

data **visualization** pitfalls

(and how to avoid them)

We've been using charts to help us understand business data for decades. But even when the data was different, the charts were basically the same.

Now, everything is changing.

Our charts have become **interactive**

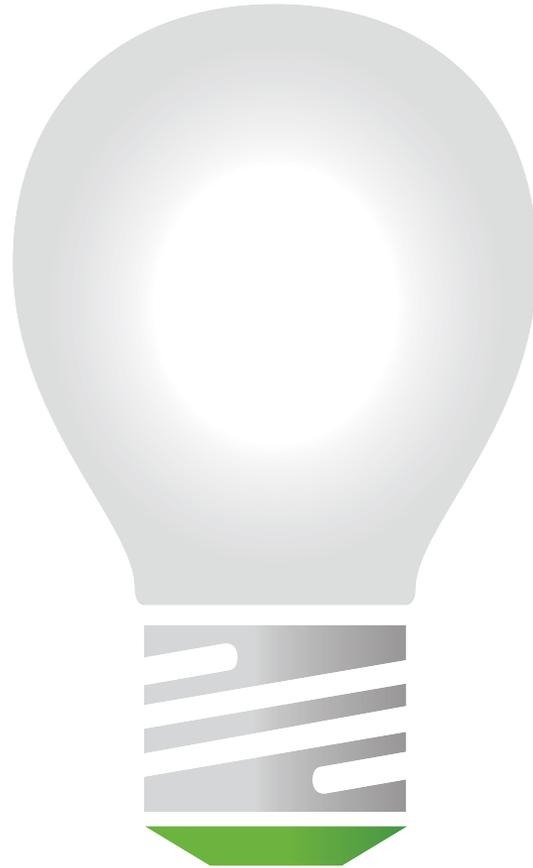


You can **work directly** with the data you see.

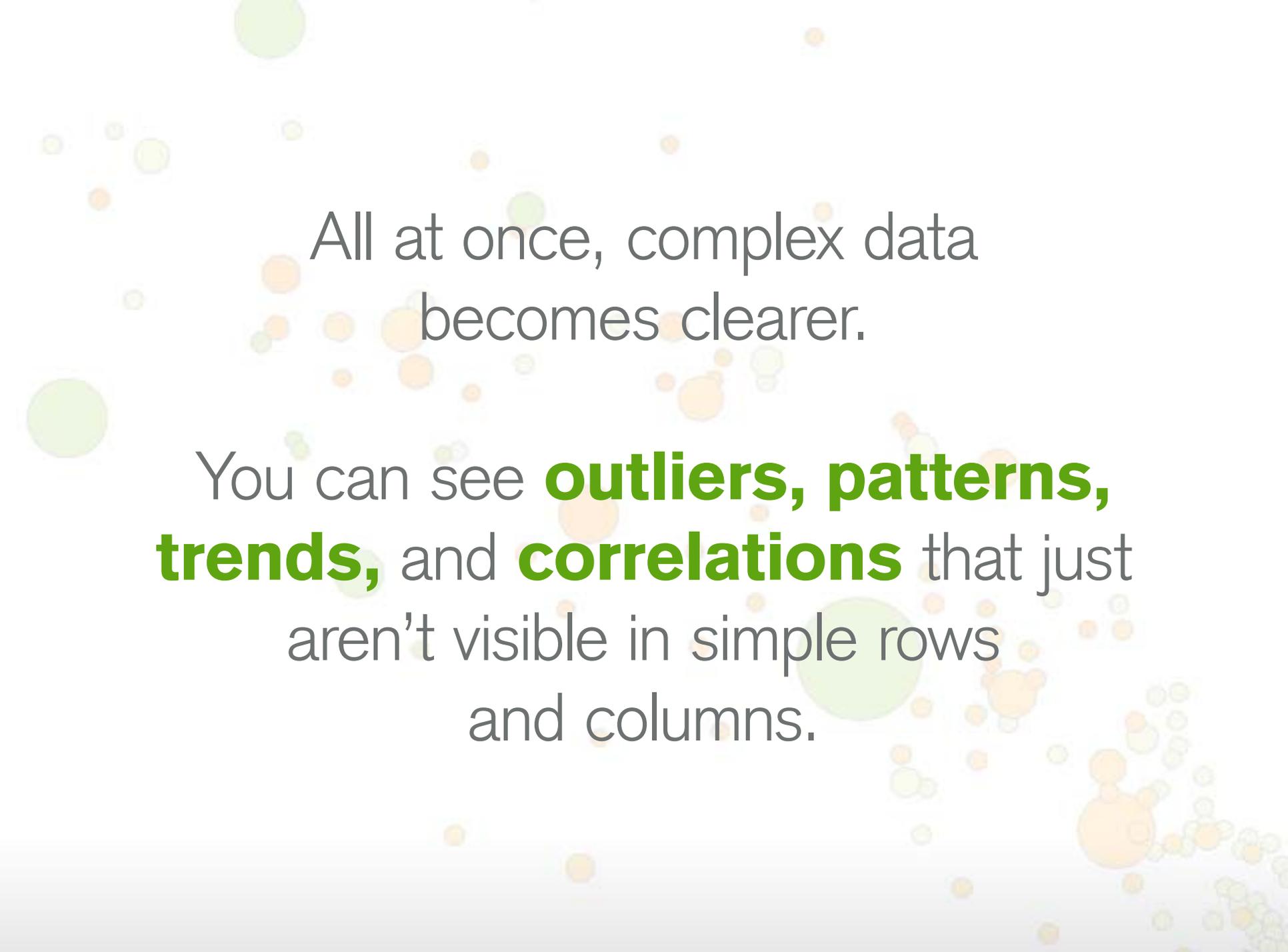
You can **interact** with the visuals to dig deeper.

And you can **navigate** through all your information like never before.

You can interact as quickly as you think...



...and that leads to **insight.**



All at once, complex data
becomes clearer.

You can see **outliers, patterns,**
trends, and **correlations** that just
aren't visible in simple rows
and columns.

And pictures are suddenly
worth more than a
1000 words.

But, to experience the benefits of data visualization, you must avoid the pitfalls.

So, let's get to it...



5 Pitfalls of Data Visualization

1 Color Abuse

2 Misuse of Pie Charts

3 Visual Clutter

4 Poor Design

5 Bad Data

Pitfall

#1

Color Abuse



Color has its place but
don't overdo it in
data visualizations.

The wrong color can lead
to confusion, or even
worse, misinterpretation.

Tip # 1

Always choose your
colors carefully

Analysis always comes first. So, despite what your branding department might say, brand colors are often not the best choice for visualizations.

Consider the color blind, and use shapes and colors that are easiest for the most people to see.

Don't rely on color alone to convey meaning.

Pitfall

#2

Misuse of
Pie Charts

We all love our pies. But nothing is less satisfying than a tiny sliver.

If you try to squeeze too much information into a pie chart, the big picture gets lost. Too much detail leaves your audience feeling unsatisfied and confused.

Avoid using pie charts side by side — it's an awkward way to compare data.



Tip # 2

Use pie charts for the
right data

Pie charts work best for limited data sets that let you easily distinguish each slice of pie.

Use pie charts to compare parts of a whole. Don't use them to compare different sets of data.

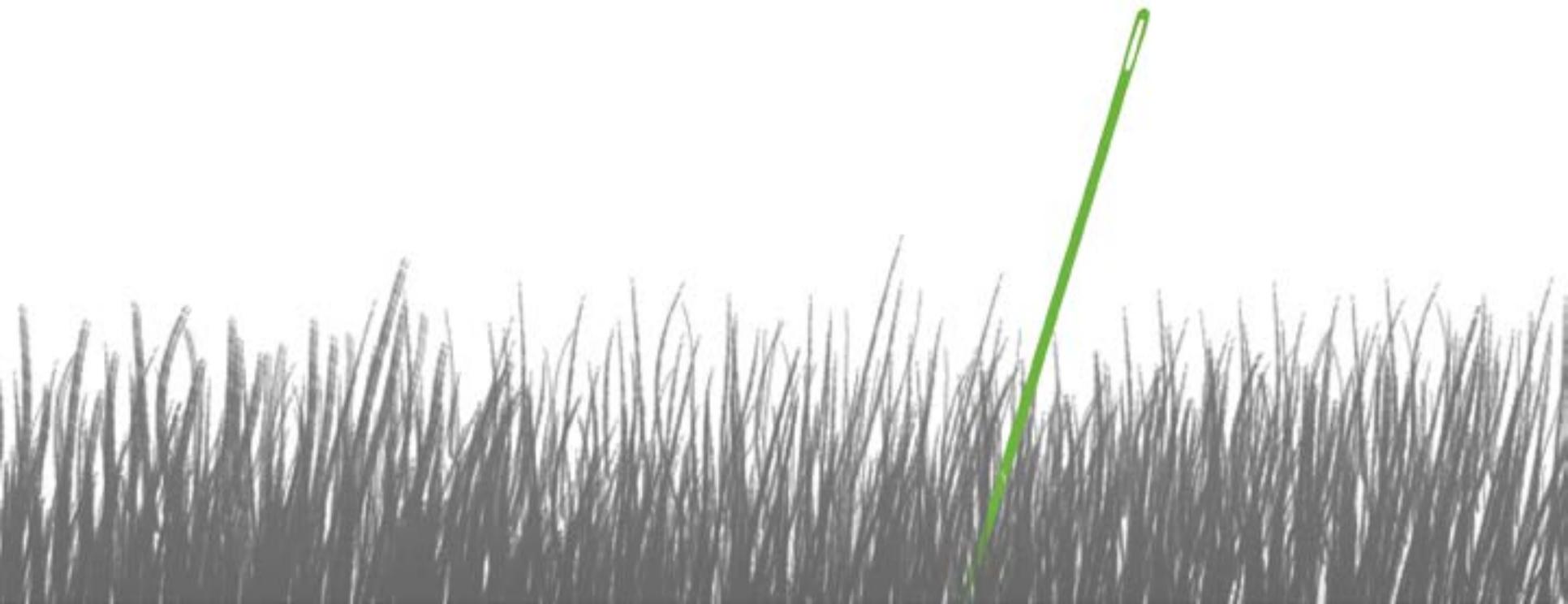
Order your slices from largest to smallest for easier comparison.

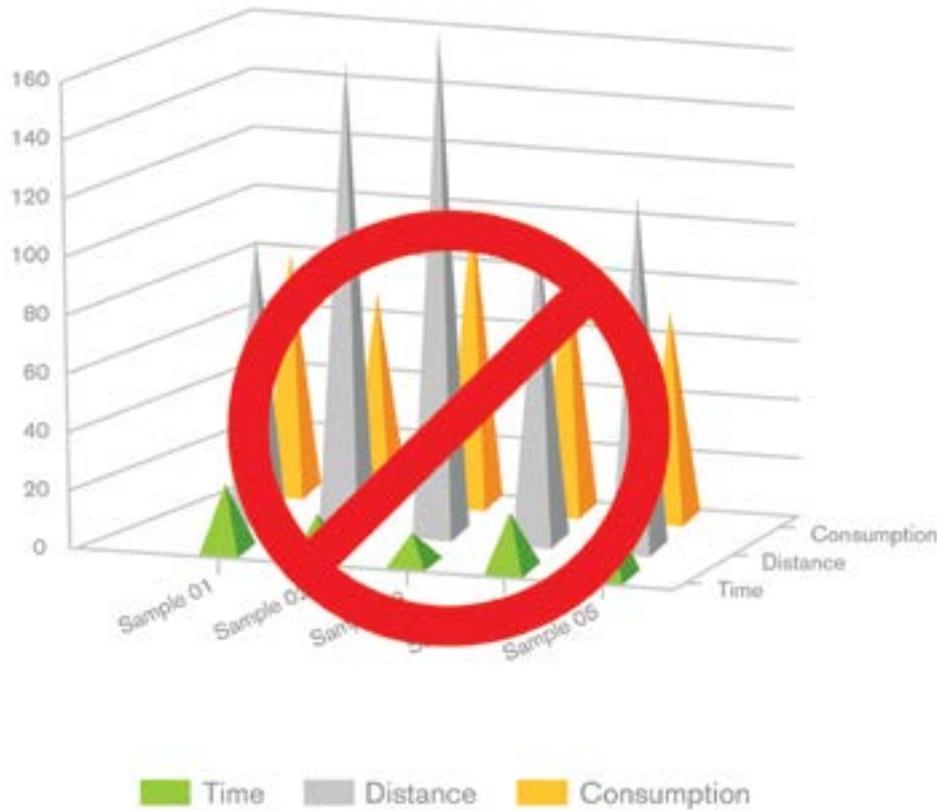
Pitfall

#3

Visual Clutter

Making discoveries in a cluttered visualization is like finding a needle in a haystack.





Too much information
defeats the purpose
of clarity.

And unnecessary
elements - or chartjunk -
crowd a visualization,
obscure meaning, and lead
to inaccurate conclusions.

Tip
#

3

Keep it simple

Limit the number of KPIs in a dashboard to 9 or less. Too many indicators are distracting.

Keep the visualization simple. The less there is to interpret, the easier it is to understand.

If your visual looks cluttered, try a different format. The cleanest format is usually the best.

Pitfall

#

4

Poor Design

“Design is not just what it looks like and feels like. Design is how it works.”

– Steve Jobs

Just because a visualization is beautiful to look at doesn't mean it's effective.

Effective visualizations incorporate design best practices to enhance the communication of data.



Tip
#

4

Enlist professional
designers

Don't just create visuals and
dashboards; design them.

Work with designers to ensure
that the visualization is as
effective as possible.

Pitfall

#5

Bad data



Great visualizations start
with great data.

If your visualization reveals
unexpected results, you may
be the victim of bad data.

Don't let your visualization
become the scapegoat for
bad data.

Tip # 5

Spot and correct data
issues early

Use your charts to spot issues with your data.

Address the issues before presenting your data. Don't let your visualization take the blame for bad information.

Understand the difference between an unexpected discovery and a data issue.

Now you know the secrets to
creating effective visualizations.

So what's stopping you?

Go. Design. Discover.

Want more creative ideas and examples for top-notch visualizations?

Start Here:

Infosthetics.com: Explore the relationship between creative design and information visualization.

Flowingdata.com: Learn how designers, statisticians, and computer scientists use data to better understand the world.

Visual.ly: Create, share, and explore great visual content online.

Perceptualedge.com: Get fresh visual BI insights from the blog of leading expert Stephen Few.

Data Visualization: Use the QlikView demo and video to choose the best chart for any kind of data.

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