



Excel Spreadsheet Secrets

Simple Ways to Maximize the Power of Excel

By Jay Arthur

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Table of Contents

Excel Spreadsheet Secrets	1
Secret #1 – Put Your Data in Columns.....	2
Secret #2 – Use Raw Data	3
Secret #3 – Turn Data Into Charts That Anyone Can Understand	4
Secret #4 – Use Smart Charts Not Dumb Charts	5
In Summary.....	6
Jay Arthur.....	7

Excel Spreadsheet Secrets

Simple Ways to Maximize the Power of Excel

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You've probably never had any formal training using Excel. Me either. So I had to learn how to best enter data into a spreadsheet. Over the years I've learned some simple ways to maximize the power of Excel and how to avoid the tar pits.

Most spreadsheets look backward at data (hindsight). What management wants from your data is insight and foresight. If you set it up properly, your spreadsheet can yield insights about how to maximize productivity and profitability, not just report past performance.

One of the biggest mistakes people make is trying to create a spreadsheet that other people can read. It usually looks like this because people associate horizontal with the passing of time.

	A	B	C	D	E	F	G
1	Date	01/02/21	01/03/21	01/04/21	01/05/21	01/06/21	01/07/21
2	Line 1	3	2	6	2	4	4
3	Line 2	2	3	3	1	2	2
4	Line 3	8	3	9	2	2	4
5	Grand Total	13	8	18	5	8	10

Truth is, nobody wants to read your spreadsheet.

If it has more than seven data cells, it overwhelms their senses (unless they're an accountant) and they stop looking or listening.

Anyone can understand your data if it's presented correctly. For people to understand your presentation, you will want to organize your spreadsheet to make it easy to:

- Analyze the Data (PivotTables)
- Chart the Data (Smart Charts)



Secret #1 – Put Your Data in Columns

Instead of using rows, like the example above, use columns, because then you can use PivotTables to summarize the data as needed:

Column Data

	A	B
1	Date	Total
2	01/02/21	13
3	01/03/21	8
4	01/04/21	18
5	01/05/21	5
6	01/06/21	8
7	01/07/21	10
8	01/08/21	3
9	01/09/21	8



PivotTable

	A	B
1	Count of Defect	
2	Date	Total
3	1/2/2021 - 1/8/2021	65
4	1/9/2021 - 1/15/2021	65
5	1/16/2021 - 1/22/2021	52
6	1/23/2021 - 1/29/2021	52
7	1/30/2021 - 2/5/2021	65
8	2/6/2021 - 2/12/2021	52
9	2/13/2021 - 2/17/2021	41



Warning

You cannot use PivotTables with horizontal data. I've tried, it doesn't work.



Warning

According to Microsoft, over half of all spreadsheets use Merge and Center (as headings for reports).

Don't. It makes it impossible to use PivotTables. Use Center Across Selection instead.

Secret #2 – Use Raw Data

Why Raw Data? When you have data that's already summarized by month or quarter, you can't drill down to find out where the numbers came from. You won't be able to answer management's questions about how the data was derived. And it's really hard to do useful data analysis on summarized data.

If you have raw data about various events or transactions, it might look like the following. Again, we can summarize this data using PivotTables:

Raw Data

	A	B	C
1	Date	Line	Defect
2	1/2/2021	Line 3	Folded flaps
3	1/2/2021	Line 2	Bent/Damaged flaps
4	1/2/2021	Line 2	Carton will not open
5	1/2/2021	Line 3	Folded flaps
6	1/2/2021	Line 3	Off color
7	1/2/2021	Line 1	Bent/Damaged flaps
8	1/2/2021	Line 1	Carton will not open
9	1/2/2021	Line 3	Bent/Damaged flaps
10	1/2/2021	Line 3	Ink smears/streaks
11	1/2/2021	Line 3	Folded flaps
12	1/2/2021	Line 1	Bent/Damaged flaps
13	1/2/2021	Line 3	Ink smears/streaks
14	1/2/2021	Line 3	Folded flaps
15	1/3/2021	Line 1	Carton will not open

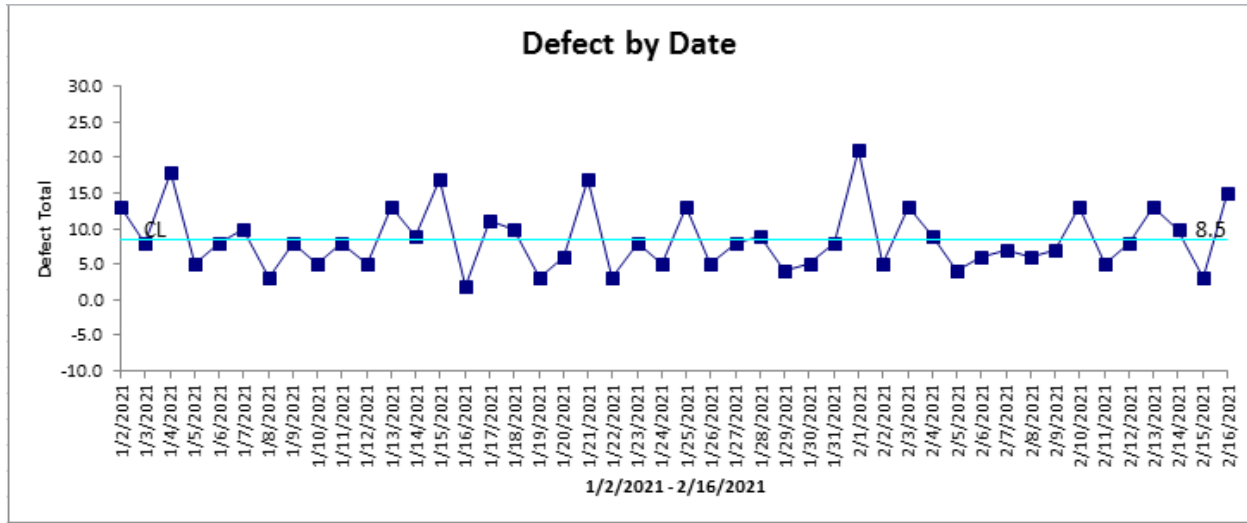
PivotTable Summary

	A	B
1	Count of Line	
2	Defect	Total
3	Bent/Damaged flaps	84
4	Carton will not open	76
5	Damaged Pallet	3
6	Fisheye	9
7	Folded flaps	105
8	Ink smears/streaks	24
9	Mislabeled	3
10	Missing color	8
11	Off color	31
12	Oil spots	14
13	Poor ink adhesion	33
14	Undercount	2
15	Grand Total	392

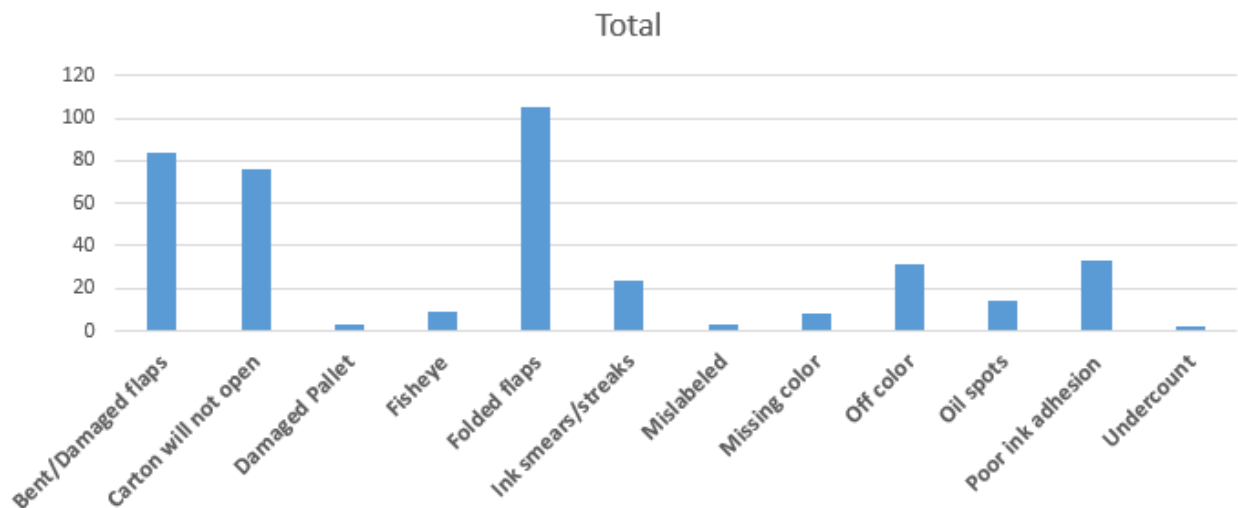


Secret #3 – Turn Data Into Charts That Anyone Can Understand

Traditionally, we use line charts for time series (dates/times) data and bar charts for category data. The data under Secret #1 could look like this:



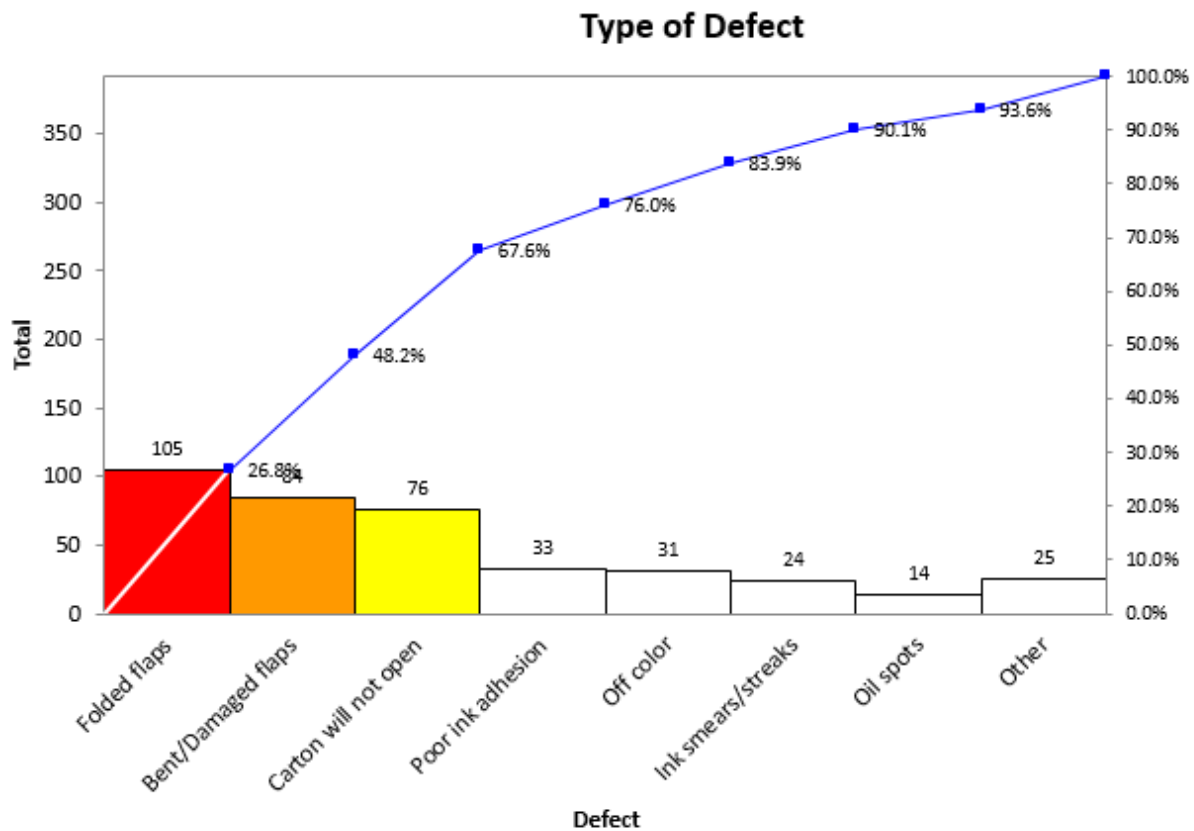
The data under Secret #2 might look like this:





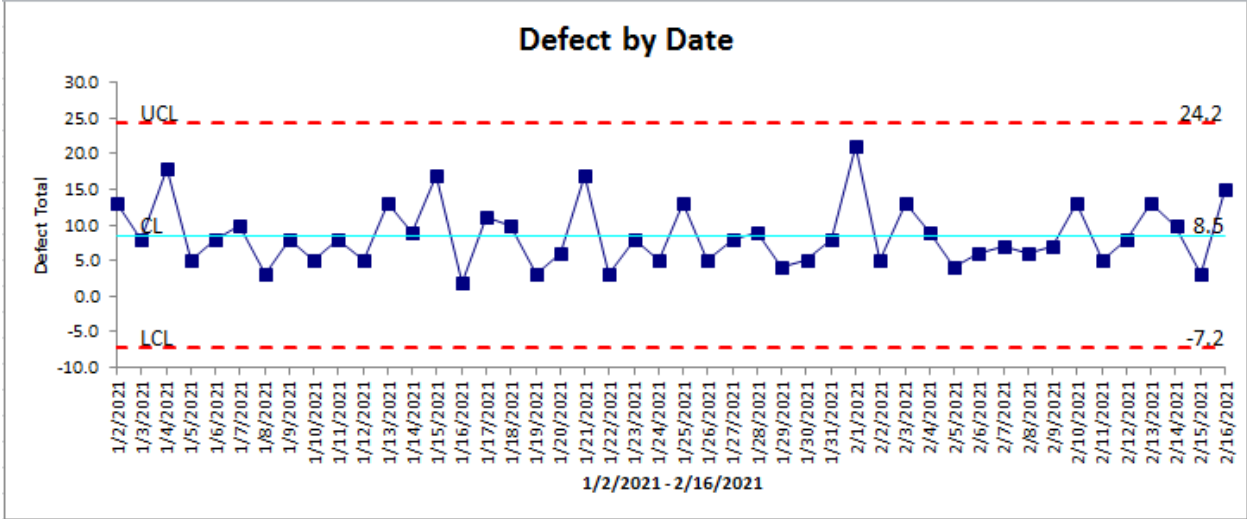
Secret #4 – Use Smart Charts Not Dumb Charts

Line and bar charts can be misleading and confusing. The bar chart above is like a Jack-O-Lantern with bad teeth. What's important about this data? A smart Pareto chart will sort and summarize the data for ease of analysis. The three big problems are on the left. A cumulative line chart shows that these three types of defects are 67.6% of the total problem.



On the previous line chart, the numbers are going up and down, but is there anything management needs to attend to? You can't tell from a line chart.

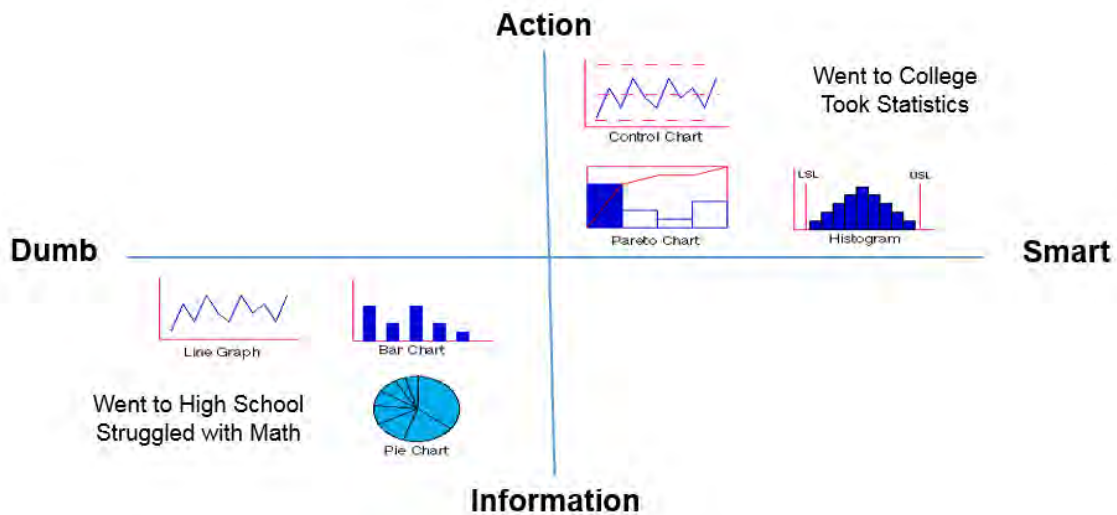
Control charts, like the one below, use statistical calculations to detect aberrant behavior. In this case, the software hasn't identified any points so the process is stable and predictable. No action is required. What if all of your key process indicators (KPIs) could tell this story?



In Summary

- Don't make people read your spreadsheet, they won't do it.
- Organize your data in columns so that it's easy for Excel to read, analyze and chart
- Chart your data using smart performance charts, not dumb line and bar charts. These charts will reveal the insights management wants to improve business performance.

Smart versus Dumb Charts



To learn more about Excel spreadsheets and performance charts, visit our website: <https://www.qimacros.com/free-excel-tips/>.

Jay Arthur



[Jay Arthur](#), the KnowWare Man, teaches people how to eliminate delay, defects and deviation in one day using Excel and the Magnificent Seven Tools of Lean Six Sigma. Jay is the shortcut to results with Lean Six Sigma.

Jay is first and foremost a Money Belt; he knows how to use data to fix broken processes to save time, save money and save lives. Jay has 25 years of experience helping companies save millions of dollars.

Jay is a frequent speaker at Lean Six Sigma conferences, is the author of many popular Lean Six Sigma books published by McGraw Hill including [Lean Six Sigma Demystified](#) and [Lean Six Sigma for Hospitals](#). He is also the developer of [QI Macros SPC Software for Excel](#).