

# **AUTOMATE THE ROUTINE, FOCUS ON THE RISK: USING EXCEL**

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## **Agenda**

- Data Cleaning
- Essential Formulas
- Tables & Analysis
- Efficiency Tips

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## Benefits of Excel Tables

- **Automatic Expansion:** Tables automatically include new rows and columns when you add data.
- **Structured References:** Formulas use clear names like `=SUM(tblSales[Total Sales])` instead of `=SUM(G2:G121)`.
- **Built-in Filtering & Sorting:** Drop-down arrows appear on headers for quick analysis.
- **Consistent Formatting:** Tables apply alternating row colors and can be styled with one click.
- **Easy Aggregations:** Built-in **Total Row** quickly calculates SUM, AVERAGE, COUNT, etc.
- **Dynamic Charts & Pivots:** Charts and PivotTables linked to a Table automatically update when data changes.
- **Slicer Compatibility:** Tables support slicers for interactive filtering (like PivotTables).
- **Improved Readability:** Named Table headers make large datasets easier to navigate.

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## Benefits of Spill Formulas

- **Dynamic results** → one formula can return multiple values.
- **Automatic resizing** → results expand/contract when data changes.
- **No copying down** → eliminates the need to drag formulas or use Ctrl+Shift+Enter.
- **Cleaner formulas** → simpler than older array formulas.
- **Works with Tables** → structured references adjust as tblSales grows.
- **Supports advanced analysis** → combine with UNIQUE, FILTER, SORT, SEQUENCE.
- **Easy referencing** → use the # operator to point at all spilled results.

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## Benefits of SUMIFS

- **Multiple conditions** → allows summing values based on more than one criterion (e.g., Region = North *and* Date in January).
- **Dynamic analysis** → works with Excel Tables, so totals update automatically when data grows.
- **Replaces helper columns** → no need to build extra “flags” or filtered totals.
- **Flexible criteria** → supports numbers, text, dates, and wildcards (\*, ?, &).
- **Cleaner reporting** → one formula can summarize by Department, Category, Region, etc., without a PivotTable.
- **Spill compatible** → can be combined with UNIQUE to create dynamic summaries.
- **Faster than manual filters** → instantly recalculates totals without reapplying filters.

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## Benefits of XLOOKUP

- **Replaces VLOOKUP & HLOOKUP** → one function works both vertically and horizontally.
- **Lookup in any direction** → no more “lookup column must be on the left” limitation.
- **Exact match by default** → safer and more accurate than VLOOKUP’s default approximate match.
- **Simpler syntax** → no need to count column numbers; just reference the return column.
- **Handles missing values gracefully** → built-in “if not found” argument (e.g., “Not Found”).
- **Flexible match modes** → supports exact, next smaller, next larger, or wildcards.
- **Dynamic range friendly** → works seamlessly with Tables and spill functions.

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