about the lasting value that all those software applications and systems had for my clients, it makes me want to throw up (and not just regular vomit, but EXORCIST-style PROJECTILE vomit).

Many times, my team and I would be called in to a client to fix or replace software from a previous vendor; their system wasn't working right, or was too hard to learn or manage, or was too expensive to maintain. Later (years later, hopefully), WE became those same systems, only to be replaced by yet another, newer, leaner, trendier system. This cycle repeated over and over; the upshot being that many millions of dollars were being spent chasing after something that was largely never attainable. Ever-changing management personnel and company philosophies dictated that there must be change.

The one constant in all the above, the one common-denominator over the years, across the hundreds of clients and thousands of users and millions of dollars spent, was ... Excel. Yup – the little old spreadsheet that could, the program that's been around since before you were born (well, assuming you were born after 1987).

No matter what, no matter where, no matter who, Excel was always there, always in support of the core financials or ERP or SaaS tool-of-the-day. Most everyone knew and used Excel; some more than others, mostly at a beginner-to-intermediate level, some at a power-user level. Even the IT department, whose main purpose was to support and enhance existing ERP, etc. systems, used Excel extensively; the programmers loved Excel. But even if not all users loved the spreadsheet, they used it out of necessity, and many/most used it to their advantage.

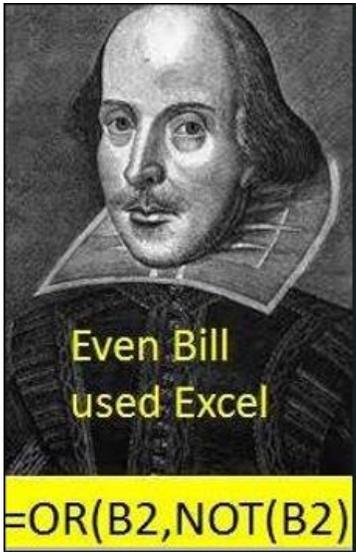
Wait a minute! Weren't we just talking about the many millions of dollars being spent by companies to manage all their corporate and financial processes, and free all their users from the tedium and frustration of the spreadsheet? Yes ...

BUT ... people were STILL using Excel and were still DEPENDING on Excel. Even after being convinced that the new, dedicated system would be easier and more efficient. Even after spending days/weeks in training learning the new software. Even after admitting that the new system actually WAS rather good. Even STILL, analysts, managers, admin, tech, and support staff kept using Excel.

WHY ? HOW COULD THIS BE ??

The answer is pretty simple actually.

EXCEL AS POPCORN



Maybe Shakespeare meant "To Excel, or Not to Excel - That is the question!"
Pun intended? But this is SO TRUE!

People are still using Excel because it is ubiquitous. If popcorn were everywhere, you're going to have some, right? It tastes good, it's not too bad for you, it satisfies; it may not be the absolute 'best' thing, but it gets the job done and it's even fun to eat!

Anyone whose job involves numbers or data, uses Excel; those that don't, probably want to. Excel is quick. Excel is familiar. Excel is flexible. Excel is intuitive. Excel is (dare I say it) FUN ... (sometimes), like popcorn. Excel is portable. Excel is easy to learn. Excel can be made to look sexy and cool. Excel can be used for so many things, not just in a business-context, but for personal uses as well.

Corporate needs are ever-changing and dedicated software systems cannot anticipate every conceivable data need required by users. Soon after a new system is installed, users start sending in requests to their IT department for changes, enhancements, or bug-fixes, etc. If you're lucky, you might get your request filled in days, or weeks. And by that time, you've thrown your hands up in the air, loading up your trusty old spreadsheet again to get the job done. And even if there aren't any such requests, users almost always return to the environment they know best, where they are most comfortable ... Excel. After all the kale, brussel sprouts, and wheat germ, a little popcorn always hits the spot!

Companies may spend millions of dollars installing state-of-the-art enterprise resource systems (ERPs - some of them cloud-based) that intend to idiot-proof everything and increase efficiencies 100-fold and make life easier for all who work there, but admit it or not, for many users – it's Excel that makes their life easier.

Sure, we all understand the need for CONTROL; the need to make certain that nobody can do anything (number crunching-wise) they're not supposed to, at any time, under any circumstance; the need to keep the integrity of the lowest level of financial data, pristine and clear. God-forbid, users be left on their own to check the integrity of their own work. But think about it - is the full cost of ERPs really worth it ?

Financial managers really need to consider those full costs vs. the cost of stronger training in Excel. Such training could not only enhance users' productivity but could also include controls and checks to improve and validate data-integrity, as well as perform troubleshooting to prevent errors and inconsistencies. Staff are using Excel anyway, so why not make their use of Excel better, more effective, less tedious, more fun? Is that even possible? OF COURSE it's possible – and at just a fraction of the cost of those "big gun" ERP systems.

I am not saying that large companies should go back to the stone-age by replacing their ERPs with Excel – chaos might be the result. But instead of trying to knock Excel out of the ring, embrace Excel for all the value it still brings to the table and just make it better.

ECONOMIES OF SCALE



If we could simply enhance the way Excel can support the core financials, corporate processes, and other decision-making systems, true economies of scale can actually be achieved.

And for those who are wondering, there are other players out there. Google Sheets has a place; it can complement Excel. For those that do not want to install or pay for software, or for those who just need basic spreadsheet operations, nothing too complicated or sophisticated, Google sheets may be good enough. For such users, Excel is not even needed. In fact, Google sheets can be easier than Excel for sharing and collaboration purposes. However, for any type of robust spreadsheeting, e.g. comprehensive data analysis and visualization, handling large volumes, rich function set, etc., Excel is steak from Delmonico's and everyone else is White Castle.

To be sure, Excel can't compete with ERPs and core financial applications in terms of managing and linking corporate processes and modules within a centralized environment. Excel was never meant for that. The need for ERP in most mid-to-large sized companies is compelling. But few would deny the value of a software tool that can complement and support those enterprise systems. Excel still reigns supreme whenever quick, ad-hoc analysis or visualizations are needed. Excel relieves some of the rigidity of ERPs and provides users with the flexibility to perform analysis and reporting that often is simply not available, at least not on a timely basis, within the ERP environment.

Who is going to wait weeks or days for a customized query or report that a manager or analyst needs from an ERP module? Nobody. They will resort to building what they want on their own, even if it means copying and pasting from an ERP query into an Excel worksheet. Some ERP tools have an "Export to Excel" feature, but even these may leave something to be desired because the end result must still be massaged or transformed by the user. Tighter and more effective integration between ERP systems and Excel would be nice, but isn't always the case.

Modules of ERP, SaaS, and similar systems are being implemented throughout organizations, so much so that the custodial staff would need to be trained. Many companies are ill-prepared for the actual cost of implementing ERP systems. And just what are those actual costs?

COSTS OF IMPLEMENTING ERP

A typical ERP installation for a mid-sized enterprise will range from \$150K - \$750K or more. Yearly license renewal fees are about 10-20% of that cost. So, if your company spends \$400K on the software, there will be another \$75K/year for license renewal. Plus, there are the inevitable "hidden" costs such as: user training and testing, support and maintenance, enhancement and upgrades, not to mention the time spent and opportunity costs. As such, companies end up spending SO MUCH more than originally anticipated. Not only that, but a surprising percentage of systems are eventually replaced inside of 5 years, for a variety of reasons.

As a result, some companies are re-thinking their ERP budgets and spending less; wondering if they should be reallocating a portion of that to strengthen the rich investment that already exists within their Excel user-base. Rather than spend \$500K for every conceivable module of an ERP system, why not spend, say, \$400K and use the remainder for enhanced Excel training and improvements?

THERE *ARE* BETTER, EASIER WAYS

Instant cure for insomnia



Let me draw your attention to our 5-year budget projections...



Critics of Excel often cite the example of tedious, error-filled, user input requiring endless hours of mind-numbing tasks. They say the only way to get data from your core financials into an Excel sheet is by using an export feature (if it exists) and/or copy+paste. Very time-consuming and error-prone. Can anything be done to alleviate that?

YES. Excel features like Power Query can effectively “Get and Transform” data from many sources without all the tedium and with a lot less potential for error.

Spreadsheet data is arranged in a grid of rows and columns; users input, calculate, and report on data that is displayed in a tabular format. Depending on the font size used and the dimensions of your screen, you could be looking at over 500 data values in a single viewable screen. Detractors will say that could make your eyes bleed and that it is nearly impossible to glean any useful insights or business intelligence from data displayed that way.

Seriously? That statement suggests someone doesn't use Excel very much because features such as pivot tables, slicers, conditional formatting, auto-charts, and the SUMIFS formula would address those concerns nicely. Do you need/want to spend thousands on dedicated dashboarding software? Probably not necessary! Excel can create perfectly beautiful and functional dashboards with absolutely no add-ons and with less effort than you would think.

Combining and consolidating data is a common task for companies with multiple departments, divisions, product lines, marketing channels, etc. Critics will say doing this in Excel is a very laborious and difficult process with high chance of user-error. However, the fact is that many Excel users who try to combine/consolidate data do it ineffectively. A simple feature like 3-D formulas can improve this considerably. If something more robust is needed, Excel's Power Query might be all that's needed; and no, macros are not needed.

Companies that generate truly humongous datasets may need the Big Guns, but we're talking very tiny percentages here. Does YOUR company deal with such volumes ... really? A single Excel worksheet can hold 1,048,576 rows and 16,384 columns: that's over 17 billion cells of data. There would never be a good reason to try to populate more than, say, a ½-million rows by 50 columns; chances are your sheet will bog down and become unusable anyway. This makes uninformed users believe that Excel is unable to handle large volumes

Not true. Fact is, Excel's Power Pivot can effectively handle about 2GB of data, assuming you have a 64-bit PC and sufficient RAM to handle it. How much is 2GB? Given the ½-million rows by 50 columns example above, this is estimated to be less than 100MB in size, less than 5% of the 2GB limitation above. Safe to say, Excel WILL handle your volumes. Not only that, but Power Pivot has a compress feature that can easily turn a 50MB source text file into less than one-tenth that size.

EXCEL CAN HANG WITH THE BIG GUNS



A Lamborghini or Mercedes-Benz will do the job in a fancier, prettier, and more feature-filled package, but the Fords and Toyotas will still get the job done and in a more cost-effective manner.

The Toyota Corolla isn't going away anytime soon, and neither is Excel. Conservative estimates put the number of Excel users worldwide at over 500 million; that many users can't be wrong, can they?

I run an Excel-services business where I provide training, consulting, and troubleshooting for companies, finance professionals, business owners, managers, analysts, individuals, and students. So, lest I be accused of being self-serving, let me be up-front by saying that there's no lack of people who find Excel difficult and frustrating.

Many Excel users simply learned on their own and had no formal training at all. Let's face it, whatever frustration users feel about Excel is mostly due to a lack of and/or ineffective training. Yes, YouTube is free and there are a googol-plex number of training videos out there, but you get what you pay for, right? Good luck finding a video that won't leave you even more frustrated and confused. You might eventually find a useful video but, for many, more personal interaction is needed when trying to learn something new.

Excel's best feature is also its worst – EASE of use. Excel is so easy to learn, people sometimes ignore the need to develop effective techniques for ensuring data integrity and minimizing the chance for error. Once someone learns how to do simple arithmetic operations and some basic formatting, they then try to put together a budget worksheet or data analysis table or visualization chart, etc. without learning HOW to do all that in an effective manner. No wonder there's frustration. In my training sessions or consulting assignments, my clients end up saying things like this all the time:

"I can't believe Excel can do THAT!"

"That's going to save me so much TIME!"

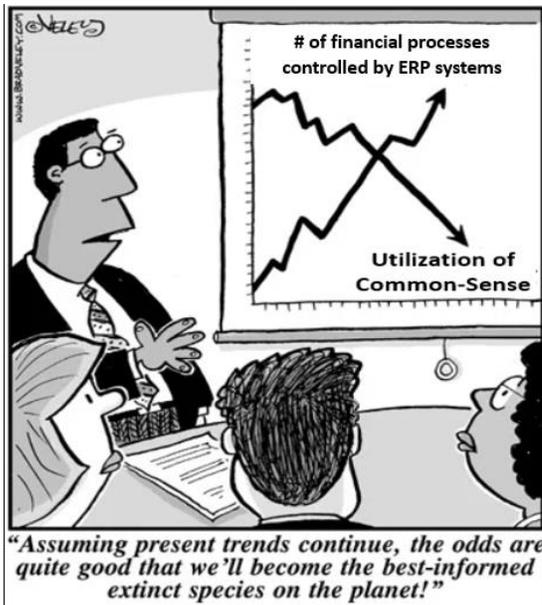
"Doing that is WAY easier than I ever thought!"

"If only someone would've shown me that before!"

Being as flexible, powerful, and popular as Excel is, those attributes are both a blessing and a curse. With relatively little effort, anyone can make an Excel workbook APPEAR very professional and sophisticated. When presented in a PowerPoint meeting, the audience might "ooh and aaah" but underneath the cool-looking charts, dashboards, and formatting, there could be significant error, whether by accident or otherwise. Consulting firms continually publish studies showing that an alarming number of Excel-based systems contain material error. This all calls into question the integrity of anything created with Excel. Company execs and financial data owners should rightly be concerned and take necessary steps to lessen that uncertainty and increase the trust in their Excel-based data. Can such steps be taken?

YES, of course.

USE COMMON-SENSE



It seems, sometimes, that basic common-sense takes a back seat to the latest corporate trends, or to expensive consulting studies that conclude, well, that you need more consulting and vendor tools.

Do you trust your own staff to not deliberately falsify data? Do you want your own staff to actually like what they're doing and feel they're contributing to corporate goals more? Your staff already use Excel to some extent. Doesn't it make sense to find out how they'd like to use Excel better and be more productive and have more fun with it at the same time?

Even if you don't do an internal study or audit of your corporate Excel usage, there are several common-sense things that can be done – by any Excel user – to mitigate many of the perceived problems or limitations above.

Here are just a few things to consider:

- Organize worksheets and workbooks for easy navigation and explanation of sheet content and purpose; use menu links.
- Use notes, and text boxes/shapes to document all critical processes or data flows; also, to document complex formulas, macros, etc.
- Use comments to collaborate with others on any elements in your Excel worksheet; this could alleviate the sharing problem.
- Make it crystal-clear for anyone who might ever see your worksheet to understand what is going on
- Build-in controls to double-check, validate, and reconcile totals and other calculated values
- Use cell, sheet, and workbook protection sensibly; no VBA needed
- Employ techniques such as cell-mapping to hunt for inadvertent inconsistencies between text, number, and formula cell ranges
- Use techniques such as forms or user-input VBA code to control inputs from users, even yourself
- Document any VBA code so that it is completely understandable; however, resist the temptation to over-use VBA
- Document all named ranges and external links
- Employ error-checking techniques (Excel has a built-in feature) to identify and fix potential problems, circular references, etc.
- Use conditional formatting to highlight trends, anomalies, or unexpected values in data
- Use Excel's Power Query to transform and load data from external sources such as SQL, Access, XML, web-based data, etc.
- Use Excel's Power Pivot for Pivot table-like operations on very large datasets
- Use slicers for more effective and user-friendly filtering of pivot tables or regular tables
- Consider implementing in-house spreadsheet "audit" examinations that check workbooks for errors, inconsistencies, data-integrity issues, needs for enhancement, etc.
- Consider ranking workbooks/worksheets in terms of importance to corporate decision-making and prioritize such examinations to those; some companies have even instituted "Spreadsheet Validation" procedures.
- Build your worksheets with your audience in mind; make sure it would be easy to hand it off to your successor.

EXCEL IS NOT GOING ANYWHERE

Excel is too useful to too many people to think that it is going the way of the dinosaur anytime in the foreseeable future. Considering all the \$\$\$ spent on those Big Guns, one has to wonder why there's this running joke in Business Intelligence communities:

"What is the most used feature in any business intelligence solution?"

Answer – "The Export-to-Excel button."

Ken Puls of Excelguru.ca says: *"With the increasingly diverse toolset being added to Excel — Power Query to source and clean data from disparate dirty sources, Power Pivot to aggregate those disparate sources into business intelligence models, Power View to create dynamic dashboards from those models and Power Map to tell the data story on a geo-spatial plane — it's very clear that Microsoft is investing heavily to make Excel the Business Intelligence tool of choice."*

Train your people to use Excel more effectively, with the necessary controls and checks to improve and enhance data integrity, eliminate significant error, and make users more productive.

Excel and large corporate systems are always going to be in the same sandbox; there is no reason why they can't play nice together.



"EXCEL IS ALIVE AND WELL, THANK YOU VERY MUCH!"