Excel Reporting

In the world of spreadsheets and data, Microsoft Excel is certainly one of the most popular. Sure, there are other great platforms, but few can match Excel's longevity or the astounding amount of built-in functions it provides users. From finance gurus to inventory management experts to managers and executives everywhere, we've all used Excel to dive into the information needed to keep companies running successfully.

But whether you're an advanced Excel user or you're still learning the ins and outs of the platform, you're bound to have questions from time to time. It's a complex program. And, you might even be wondering if there are products or tools out there that can ease some of your pain points. After all, we've all dealt with errors from updated data, frozen screens, and the myriad issues that come from any attempt to drill up and down on a large data set. And that's not necessarily the fault of Excel (or the user!). It's simply that other kinds of tools are needed to take Excel reporting to the next level.

In our ultimate guide to Excel reporting, we're exploring the basics of Excel, including the various use cases, how to generate basic reports, and what tools exist to work alongside Excel and truly provide the functionality you didn't even know you were missing.

What Can Excel Be Used for in Business?

Excel is a powerful tool used by teams throughout small, mid-sized, and enterprise businesses in almost every industry imaginable. Released in 1985 as a spreadsheet program using cells, columns, and numbers, the original version of Excel included the ability for end-users to program macros to automate certain tasks and to use defined functions from Excel's built-in library. In other words, Excel was first designed to help us free up our time from mind-numbing tasks—something it's still doing today. Anyone who has ever tried manually doing some of the things Excel can automate can attest to how grateful we are that it exists!

With that said, it's important to note that Excel has its limitations. On its own, it was never designed to store huge amounts of data or do some of the advanced, collaborative, real-time reporting and data slicing that some try to force it to do. At the end of the day, it's a spreadsheet tool—a handy one at that—but trying to make it more than that can result in a lot of headaches.

And that's where dedicated reporting tools and add-ons like XLCubed by Fluence shine. From data dashboards to highly-formatted reports with the option to drill up and down on your data, XLCubed works with Excel and various data sources to create better, more actionable reports. But before we get too far ahead of ourselves on reporting tools and our own awesome platform (more on that toward the bottom of the article), let's dive into what Excel *is* designed for. What are the formulas and functions of Excel? What applications is it designed for? Is it a replacement for a database?

What Are the Excel Formulas and Functions?

Excel has become much more powerful in the past 35+ years, and the formulas and functions it provides remain one of the most popular features.

Excel formulas are mathematical expressions that can be used to perform both simple and complex calculations on the cells, rows, and columns in a spreadsheet. A hallmark feature of Excel's formulas is that they can be used to define the value of a cell automatically, calculating the value of that cell based on the value of other cells.

Excel supports more than 480 formulas as functions, or pre-built formulas. According to Microsoft, some of the most popular include the SUM function, the FI function, the LOOKUP function, the VLOOKUP function, and the MATCH function. Getting into the details, functions are classified into 14 different categories, including:

- Compatibility
- Cube
- Database
- Date and Time
- Engineering
- Financial
- Information
- Logical
- Lookup and Reference
- Math and Trigonometry
- Statistical
- Text
- User Defined Functions and Add-Ins
- Web

For anyone looking for usability outside of the pre-built functions, you also have the ability to create your own custom formulas and functions using VBA (or Visual Basic for Applications). Similar to how macros provide added automation capabilities, these custom formulas expand options for data manipulation and calculations.

What Are the Popular Applications for Excel?

Let's preface this by saying that almost every industry imaginable uses, or could benefit from using, Excel. There are countless applications in countless industries—certainly too many for us to list here. Here are just a few of the most popular use cases for Excel.

- **Basic Accounting and Financials:** Finance teams across the globe use Excel for a variety of purposes. In fact, it's probably been argued by a finance team or two that maintaining financials is one of the primary purposes of Excel. From creating balance sheets to making financial reports to budgeting and tracking expenses, Excel can provide the functionality finance teams need for their day-to-day work.

- **Data Visualization:** We're visual people, and data visualization is essential to the work of teams everywhere. When investors, C-suite executives, or coworkers need to understand the implications of a dataset, using Excel is a quick and effective way to make raw data more digestible.

- **Mailing and Contact Lists:** For marketing teams, creating mail merges and separating contact lists based on key demographic features is a must. With Excel, all of these functions—and more—can be done with a few clicks of a button.

- **Scheduling and HR:** Especially for smaller companies that don't have the budget or need for expansive HR tools, Excel can work wonders for developing schedules, tracking meetings and room usage, and more.

- **Tracking Inventory and Sales:** For industries like retail or manufacturing, Excel can be an excellent tool for tracking inventory, keeping an eye on margins, maintaining and forecasting sales data, and making data-backed decisions to keep businesses in the black.

Should I Use Excel as a Database?

In a word, no. Excel isn't a database and it shouldn't be used as one. For those of us who aren't IT professionals or programmers, Excel can look a lot like a database—but those looks are deceiving, and here's why:

- **Security:** Excel simply doesn't have built-in features that offer any significant amount of security or user permissions. What does this really mean? If you're working with sensitive data or personally identifiable information (PII) the proper security is of the utmost importance. A data breach due to a lack of security could be devastating.

- **Collaboration:** Excel was never designed to be a multi-user collaborative tool. Multiple users simultaneously working in the same spreadsheet can easily lead to file corruption, multiple versions, or performance issues (we've all dealt with the dreaded frozen Excel screen from time to time).

- **Quantity:** While it might feel like Excel can scroll forever, it has a limited data capacity per sheet. The larger the volume of data you're storing, the more unmanageable it becomes in Excel—and the more likely you are to face errors and broken formulas. What's more, splitting data between sheets can make reporting and data manipulation much more complicated than it needs to be.

So what's the alternative? Use dedicated databases like SQL, Oracle, or SAP HANA that can work with Excel to provide you with the proper database features *and* the capabilities you need from Excel.

Excel Reports and Dashboards Design

So we've discussed how you might use Excel. But what about the nuts and bolts of actually working in Excel? What are the different types of reports you can produce? How do you create a report in Excel? How do you create a data dashboard—and what exactly is it? We're diving into the basics below.

How Many Types of Reports Are There in Excel?

When it comes to the number of reports available in Excel, the sky is truly the limit. The fact is, there isn't a set amount of reports available. It all comes down to what you want to build in Excel. There are, of course, some common types of reports in Excel that businesses turn to time and time again. Here are just a few.

- **Financial Reports:** There are a number of financial reports you can build in Excel, including balance sheets, income statements, cash flow statements, and profit and loss statements.
- **Management Reports:** Management reports are designed to provide financial and operational information on a certain segment of a business.
- **Operational Reports:** Operational reports provide a quick-glance of financial data from an operational perspective. So they might include information on annual revenue and operating expenses broken down by department.
- **Analytical Reports:** Excel provides a built-in tool called "Analyze Data," which allows users to select a dataset and analyze it to get high-level visuals and trends quickly. Many also build this out on their own with analytic reports that take a deep dive into data to provide key outcomes and insights.
- **Ad-Hoc Reports:** Essentially, this is the "other" category for Excel. Ad-hoc reports are off-the-cuff reports created quickly within Excel, typically with one singular purpose.
- **PivotTables:** Technically a table and not a report, PivotTables are well-loved by Excel users. They turn large amounts of data into a clean, interactive table that allows for auto sorting, calculations, and more. PivotTables can be viewed as a compact, outline, or tabular report format in Excel.

How to Generate a Report in Excel

When it comes to Excel report design, you'll typically make use of charts and PivotTables. Charts and graphs are designed to visualize data—which can be especially helpful when making presentations or reports for leaders. PivotTables, on the other hand, are interactive tables that make quick work of aggregating and summarizing large amounts of data so you can better explore trends. Below you'll find the basic steps for generating charts and PivotTables.

Charts

1. To begin, insert a title for your report by clicking “insert” and choosing “header and footer” in the “text” group. You may also wish to enter a footer with information like page number or date.
2. Enter your data into the spreadsheet cells in the rows and columns.
3. Highlight the data that you wish to create a chart from.
4. Select “insert” from the menu and find the “charts” category.
5. Select the type of chart or table you wish to create and click “ok.”
6. Your chart should be automatically created. Any updates you make to the data should update the chart.

PivotTables

1. To begin, enter your data into the rows and columns of your Excel worksheet. As usual, use the top row to create headers for each column.
2. Ensure that your data is sorted in a way that will make sense for your table. You can use the “data” tab at the top of your screen to sort based on different properties.
3. Highlight the cells that you wish to create a PivotTable from.
4. Click “insert” in your upper menu and select “PivotTable.”
5. This will open a pop-up box that will provide you with some additional options, like creating your PivotTable in a new worksheet.
6. Another option is to use the “Recommended PivotTables” option in the “insert” menu.
7. Drag and drop a field in the “rows labels” area to determine how the PivotTable should organize your data.
8. Next, drag and drop a field into the “values” area.
9. Review your calculations. The sum is typically calculated by default, but you can select different options.

What is Dashboard Reporting in Excel?

Dashboards are similar to reports—and in fact, some reports are dashboards! So what’s the difference? A dashboard is a place to track business data, like key performance indicators (KPIs), metrics, and other high-level data points that need an at-a-glance view. They’re typically very high level, providing a lot of information in one window. All of this allows executives and leaders the ability to review one panel to make quick decisions.

To build out a dashboard in Excel, you’ll be looking at combining charts, graphs, and tables—as described above—and making all of that fit nicely into a single worksheet. Anyone who has ever tried to do this in Excel can attest to the fact that it’s exceedingly difficult. Working with that much data—in addition to likely having to build out custom functions and macros—leaves plenty of room for errors, broken formulas, and more. So while you can technically create a dashboard in Excel, a lot of companies have shifted to using dedicated reporting tools to develop very high-level dashboards for their teams.

And with that said, let’s jump into what reporting tools are and if there’s a reporting tool that’s actually aimed at non-programmers. (Spoilers: there is!)

What Are Reporting Tools?

So we’ve discussed some of the things that Excel…well, excels at: data manipulation, basic reporting and data visualization, and tracking business information. But what about when you need more advanced options for reporting? That’s where reporting tools come into play.

Simply put, a reporting tool is a software program or system that can take data from various sources (like the databases we talked about earlier) and make it into dashboards, truly interactive reports, or other visual representations to make it easier to digest, understand, and slice and dice.

You've probably heard of some of the big reporting tool players, like Power BI, Tableau, Zoho Analytics, and more. These systems shine when it comes to creating high-level dashboards and aggregating a whole lot of data. The downside? Most reporting tools like this require pretty advanced knowledge of data modeling, mathematical equations, building queries, and even coding in some instances. Now don't get us wrong, there's certainly a time and a place for these tools—in fact, our own XLCubed works with each of these reporting tools! But the selection and use of these tools are best left to programmers, coders, and other IT team members who have the skills to make dashboards in these platforms shine.

Instead, we're here to talk about something else: how to find an easy-to-use platform that offers the ability to create custom reports from Excel data that can be analyze and display your data however you choose. If that sounds like what you're looking for, let's talk through how to find the right product for the job.

How Do I Choose a Reporting Tool I Can Use?

So how do you go about finding a tool that you can actually use in your day-to-day work? Keep an eye out for these kinds of features.

- **An Easy to Use Platform:** While we've all had to learn new systems from time to time, the ability to quickly jump right into a program or tool can be a huge perk. XLCubed, for example, works in an extended Excel environment to address PivotTable and other reporting restrictions. That means you'll be working with a platform you already know how to use—and your skills will directly translate.

- **Self-Service Reporting:** For busy finance teams and others that use Excel regularly, the ability to be self-sufficient for certain aspects of your reporting can be a game-changer. Look for a tool that empowers your teams to build their own reports, dashboards, and data visualizations.

- **A Value-Add:** The right reporting tool is going to work for your team. Especially for small- and mid-sized companies that may not have the budget (or the number of employees) to learn how to use a whole new tool, the right platform will cut down on training time and costs—allowing you to scale up or down as needed.

- **Existing Integrations:** Your organization may already be using other reporting tools, like some of the ones we mentioned above. If that's the case, it's important to find a program that can work with your existing tech stack, not just add to it. A product like XLCubed can integrate with Power BI and other platforms for extended visualizations and slice and dice analytics. Truly, you can have the best of all worlds.

- **Web and Mobile Use:** When developing reports and dashboards that need to be shared with additional stakeholders, the ability to create reports and responsive dashboards on the web is critical. Keep an eye out for products that retain corporate security, especially when sharing information online.

- **Built-in Libraries:** Sometimes, it's easier to work with built-in calculations and templates. Look for a tool that offers a library of calculations, views, and layouts for the types of reports and dashboards you use most often. For example, many find Excel's waterfall reports to leave something to be desired. Make these reports that much better with a product like XLCubed.

What Is the Best Reporting Tool? XLCubed

Ultimately, the best reporting tool on the market is the one that works for your team. If you're in finance or management and you're looking for a platform that'll let you really drill down on your data to truly see the finer details, look no further than XLCubed.

We know we're biased, but time and time again our customers have found value in the self-service, ad-hoc reporting capabilities that XLCubed provides. The data-connected Microsoft Excel add-in lets users from any business or department create and distribute interactive reports automatically to any audience, on any device. No more waiting on busy IT teams. You can do it yourself in a platform you're already comfortable with.

We're not here to replace your BI platforms, nor are we here to replace Excel. We're here to help your finance team work with the kind of live, dynamic data they need. Ready to learn more? Read more about XLCubed or request a demo today.