
Extending Excel

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- ▶ *Building on Current Models
to Create an Ideal EPM Solution*

Introduction

For almost a quarter of a century, both financial and non-financial personnel have adopted Microsoft Excel as the de facto financial tool to analyze numbers, budget projects, forecast business performance, model scenarios, and create reports. With the emergence of Enterprise Performance Management (EPM), Excel has been stretched to its limit.

Many companies use Excel's robust modeling functionality to perform complex budgeting, planning, and reporting in support of EPM. However, EPM also demands the consolidation of large amounts of information—in a secure and accurate manner—while supporting collaboration across a geographically dispersed enterprise. This is where Excel alone is not enough. Its limited consolidation, collaboration, and data security functionality make it difficult to effectively apply across the enterprise.

This article takes a critical look at Excel's strengths and weaknesses relative to EPM. It also evaluates traditional EPM vendor interfaces with Excel and proposes an ideal EPM solution—one that allows users to cost-effectively extend Excel's core strengths in modeling and presentation while adding robust database functionality for secure enterprise-wide consolidation and collaboration.

Excel: A Pervasive and Robust Modeling Tool

Microsoft Excel's vast installed base, ease of use, low cost, and simple user interface has made it a popular application for financial analysis and budgeting. And with good reason—95 percent of companies rate the capabilities and power of electronic spreadsheets as “excellent” or “good,” and a full 94 percent describe electronic spreadsheets as “easy to use.”¹ Because of Excel's inherent strengths, it is no surprise that it is also widely accepted as a planning tool. In a recent survey by CFO Research Services—a sibling of CFO.com—73 percent of finance executives at midsize companies reported relying primarily on spreadsheets and manual processes as a basis for planning and budgeting.

In addition to its power and ease of use, Microsoft Excel offers extensive modeling and formatting capabilities that are cornerstones for an effective EPM solution. Foremost, Excel provides unparalleled modeling flexibility, including the ability to incorporate drivers as independent variables into sophisticated business models. This allows users to easily create complex formulas and functions to calculate and simulate business performance—a fundamental requirement of EPM.

Offering superior and intuitive formatting options, Excel also creates presentation-quality output and offers an unmatched ability to enrich and enhance the look and feel of budgets, forecasts, reports, and plans. With Excel, it is easy to understand, format, and create graphs and charts from data and performance results—allowing the user to easily communicate the results of EPM-style analytics.

Add to these strengths a rich user interface and it is no wonder that Excel has been and will continue to be a pervasive, accepted, and popular component of enterprise EPM solutions.

¹Spreadsheet Hell, Don Durfee, CFO.com, June 15, 2004.

Excel's EPM-Related Weaknesses

While it offers substantial functionality that should be leveraged by a comprehensive EPM solution, Excel alone fails to deliver on several key EPM requirements: consolidation, collaboration, workflow management, and data security.

First, Excel cannot easily manage or consolidate large volumes of data. In most companies, consolidation requires managing tens, hundreds, or even thousands of files. Using Excel to accomplish this creates a cumbersome process as every spreadsheet has to be identical or share the same structural geometry in order to consolidate numbers. Because Excel is a formula-driven application, it becomes very rigid during any form of consolidation—causing fixed formats to quickly become broken. In addition, Excel has great difficulty supporting varying levels of consolidations—along organizational or product hierarchies.

Secondly, while spreadsheets are an ideal small-scale planning tool, Excel was not designed to—and simply cannot—support a collaborative, enterprise-wide EPM planning solution that delivers reliable, real-time results. Excel does not support a multi-user environment, and it is nearly impossible to manage and incorporate the input of hundreds of users. An organization can clog its email servers while trying to distribute large numbers of Excel attachments across the enterprise. These same attachments are often returned, forwarded, or forgotten—leaving planning managers with limited ability to measure or control the planning cycle. Because it was designed for individual users, Excel lacks workflow management functionality—including processes for controlling review and approval cycles.

Finally, because Excel does not natively support centrally managed data access layers, user roles, and authorizations, enterprises using Excel as a primary EPM solution often build solutions that compromise access to and the security of sensitive financial data.

How Typical EPM Solutions Relate to Excel

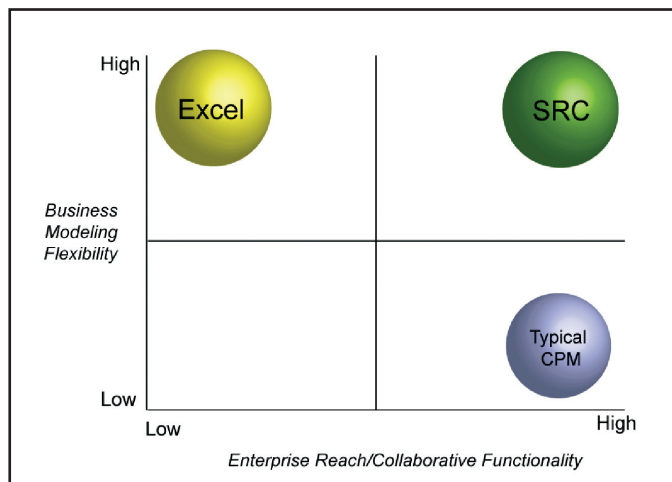
“Is it Really Excel?” Ten Important Questions to Ask Your EPM Vendor

Most EPM vendors say they embrace Excel, but what does that mean? Make sure to ask the following questions:

1. Can a user create a formula in a cell? Will the formula be retained between sessions?
2. Can a user change any formatting or layout? Will those changes be retained between sessions?
3. Can a user add commentary to the spreadsheet? Will that commentary be retained between sessions and stored in the database?
4. Can any existing Excel business model be easily incorporated into the planning system?

Motivated by Excel’s weakness and seeking to provide an alternative, EPM vendors initially abandoned the use of this favored tool and instead developed their own proprietary systems. The results were dismal. Focused on optimizing the enterprise-reach component of EPM, vendors developed rigid solution structures that compromised business modeling flexibility and capability (see Figure 1). Users also found that proprietary EPM solutions created complicated data entry interfaces, limited visibility into the business logic, and produced complex programming languages that added further training to the user learning curve and increased the total cost of ownership.

Often users still relied on Excel for primary modeling and then imported or retyped their results into the enterprise EPM solution—a process that was both inefficient and error prone. Administrators had limited visibility into how end users were calculating their projections. Administrators were also forced to convert their formula-based business modeling into server-side calculation scripts or other programming languages that were difficult to learn and manage. In the end, users were often unimpressed with the Excel or grid-like interfaces many EPM solutions featured and considered them inferior to the feature set and functionality of Excel.



Over time, EPM vendors began to acknowledge both that users are very devoted to Excel and that Excel offers superior modeling and formatting capabilities necessary for an effective EPM solution. As a result, these EPM vendors are now taking various steps to

5. Can a user easily view or change spreading methodologies?

incorporate Excel into their EPM solutions—but with limited success. Most vendors still treat Excel as secondary to their core application, creating numerous inefficiencies and data integrity issues. For example:

6. Can a user add analytic areas or sheets? Will those additions be retained between sessions?

- Some EPM solutions allow only the import and export of data to and from Excel—essentially turning an Excel spreadsheet into a glorified data input form and rendering much of Excel’s functionality useless.

7. Can the Excel environment host a large number of sheets and complex modeling formulas?

- Business rule logic is still written in server-based languages. Not only are these languages difficult to master, they also impair performance and scalability. Users can expend a significant amount of time and effort tuning an unintuitive rules engine that hosts complex interrelationships and creates a frustrating optimization and review process.

8. Can Excel models be virtually “free form” in terms of layout, content, and interdependencies? If not, what are the limitations?

- The interface with Excel is not real-time or web-based—so users must work with static data stored locally, creating an entirely new set of data silos, out-of-synch versions, or multiple, competing versions of the truth.

9. Will the spreadsheets still communicate properly with the back-end databases if a user inserts rows or columns?

- Formulas and calculations between Excel and the packaged application are incompatible, further limiting Excel’s usefulness while complicating the user experience. Constructing and preserving driver-based modeling is particularly difficult with this approach.

10. Can an Excel model be parameter-driven

- In most cases the use of Excel is transitory. For example, end-user formulas are deleted once the numbers are committed to the database and the workbook is closed. This is especially problematic for the user who returns for further work on a budget. For reviewers, the transitory nature of formulas limits visibility into how the numbers were constructed.

In virtually all approaches, Excel is an afterthought, a “bolt on” that has not been properly architected into the heart of the EPM application. This approach does not capitalize on Excel’s inherent strengths and renders a company’s current investment in Excel models worthless.

Extending Excel for Enterprise performance Management—A Unique EPM Solution

Business Objects's unique approach to EPM leverages the full functionality of Excel as part of its core solution—not just as an add-on or optional interface. Business Objects's approach is to enhance, optimize, and extend the capabilities of Excel without sacrificing its benefits. Because it was built from the ground up to leverage Excel's strengths, Business Objects supports 100 percent of Excel's capabilities and allows users to extend their existing Excel models into an enterprise-wide EPM solution. Users can embed models into the application as appropriate—no longer needing to maintain “models on the side.” This eliminates the inefficiencies related to re-keying data or rebuilding complex planning models. By preserving end-user formulas and free form models, Business Objects also provides visibility into how performance results were generated, creating a basis for collaborative commentary throughout the enterprise.

Unlike other vendors, Business Objects's primary user interface is Microsoft Excel—either across the network or over the web—and purposely leverages Excel's ease of creating complex formulas and functions; superior and intuitive formatting options; easy to understand charting capabilities; and ability to host other Microsoft programs and objects.

Business Objects was specifically designed to overcome Excel's shortcomings related to consolidation, collaboration, security, and reporting by:

- Using powerful, industry-standard databases to manage and consolidate large amounts of data along unlimited hierarchical structures.
- Allowing for hundreds or thousands of users to simultaneously access the solution and collaborate regardless of geographical location.
- Centralizing process control, workflow management, and robust data and user security for more secure and efficient planning and budgeting.
- Enhancing Excel's already powerful reporting abilities with drill down and ad-hoc analysis capabilities.
- Adding a methodology library for standardized business rules that is both reusable and dynamic without being directly tied to the spreadsheet.

Business Objects's approach supports a real-time view into a centralized database, ensures information is up-to-date, recognizes rights and authorizations of end users, and allows for flexible yet controlled insertion of new accounts as appropriate. Business Objects dynamically reads and writes to a multidimensional relational data store, allows users to import data from any source, and populates workbooks automatically—streamlining the

process and increasing accuracy. Rather than a fixed-length template, Business Objects populates Excel with only the line items that are relevant, based on an intelligent query of the database. It creates and stores enterprise-wide planning methodologies without requiring users to learn calculation scripts—allowing for standardization and ease of use. In fact, Business Objects’s solution is so easy to use that it is maintained by finance personnel with limited—if any—IT involvement.

Only Business Objects’s approach provides a cost-effective, Excel-centric EPM solution that extends the powerful, user-friendly modeling functionality of Excel throughout the collaborative enterprise.

Conclusion

Over time, EPM vendors have recognized the futility of wrestling Excel models away from the end user community. While most have attempted to add an Excel interface as an afterthought, only Business Objects has elegantly fused a full-fledged Excel experience with enterprise database, security, and workflow management to create the ideal EPM environment.

Business Objects wraps a virtual shell around Excel—and widely-accepted databases—preserving their strengths and eliminating their weaknesses. Business Objects then enhances the overall functionality of the combined spreadsheet and database environment by adding in workflow and consolidation capabilities, scenario management, reporting functionality, and data extraction, translation, and accessibility. The result? The cost-effective transformation of an individual modeling tool into a robust EPM solution that is familiar, secure, and easy-to-use.



**Enterprise Performance
Management Headquarters**

13190 SW 68th Parkway
Portland, OR 97223
Tel: +1 503 608 3300
+1-800 544 3477
Fax: +1 503 608-3399

Americas

Business Objects Americas
3030 Orchard Parkway
San Jose, California 95134
USA
Tel: +1 408 953 6000
+1 800 877 2340

Asia-Pacific

Business Objects Asia Pacific Pte Ltd
350 Orchard Road
#20-04/06 Shaw House
238868
Singapore
Tel: +65 6887 4228

Europe, Middle East, Africa

Business Objects SA
157-159 rue Anatole France
92309 Levallois-Perret Cedex
France
Tel: +33 1 41 25 21 21

Japan

Business Objects Japan K.K.
Head Office
Yebisu Garden Place Tower 28F
4-20-3 Ebisu, Shibuya-ku
Tokyo 150-6028
Tel: +81 3 5447 3900

For a complete listing of our sales offices, please visit our web site.

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