DATA

FOR EXECS®

ULTIMATE GUIDE

Real-world Before & After examples

BETTER CHARTS
Fast Fixes for the Big Meeting

BETTER DASHBOARDS
This New Way Changes Everything

BETTER STORYTELLING
How to Win Big with the CEO

+ More Secrets & Surprises!

dataforexecs.com

DATA
FOR EXECS®

ULTIMATE GUIDE

BETTER CHARTS

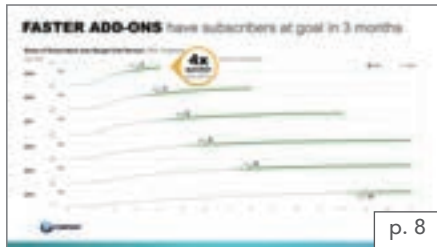# BETTER DASHBOARDS

BETTER STORYTELLING

+ More Secrets & Surprises!

Collecting highlights from Issues 1-4 of Data for Execs® magazine
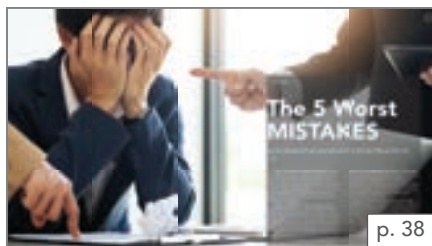
BETTER
CHARTS

All images: Adobe Stock

BETTER
DASHBOARDS

BETTER
STORYTELLING

+ SECRETS
& SURPRISES

Flashy fixes for data

I just checked out the latest edition, Issue 3, of *Data for Execs*. It was a delight to read a visualization magazine in print!

My favorite was the feature on fixing your data presentation issues in a flash. The before vs. after showing how a real-life data story can be improved in 1 minute, 1 hour and 1 day was creative and actionable. A suggestion: adding narratives with key takeaways and recommendations could enhance the storytelling.

— Ganes Kesari, co-founder and Chief Decision Scientist at Gramener

Getting to the points

There are some great points in this edition of the magazine:

- How to show forecasts
- Turning dashboards into informative decks
- Data stories that spark success both at professional and business levels.

This magazine is a must for anyone who wants to step up his or her storytelling game. I plan to do some data visualization makeovers based on the suggestions made in this magazine.

— Sunil Kappal, advanced analytics consultant, datadojo.co.in
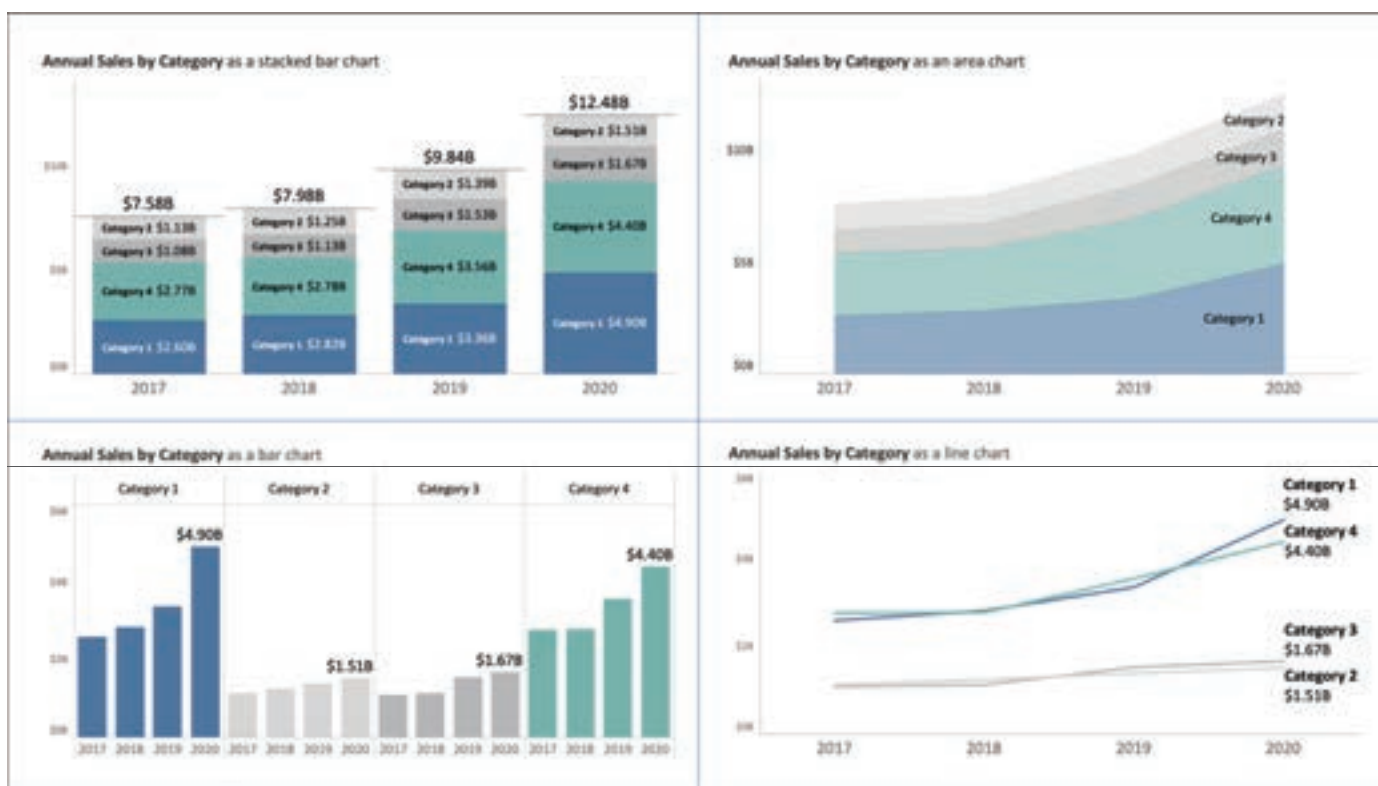
"The choice is clear, right?"

That's how this LinkedIn post started, like the "Is this dress blue or gold?" debate — only much nerdier. I thought it was obvious which type of chart illustrated this data most effectively. My intention was to show a CEO what's driving top-line revenue, so I favored the approach in the upper left. The other approaches didn't quite show how it all added up.

Yet I fell into the trap. I hadn't clarified what story I was trying to tell; I just showed the data. Many insightful comments followed, but a note from Jamie Lewis, a data & analytics manager, summed it up: "What's your goal?" Everyone had a different goal in mind, and each chart achieved something different. Every chart won.

So Many (Helpful) Voices in My Head

Let's talk data at linkedin.com/in/christauber
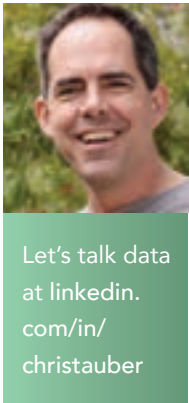
I had to stop everything I was doing. There I was at my desk, too late into the night and too deep into the data. And when I say deep, I mean as granular as you can go without accidentally slipping into the quantum realm. I found myself examining the second-by-second details of one specific store on one specific day doing one specific behavior. How was I going to calculate that, then visualize it, then show the story, then help someone make a decision? I was losing it in every sense. That's when I stopped.

And then I heard the voices. The good voices. The helpful ones. I could hear the director saying, "Just show me what's working and what's not, and let me drill down if I have questions." The exec chimed in, "I need to see if we're on track to hit our goal." And all the book authors I've read and all the LinkedIn experts I follow were in there too, telling me to see the big picture (thanks, Steve Wexler), avoid the data pitfalls (I hear you, Ben Jones), and pursue killer visual strategies (thanks, Amy Balliett).

The next morning, I started fresh. Listening to those voices sparked

a whole new approach that I had never tried before. The resulting visualizations showed the data clearly at a high level, but there was an intuitive path to dive deep, even down to each store and each second — without getting lost.

That experience inspired much of this guide, which includes so many expert voices. The feature "What's Missing From Your Presentation?" alone has 28 data gurus sharing their best advice on how to present data to executives. That's yet another example of the spirit of collaboration in the data community. We can all learn from each other and get better together. And then you'll see new ways to make persuasive data stories that lead to real change in your business.

You can hear the voices too. Follow these experts on social media, read their books, watch their webcasts. Even better, interact with them. Ask questions. Join the conversations. Add your voice. I can't wait to hear what you have to say.

Chris Tauber
Editor, Data for Execs

In defense of stock photos

Cheese factor is an issue when using stock photography with data. That's why this cover at left didn't make the cut for Issue 4, though I really loved the emotion. I carefully sprinkle images throughout presentations to literally put a face on the data. If a stock photo fits your story and makes the communication clearer, use it — it it's not too cheesy.

Why
Bad Slides
are
Bad Business

BEFORE-AND-AFTER MAKEOVERS FIX COMMON CORPORATE ERRORS

The analysts thought the meeting was going well. They had spent weeks digging through customer website data, learning about behavior by hour of day, day of week, time of year. And they had the charts to prove it. A lot of charts, pasted onto a lot of slides. So many, in fact, that their presentation was jam-packed with charts as if it were the world's scariest piñata. The lead analyst swung the bat when he said, "OK, let's go through the deck." Charts went flying everywhere. We were left scrambling to fi d the good ones among all the Tootsie Rolls.

That's (almost) a worst-case scenario when it comes to presenting data on slides. And it's clear why that situation happens: The analysts may be terrific at analysis, but they aren't communicators. If analysis needs to go in front of a client or executives, the solution is often to paste a chart onto a slide, maybe put a title on it, repeat as necessary. That happens for senior leadership sessions, for board meetings, for investor presentations, for too many high-stakes events where clear communication of the data can make or break the business. But there is good in these bad slides. The key is helping the analyst communicate the insights so that the business value is clear.

These slide makeovers will help. The examples are based on actual corporate slides from senior leadership sessions, board meetings and investor presentations. Bad slides are everywhere, leading to lost opportunities. Here are the next steps to rescue those bad slides for the sake of good business.

- ☐ CLEAR FOCUS
- ☐ STRONG HEADLINE
- ☐ QUICK TAKEAWAY
- ☐ DESIGN HIERARCHY
- ☐ CLEAN CHARTS
- ☐ SIMPLE COLORS

TARGETS

Every executive wants to know if the business is on target toward a certain goal. There are so many ways to show this on a slide. The key here is not the type of chart, but the clear visual of the target.

BAR CHARTS

These are the Toyota Camrys of the data world. They're boring and they're everywhere because they're the most reliable choice for the money. And you might think you can't go wrong with them, but …

PIES & TREES

Pie charts should really not be used on a slide or in life. That's even true if you're doing analysis for a pizza company and want to show your slice of the pie. Here's a look at how a tree map works better.

MAPS

Sometimes a map is popped onto a slide just because. That's never a good reason. Either the map should do some work or the map should be let go in order to pursue better visualizations.

LINE CHARTS

You can have too much of a good thing with line charts. Because like the reliable bar chart, the line chart is a proven workhorse that can be effective on almost any slide. Here's how not to overdo it.

TARGETS

BEFORE
What's the first thing you think of when you look at this slide? If you said, "Sea anemone," you're right, which is how this slide goes wrong with what could be a compelling story.
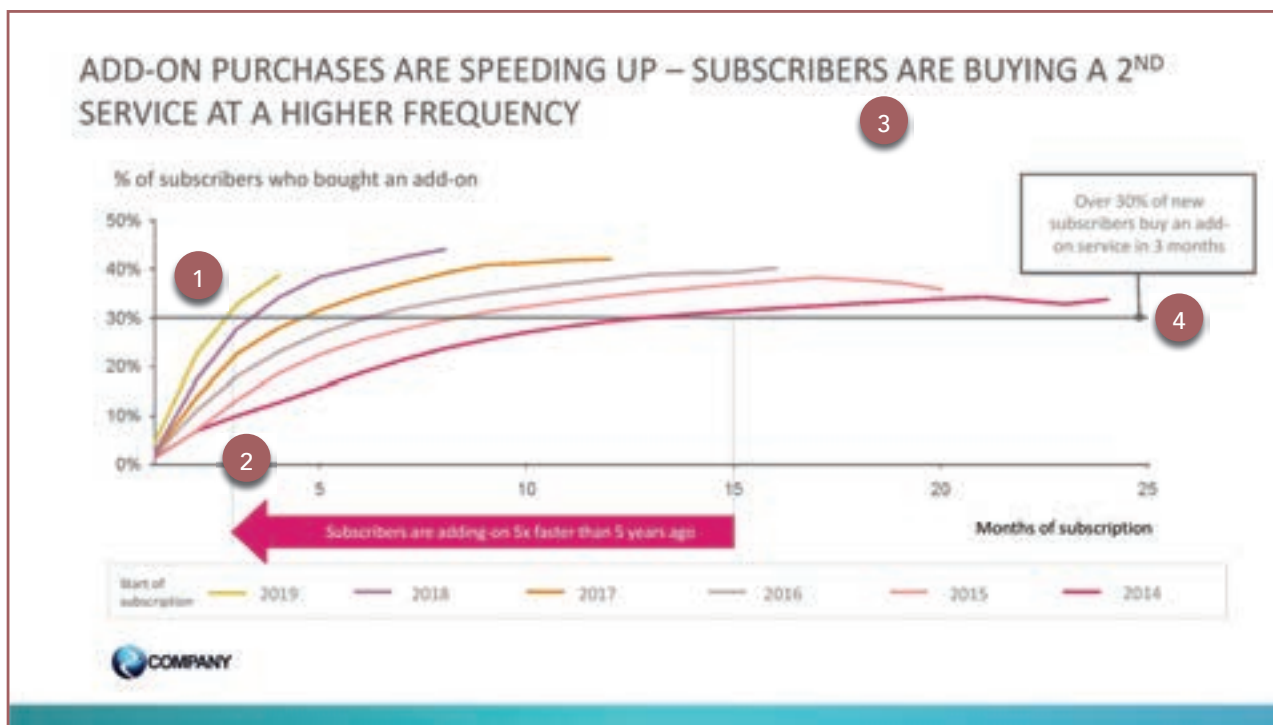
1 You'd never know that this spot is the story.

The yellow tendril crosses the gray line at the dotted line. The audience should say, "Wow, what a success!" But only the analyst can see it that way because of the confusing design.

2 Odd colors make an odd chart more confusing.

The pinks, purples and oranges in the color legend and with that arrow have no inherent meaning. So the audience still has to do a lot of work to decipher what this chart is trying to show.

3 The headline and chart don't go together.

The headline and chart may be on the same slide, but they aren't on the same page. Some of that is because of the headline (which is too wordy for real impact), most is because of the chart.

4 The target's explanation and insight are too weak.

This business-critical information, the entire purpose of this slide, is literally presented off to the side and in a font more appropriate for a footnote than a game-changing finding.

AFTER

The original chart had value that could be drawn out by separating the lines, making the colors more meaningful, and supporting the story with a bold headline and takeaway.
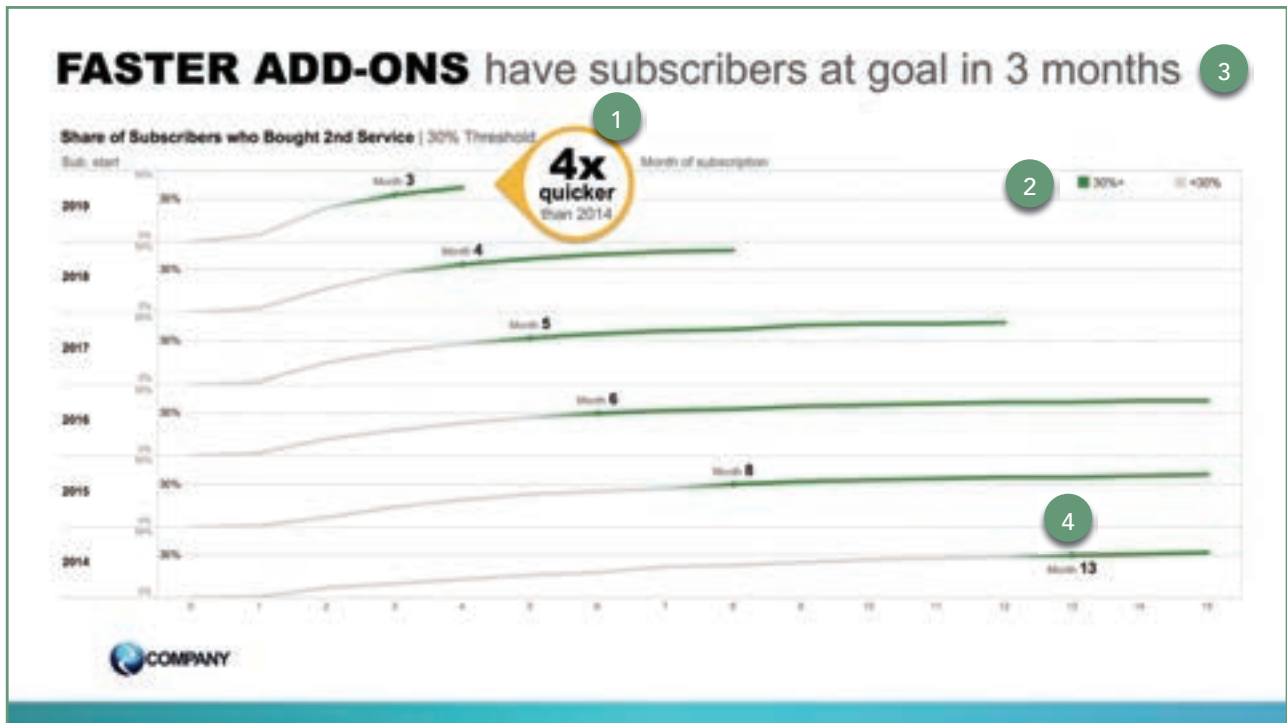
1 Point to what's most important.

If you remember nothing else from this issue, remember that. It's a tip that can somewhat salvage a messy chart on a clunky slide as well as drive home the point on a cleaner slide.

2 Keep colors simple and specific to the target.

If the line is dark green, it passed the target. If it's light gray, it didn't. Done. Avoid other colors that distract from showing the story of how these metrics performed vs. the target.

3 Make the headline big and bold.

For the design hierarchy, this approach anchors the slide and ensures your eye starts at the headline. But this approach also shapes the insight itself so that it truly packs a punch.

4 Add labels for more context on the target.

In this example, the green indicates when the target was crossed, but the "year" data label clarifies the specific year. It's another way to highlight the data that's most important.

BAR CHARTS

This is a classic example of a chart that was simply cut-and-pasted into a slide template. It's a square chart in a widescreen slide. And there's no attempt at drawing out the story.
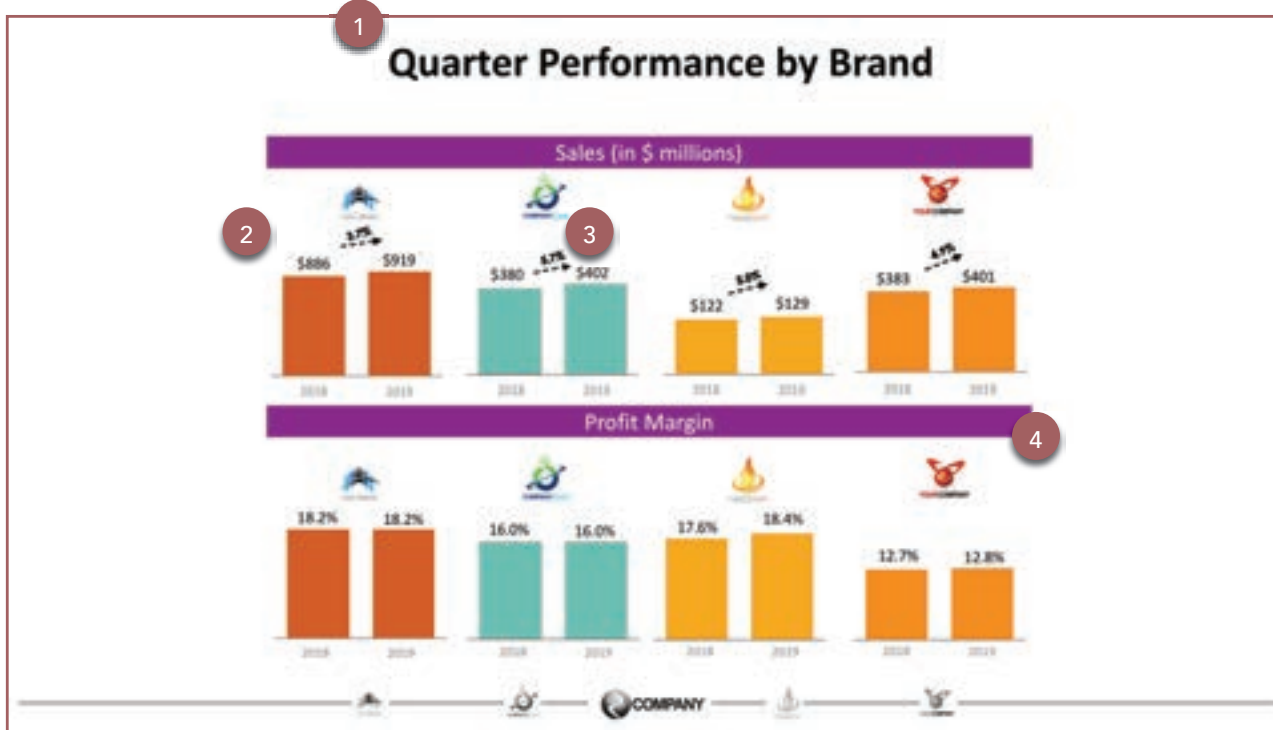
1 It's a red flag if you see a label, not a headline.

This isn't specific to bar charts, but it's a common problem. A label only says what the chart is, not what it means, like the label "Ketchup" on a bottle of, well, ketchup. It just sits there.

2 Random white space and colors are also red flags.

All the space on the sides and the multiple colors show that this chart was inserted from another format without the extra step of making it effective in this widescreen format.

3 The story is buried in a tiny data label.

The chart doesn't align to the strategy if the most important business objective is year-over-year growth. If that's the focus of the business, it should also be the focus of the chart.

4 The secondary metric doesn't support the story.

The metric of profit margin gets nearly equal attention as sales, yet it's virtually unchanged year-over-year — except with one brand, which is likely its own story for another slide.

AFTER
Use that "before" slide as a rough draft for a basic overview of what you've got, but then hone in

1 Capture the story with a real headline, not a label.

Here, the story isn't "Quarter Performance by Brand," it's that every brand is achieving growth. Shout it from the rooftops, or at the very least, from the top of the slide.

2 Convey the point through clear design.

Remove the random white space and colors to structure the slide with a natural flow of left to right, top to bottom, with logos, bars and labels all positioned for easy reading.

3 Point to the story with a can't-miss-this takeaway.

Executives should first see the headline, then read the takeaway, then see the rest of the chart for context. The takeaway literally points them to what's most important.

4 Make the secondary metric appear secondary.

In this example, profit margin is still on the slide under key data labels, but the attention is on the primary metric of sales growth since that aligns to the strategy and the story.

PIES & TREES

BEFORE

The pie chart is the worst offender on this problematic slide, which muddies the story with a weak headline, a random floating photo and a truly head-spinning chart title.

1. Good news: This isn't a label headline. But …

… the bad news is, this isn't telling why this data insight is so important.

2. Maybe this photo means something to someone.

But on this slide, the photo has zero connection to this data or to the story.

3. The business story is buried in tiny type.

No executive on the other end of the conference table will be able to see this.

4. Pie charts and circular titles (!) are hard to read.

People can't compare pie slices well or read this without tilting their head.

AFTER

Famous Harvard professor Michael Porter describes strategy in terms of fit. The principle holds
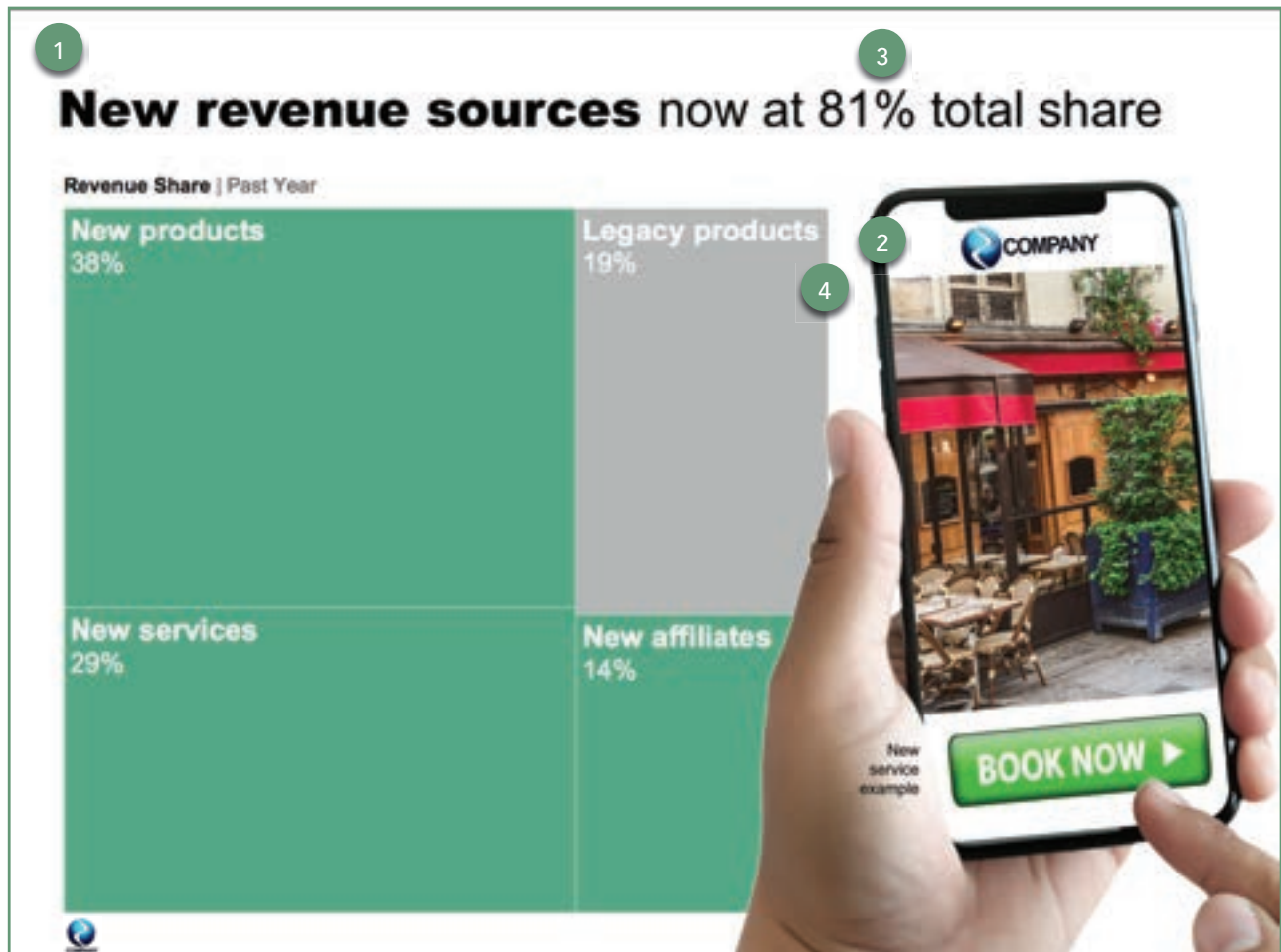
1. **Make the headline grab executives' attention.**

   "New revenue sources" is always a winner, so kick off the slide with that.

2. **Tie the photo to the data and the business.**

   Oh, so that photo was a new service that's driving revenue? Great, show it!

3. **The business story is celebrated in big type.**

   "Wow, that's big news!" is how you want executives to react to this slide.

4. **Tree maps and horizontal titles are easy to read.**

   Always try to replace pies with trees, and never, ever use circular titles.

MAPS

BEFORE
Like the example of the pie chart, this map slide simply doesn't fit together. So the executives have to do the work to decipher why this is so significant to the business.

1   This headline conveys no new information.

The executive audience already knows this, so no need to waste time stating a basic fact that the business has international sales that help growth. How much do they help?

2   These colors add no value to the data.

The orange and purple detract since there seems to be no reason attached to why some countries are orange and some are purple, not sales volume, region, good/bad or anything.

3   The map is decoration, not information.

Maps are one of the oldest and best data visualizations. Yet they're often used, as is this case here, for purely ornamental reasons to convey "this data has to do with geography."

4   The chart is misleading with the relative sizes.

Like the color choices, there seems to be no reason for the sizes given to each country's sales figure. Brazil is by far the largest number, yet its size is the same as countries with lower sales.

AFTER
Ideally this slide would show historical data and a forecast of key countries impacting sales. But

1. This headline highlights the most important info.

The headline should never be an afterthought with lazy words typed in. Instead, it's the entry point for the insight and should be the framework for the data visualization.

2. These colors help illustrate the data.

A green gradient based on sales volume is tried-and-true for a reason. Any executive — anyone — will immediately understand. To further clarify, the color legend is a bar chart.

3. The map is information, not decoration.

Unite the map with the data and the colors to help showcase the insight. In this case, the bar chart at the bottom further shows how far ahead some countries are compared to others.

4. The chart is centered around this takeaway.

Now all the elements of the slide support this main point, that Brazil is leading the way in the dominant international sales. So the decision becomes how to grow that further.

LINE CHARTS

BEFORE
Yes, it's possible to go wrong with this classic chart type. Lines need space to show the movement up and down. In this real-world example, the chart has flatlined, in every sense.
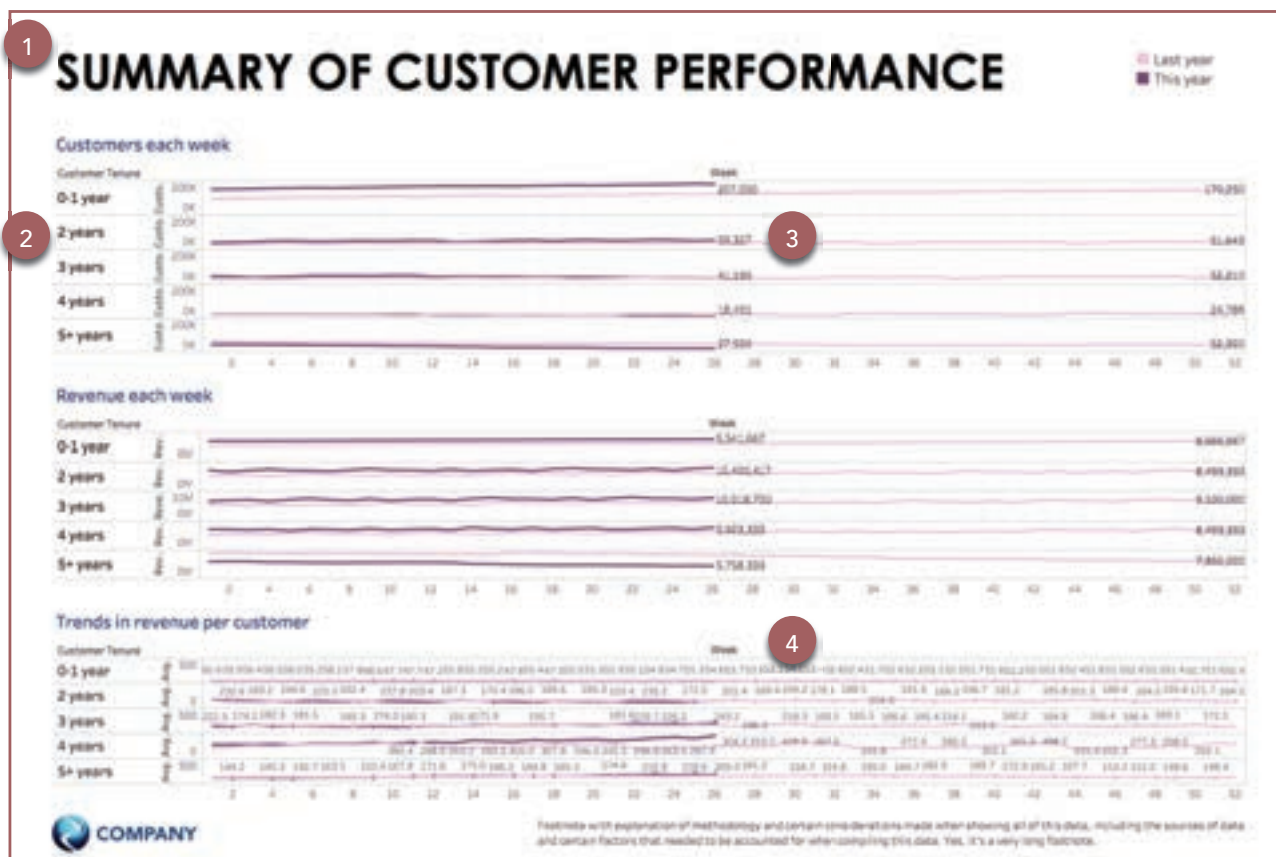
1
The problems start at the top with no story.

Here's another label instead of a headline. Labels are fine for analysts during the analysis, but not for decks.

2
All of these categories are smashing down the lines.

Having each category as its own row ensures that the vertical space will be extremely limited.

3
This very wide space is also smashing the lines.

These lines just aren't given a chance, constricted vertically and horizontally, making them flat and meaningless.

4
Too many KPIs are also killing this slide.

If nothing else, having these KPIs in columns instead of rows could help the line charts breathe a little.

AFTER
That original slide was loaded with data; it just had to be re-imagined to be of more value to an
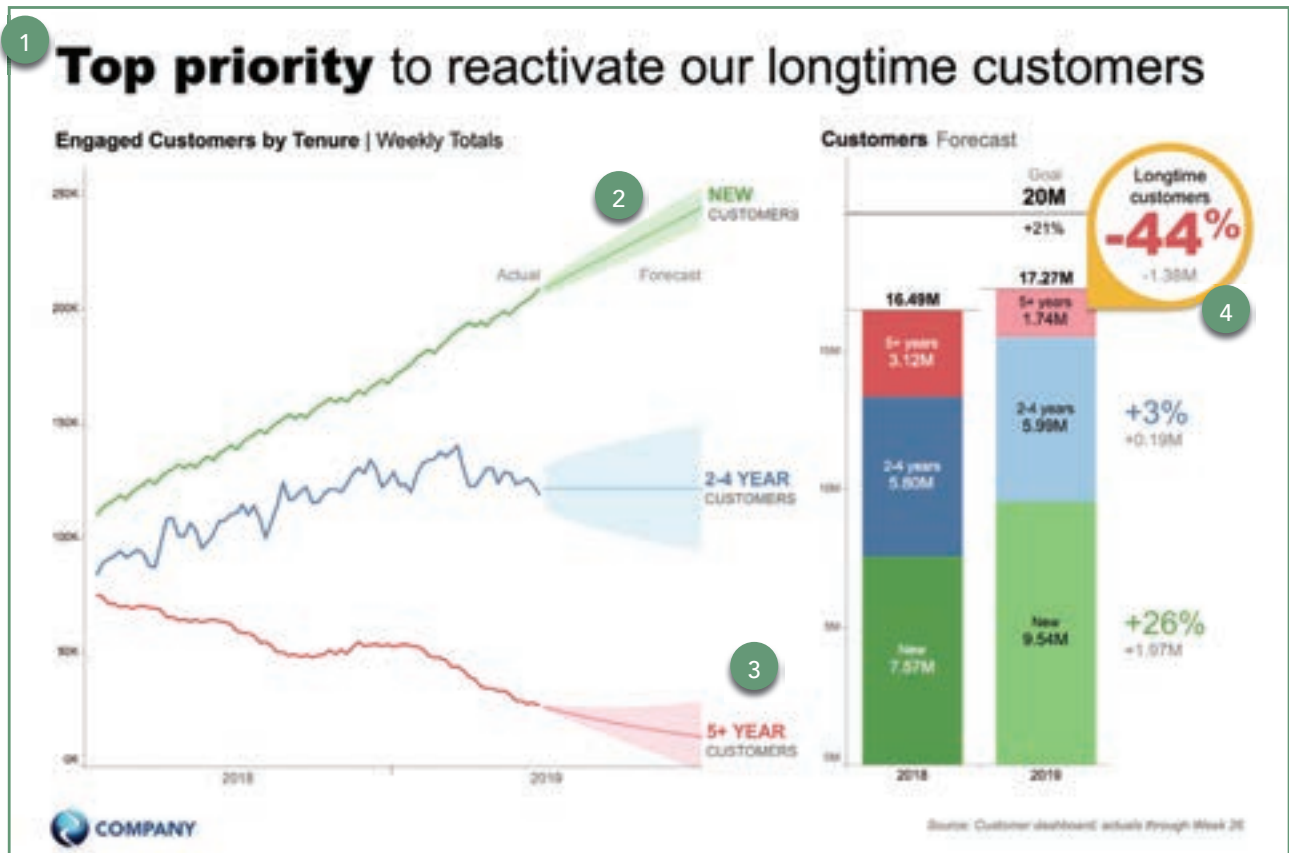
1 Get right to the point
of this business story.

Make the most of the executives'
time by starting with the top
priority rather than digging
around in a summary.

2 Use a line chart to show
a dramatic change.

Buried in the original 15 line
charts was this one trend, now
clearly shown on one chart with
colors and forecast.

3 Show the main threat
to the business.

This same data was in the original
slide but all the lines looked the
same, so an executive would miss
this threat.

4 Support the chart with
a takeaway and context.

A bar chart can complement a line
chart, totaling the metrics. Then
distill the overall insight into the
key point.

BETTER CHARTS

Beauty Secrets of
Pretty Slides

BECAUSE IF DATA DOESN'T LOOK GOOD, THINGS CAN GET UGLY

"I don't need this to look pretty," the executive said. "I just need these 50 data points each month."

With that directive, the analyst started to build a report. Thanks to today's analysis tools like Tableau, it can be hard for data to not look pretty. And it's easy to create a dashboard report with visualizations plus a few slide-friendly views that can be exported straight to PowerPoint. The dashboard and slides — fairly pretty but not too pretty — were proudly presented.

"I said I don't need these to look pretty at all," the executive said. "I just need these 50 data points listed in rows and columns."

"Like in Excel?" the analyst asked with a soul-crushing sigh.

"Yes," the executive said, not happy to crush a soul, but not exactly sad.

The resulting Excel report quickly went live. It was not pretty. In fact, it was ugly. Two months later, it was dead. Too hard to understand. True story.

"Pretty" is worth fi hting for when it comes to presenting business data. At least it is when "pretty" means clear, clean, impactful and memorable. And that stands out in a world that's still too ugly: ugly reports, ugly charts, ugly dashboards and ugly slides confusing everybody in businesses everywhere. Data analysis designed to be clear can make a world of difference.

So what would have made a difference in that story with the Excel report? Communication on what "pretty" means. The executive wanted something useful to guide her decisions. And she wanted to make sure the result had substance, not just flash. The analyst could have done a walk-through of the visuals to show how the "pretty" elements were to make the data clear.

Lesson learned. For the next time you're dealing with ugly visualizations, here's a walk-through of beauty secrets that can make data look good so that everybody comes away looking great.
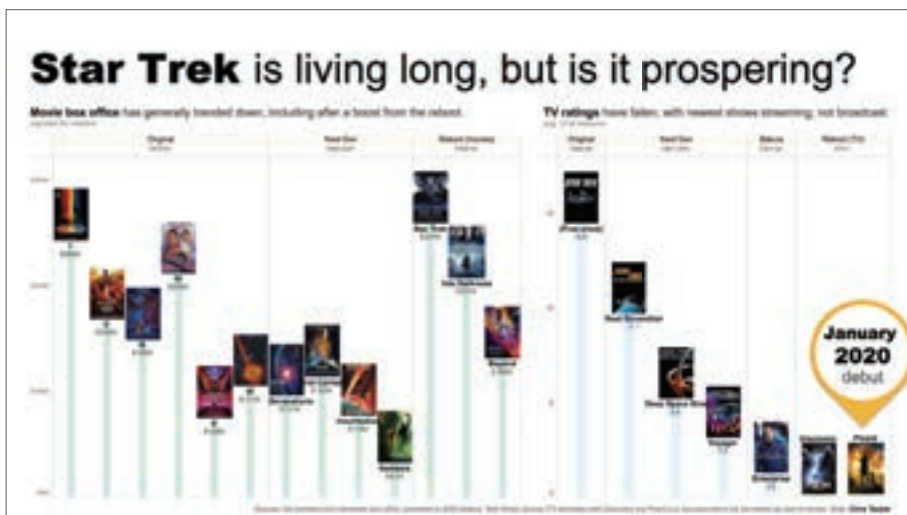
SECRET #1
Use a design structure

One chart per slide is an ideal approach for an ideal world. That way (almost) ensures clear data communication. But for many presentations, more data has to be shown on one slide. To make sure that slide doesn't collapse under its own weight, a design structure can accommodate multiple charts in a way that still shows the story. We'll go deeper into that structure in the following pages.

SECRET #2
Engage with imagery

A picture is worth a thousand Excel cells, if handled strategically. No, this doesn't mean clip art of a bag of money pasted next to a chart on company sales. This means using images to reinforce and further explain the insight. The right images ground the insight in something real and relatable for the executives rather than just showing the abstract data. Even finance executives who say, "Just give me the numbers," can't look away when the images mean something.

SECRET #3
Go big with the story. Really big

This secret comes from the magazine world. To really drive the story home, distill the point to a main visual. Then design a headline and other material that supports the point. Further techniques (which we'll cover in the following pages) make this visual approach even more effective. It's additional work. Finding an insight can be hard enough. Finding the best way to show the story big takes even more effort. But it can pay off.

SECRET #1 Use a design structure

"Still open to serve you"
Outback Steakhouse website example of new messaging for takeaway and delivery amid crisis

Bloomin' lif

Bloomin' Brands Takeaway & De
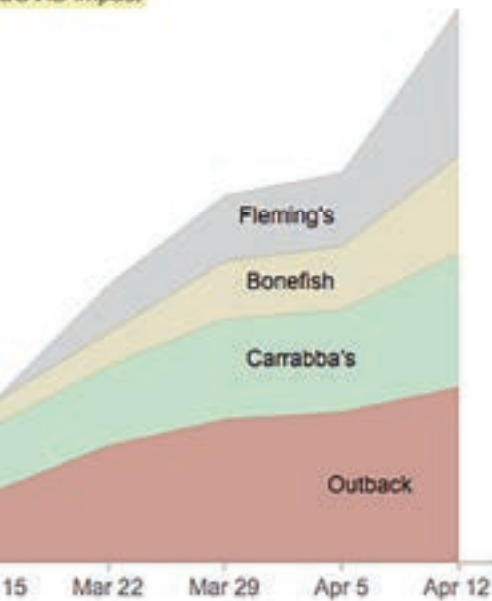
Bloomin' Brands Comparable Sa

DATA

THE BACKGROUND In April, Bloomin' Brands issued a press release about the crisis. The headline was dry: "Bloomin' Brands Provides Business Update Related to the COVID-19 Pandemic." The data was dry too, shown in the typical Excel-style financial tables. The challenge was to reveal a compelling story and bring it to life … all on one slide.

fts "to go" to rally comp sales

livery Sales Weekly per Restaurant

COVID impact
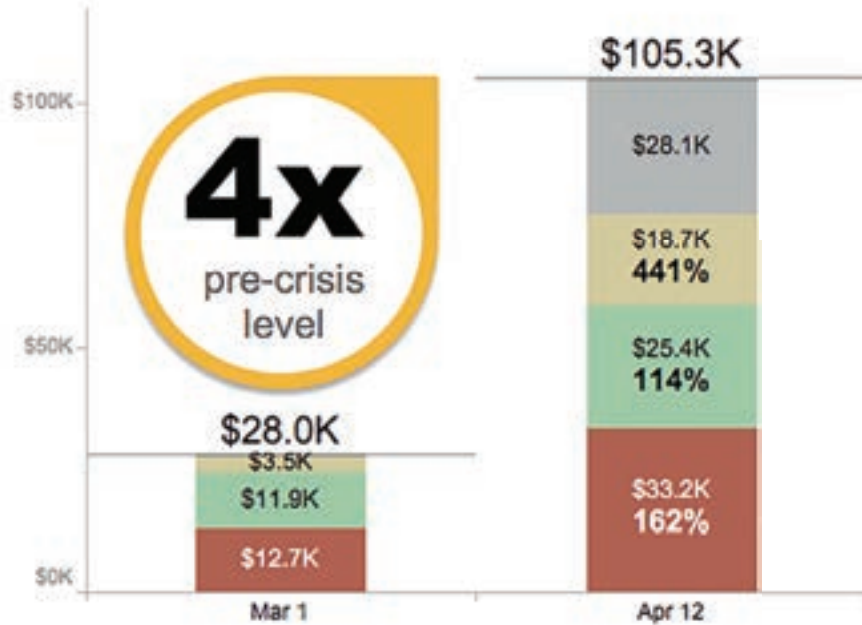
Fleming's

Bonefish

Carrabba's

Outback

15 Mar 22 Mar 29 Apr 5 Apr 12

Totals March 1 vs. April 12 with % change

$100K

$50K

$0K

4x pre-crisis level

$105.3K

$28.1K

$18.7K
441%

$25.4K
114%

$33.2K
162%

$28.0K

$3.5K
$11.9K
$12.7K

Mar 1

Apr 12

les Weekly year-over-year, U.S. company-owned restaurants

Bonefish	Outback	Fleming's	Total
0.4%		1.9%	
-68.2%	-52.2%	-1.9% -63.9%	-55.9%

Mar Mar Mar Apr Apr   Mar Mar Mar Mar Mar Apr Apr   Mar Mar Mar Mar Mar Apr Apr   Mar Mar Mar Mar Mar Apr Apr
15 22 29 5   12   1   8   15 22 29 5   12   1   8   15 22 29 5   12   1   8   15 22 29 5   12
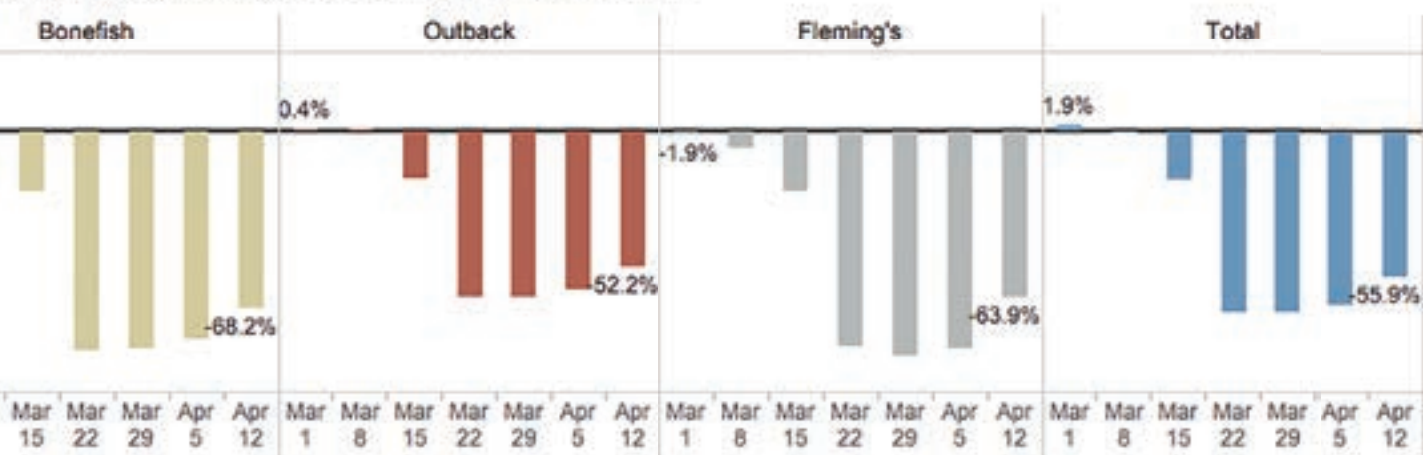
SECRET #1 Use a design structure

Show the customer experience
Make a CX example big as the slide's focal point. The right visual will encapsulate the story quickly and connect the data to the customer.

STILL OPEN TO SERVE YOU >

OUTBACK STEAKHOUSE   ALTAMONTE SPRINGS (Change)

MENU   ORDER   WAIT LIST   OFFERS

GIVE YOUR

OUTBACK STEAKHOUSE

PLAN AHEAD

PLACE YOUR ORDER NOW FOR CURBSIDE TAKEAWAY OR DELIVERY LATER!

ORDER NOW

"Still open to serve you"
Outback Steakhouse website example of new messaging for takeaway and delivery amid crisis

Write a newspaper headline This is no place

Bloomin' lif

Bloomin' Brands Takeaway & De

OUTBACK STEAKHOUSE

CARRABBA'S

BONEFISH GRILL

Fleming's

Have logos be the color legend

When possible, this approach kills two birds with one design element. The logos are more engaging than text, and giving them meaningful colors makes them useful for the charts.

Bloomin' Brands Comparable Sa

Carrabba's

20% — 6.5%

0%

-20%

-40%

-60% — -53.0
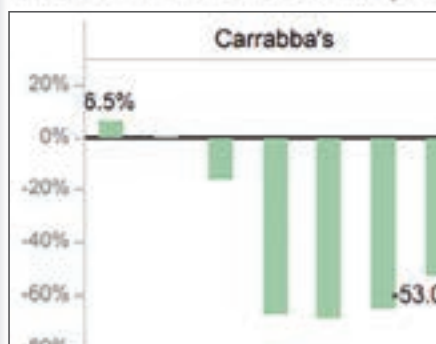
Make supporting data small
Here, the comparable sales are the result, but the story is that "to-go" is the driver. So see the "to-go" charts first, then the

THE TRICKS The CEO of Bloomin' Brands hit on the success of the company's quick pivot to off-premises dining as the crisis set in. The data in the tables supported that strategic decision. So the design structure of this slide is built for that story. At-a-glance, the "to go" messaging, the headline and the "4x" all jump out to convey the story, inviting a deeper
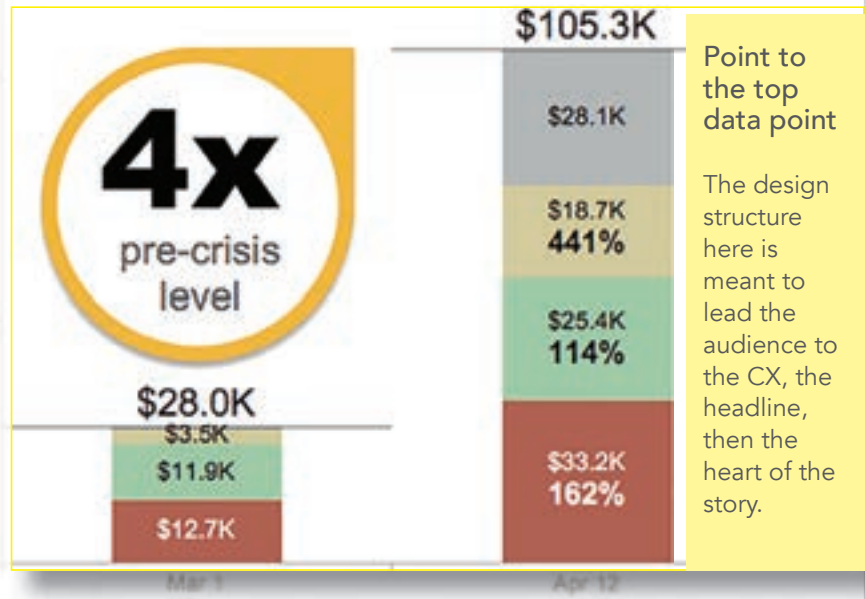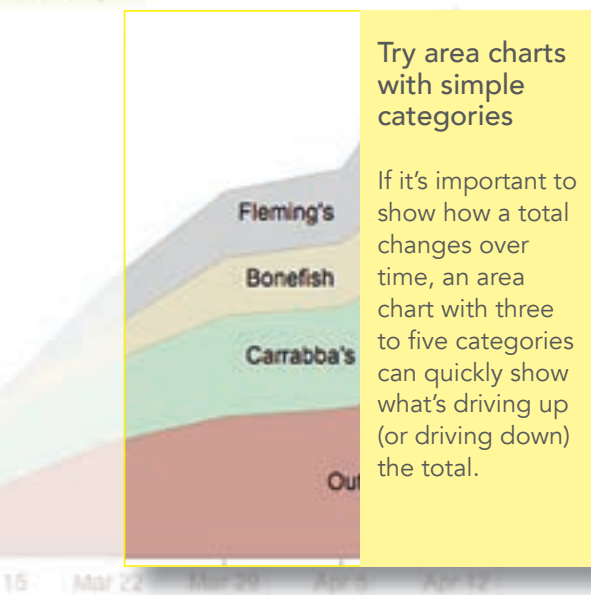
e for a boring label like "The business impact." The headline should be deserving of a kid yelling, "Extra! Extra! Read all about it!"

fts "to go" to rally comp sales

livery Sales Weekly per Restaurant

Totals March 1 vs. April 12 with % change

Try area charts with simple categories

If it's important to show how a total changes over time, an area chart with three to five categories can quickly show what's driving up (or driving down) the total.

4x pre-crisis level

$105.3K

$28.1K

$18.7K
441%

$25.4K
114%

$28.0K
$3.5K
$11.9K

$33.2K
162%

$12.7K

Mar 1

Apr 12

Point to the top data point

The design structure here is meant to lead the audience to the CX, the headline, then the heart of the story.

les Weekly year-over-year, U.S. company-owned restaurants

Bonefish

Outback

Fleming's

Total

0.4%

1.9%

-52.2%

-55.9%

Use the same colors
Because these secondary charts feature the same brands as the main charts, the colors match for a fast read.
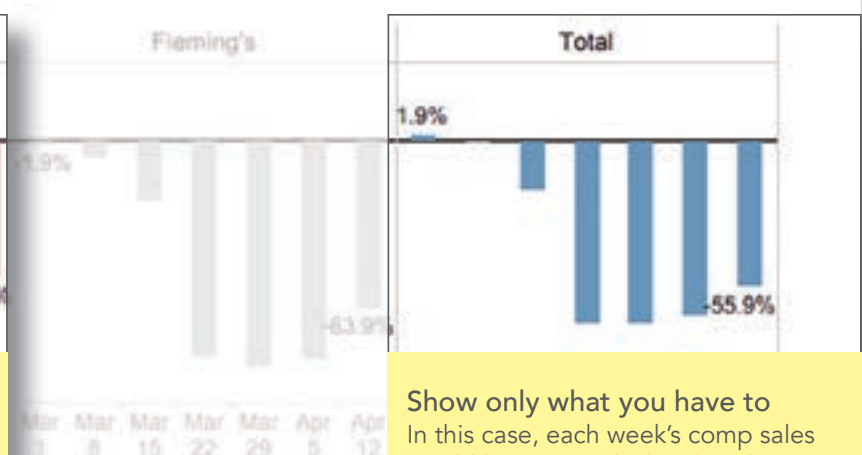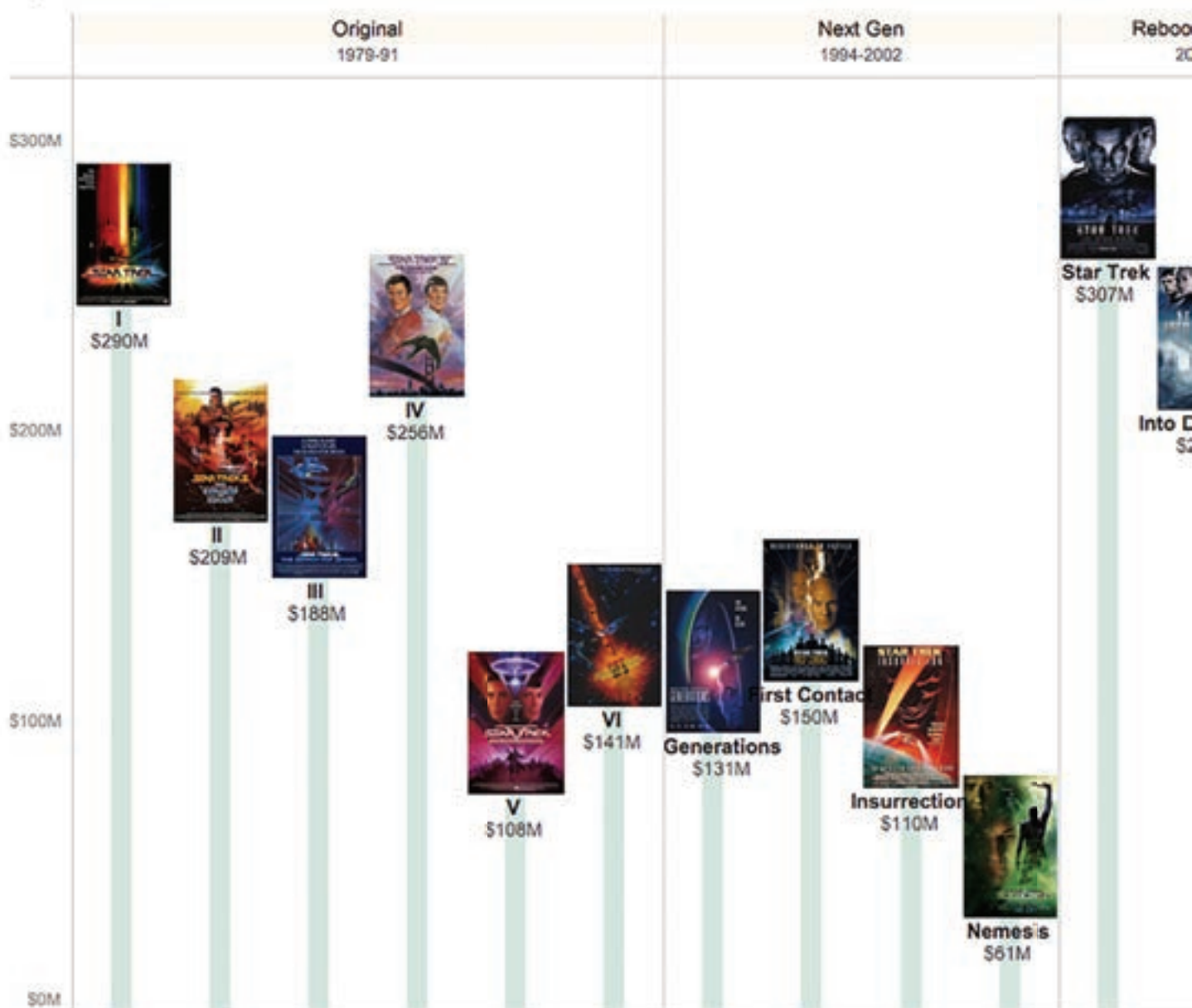
Show only what you have to
In this case, each week's comp sales would be too much detail to show. Instead, these charts show the rebound, understood at a glance.

SECRET #2 Engage with imagery

Star Trek is living long

Movie box office has generally trended down, including after a boost from the reboot

adjusted for inflation

	Original 1979-91	Next Gen 1994-2002	Reboot 20

- I $290M
- II $209M
- III $188M
- IV $256M
- V $108M
- VI $141M
- Generations $131M
- First Contact $150M
- Insurrection $110M
- Nemesis $61M
- Star Trek $307M
- Into D... $2...

Sources: the-numbers.com (domestic box office, converted to 2020 d...

THE BACKGROUND To show the health of the *Star Trek* franchise, *The Wall Street Journal* ran a chart of its TV series, pegged to the debut of *Star Trek: Picard*. That chart used imagery of spacecraft from each show, recognizable only to Trekkies. This slide instead uses posters for wider appeal and includes movies for a more comprehensive assessment.

but is it prospering?

TV ratings have fallen, with newest shows streaming, not broadcast
avg. of all seasons

| t (movies) 09-16 | Original 1966-68 | Next Gen 1987-2000 | Bakula 2001-04 | Reboot (TV) 2017- |

Darkness
251M

Beyond
$169M

(First show)
15.8

Next Generation
11.1

Deep Space Nine
6.6

Voyager
4.5

Enterprise
2.6

Discovery

Picard

January 2020 debut

*ollars), Wall Street Journal (TV estimates with Discovery and Picard n.a. but assumed to be the lowest yet due to trends) Slide: **Chris Tauber***

SECRET #2 Engage with imagery

Match the headline to the images Seems like this is a step that can't go wrong, but it can. Very much so.

Star Trek is living long

Movie box office has generally trended down, including after a boost from the reboot
adjusted for inflation

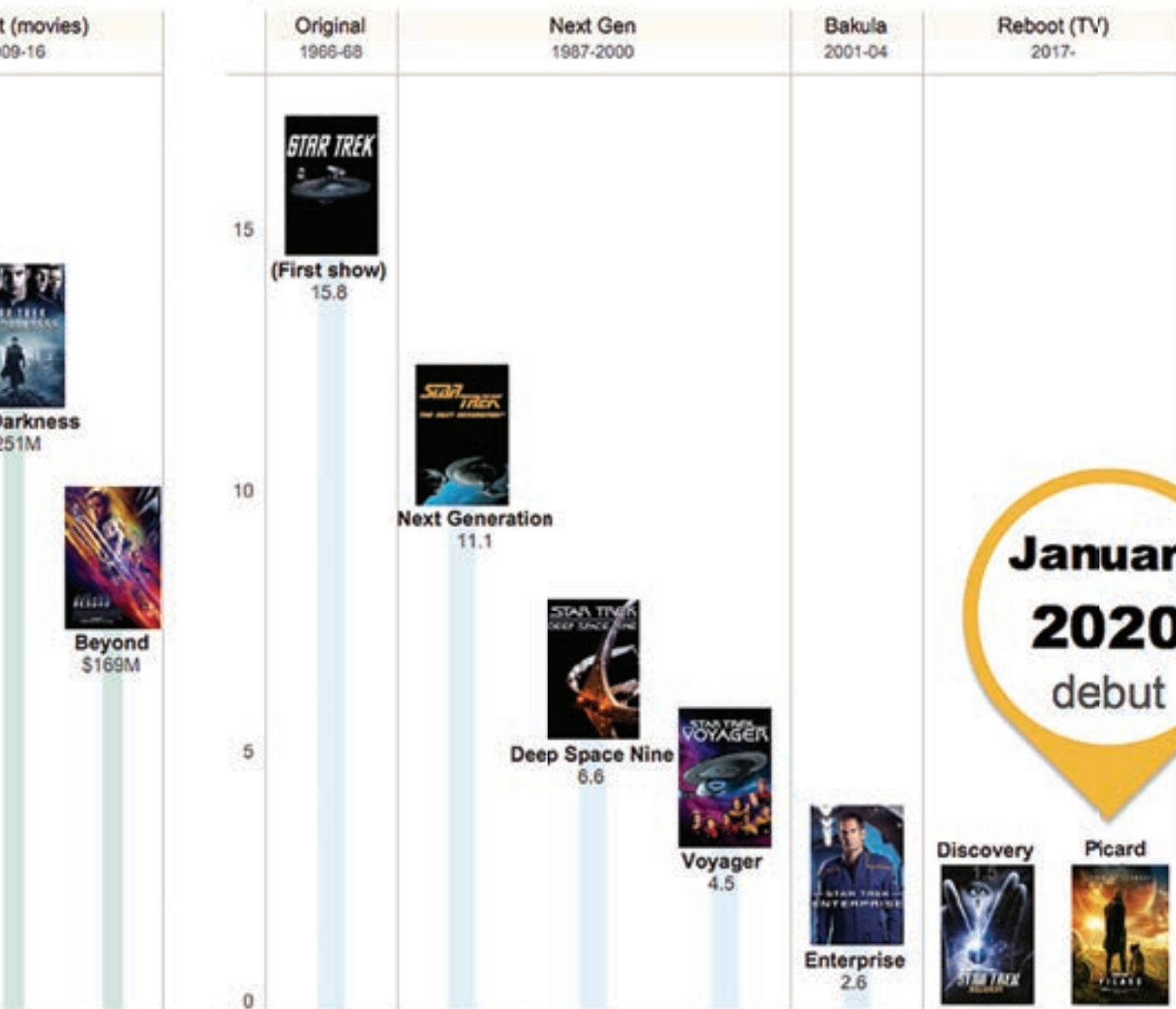**Organize the images**
The key is keeping headings
and lines subtle but helpful.

Original	Next Gen	Reboot
1979-91	1994-2002	20

$300M

I
$290M

$200M

IV
$256M

Star Trek
$307M

Into D

II
$209M

III
$188M

Use white space to guide the audience
Lack of imagery in certain areas is meaningful in this chart.

First Contact
$150M

VI
$141M

Generations
$131M

$100M

V
$108M

Insurrection
$110M

Nemesis

Add an image to a bar
This displays what the data
represents while still using
a very straightforward chart
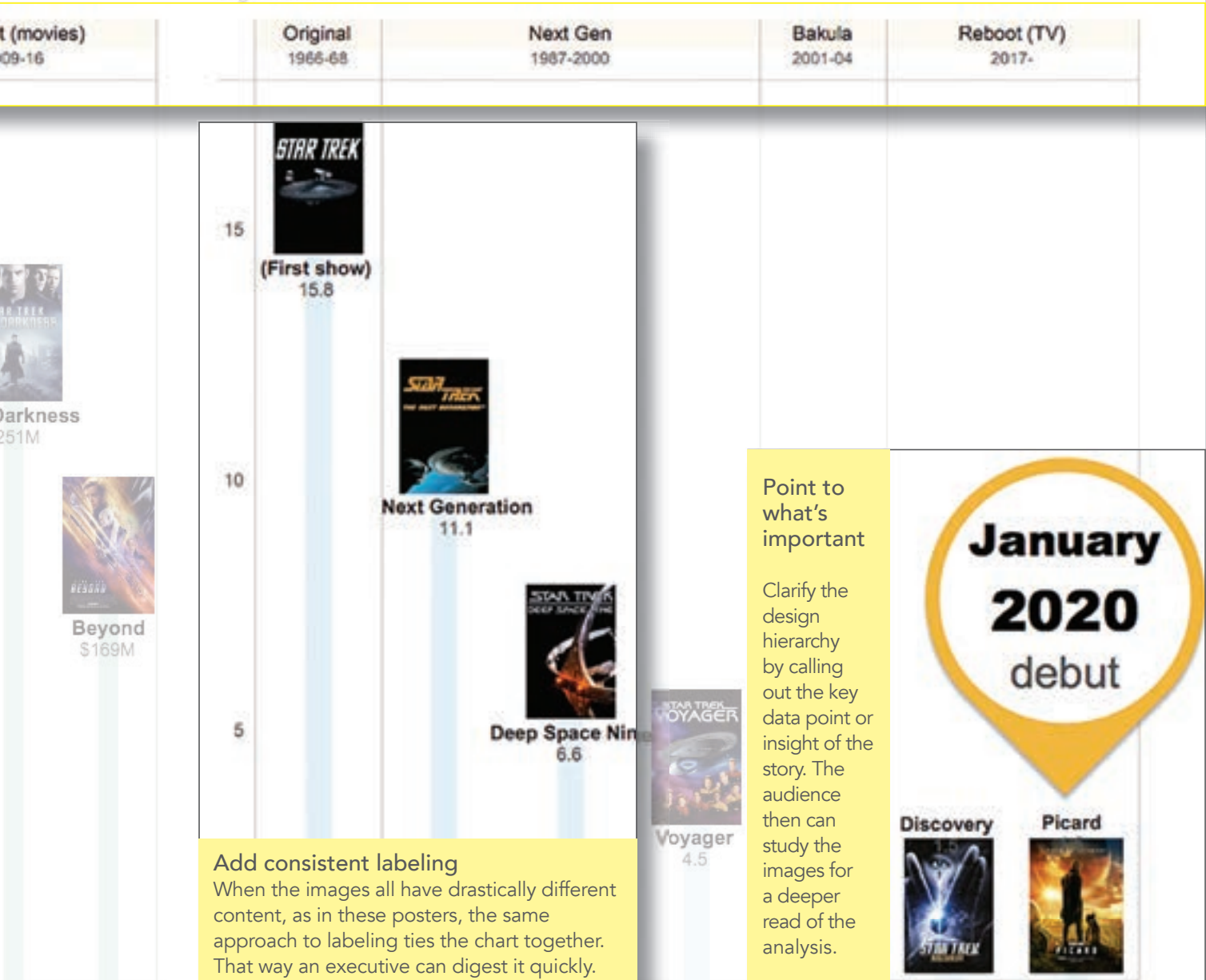that's easy to understand.

$0M

Make thumbnails just big enough
This slide isn't about the details, it's about the big picture.

Sources: the-numbers.com (domestic box office, converted to 2020

THE TRICKS Often one bold image is better than multiple small ones. Actually, an earlier version of this slide had a giant USS Enterprise following a downward line chart. Another had a very sad Vulcan as the dominant image. But the simple bar chart of the data was so compelling, and the small posters were reminders of how Star Trek has appeared in pop
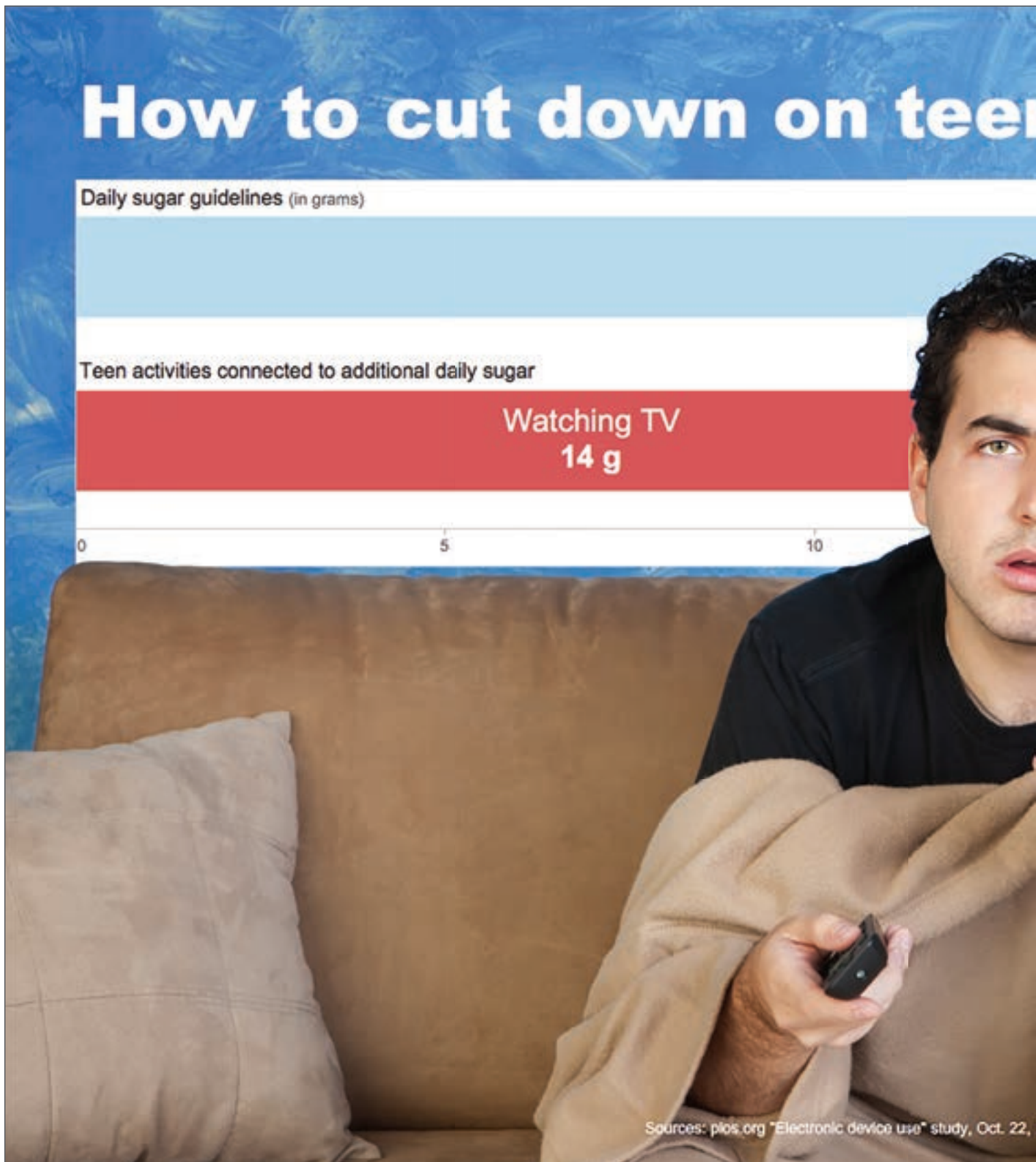
g, but is it prospering?

TV ratings have fallen, with newest shows streaming, not broadcast
avg. of all seasons

t (movies) 09-16		Original 1966-68	Next Gen 1987-2000	Bakula 2001-04	Reboot (TV) 2017-

STAR TREK

15

(First show)
15.8

Darkness
251M

10

Next Generation
11.1

Beyond
$169M

5

Deep Space Nine
6.6

Voyager
4.5

Add consistent labeling
When the images all have drastically different content, as in these posters, the same approach to labeling ties the chart together. That way an executive can digest it quickly.

Point to what's important

Clarify the design hierarchy by calling out the key data point or insight of the story. The audience then can study the images for a deeper read of the analysis.

January 2020 debut

Discovery   **Picard**

dollars), Wall Street Journal (TV estimates with Discovery and Picard n.a. but assumed to be the lowest yet due to trends) Slide: *Chris Tauber*

SECRET #3 Go big with the story. Really big

How to cut down on teen

Daily sugar guidelines (in grams)

Teen activities connected to additional daily sugar

Watching TV
14 g

0   5   10

Sources: plos.org "Electronic device use" study, Oct. 22,

THE BACKGROUND This slide started as a #MakeoverMonday challenge in the online data community, trying to visualize data on device use and health. The chart alone can show the impact of TV and sugar in teens, but in this case, a quick search for stock photos turned up this sugar-glazed look of a teen watching TV. If serendipity strikes, embrace it.

ns' sugar? Turn off the TV

Healthy limit for kids
25 g

Other screen time
8 g

15   20   25

Sugar & screens
hurt teens' health

"Reducing teens' screen time by
just one hour can have huge
benefits to their sleep patterns,
to their weight, to their health
and to their mood."

— Dr. Susan Albers,
Cleveland Clinic

2019; wxyz.com "Teen screen time" article, Jan. 16, 2020. Image: Adobe Stock | Slide: **Chris Tauber** for #MakeoverMonday 2020 Week 3.

SECRET #3 Go big with the story. Really big

Be just as bold with the headline It should match the tone of the big image and be immediately engaging.

How to cut down on teen

Daily sugar guidelines (in grams)

Keep the chart simple
Support the image with a very clear, very unassuming chart that works in the background.

Teen activities connected to additional daily sugar

Make the data point pop
Here, it complements the image: bright red to match the soda can and in line with the teen's eyes.

Watching TV
14 g

0   5   10

Pay attention to the details
This image works for the slide because every part supports the story. The teen is holding a TV remote, all comfortable (actually, way too comfortable) in full couch potato glory.

DATA

THE TRICKS If one image can capture the story, commit to that image as the primary thrust of the slide. Here, the teen's face is literally front-and-center. His expression plus the can of soda and the TV remote paint the picture. The headline explains what's happening. And then the data and the supporting quote simply ground this experience in the facts.

ns' sugar? Turn off the TV

Healthy limit for kids
25 g

Other screen time
8 g

15
20
25

Eye contact is key
Magazine covers use this trick for a reason because it draws you in. Here, the teen is looking right at the audience. The expression, the can, the vibe — it's all there.

Sugar & screens hurt teens' health

"Reducing teens' screen time by just one hour can have huge benefits to their sleep patterns, to their weight, to their health and to their mood."

— Dr. Susan Albers,
Cleveland Clinic

Add supporting context
During the design phase, this slide seemed too distilled and, honestly, too depressing. This kid is never getting off that couch. So to add another layer of information — and a ray of hope — additional research led to this quote. It offers a solution and the return on investment, concepts that any executive will welcome.

2019; wxyz.com "Teen screen time" article, Jan. 16, 2020. Image: Adobe Stock | Slide: **Chris Tauber** for #MakeoverMonday 2020 Week 3.

The 5 Worst MISTAKES

AVOID PRESENTATION MISHAPS WITH THESE BEFORE/AFTER TIPS

Those five words are among the worst you can hear from an executive. The team gathered all the data, crunched all the numbers, analyzed all the metrics and now are presenting all the findings. But instead of light bulbs going off over everyone's head, the leadership team is responding with quizzical looks at all the charts and that dreaded question, "What am I looking at?"

That's the bad news. Mistakes happen all the time, even as data literacy and visualization skills proliferate across organizations. The skills it takes to analyze data usually aren't the same skills it takes to communicate the data. So while that slide may look great to an analyst who's spent hours with the data, the executive who has 30 seconds to make sense of it sometimes can't.

The good news is, these missteps have fixes. What makes the biggest difference is treating the analysis like the rough draft of a story. All the initial data tables, findings, charts, even headlines are more like notes than a polished story. And that's great, actually, because it's very, very hard to create a story from a blank page. The analysis is the raw material that's essential to crafting a story that business leaders can understand fast.

So how do you avoid presenting your rough draft? By marking your shift from analysis mode to story mode. In analysis mode, it doesn't matter if your color palette is wild, your headlines are long, your visuals are placeholders. In story mode, it all matters. That's the time to make careful choices about each color on the chart, each word in the headline, each visualization of the data. Revise, then revise, then revise until the visuals are tight and the story is solid. All of that is to get the executives to say the best word, "Yes!"

MISTAKE #1
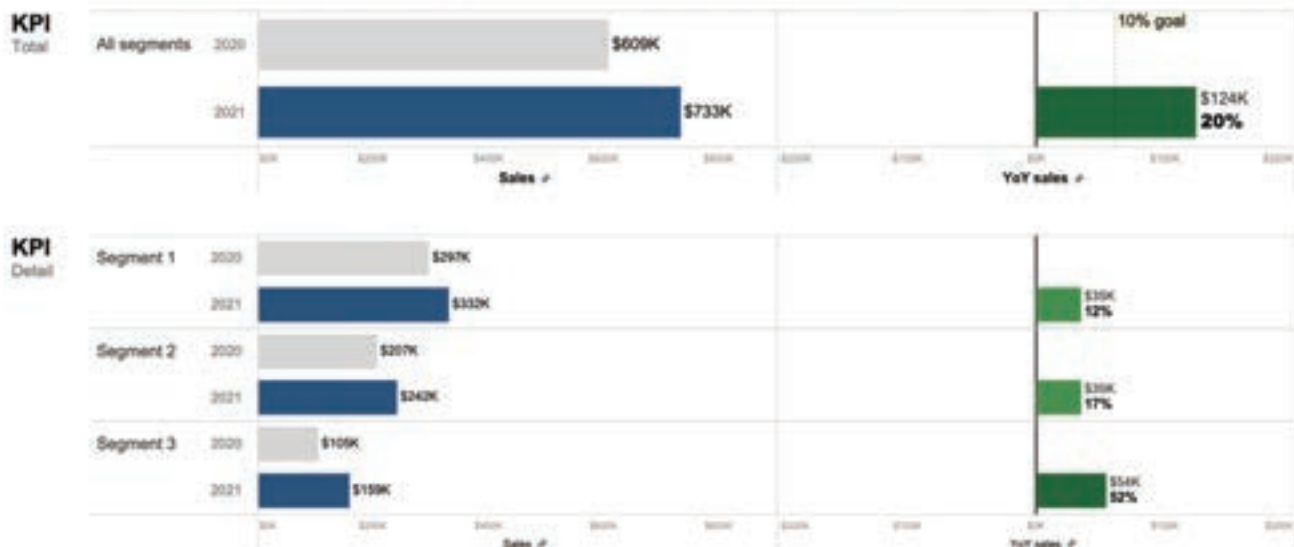**Presenting a data table**

BEFORE — This is a classic example of a rough draft that should not be presented to a high-level or broad audience. The material is all here, but this is raw material. Now comes the switch from analysis mode to story mode.

AFTER — In this case, executives want to know if we beat goal. Show that. The headline shouts it, and the top chart visualizes the sales. Going deeper on the slide goes deeper into the story on how segments contributed.
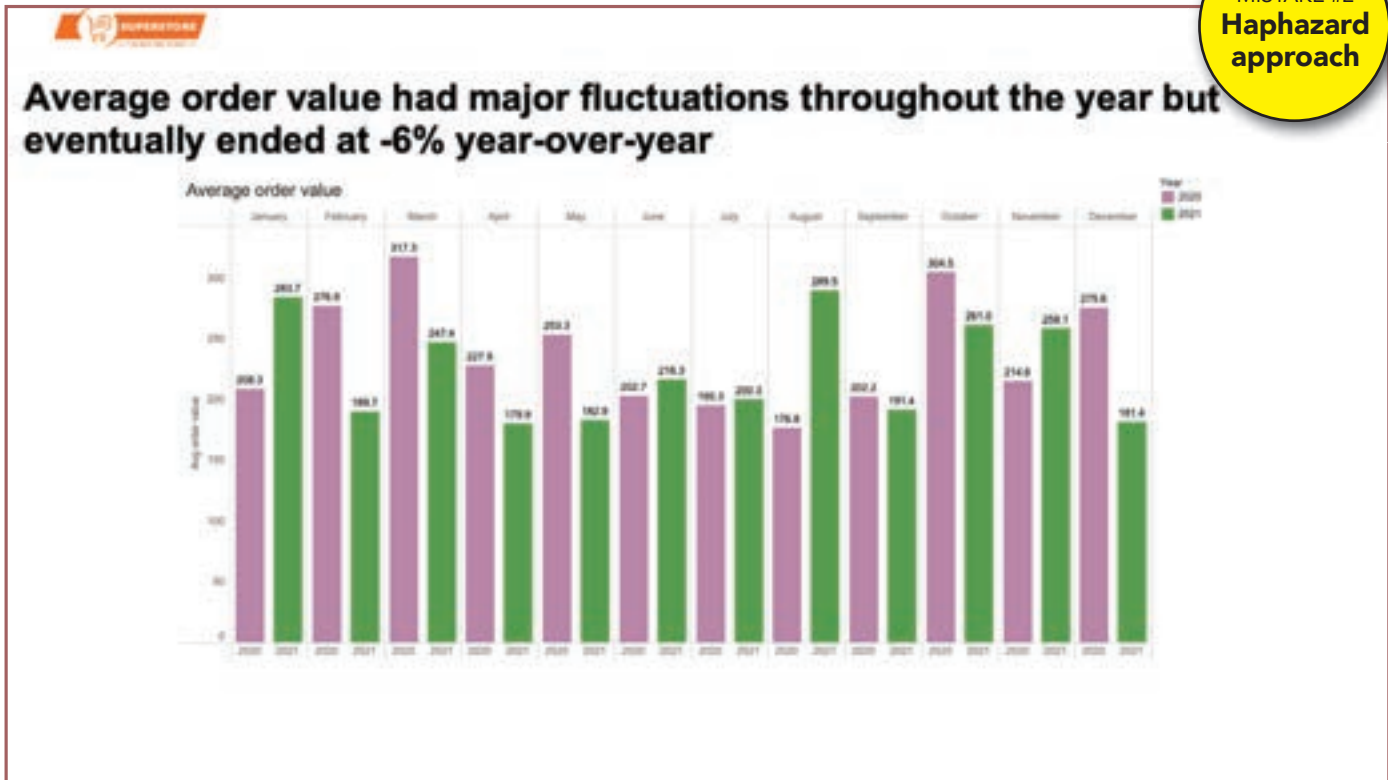
DATA

MISTAKE #2
Haphazard approach

Average order value had major fluctuations throughout the year but eventually ended at -6% year-over-year

Average order value

| | BEFORE | The headline isn't tight. The colors are confusing. The bar chart is clunky. The executive has to do a lot of work to decipher what's happening. And it all looks thrown together, which damages credibility. |

| | AFTER | If you can say the story in 7 words instead of 17, do it. The headline is tight. The visuals and design are polished. The visuals illustrate the headline, that the months were volatile, sending the year negative. |

Fluctuating AOV ends at -6% decline overall

Avg. Order Value
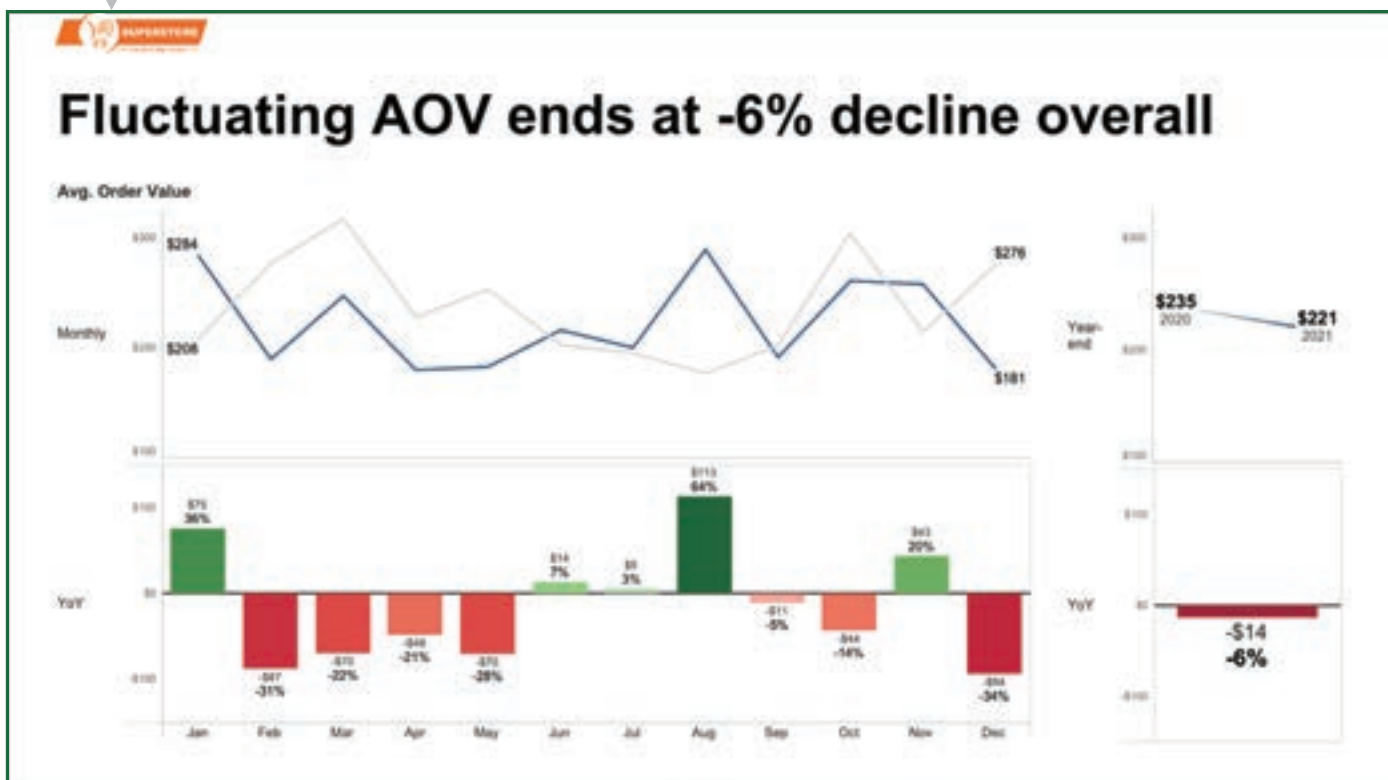
MISTAKE #3
Using SmartArt

Ecommerce funnel: Sessions & progression rate

Home 52.5M | Catalog 23.1M 44% | Cart 5.1M 22% | Review 3.4M 67% | Orders 3.1M 91%
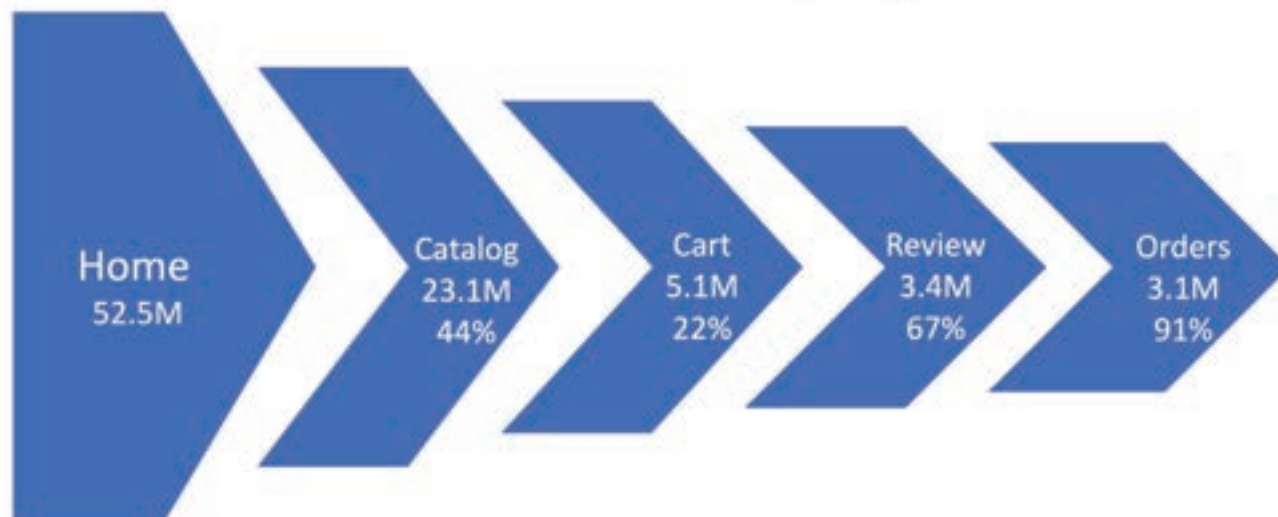
BEFORE PowerPoint's "SmartArt" visuals are often neither smart nor art. The chevrons do communicate movement in a funnel, but they distort the data. That starting 52.2M is not proportional to the ending 3.1M.

AFTER Sometimes trying to shoehorn funnel data into a funnel visualization isn't the best way to show the story or the action needed. The tried-and-true bar chart keeps the proportions true and the problem clear.

Funnel's worst progression is Catalog to Cart
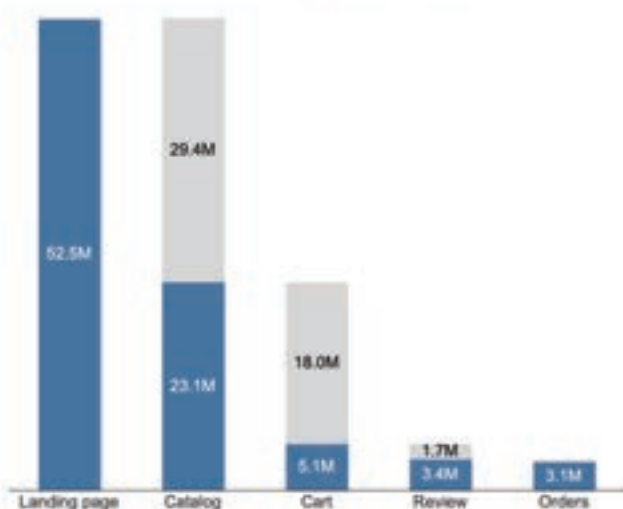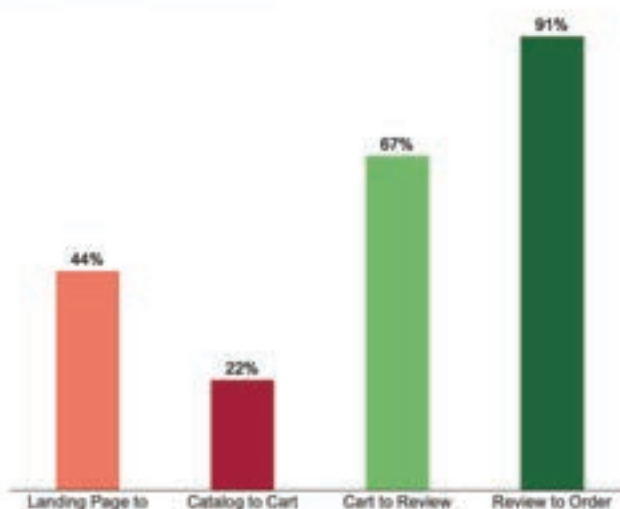
New email campaigns were a big success

18.91%
click-through rate
best of the year so far

11.26%
open rate across all
new campaigns set a
record

752,541
sessions for our
digital platforms

$2,346,240
In revenue, more
than 2x that of last
year's campaigns
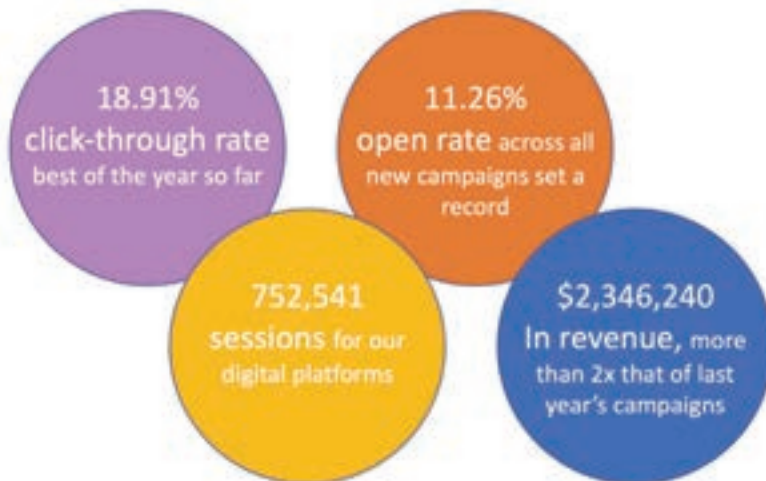
BEFORE Here's more raw material ready for an executive makeover. These are interesting data points alongside a lot of creative. But now think about what's most important: Did we make more money, and if so, how?

AFTER The real headline was buried in those data points, a common mistake. In this case, revenue doubled. Wow! Celebrate that in the headline. Focus the visuals on the campaign that made the biggest impact.

This year's email campaigns double in revenue

Total Revenue by Email Campaign with year over year %

2020 | Campaign 1 $0.34M | Campaign 2 $0.50M | Campaign 3 $0.17M | **$1.08M**

2021 | Campaign 1 $0.95M 176% | Campaign 2 $0.63M 27% | Campaign 3 $0.50M 201% | Campaign 4 $0.26M 241% | **$2.35M**

11.3%
open rate
New record!

18.9%
click-through rate
Highest YTD!

0.75M
digital sessions
Top traffic source!
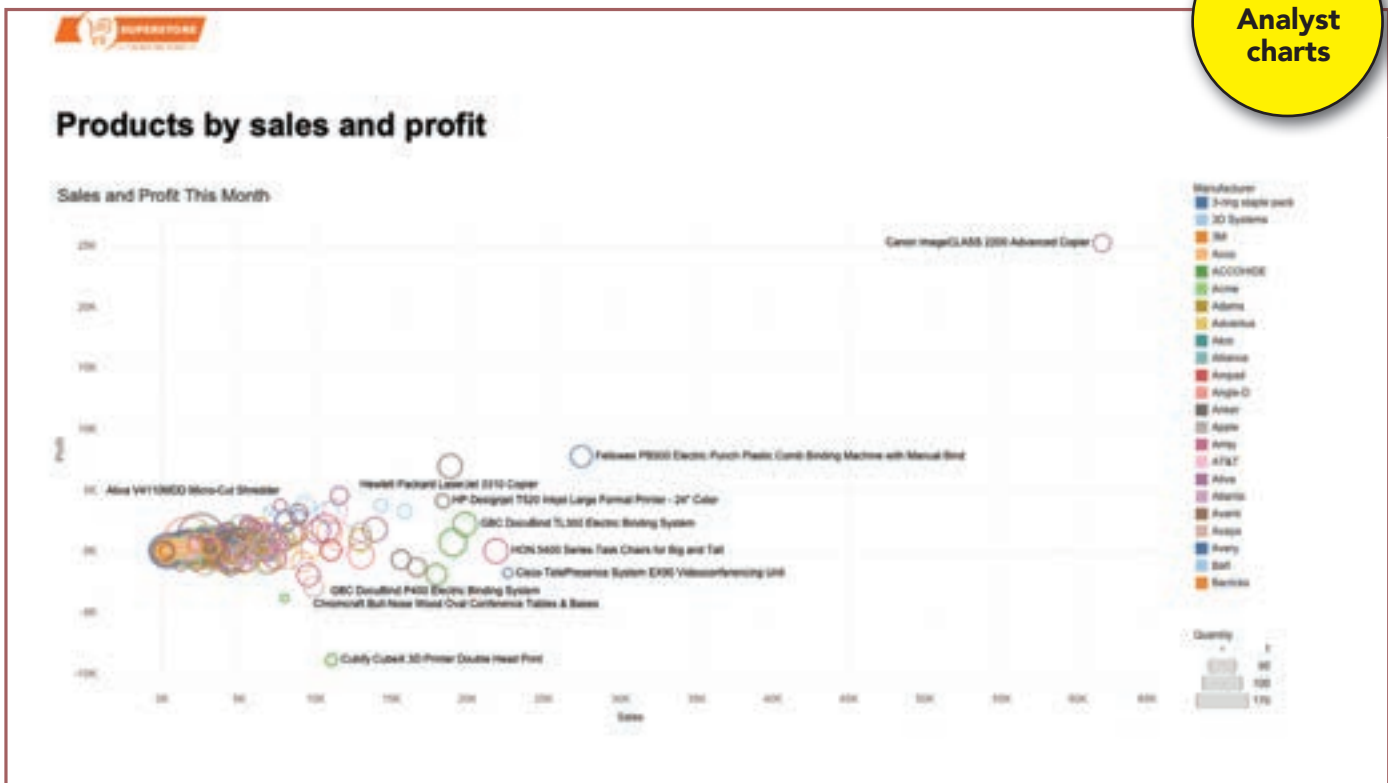
BEFORE

Atypical charts can be hard to digest

Why are bar charts and line charts so common in business? Because the boss can understand them fast. Yet if your story can best be told with another type of chart, you need to make that chart as easy to understand as possible. In this example of a scatter plot, we're a long way from comprehension.

Don't use a chart label as a headline

"Products by sales and profit" is what this chart is, not what it means to the executive. The headline has to drive the interpretation of the data. It's the answer to, "What am I looking at?" But if the presentation still has a chart label for a headline, that's a sure sign that this visualization was likely cut-and-pasted from a tool and dropped onto a slide without polishing into a final story.

White space can be your friend or your enemy

On this chart, it's your enemy. There's way too much white space, and it isn't used strategically. Yes, one lone dot sticks out as an obvious outlier. That's good. But the other dots are jumbled and the axis seems to be set at a default value. So there's an ocean of white space that doesn't help convey meaning. White space can be your friend as a tool to focus the audience's attention if used strategically.

Too many labels can be too distracting

This is an issue of both quantity and quality. The labels are everywhere on this chart with no rhyme or reason except what fits by default. And the long length of each label is a giveaway that these are simply taken from an underlying data source. They haven't been distilled and edited to help aid in the understanding.

Adding more colors subtracts the meaning

So many visualization tools have so many colors as the default palette. That's too bad. Many data experts suggest using a palette that is mostly gray with a small handful of accent colors. That's a more effective default approach for any chart. And that would help here rather than the meaningless rainbow.

Canon sees highest profit, driven by 2200 copier
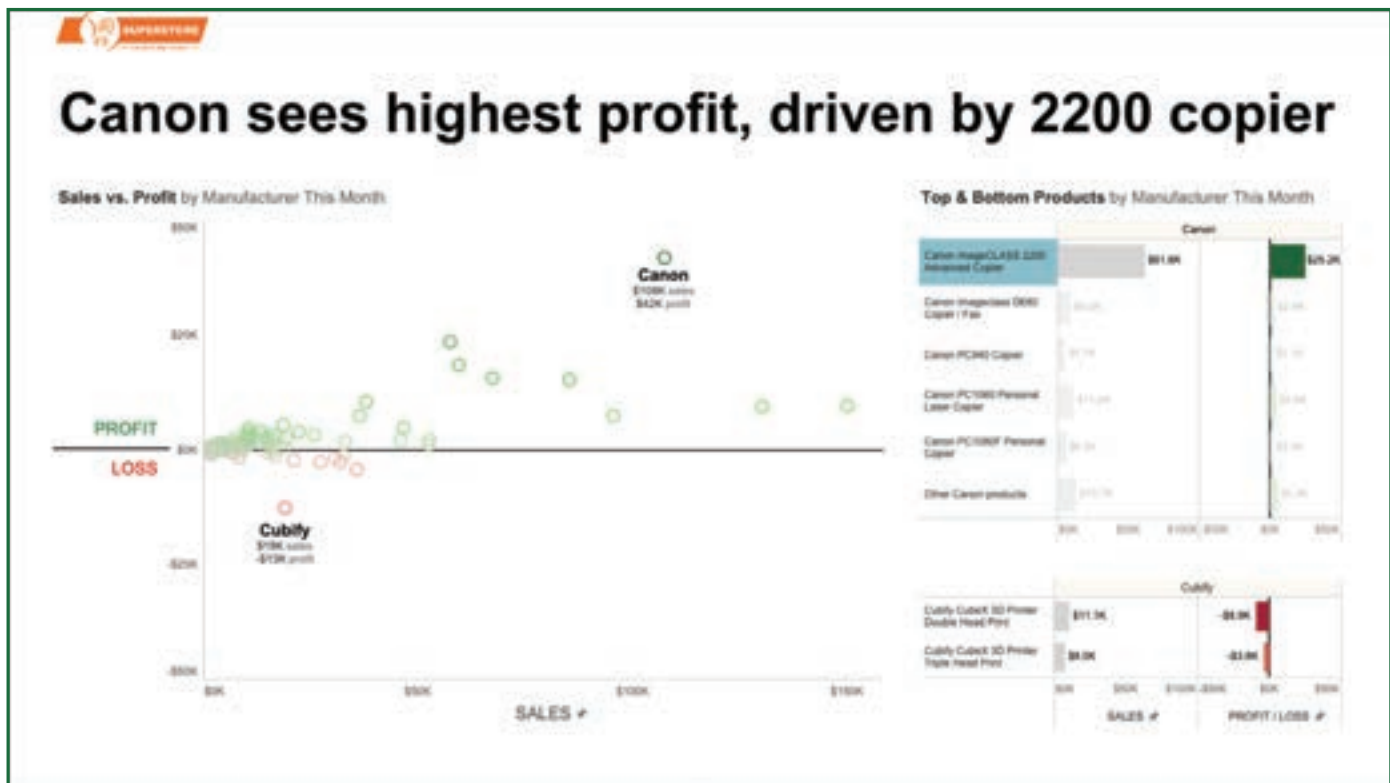
AFTER

Take time to explain atypical charts

Sometimes a bar or line is not the best choice, especially for a huge amount of data in a small space. The scatter plot works for that. But how to interpret the chart needs more visual cues. Here, the horizontal axis has a large "SALES" label. And most important, the vertical axis has the green/red "Profit / Loss" with the bold zero line.

Make the headline explain the visuals

There's a reason why you want to show this data. The headline is that reason. It's the most important aspect of your communication to execs. So many of them say, "Give me the headlines." This is what they mean. What's the story, crystallized in a few words. Then revise and revise until the headline and the visualizations are in harmony. They support each other.

Leverage white space as a visual element

Here, the white space is far from an afterthought. The vertical axis was set to have an equal amount of space above and below that zero line. And the horizontal axis was revised in tandem with a more strategic grouping of the dots. Ultimately, that makes the story clearer at a glance. Here, one dot rises above the others still, while it's clear that very few dots are in that negative zone in the dreaded "Loss."

Limit the labels to what execs need to see

This small change can be a big effort, but it's worth it. In this example, rather than have the full product names as the labels, it's clearer to have just the very short brand names in the scatter plot, and then just the top and bottom performers. The insights derived from the full product names are then distilled into secondary charts on the right, also just showing the top and bottom performing products.

Show only colors that have strong meaning

In this case, the leadership team just wants to know if most of the brands are making a profit, which ones are leading and which ones are lagging. So the simple "green is good / red is bad" approach works well. And to be mindful of issues with color blindness, the "Profit / Loss" labeling and that zero line further show what's good and what's bad. This example shows a very good story that was worth the effort.

Fix Data in a Flash

TIPS FOR THAT BIG MEETING WHEN TIME IS VERY, VERY SHORT

The phone call and the charts both came at 10 a.m. "The CEO wants to see findings on this initiative," the executive told me, "but these charts aren't telling the story."

I glanced at the visuals — slide after slide jam-packed with bars, pies, legends, colors, labels and numbers. A data team had put in a serious amount of effort gathering material but didn't distill it into a high-level view. "Wow, that's a lot of information," I said. "I'll dive in. When's the CEO meeting?"

"11 a.m."

I was lucky I had finished my morning coffee for two reasons: 1) A caffeine rush was already racing through me, and 2) I didn't do a spit take.

Yes, that's a stressful deadline. And yes, there's hope. Whether you have a turnaround of one hour or one minute, you can draw out the story from dense data. The key is knowing what to prioritize in the time between right now and the start of the meeting, then having techniques that you've accelerated through repetition and repetition.

You're about to see three data slides that need fast help, each based on a real-world example. For each slide, I go through advice on what you can fix if you have just one minute (or so), one hour or one day before an executive needs to see it. Little changes can make a big impact, and a little more time can uncover the true story.

Use all the time you can, but move fast. That 11 a.m. CEO meeting? With my heart racing, I finished at 10:59 a.m. The response: "Wow, that's a good story." Then I got another coffee.

THE PROBLEM: "I'm going to get flattened in the meeting like this bar chart."


Consistent Store Sales Growth
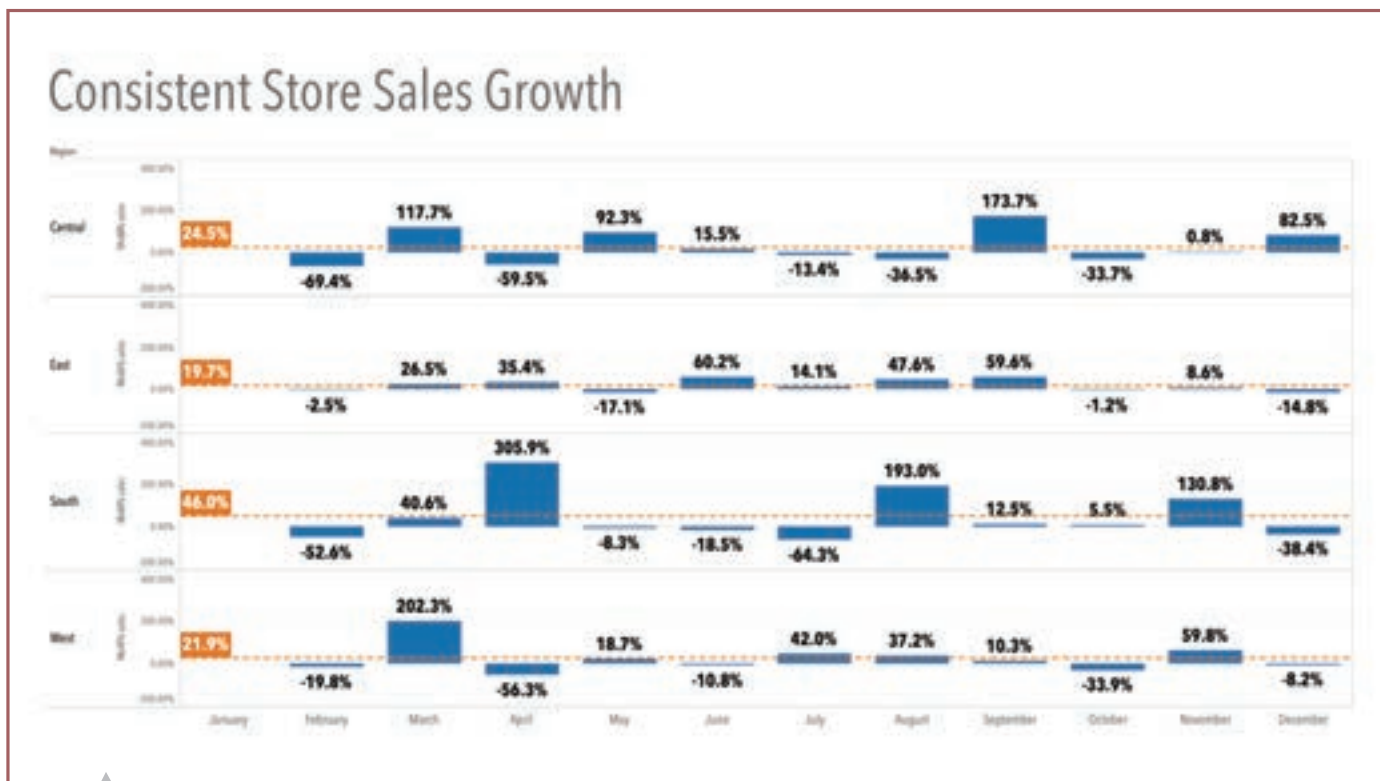
BEFORE

Too many numbers, too wide to tell differences, too much to fix in too little time! Don't panic. First, figure out which number is most significant. In this case, it seems to be that average figure for the South. It's the biggest by far of the regions, so start there.

1 MINUTE

In a very tight turnaround, at least highlight what's most important visually, then rewrite the headline to match. In Tableau, you can click the row, then export as PowerPoint for the view shown below. Or in PowerPoint, use semi-transparent white boxes.

South Region Leads in Average Monthly Sales Growth
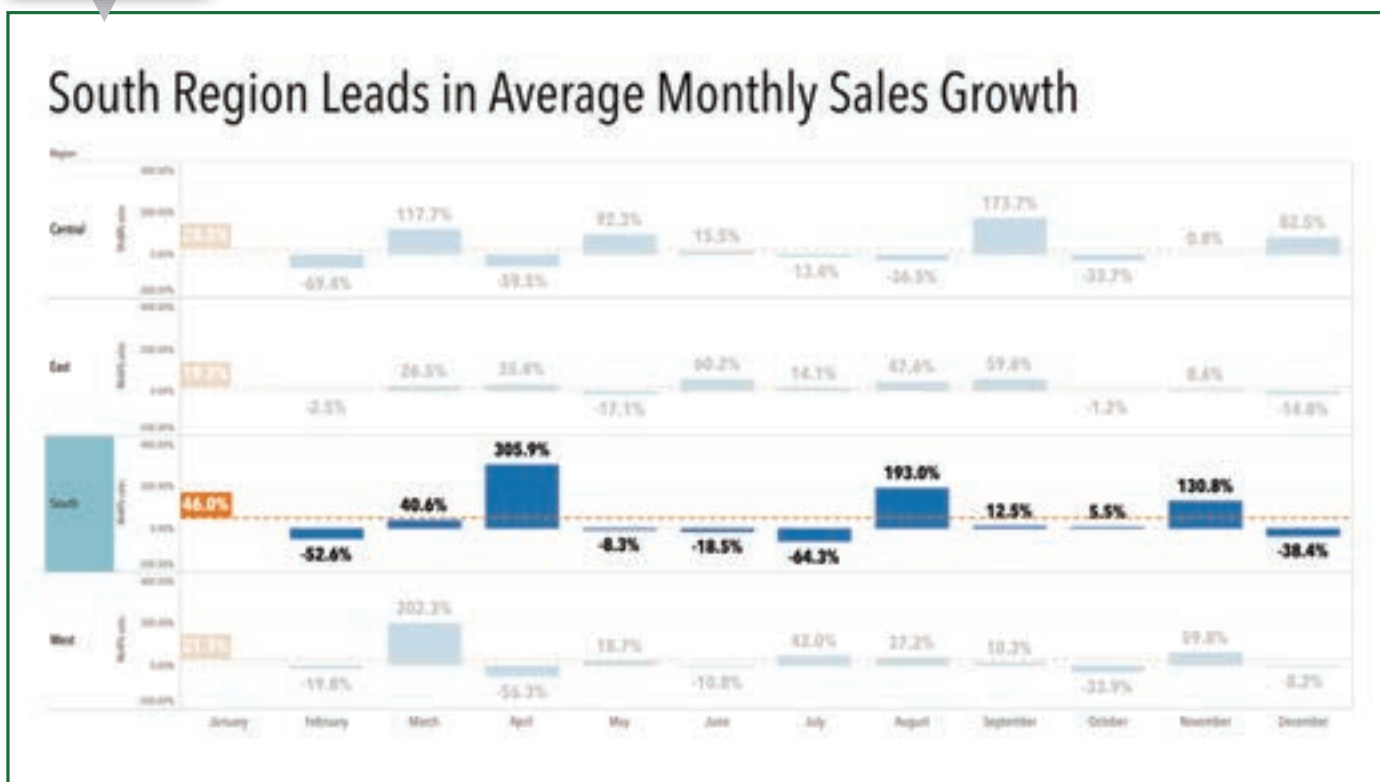
South Leads in Average Sales Growth Fueled by April Spike

SALES Month-over-Month
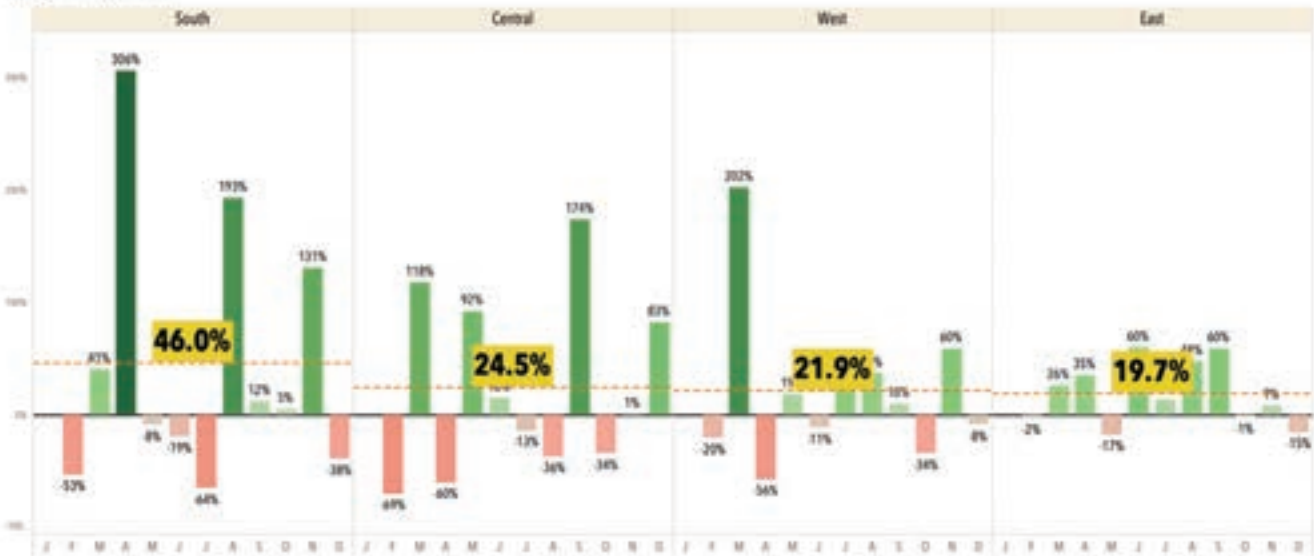
1 HOUR	With a bit more time, switch wide rows to tall columns, like this revision above. That makes highs higher and lows lower. Then change the colors to a standard palette of green "good," red "bad" and yellow for key highlights. Keep evolving that headline.
1 DAY	One day can make a huge difference. You can make a more meaningful fix to problematic visualizations. In this case, a more complete story was hiding in the data. Switching from year-over-year percentages to actual differences reveals a better insight.

West Region Drives Our Growth with Best Year-over-Year Gains

SALES Monthly

THE SOLUTION: "Great seeing all that green!"

West Region Drives Our Growth with

SALES Monthly   2018   2019

West   Central   East

$40K $35K
$31K
$20K $22K
$10K $5K $5K $2K
$0K

$20K $19K
$14K $16K
$10K
YoY $0K
-$7K   -$14K   -$15K
-$10K
-$15K   -$15K
-$20K

J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M
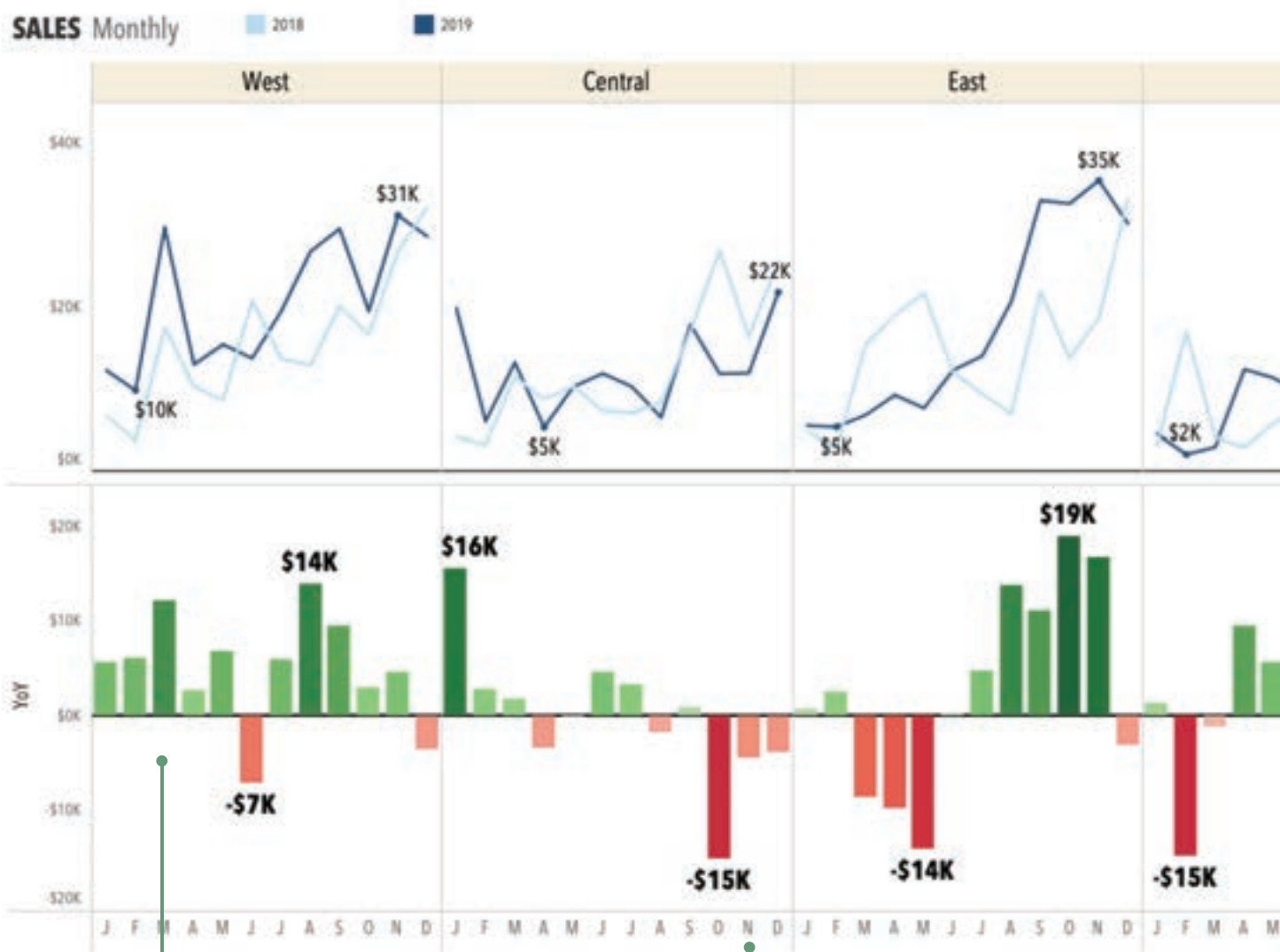
DETAILS

Show the values and differences whenever you can

Here the line charts show the values, the bar chart shows the differences. That way, you see the volume driving the business and the biggest gaps that need attention.

Do the bare minimum in axis tick marks

Keep the focus on the content. With months, for example, the first letter is enough to know what you're looking at. An axis should simply frame the content.

Best Year-over-Year Gains

SALES Annual · 2018 · 2019

West · Central · East · South
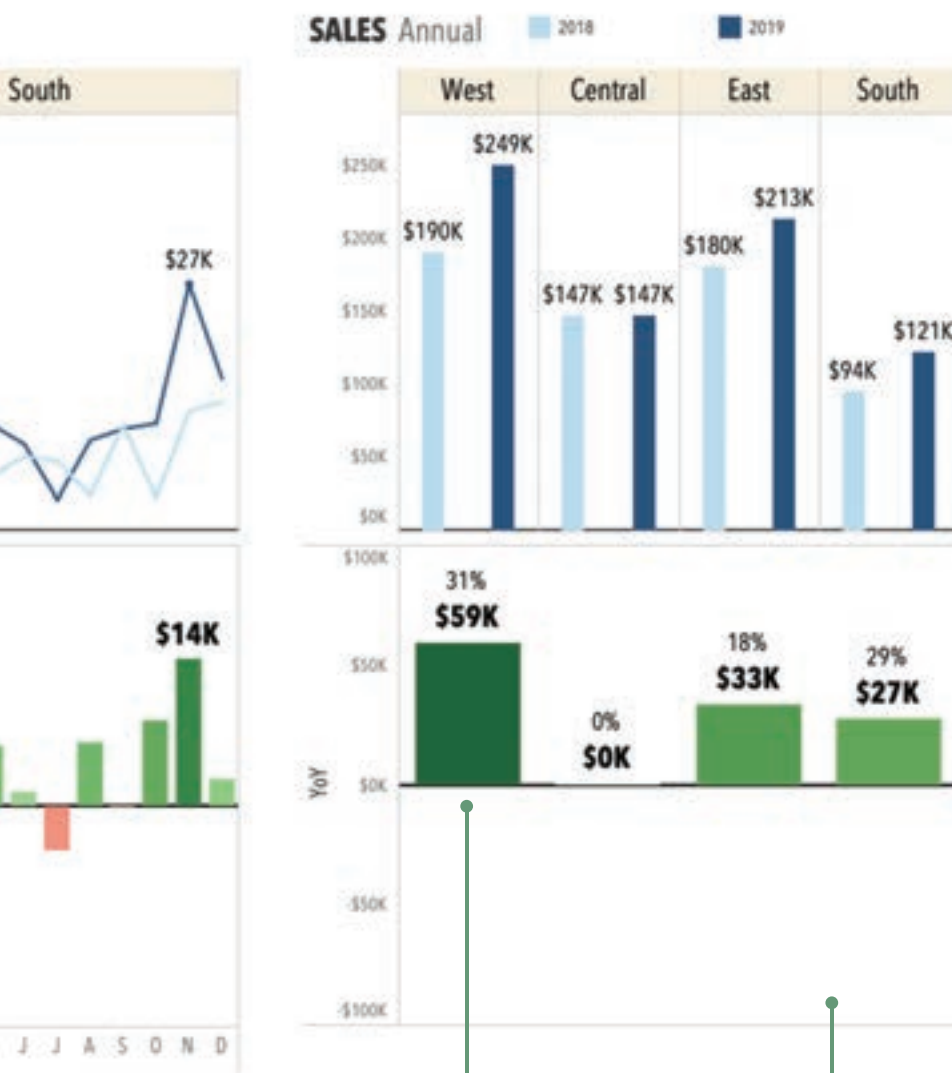
Work on the headline until the last minute

This is the story distilled to its essence, and it may be what's remembered most from the meeting. Keep fine-tuning it.

Make sure charts are tall enough to show differences

Going wide and short is a bad look for bar charts (and line charts). Carve out as much vertical space as you can.

Bold what's most important and remember green is good

When executives glance at the chart, these bold numbers and the biggest green/red differences should jump out.

Total up the data for a conclusion to the story

A structure that often works is having the trends shown on the left, then what they literally amounted to on the right. Here, the approach reveals the bigger story.

Remember white space is important too

Yes, it gives breathing room to the charts to help the focus. But here, the white space is also essential to show that none of these regions was negative. Big news.

THE PROBLEM: "The discussion is going to go like this chart — sideways."

Industry Market Trends
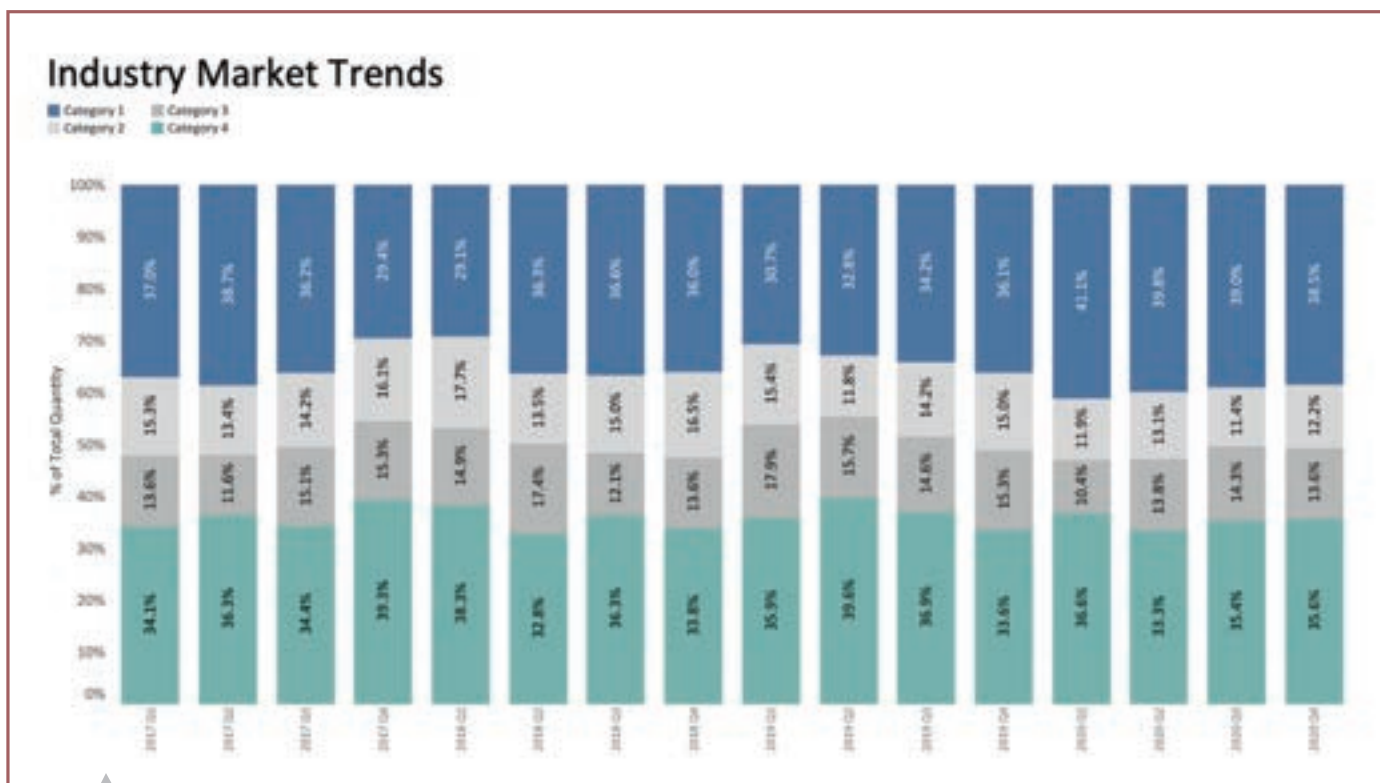
BEFORE

So many bars, so many numbers, so many sideways! All of that and the non-descriptive headline on this slide will make a whole meeting go sideways. This is a classic case of default settings for chart labels and for a chart type. Let's get this turned around.

1 MINUTE

At the very least, highlight the most important categories to start drawing the executives' attention to what matters. Then if there's a setting to "rotate label," click it until as many numbers as possible are right-side up. Type in an actual headline.

Two Categories Have Solid Grip on Industry
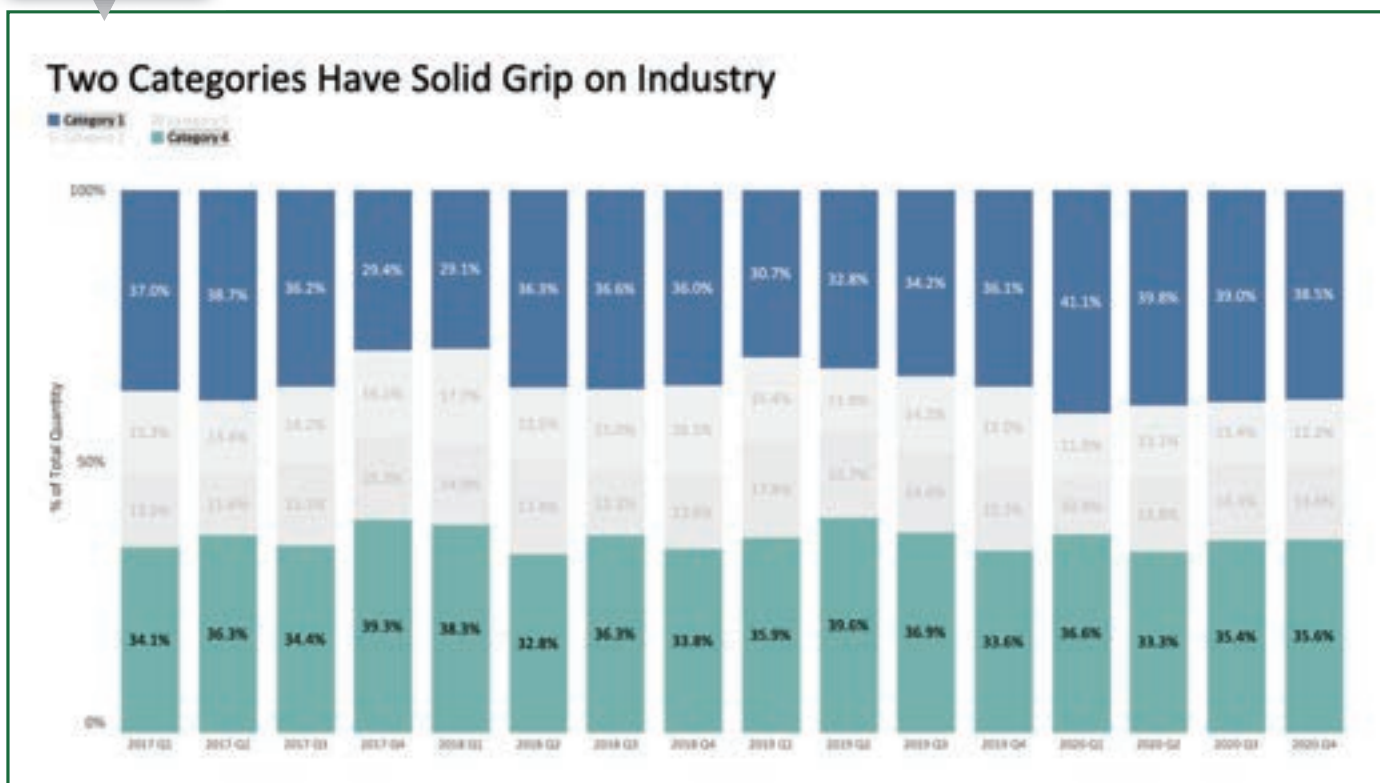
Two Categories Maintaining Solid Grip on Industry Amid Uptick in Sales Mix

Sales Mix by Quarter

Category 2
Category 3
Category 4
Category 1

Start:
Category 3 — 13.6%
Category 2 — 15.3%
Category 4 — 34.1%
Category 1 — 37.0%

Recent:
Category 2 — 12.2%
Category 3 — 13.6%
Category 4 — 35.6%
Category 1 — 38.5%
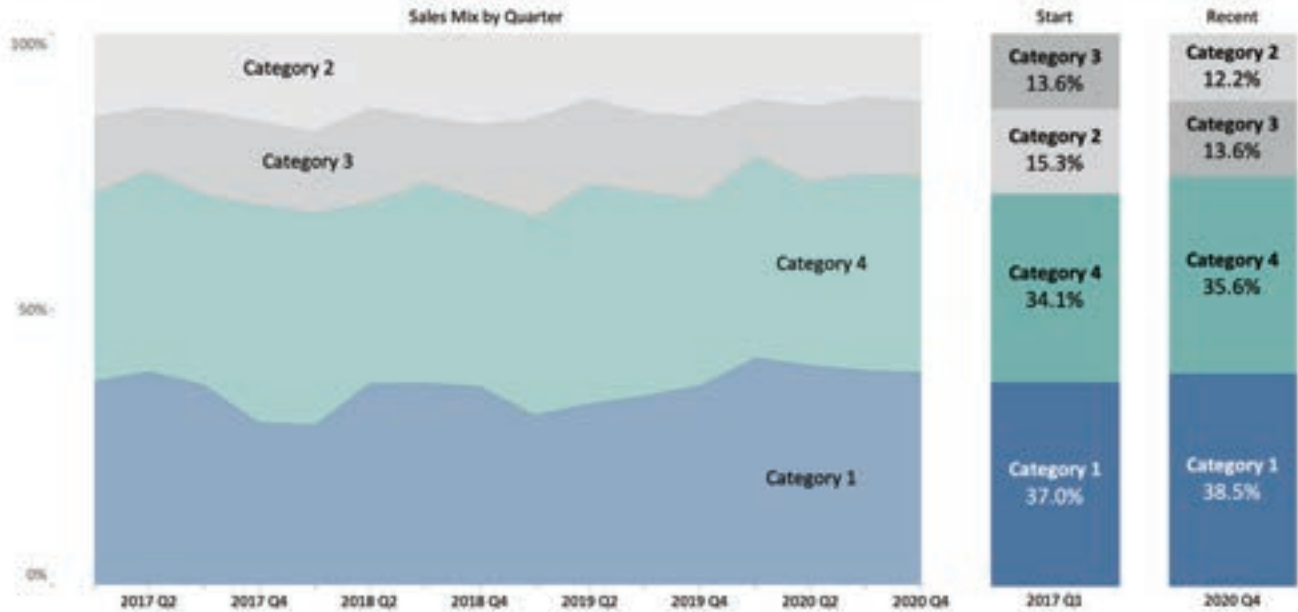
| **1 HOUR** | One fast way to distill an overloaded bar chart is to turn it into an area chart. That's especially true in this case, where the overall trends are the story, not each bar segment's percentage value. Instead, show the percentages at the start and the end. |
| **1 DAY** | With a little more time, take a step back and question whether the share percentages are the story or whether it's the overall volume. In this example, if you only have one slide, the volume shows what's really happening. A visual key helps, too. |

Category 1 at +46% Year-over-Year is Driving Industry Growth

Industry Sales by Quarter

2017 — $7.58B
Category 2 $1.13B
Category 3 $1.08B
Category 4 $2.77B
Category 1 $2.60B

2018 — $7.98B
Category 2 $1.25B 10.4%
Category 3 $1.13B 4.2%
Category 4 $2.78B 0.3%
Category 1 $2.82B 8.7%

2019 — $9.84B
Category 2 $1.39B 11.6%
Category 3 $1.53B 35.6%
Category 4 $3.56B 27.9%
Category 1 $3.36B 19.0%

2020 — $12.48B
Category 2 $1.51B 8.8%
Category 3 $1.67B 9.0%
Category 4 $4.40B 23.5%
Category 1 $4.90B 45.9%

Biggest jump in 2020

Category 1 — Services and subscriptions
Category 2 — Food and drink
Category 3 — Household goods
Category 4 — Office equipment

THE SOLUTION: "Now I see what's going on. Let's talk about what to do."

Category 1 at +46% Year-over-Year is D

Industry Sales by Quarter

$10B

$7.58B
Category 2
$1.13B
Category 3
$1.08B

Category 4
$2.77B

$5B

Category 1
$2.60B

$0B

2017

$7.98B
Category 2
$1.25B 10.4%
Category 3
$1.13B 4.2%

Category 4
$2.78B 0.3%

Category 1
$2.82B 8.7%

2018

$9.84B
Category 2
$1.39B 11.(
Category 3
$1.53B 35.(

Category 4
$3.56B 27.(

Category 1
$3.36B 19.(

2019

Category 1
Services and subscriptions

Category 2
Food and drink
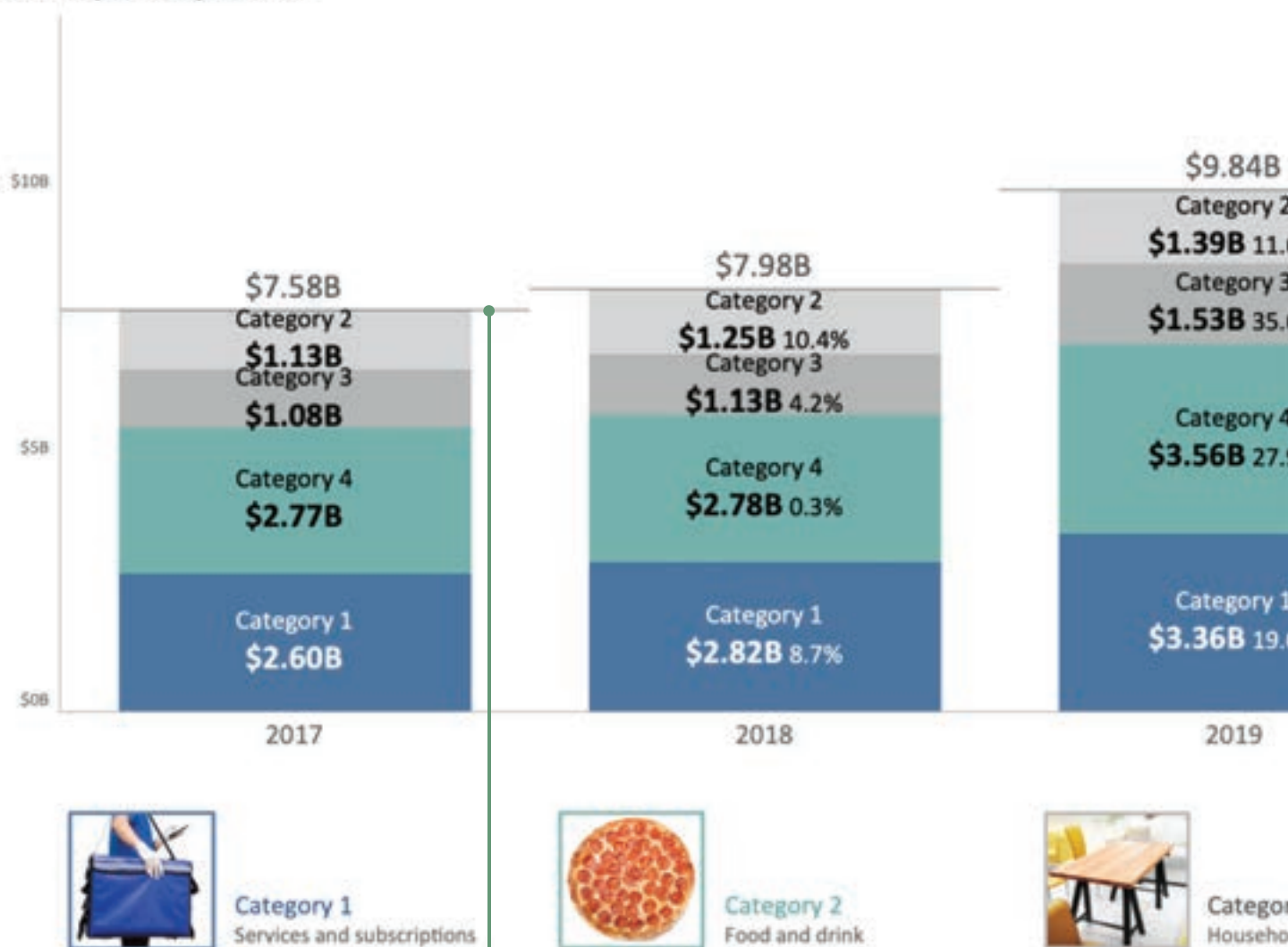
Categor
Househo

DETAILS

Use reference lines to show how everything adds up

Here, the category breakdown is the key. But executives will want to do the math to see what the total is. Do it for them in this subtle reference line.

Add visual elements if they help explain the story

No, that doesn't mean clip art of two hands shaking or of a bar chart with an arrow going up, up, up. Usually images of customers or products are the best bet.

riving Industry Growth

$12.48B

Category 2
$1.51B 8.8%

Category 3
$1.67B 9.0%

Category 4
$4.40B 23.5%

Biggest jump in 2020

Category 1
$4.90B 45.9%

2020

y 3
ld goods

Category 4
Office equipment
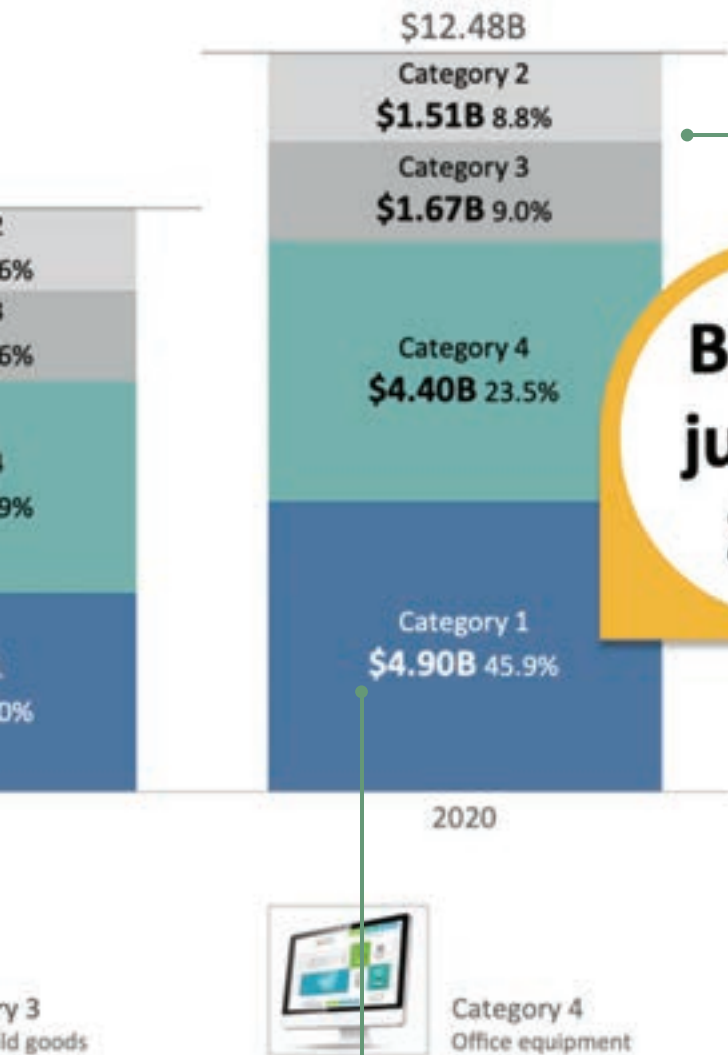
Include the "Wow!" data point in the headline

Remember the original headline for this slide? No one will. But this one makes executives take notice and sparks an action plan on how to capitalize.

The chart and the story should both build to the climax

If the news is that a top metric has climbed to a new high, make sure that's very clear in the visualization. Here, the big bar at the end is the big news.

Point to the data that's most important

This is especially helpful in a chart like this where there are still a lot of data labels. Many executives really want to "see the numbers." But a visual takeaway like this helps tell the story and ties the headline to the chart.

Give thought to how you're labeling the data

This label is more than a just a number. You can often eliminate a color legend by adding a name here. Sneak in a year-over-year %, too. It helps to make the most important number bigger and bolder.

If you have the time, keep honing the story

As Lorne Michaels said about *Saturday Night Live*, "The show doesn't go on because it's ready; it goes on because it's 11:30." Same with a last-minute rush before a meeting. But do all you can.

THE PROBLEM: "Oh no, the leadership team hates rainbows and bubbles."
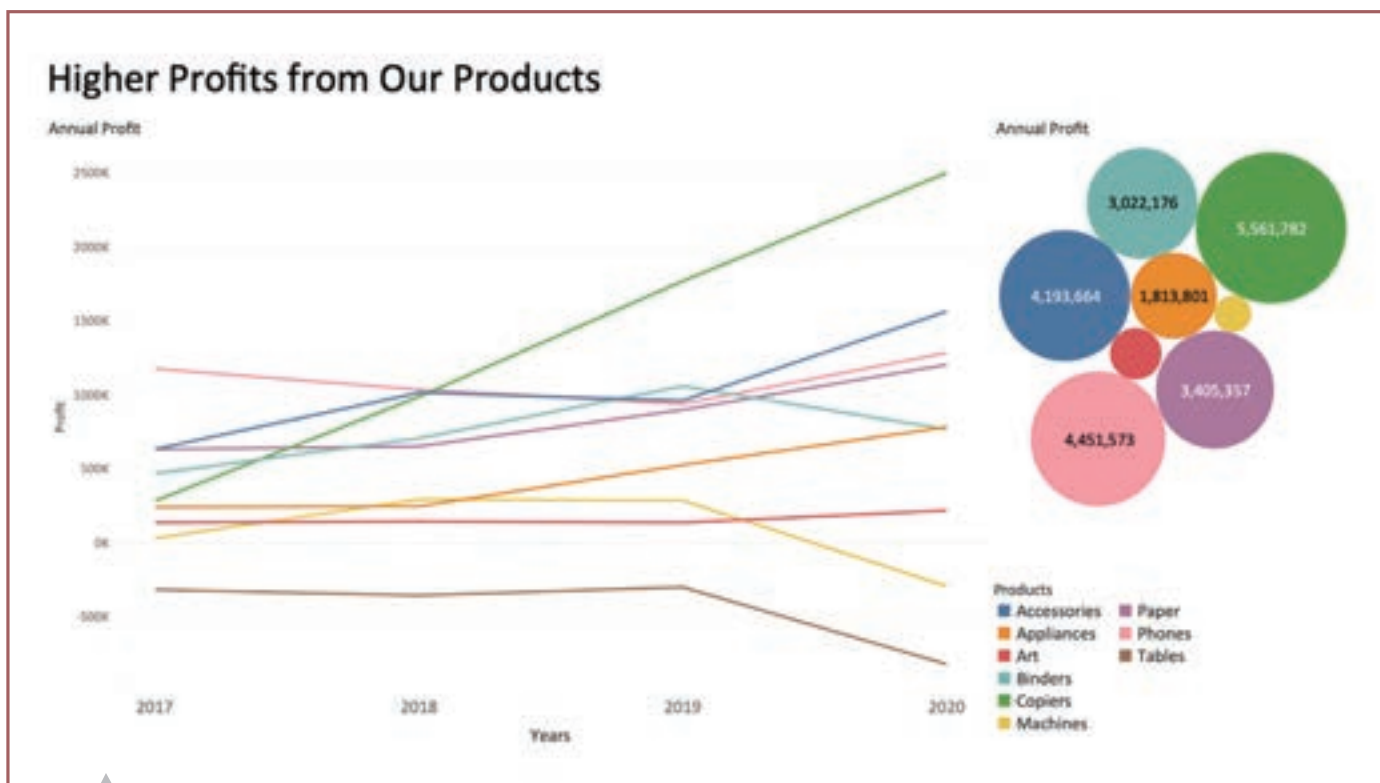
BEFORE

Whoever sets the default color palettes in Tableau, Excel and the like must be a cheery soul. But all the colors are usually color for color's sake and not to clarify what's good for business, what's bad, and what's background context. Bubbles?! Too cheery.

1 MINUTE

The advice is the same here as earlier examples: quickly highlight a couple key points and make the rest of the charts fade into the background. Then write a headline that grabs attention and supports what you highlighted. Be cheery only if the story is.
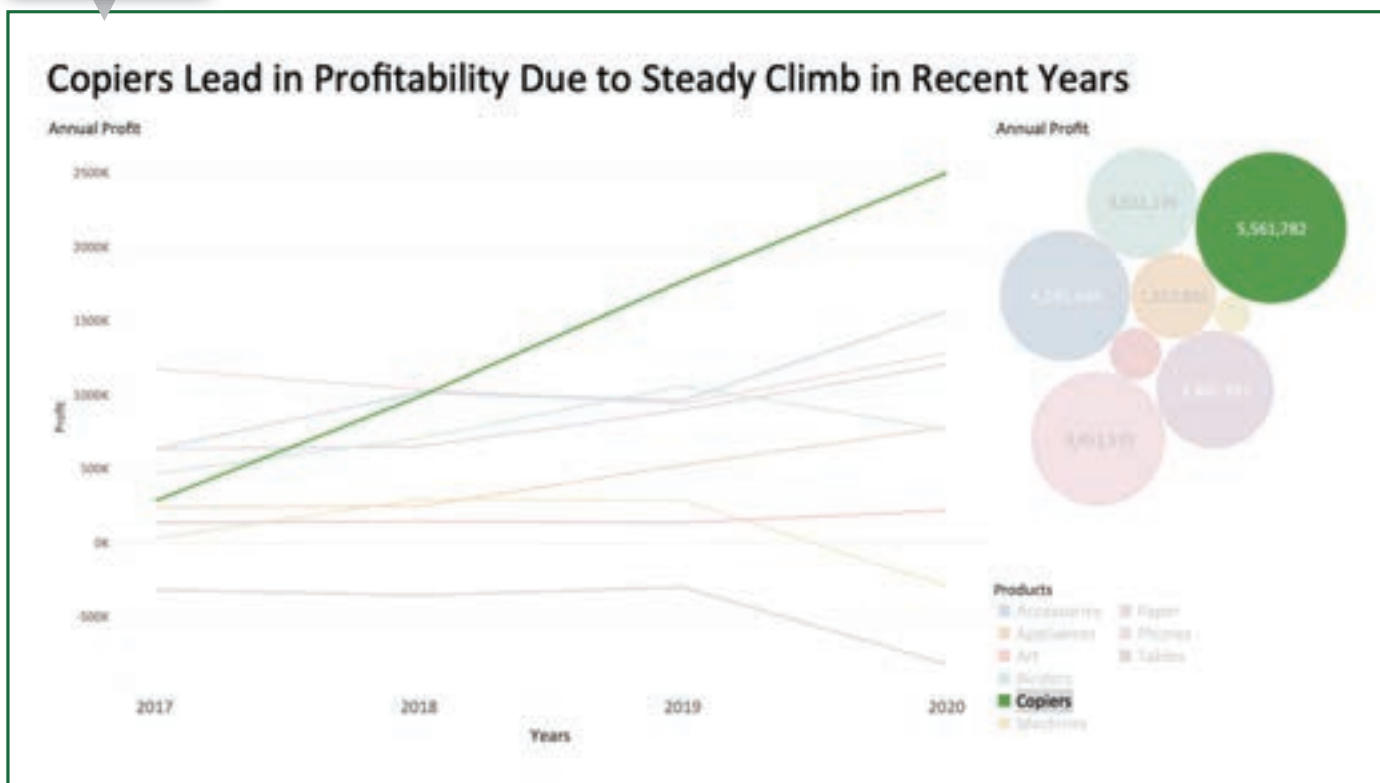
Copiers Are Driving Profits as Tables & Machines See Major Drop

Annual Profits by Product Category *(2020 totals noted)*
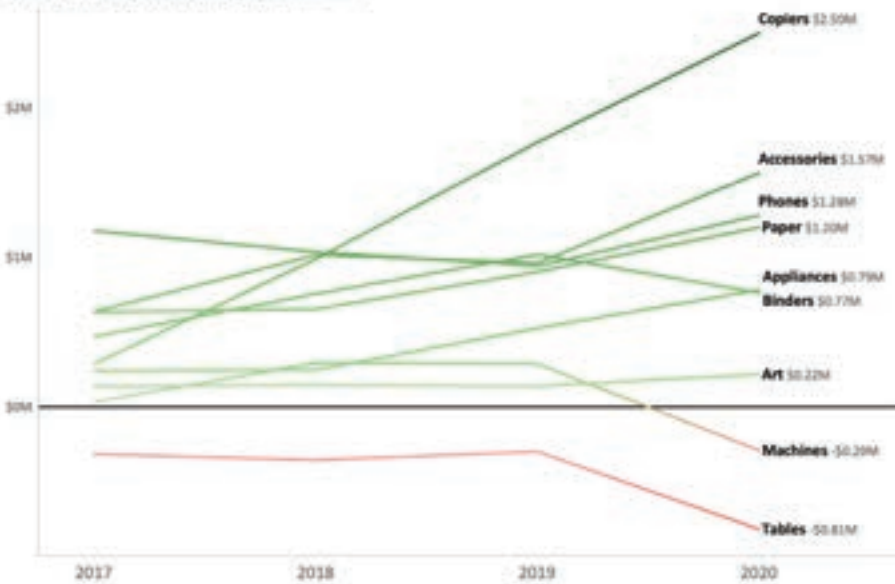
4-Year Profit Totals

1 HOUR

Changing a rainbow palette to a default business palette of red/green/gray/black is worth this chunk of time. Then change those bubbles to bars so that people can compare the sizes better. Bubbles and pie charts have that same problem so avoid them.

1 DAY

An effective tip that takes more time is grouping. In this case, maybe you can stop at the red/green approach above. But start grouping all those categories, and the story is distilled to its essence: Amid flat sales, there's one huge star and two dogs.

Profitability Threatened by Tables & Machines Even as Copiers Soar

Annual Profits with Key Categories
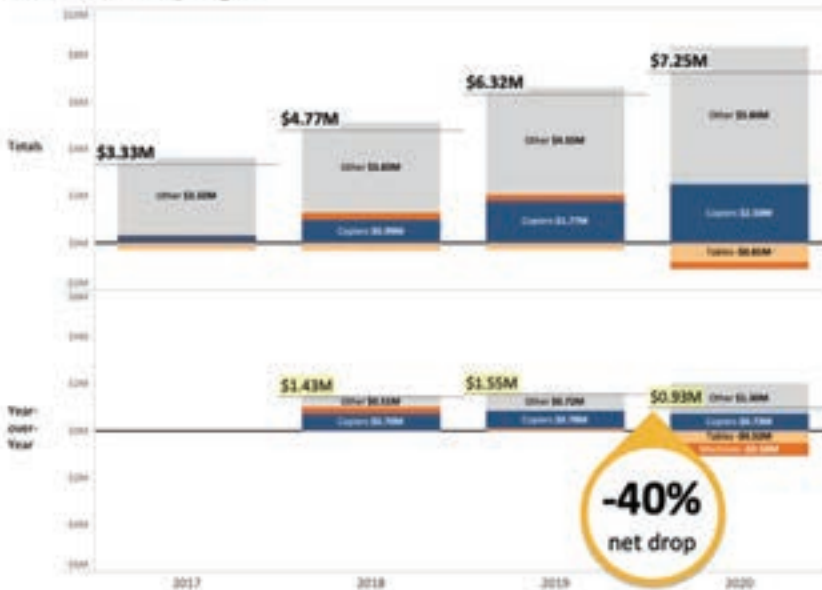
Profit per Unit
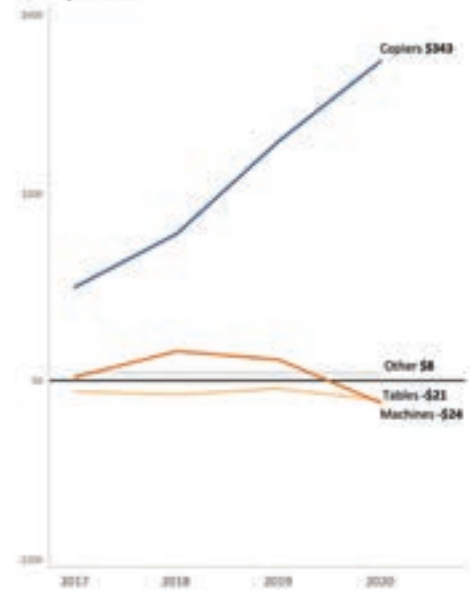
THE SOLUTION: "OK, let's scale that success and stop that bleeding."

Profitability Threatened by Tables & M

Annual Profits with Key Categories

Totals

$10M
$8M
$6M
$4M
$2M
$0M
-$2M

$3.33M
Other $3.32M

$4.77M
Other $3.83M
Copiers $0.99M

$6.32M
Other $4.55M
Copiers $1.77M

$7.25M
Other $5.84M
Copiers $2.50M
Tables -$0.81M

Year-over-Year

$6M
$4M
$2M
$0M
-$2M
-$4M
-$6M

$1.43M
Other $0.51M
Copiers $0.70M

$1.55M
Other $0.72M
Copiers $0.78M

$0.93M Other $1.30M
Copiers $0.73M
Tables -$0.52M
Machines -$0.58M

-40%
net drop

2017   2018   2019   2020
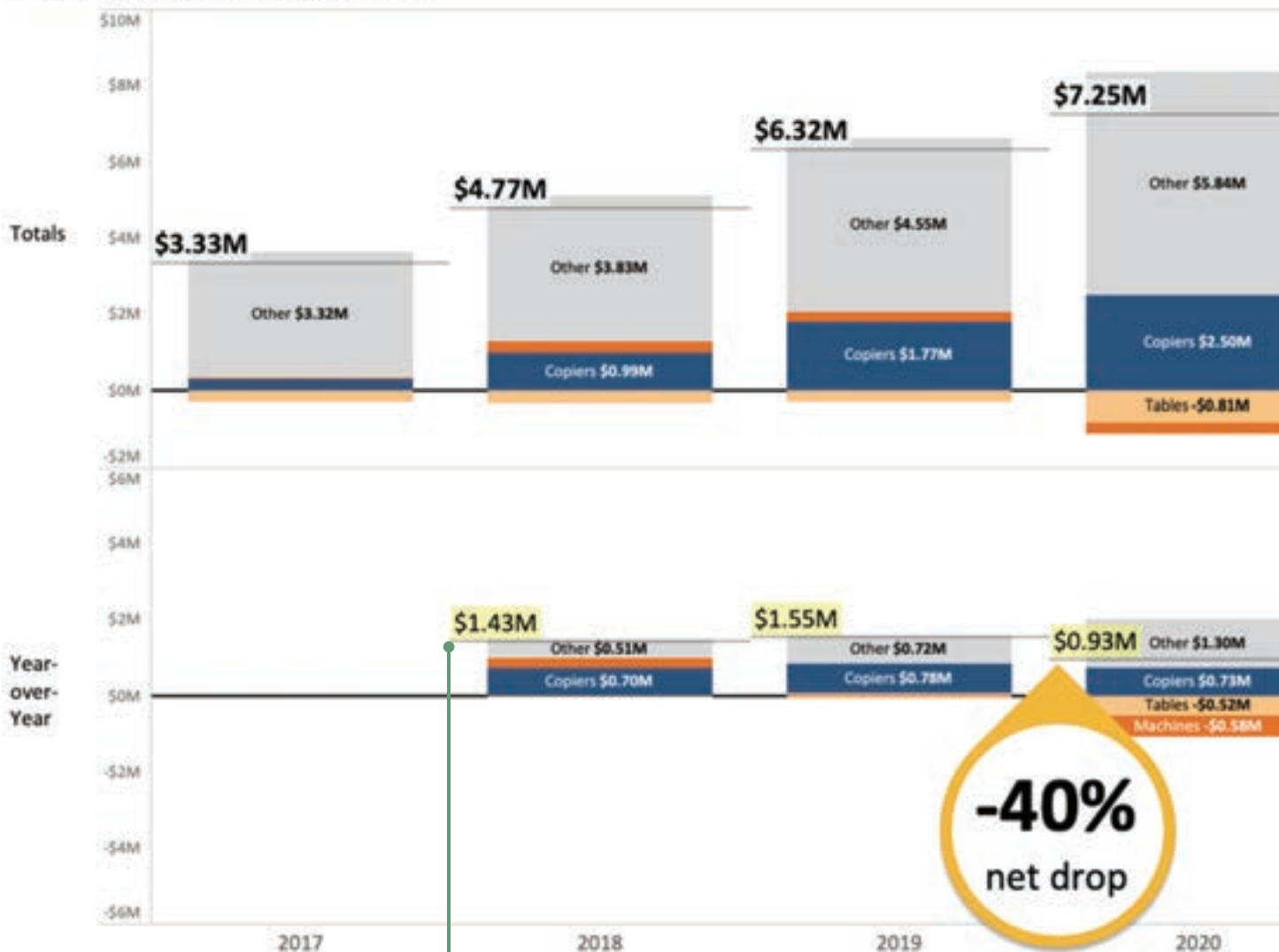
Use a yellow highlight only if you absolutely must

Even here, maybe it's too much. If this wasn't such a fast fix and there was one more day, there should be less bold and less yellow so only the critical data pops.

Point to what's important to the executives

This is an immense help in focusing attention and limiting distractions rather than having a business leader's eyes start roaming the chart on their own.

Machines Even as Copiers Soar

Profit per Unit

$400

Copiers $343

$200

$0 — Other $8

Tables -$21
Machines -$24

-$200

2017   2018   2019   2020
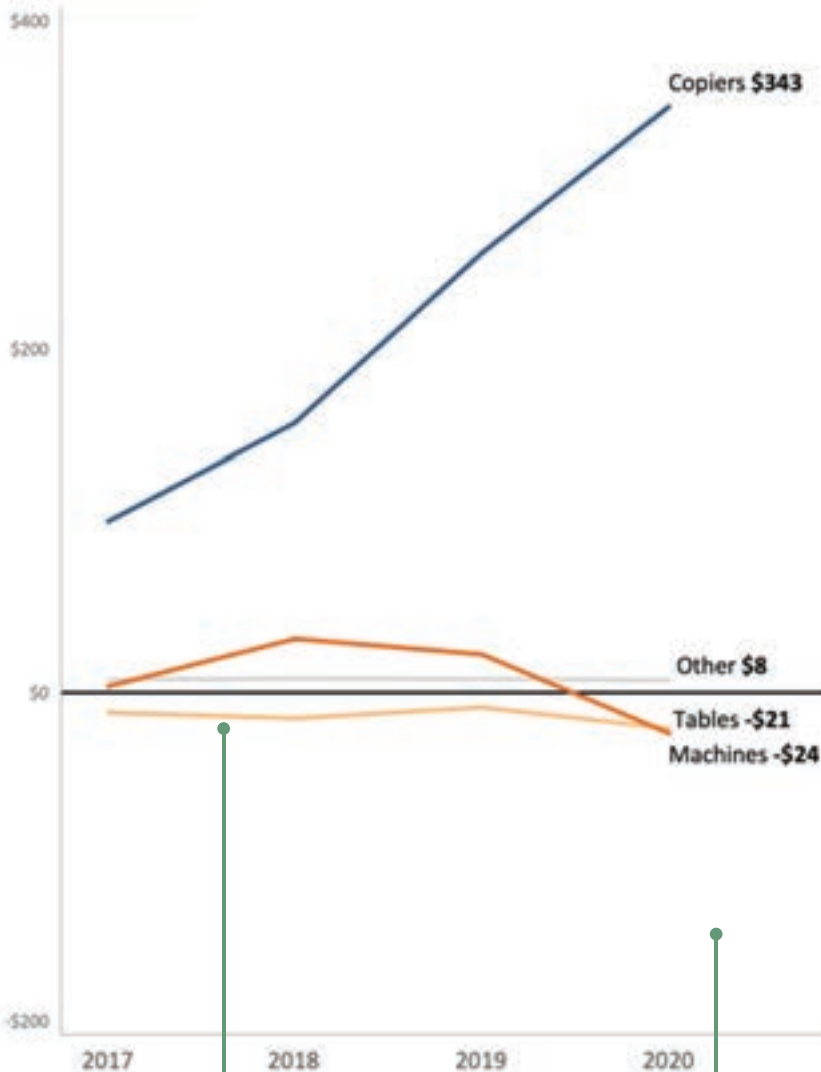
If we have something to fear besides fear itself...

Be honest and trigger emotion. Sure, celebrate the good news, but bad news will spark fast — and needed — action.

If one category is soaring above all others, let it

This visual is a clear story, so give it room to breathe. Strip away whatever you can, group together and make gray what's not important, then stand back and let the data speak for itself.

If one category is plummeting below all others, let it

In terms of the chart, of course. Once you see that plummet on the chart and make it obvious, the executives will have to take action. That's especially true in this case when it's eroding the soaring success.

Don't start with a rainbow; start with gray and add

The crazy color palette can overwhelm data and an audience. So when you have the time, strip away all the color and add back in only what shows the story you need to tell.

Let the negative space contribute to the story

Besides showing how high the star is flying, the area below the $0 line isolates what's falling behind and, thankfully, shows most categories have avoided this terrible fate.

Make the Key Insights Jump Out

"Fix Data in a Flash" was the most popular feature in Issue 3, so here, we're launching an ongoing "Fast Fixes" column. Why was it so popular? Likely because everyone can relate to the pressure of having charts and slides that aren't quite ready for primetime, yet that big meeting is only 1 day, 1 hour or 1 minute away. With the adrenaline pumping and fingers flying over the keyboard, here are more ideas on what you can do quickly to make the story at least better, if not perfect. And yes, these again are based on real-world examples, drawn from actual extreme time crunches. Let's get going…

BEFORE

Thankfully, this slide already has a great story: The project worked in lifting the KPI across markets. Well done! The chart just needs a little more work to showcase that achievement. Right now, that "target" is easy to miss and the launch date is missing.
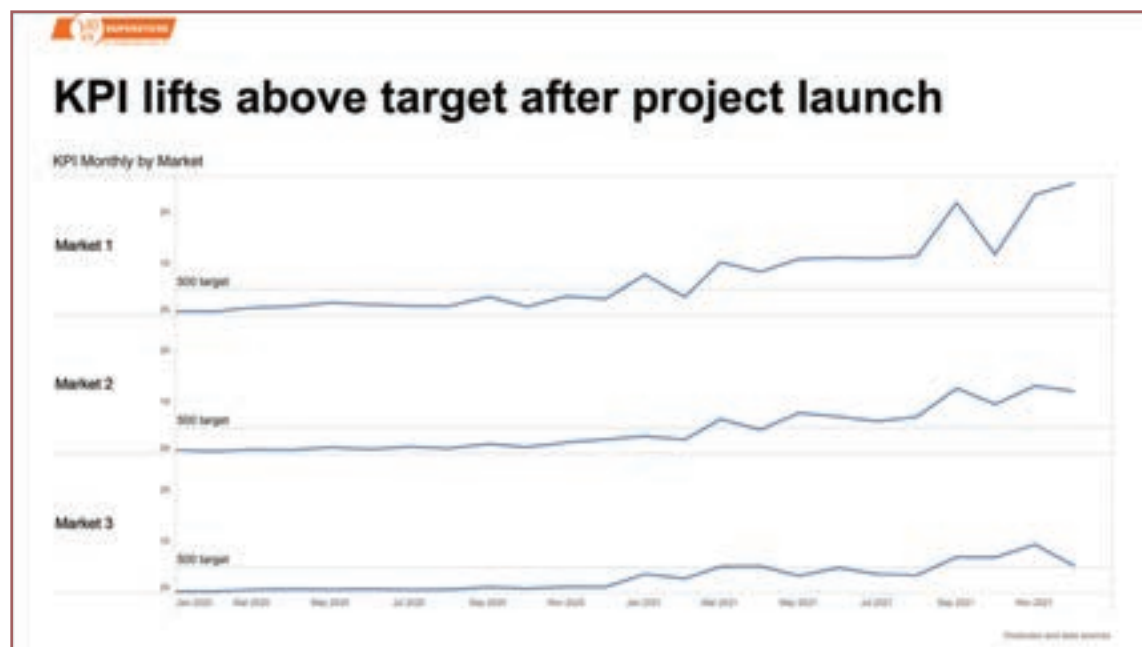
1 MINUTE

If you know a few tricks, you can make these two changes in 60ish seconds. First, add a reference line for the launch date to clarify the before and after time frames. Then drop on a red-green diverging color and set the center to be the target value. Boom.
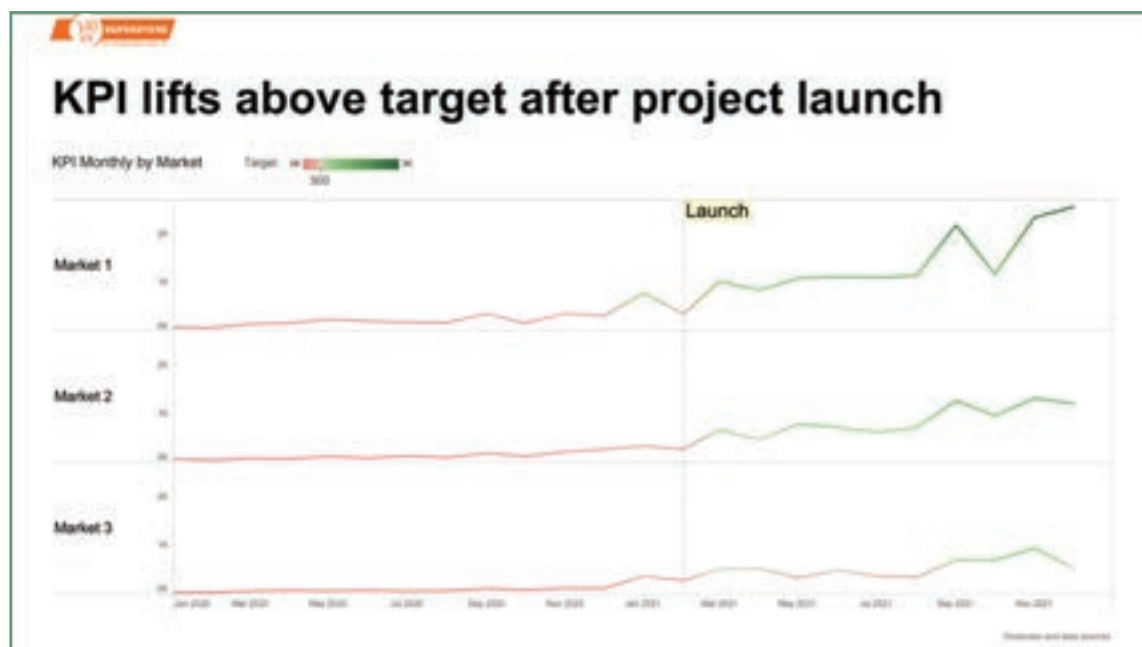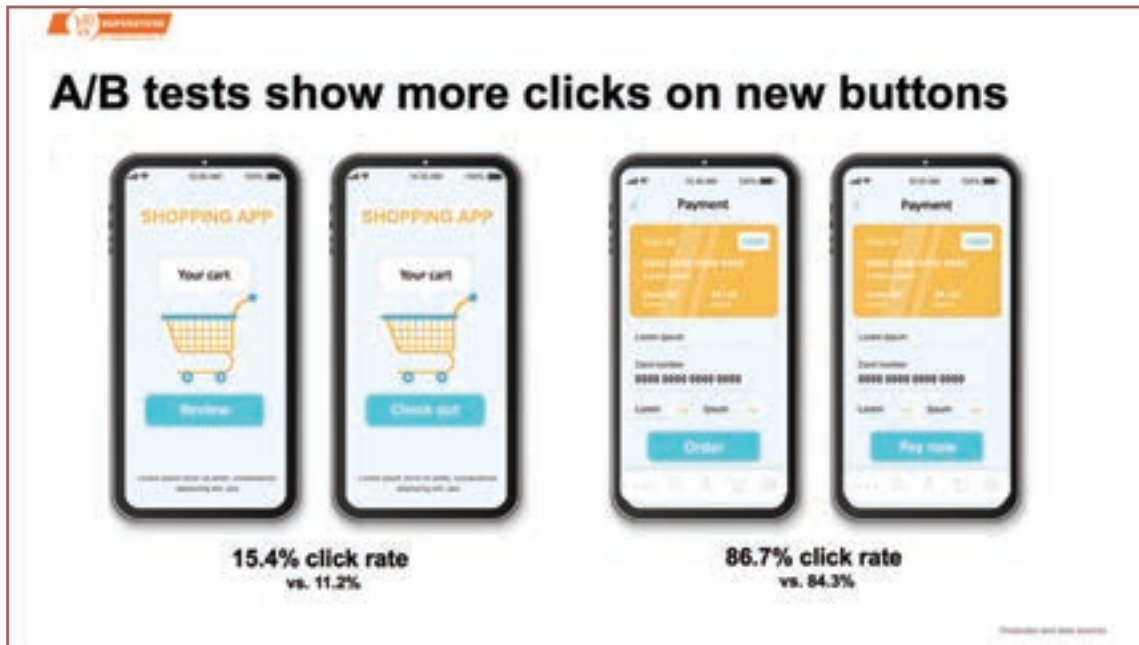
This slide already does a decent job of showing test results. The content is distilled to the user experience and the primary objectives. But an executive audience still has to work to zero in on what was the change and which won.
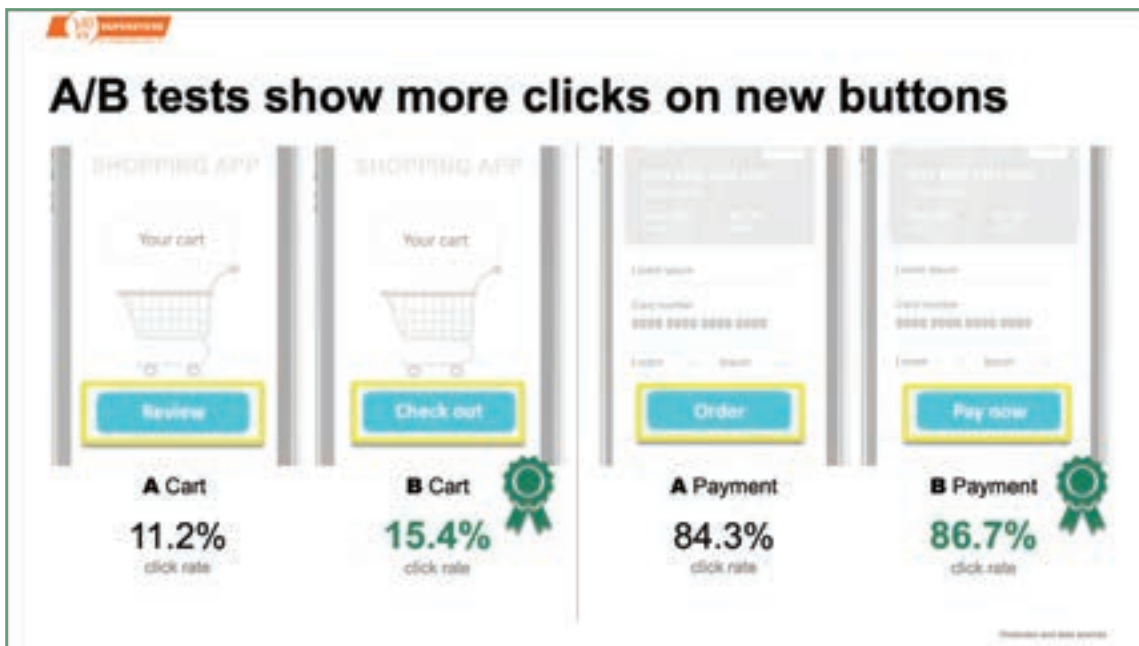
1 HOUR

For a final polish, always try to make the story even clearer at a glance. In this case, still show what changed in context of the overall UX, but make the actual change pop out. Add clearer labels. And don't be afraid to use a ribbon for winners.
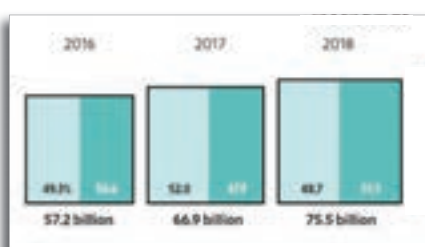
WHAT THE VIZ?!

If a pie chart and a bar chart had a baby …

The struggle is real to show both mix and volume in one data visualization. The admirable team at *The Wall Street Journal* recently presented this solution. The mix is noted by the "%" label and the colors, while the growing volume is shown by the growing bars. Does it work? It may still be a struggle.

Dashboard to Boardroom

STEPS TO TRANSFORM DATA AND REPORTS INTO EXECUTIVE SLIDES
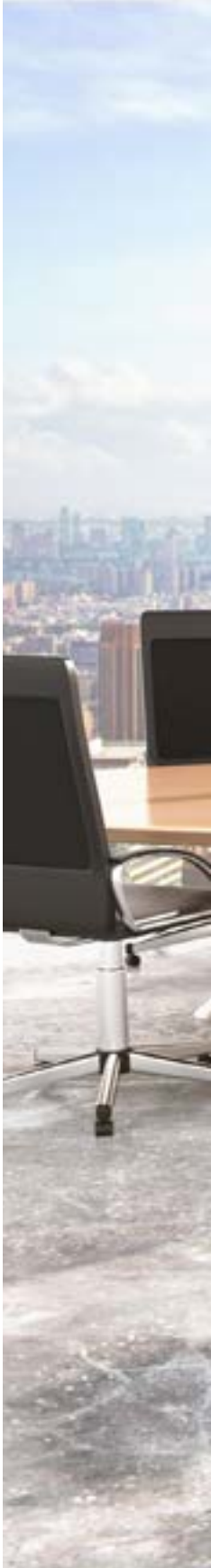
An "executive dashboard" can be an optimistic name, in the hope that executives will actually use it. What has actually happened instead is an email from the executive like this: "Data team, thanks for the new dashboard. Now please go through it and send me insights for this week's board of directors meeting."

In response, the data team will send screenshots of dashboard charts, slapped onto a slide under a headline. Or send an email of bullet points. Or, in extremely rare cases of being long on bravery but not long for this world, send this reply: "The dashboard is self-service, so you can click through the filters to fi d the insights yourself."

Please don't try that last one. Instead, what follows are ways to transform dashboards into decks that are ready for the boardroom. The key is the same guidance that you're reading throughout this issue: Focus on what matters most to the business. Dive into the data that will be most meaningful to the business leaders. And then convey the insight in a clear, compelling way.

Th s approach works for raw data and legacy reports, too. We'll start with those examples, using real-world data of San Francisco evictions and U.S. turkey sales, building up to transforming a dashboard for an executive presentation. No matter what form the numbers are in, success is based on bridging the gap between data and decision. Doing that often requires knowing how to speak in the executive's language: slides. Here's how.

- ☑ FOLLOW STRATEGY
- ☑ ALIGN TO AUDIENCE
- ☑ ISOLATE KEY DATA
- ☑ DISTILL TO SLIDE
- ☑ STREAMLINE VISUALS
- ☑ CLARIFY ACTIONS

RAW DATA

Get it straight from a database export or wrangle from various sources. With no charts or visuals associated with it, raw data is a blank canvas, which can be good and bad.
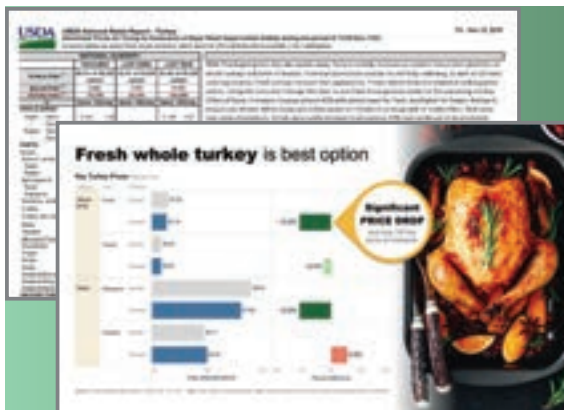
LEGACY REPORTS

The death of Excel reports has been greatly exaggerated. While they are fading away, many companies still have valuable data and insights trapped in old spreadsheets.

DASHBOARDS

Execs may not always use a dashboard, but they know the KPIs on the dash and how they're visualized. That's half the battle. The deck is then just a slide-friendly version.

RAW DATA

This data set from a #MakeoverMonday on San Francisco evictions is an example of starting at square one to find insights for an executive slide.

Source: Data SF via makeovermonday.co.uk

1

Zero in on what decision this data could inform.

This eviction data includes info on the date, location and reason for the eviction across a number of years. That can reveal trends and drivers, leading to decisions on how to lower evictions going forward.

2

Use preliminary charts to pinpoint meaningful trends.

Raw data likely has more info than is needed for this executive overview. Here, the data covered evictions from 1998 to 2018. But the story looks to be a rise since 2011, then a dramatic drop in recent years.
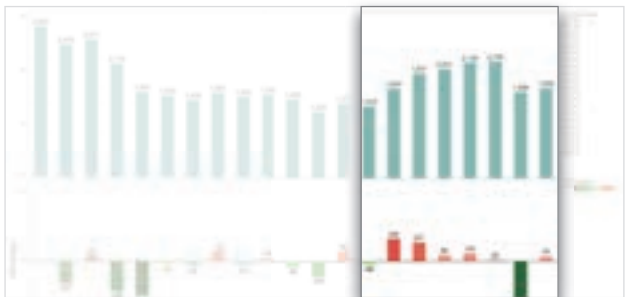
3

Isolate the drivers with the most impact on the trends.

Amid multiple reasons and neighborhoods in the evictions data, construction reasons and two neighborhoods stood out. Those are priorities for executives' attention.

4

Streamline the charts and add the key insights.

A simple color palette and a straightforward style of headlines and subheads distills the story. The trend is on the left, the drivers on the right, showing what's working.
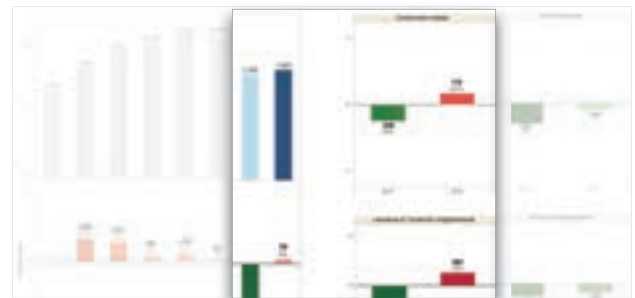
EXECUTIVE SUMMARY

The story now comes together, showing how the big decline was caused by construction and was focused in two neighborhoods.

Keep evictions low by addressing main drivers

Evictions plummeted in 2017 but are inching up again

Annual Evictions | San Francisco
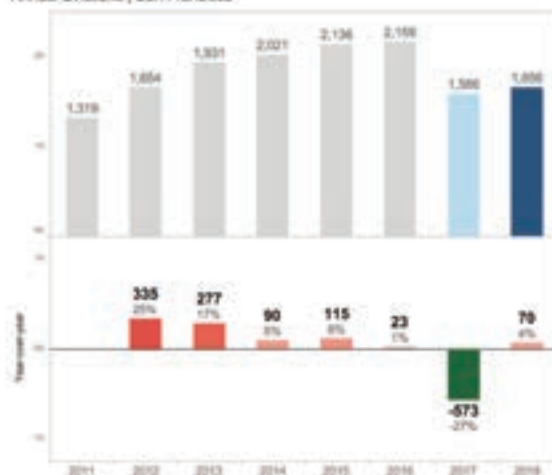
Construction-related reasons drove 2017's drop & 2018's rise

Year-over-Year Evictions by Reason

Two neighborhoods were most responsible for recent changes

Year-over-Year Evictions by Neighborhood

LEGACY REPORTS

This report from the USDA is a classic example of an Excel format.
The key to converting this to a slide is bubbling up the must-know info.
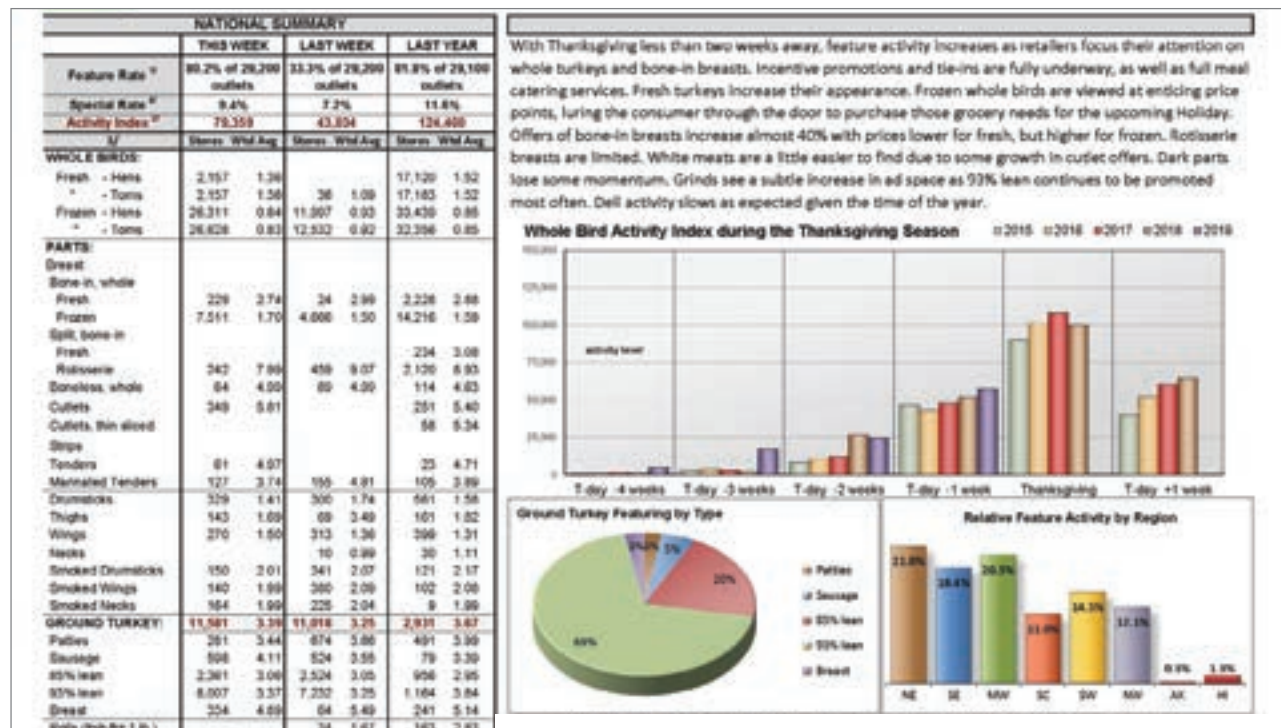
Source: USDA National Retail Report - Turkey

1

Highlight line items and text that give clues to the story.

The report may have an outdated format, but ideally it still has content aligned to the business strategy. So unlike raw data, the report will have metrics and commentary — probably just too much of it for a slide.

2

Convert the most important data points into raw data.

Legacy reports often have clunky formatting of merged cells, hidden rows and complex formulas. Extract the key data and strip out anything extraneous in order to do further analysis and data visualization.

3

Filter out what's not meaningful, and visualize what is.

From the underlying data, keep filtering and grouping and visualizing until the insight is clear and understandable at a glance. Always let the business objectives be the guide in what to leave in and leave out.
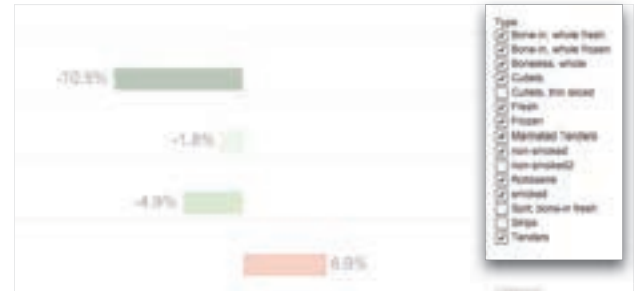
4

Add the takeaway and image to enhance the message.

As noted elsewhere in this issue, simply pointing to the main point can be a huge help. And incorporating photos or other imagery can help drive the point home by completing the story.
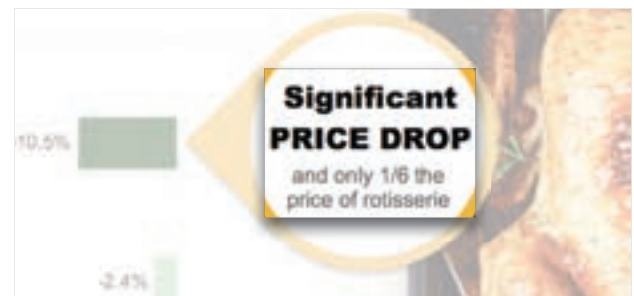
EXECUTIVE SUMMARY

A business leader needs to know how industry trends affect consumer choices. The report had all the info, but this slide illustrates the answer.
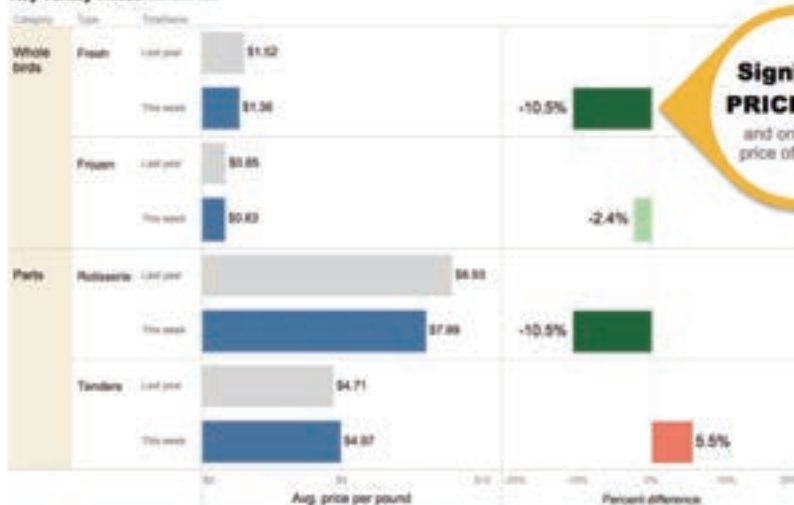
DASHBOARD

No, a dashboard is not a story. It isn't meant to be. But it is a discovery tool that can spark many stories. The key step is showing the top stories.
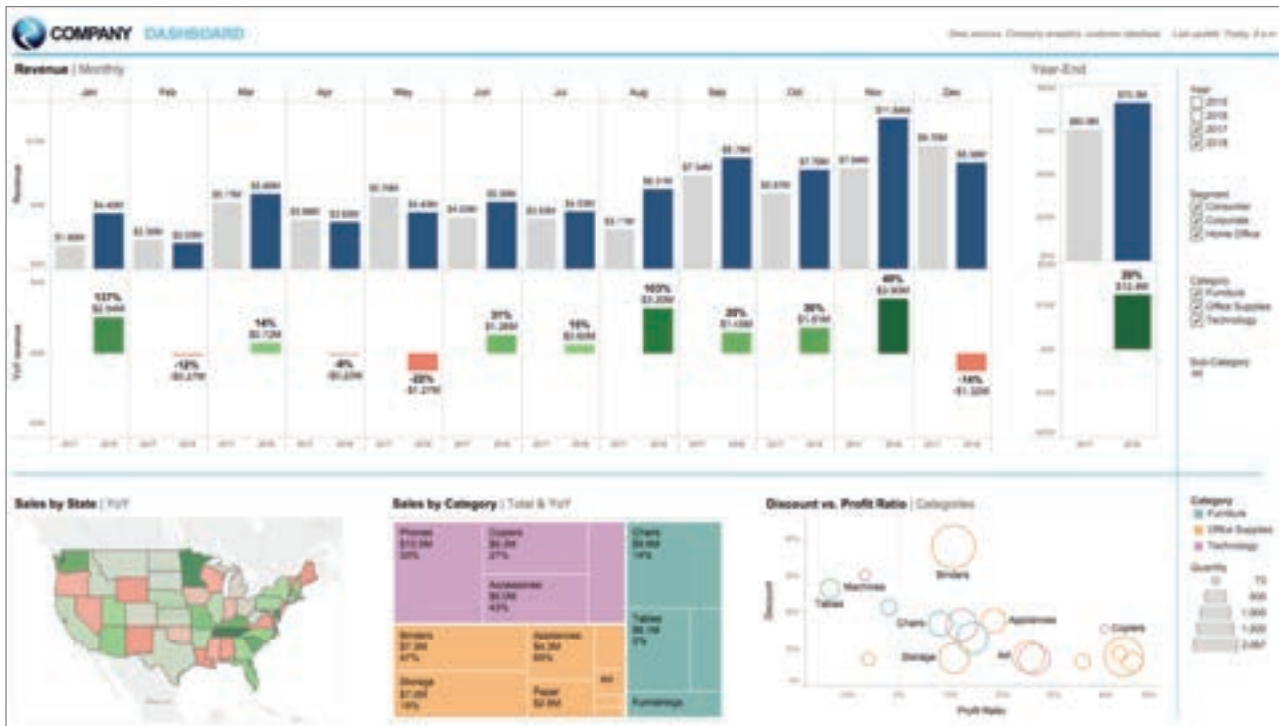
Source: Tableau Super Store sample data

1

Look for volatility or outliers that could signal a story.

This example company may be surprised that on the map section, Tennessee is the darkest green as the largest percentage gain in revenue year-over-year. That's big news.

2

Adapt the dashboard charts to slide-friendly versions.

To indicate to the company's data team that this story is drawn directly from their dashboard, use the same type of chart and colors, but bigger for the boardroom.

3

Analyze the reasons in the same dashboard data set.

Usually the dashboard has underlying data with more granular detail. Create a custom chart to show the driver. If the data team asks, "Where did this data come from?", it's very helpful to say, "The dash."

4

Add visuals to connect to the customer experience.

Dashboards are often very clinical looking: lots of numbers and charts but no sense of what this all means to the customer. Here, if tables are driving the sales, show the table.

EXECUTIVE SUMMARY

When is a dashboard not a dashboard? When it's a slide. And yet, this boardroom-ready story is very connected to the dashboard & its data.

COMPANY QUARTERLY REVIEW

Tennessee sees most success, driven by demand for tables

Sales by State | Year-over-Year %

Sales in Tennessee | Total and Year-over-Year %

Tennessee has highest growth rate at 415%

DASHBOARD

But wait, there's more! The best dash — coupled with an interesting business environment — can be a goldmine of valuable stories.
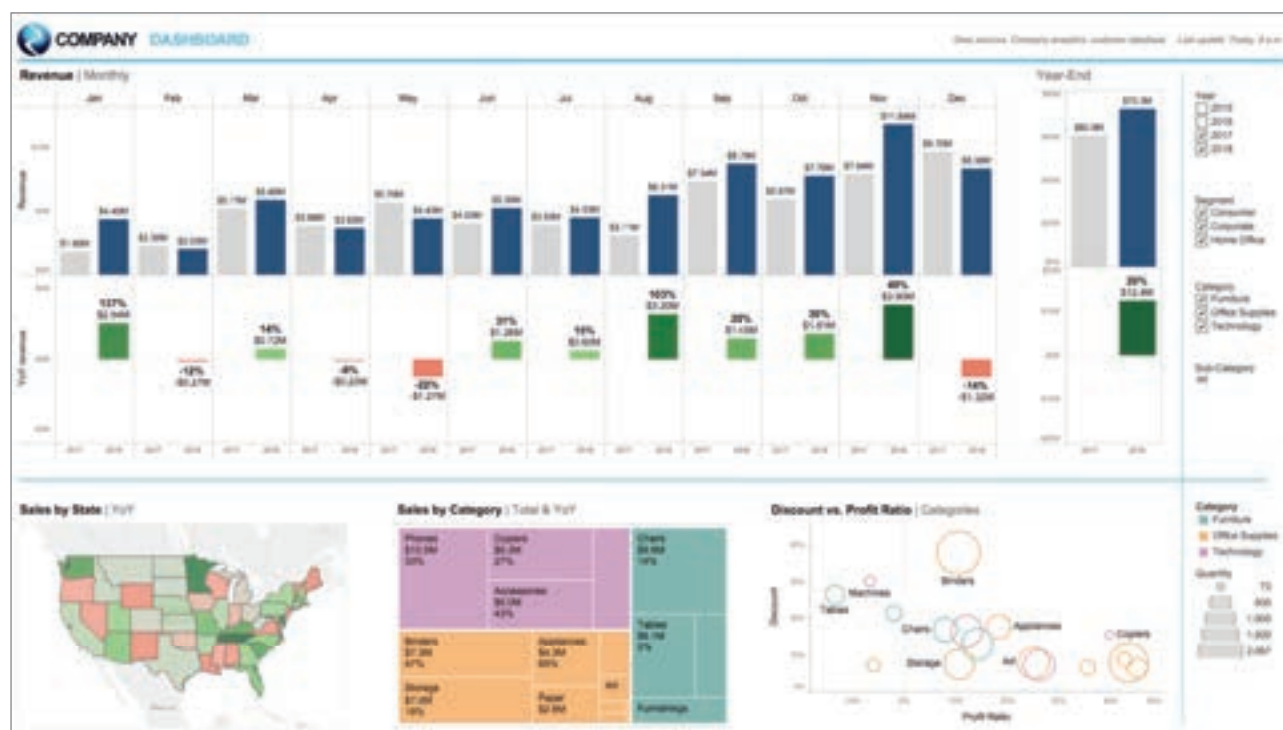
Source: Tableau Super Store sample data

1 Explain the lows and highs vs. the prior year or vs. goals.

Executives need to see what went right, what went wrong and why. Here, the month with the biggest percent drop year-over-year needs to be addressed with reasons.
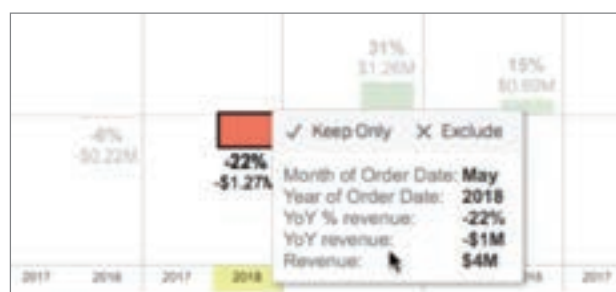
2 Use filters to uncover hidden but important trends.

This scatter plot was only a current-year snapshot on the dash, but clicking the year filters shows discount levels and profit ratios shifting in the past year. That's a story.

EXECUTIVE SUMMARY

If the business is complex and the dashboard robust, draw out more stories. Continue to adapt the dash's charts for slide-friendly visuals.
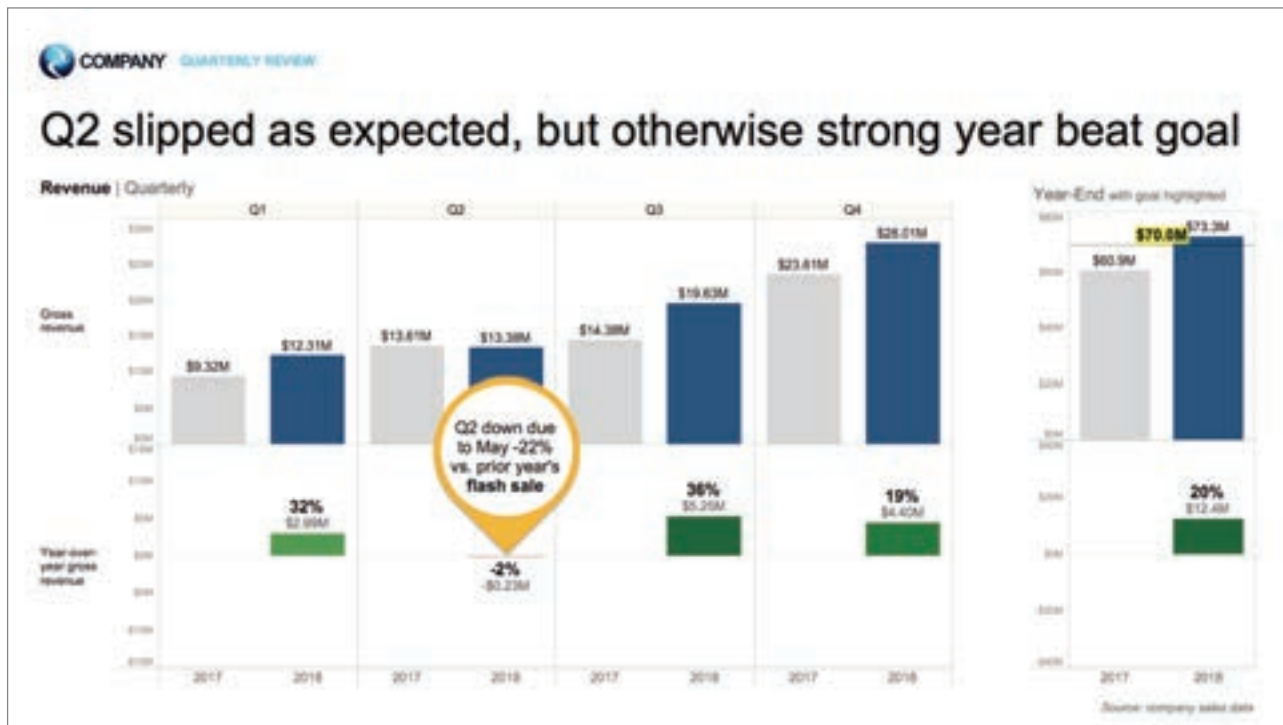
BETTER DASHBOARDS

How to Show What's Next

FORECAST WHAT-IF SCENARIOS AMID SO MUCH UNCERTAINTY

The best year ever for companies to present their five-year strategic plans was 2015. I worked on a big deck back then, full of exciting projections and bold pronouncements of what the future would bring for the business. When the team finished and did the title slide, the headline wrote itself: "2020 Vision — Our Strategy for Future Success."

We thought we nailed it, both the plan and the pun. We didn't. No one can predict the future, and everyone used "2020 Vision" for their decks too. (Should have at least seen that one coming.)

And yet, until this year, I was overconfident in showing what's next. I even fell into the crutch of gathering as much historical data as I could, then building a chart in Tableau, then clicking that simple-yet-powerful "Show Forecast" button.

In fact, back in the distant past of February 2020, this article was going to be about how to use forecasting tools to visualize the future. Weave in assumptions, leverage statistical best practices, and display the range of, say, what revenue will most likely be in the months and years ahead.

Then March came. The spread of the pandemic brought the harsh reminder that no one knows what will happen next, even if you click "Show Forecast." There is no vision for 2020.

But there is uncertainty. Always. So what if we embrace that in how we present strategic plans and data forecasts? That's how this article evolved.

A presentation on what happens next can be multiple choice. "The statistical models show this. Our assumptions show that. And the likely scenarios currently within reason might shape the future like this." Tools like Tableau allow business leaders to explore these choices, animating the data

Real Gross Domestic Product (GDPC1)

Recovery Alphabet

Economists compare the shape of potential recoveries to letters of the alphabet, and a swoosh
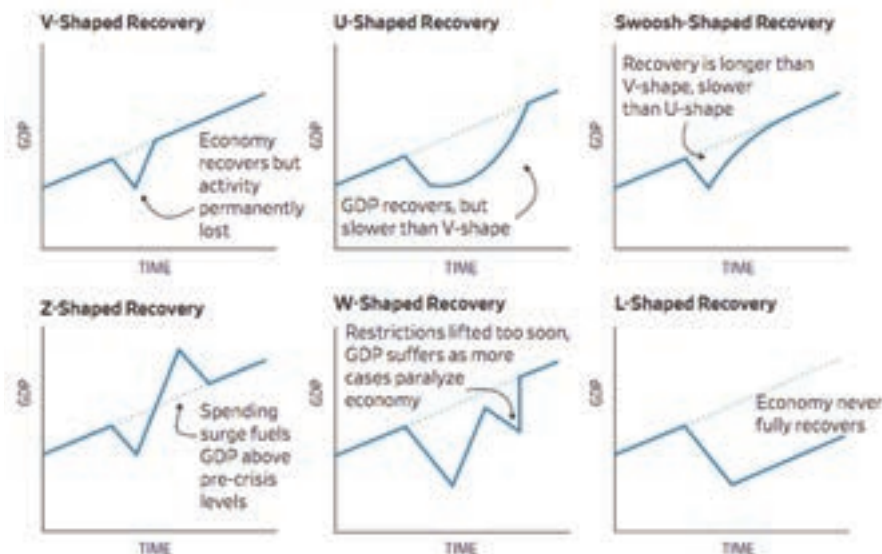
THE INSPIRATION

The Federal Reserve Bank of St. Louis (FRED) is an excellent resource for historical data on U.S. GDP, going back decades. Many businesses may not have nearly as much consistent, quality data to draw from for forecasting. But even a few years of data can help guide what might be next.

And for a multiple-choice view of the future, *The Wall Street Journal* distilled possibilities into this "Recovery Alphabet" guide in a May 11 article, "Why the Economic Recovery Will Be More of a 'Swoosh' Than V-Shaped." Yes, the actual possibilities are infinite, but these choices help narrow the discussion to what's most likely.

The following slides draw on this data and these type of choices.

The Past is Prologue, But the Future...

Data can't show us what will actually happen, but the historical numbers can offer examples. While trying to show the economic outlook of upcoming years, we can visualize the last economic downturn for context in this interactive slide.
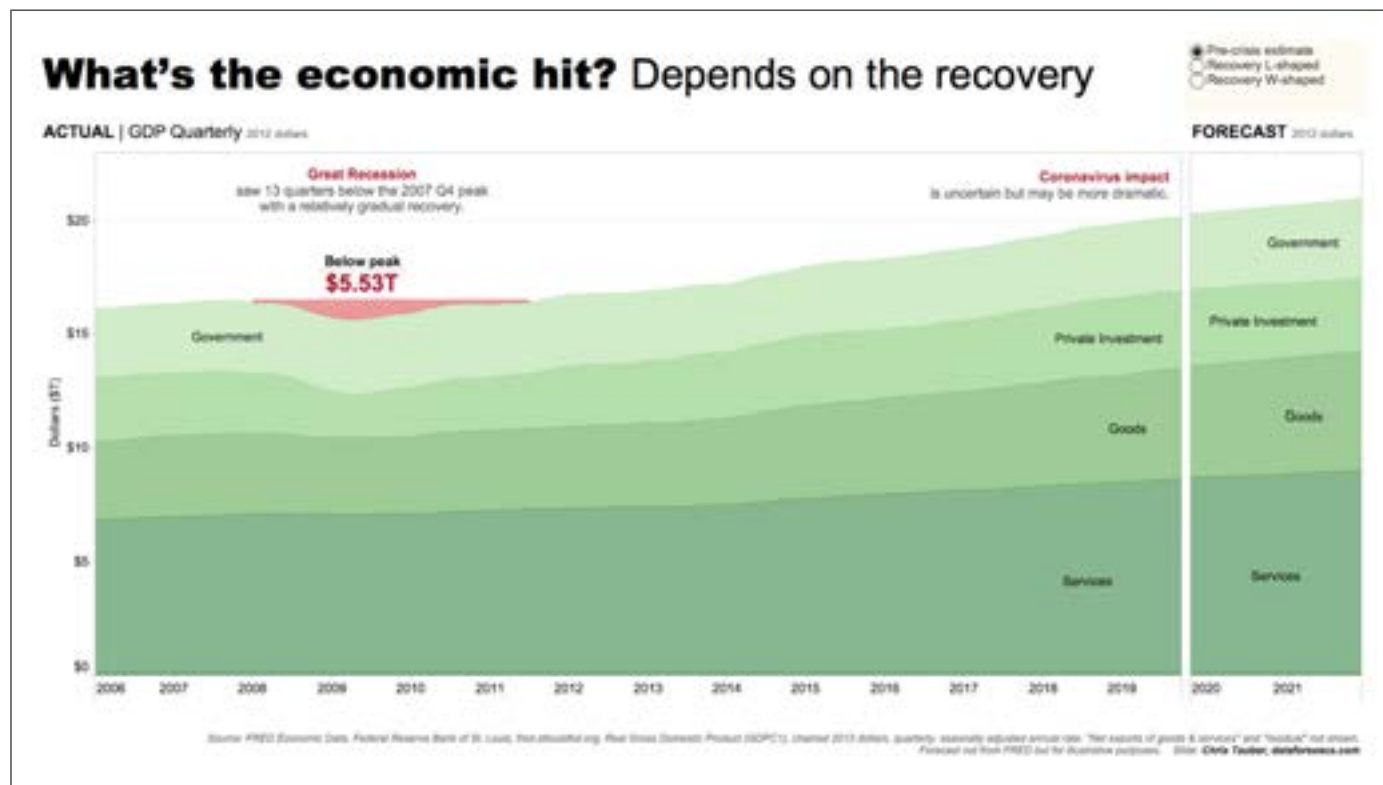
What happened last time

Look at the past in the same way we want to look at the future. In this example, we want to understand how far GDP might fall because of the current crisis. So the visualization for the historical data focuses the executives' attention on that data point, the "below peak" total.
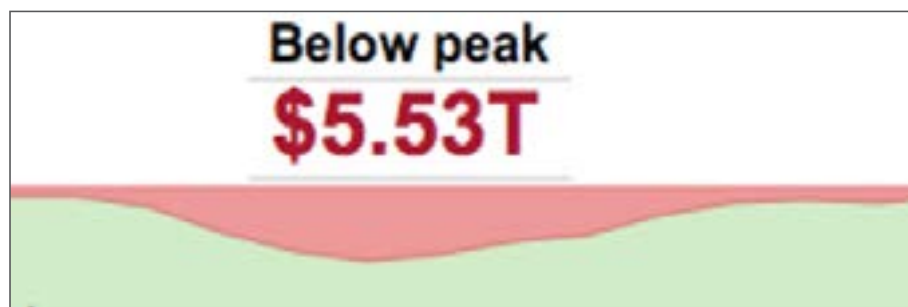
What's happening this time

Everyone in the boardroom knows the context of the presentation, but it's still important to distill and document that context into a clear synopsis.

The multiple-choice future

The future has infinite possibilities, but we distill those possibilities into the most likely, based on everything we know about the data. Still show a traditional forecast based purely on a statistical model, but for comparison, not as the only possibility.

What's the economic hit? Depends on the recovery

ACTUAL | GDP Quarterly

"Here's what this future might look like"

The key with this multiple-choice approach is acknowledging that the future is in motion. (It helps to use animation to make this point.) The discussion around each of the choices is now one of the most valuable benefits of the presentation. And even if the future is complicated, the impact of each choice should be clear in the visualization.

FORECAST

Below peak
$6.41T

What's the economic hit? Depends on the recovery

ACTUAL | GDP Quarterly

"And here's a worst-case scenario"

The pandemic has been a reminder that the worst-case scenario we imagine and plan for can always be even worse. That is a caveat to now underscore every business forecast; this isn't "the" worst-case, it's "a" worst-case. (And yes, the word "worst" means there can be nothing worse, but we're talking philosophically, not grammatically.)

FORECAST

Below peak
$12.30T

Go Deeper But Keep It Simple

The more detail we try to show about the future, the more the forecast can fall apart. Yet leadership teams need as much information as possible on which departments or products might rise and fall. Here's an interactive slide to handle that.
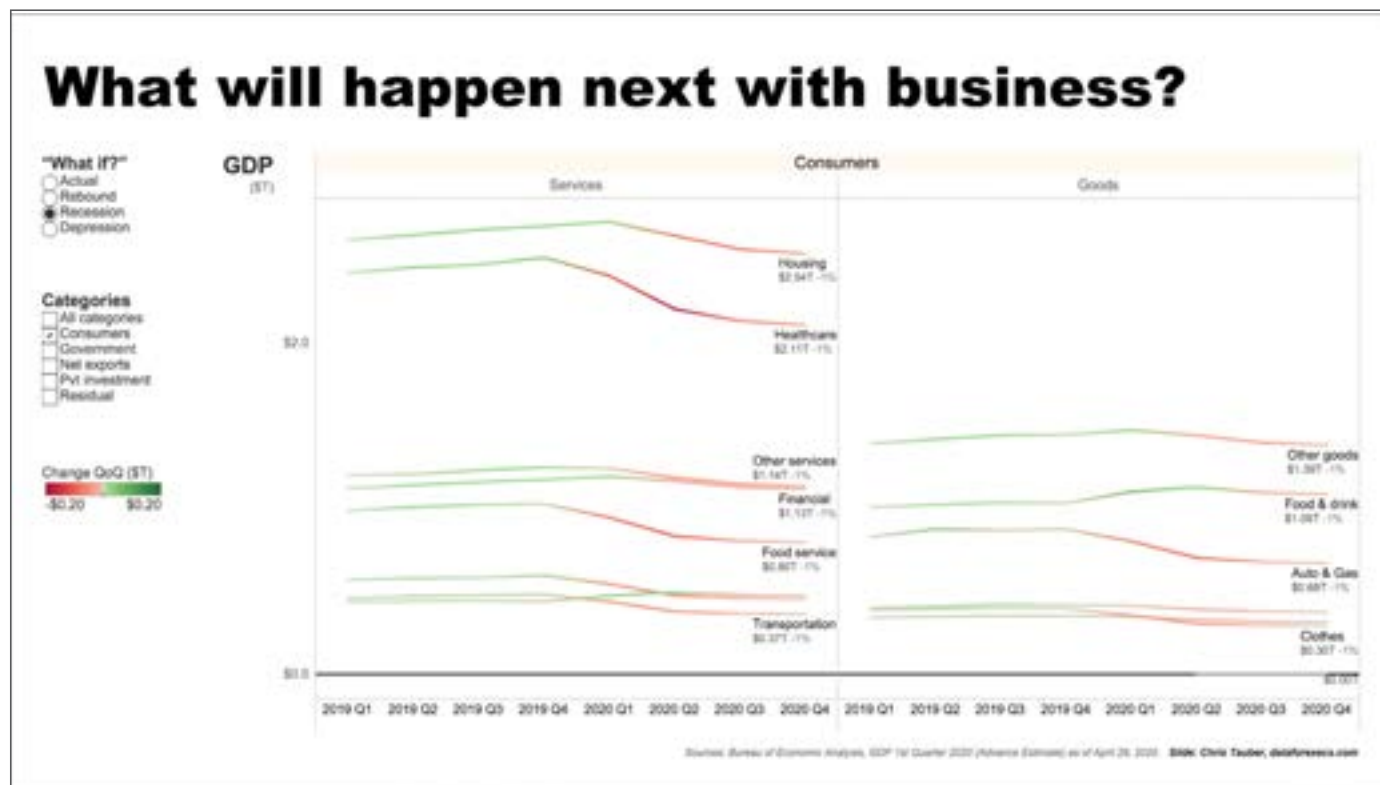
Distill the uncertainty

Even going deeper into the details, we can embrace the multiple-choice approach. This acknowledges that the future isn't clear, yet we've isolated the possibilities that would likely have the most impact to the business.
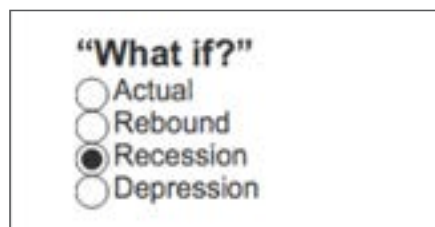
Add color to the trends

Literally and figurativel . It's most important for business leaders to see what's rising and falling in the current state and forecast. Applying green and red, respectively, reinforces that movement on the line chart. And the approach keeps this digestible at-a-glance.

Consolidate data labels

Since this forecast is directional, the exact numbers aren't as important as the direction and size of the trends. Make the data points available but not necessarily prominent.

What will happen next with business?
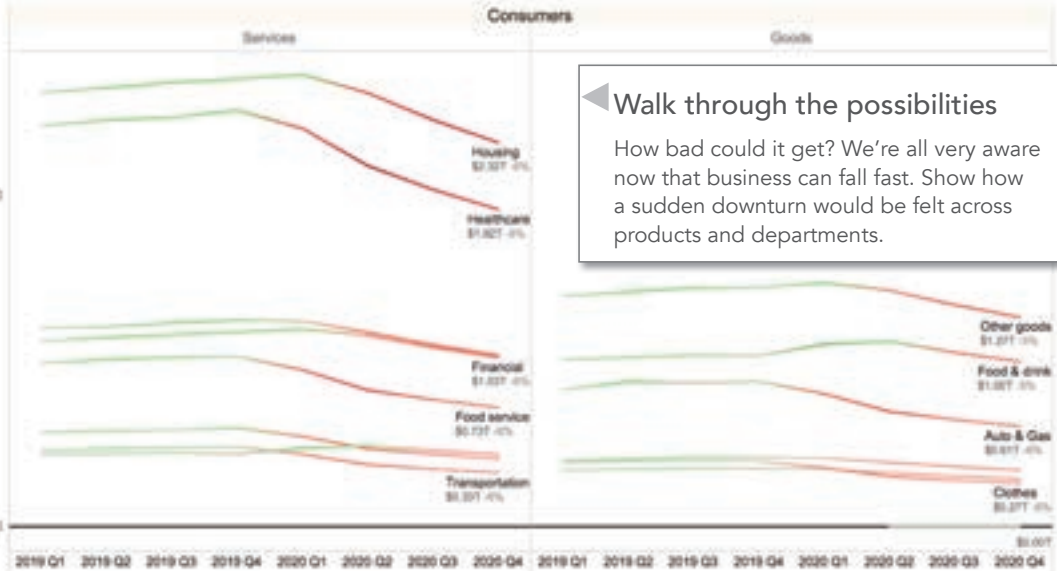
Walk through the possibilities

How bad could it get? We're all very aware now that business can fall fast. Show how a sudden downturn would be felt across products and departments.

What will happen next with business?
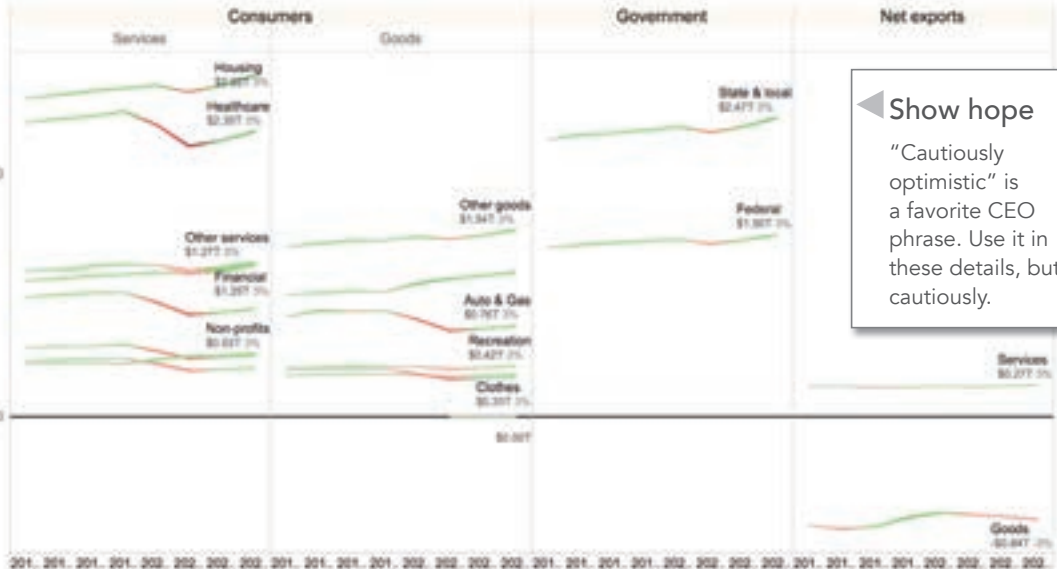
Show hope

"Cautiously optimistic" is a favorite CEO phrase. Use it in these details, but cautiously.

Rev Up Your Dashboards

IF EXECS AREN'T FULLY UP TO SPEED, IT'S TIME FOR AN OVERHAUL

Dashboards are often built from the data up, but that leads to a lot of clunkers in a junkyard of abandoned dashes. They're full of dense data tables and cumbersome filters. They run slow and then just stall out. But what if we could build a dashboard the right way?

What if we instead built dashboards not from the data up, but from the CEO down? CEOs don't care about your fancy data blending and your complex filtering with parameters. They want to know if the business is going to meet its target. And if it is, who gets the call to exceed the target? If it's not, who is getting the call to get back on track right now?

The CEO calls a director (or a C-level exec or a VP), who then needs to see how his or her department goals are tiering up to the CEO's target. Whatever is working, let's scale it. Whatever isn't, let's fix t right now.

The director then goes to the analyst to look deeper into specific etrics. The analyst needs a lot of flex bility to peer into the data for insights. But when they're found, those insights need to zoom back up to the director, then the CEO.

That CEO approach can require a full overhaul. But the result is a dashboard hierarchy that leverages data to truly drive the business.

You'll fi d an example of that hierarchy in the following pages, plus ideas (based on real-world dashboards) on how to take your dash to the shop for quick fi es and rebuilds. Tuning up your dashboards is key to turbocharging your business.

Is it a dashboard or is it just a fancier spreadsheet?

Performance Dashboard

Week
(All) ▼

Region
(All) ▼

Metrics
(Multiple values) ▼

Week of Order D... ⇟	Central			East			South			West		
	Orders	Quantity	Sales	Orders	Quantity	Sales	Orders	Quantity	Sales	Orders	Quantity	Sales
12/27/2020	10	26	679	10	44	785	6	15	1,879	14	49	2,120
12/20/2020	25	102	5,745	29	96	3,816	27	98	4,865	20	71	7,209
12/13/2020	15	57	1,992	20	80	5,640	6	28	2,932	39	143	2,649
12/6/2020	31	108	5,911	31	96	3,651	19	66	3,875	35	134	9,301
11/29/2020	23	81	4,654	51	202	10,302	16	57	4,562	52	237	8,399
11/22/2020	33	120	6,981	29	147	10,483	16	76	3,595	19	84	2,336
11/15/2020	23	86	4,366	34	133	18,746	22	95	3,362	36	132	6,627
11/8/2020	25	95	2,471	28	119	7,497	10	43	2,947	43	166	8,423
11/1/2020	24	99	1,239	30	106	4,799	30	101	15,910	40	171	11,530
10/25/2020	16	40	1,051	12	49	908	12	51	1,155	17	65	3,977
10/18/2020	22	76	5,475	30	116	17,233	15	46	3,546	14	43	1,440
10/11/2020	10	48	1,678	16	69	4,622	8	35	3,917	22	87	8,577
10/4/2020	9	32	1,679	19	57	7,238	6	22	1,038	23	87	3,343
9/27/2020	15	63	2,625	20	67	3,320	12	40	2,736	38	155	5,264
9/20/2020	21	90	3,330	36	132	16,713	22	74	2,792	30	105	4,480
9/13/2020	15	52	2,440	38	130	6,835	17	67	3,174	40	149	8,209
9/6/2020	30	123	5,729	33	116	4,345	15	56	1,946	35	133	6,932
8/30/2020	20	89	6,097	29	97	3,509	10	34	2,924	41	141	8,533
8/23/2020	10	44	368	13	67	3,921	12	44	4,890	14	53	4,519
8/16/2020	12	42	462	20	74	11,597	6	21	1,184	34	141	13,715
8/9/2020	9	51	2,079	7	28	3,960	9	43	2,881	16	65	2,338
8/2/2020	11	46	1,133	7	40	1,281	4	11	255	17	49	3,290
7/26/2020	12	36	2,846	10	43	1,999	7	24	660	17	59	4,379
7/19/2020	21	80	3,747	18	60	1,431	7	29	952	10	45	4,493
7/12/2020	3	6	377	23	89	5,100	5	13	1,316	17	57	4,062
7/5/2020	12	66	1,628	23	81	3,128	3	7	300	19	72	3,161
6/28/2020	17	53	4,551	13	59	3,760	5	11	365	16	64	8,340
6/21/2020	10	34	1,944	22	88	4,143	3	12	325	13	73	3,428
6/14/2020	16	55	1,049	17	73	5,760	17	57	5,014	16	54	3,031
6/7/2020	14	52	2,219	9	32	1,091	8	33	2,148	28	95	4,638
5/31/2020	11	46	5,053	10	35	1,071	16	56	1,427	9	44	1,397
5/24/2020	14	43	1,588	9	37	1,136	13	35	1,506	14	49	1,719

Yes, it's filterable and sortable but...

This dashboard is really just a data table. It's an extreme example above, but you'll see this in the real world. Interactivity on a wall of numbers may have value for analysts and execs. But this approach isn't digestible, accessible, shareable, relatable or translatable for quick insights.

Maybe sales are on track, maybe they aren't

Some people's brains work where they can simply see this sales column and understand the trends. Most people, though, need this visualized as a line graph or bar chart to actually see what's happening. Again, this data table may be OK for analysts, but not for executives.

Long scrolling reinforces that this is just raw data

The rows keep coming, but the insights don't. If this is going to be considered a dashboard, it should be clearly marked as material for analysts to refine further. Otherwise, this is too much like Excel from the late 1900s. It has potential, but it needs to be distilled and visualized.

AFTER   Visualize highlights and have a data table for deeper analysis

Make it "pretty" with meaningful visualizations

Charts aren't just for show. They're an accessible entry to the data, a quick read to know if this is good or bad for business. In one second, any business person can see the East is soaring and Central is lagging. That would take so much more time with a data table.

Draw attention to the biggest variances

Sure, there are very smart people who can glance at the table on the left hand page and see in their mind's eye what's doing well and what isn't. The rest of us need these helpful red and green bars. These variances are likely the story for the business and the key to success.

Keep a data table if you must, but don't make it the hero

Many business leaders will use a dashboard like this to see the big picture of what's going on, but then they'll want to dig into the numbers for ad-hoc analysis. That's great. Let them have the best of both worlds with the visuals up top, the data table below as a resource.

BEFORE

Which KPI is most important and how do they tie together?

COMPANY KPI DASH

Filter (All) ▾   Filter (All) ▾   Filter (All) ▾   Filter (All) ▾

Revenue	Discount	Units
75,521,171 ▲ 20.36%	**38.88%** ▲ 29.45%	**1,796,544** ▲ 26.83%

Price	Cancellations	Customers
42.04 ▼ -5.10%	**289** ▲ 46.70%	**6,932,772** ▲ 8.62%

Margin	Markets	Conversion
12.74% ▼ -5.09%	**436** ▲ 9.55%	**9.70%** ▲ 0.90%
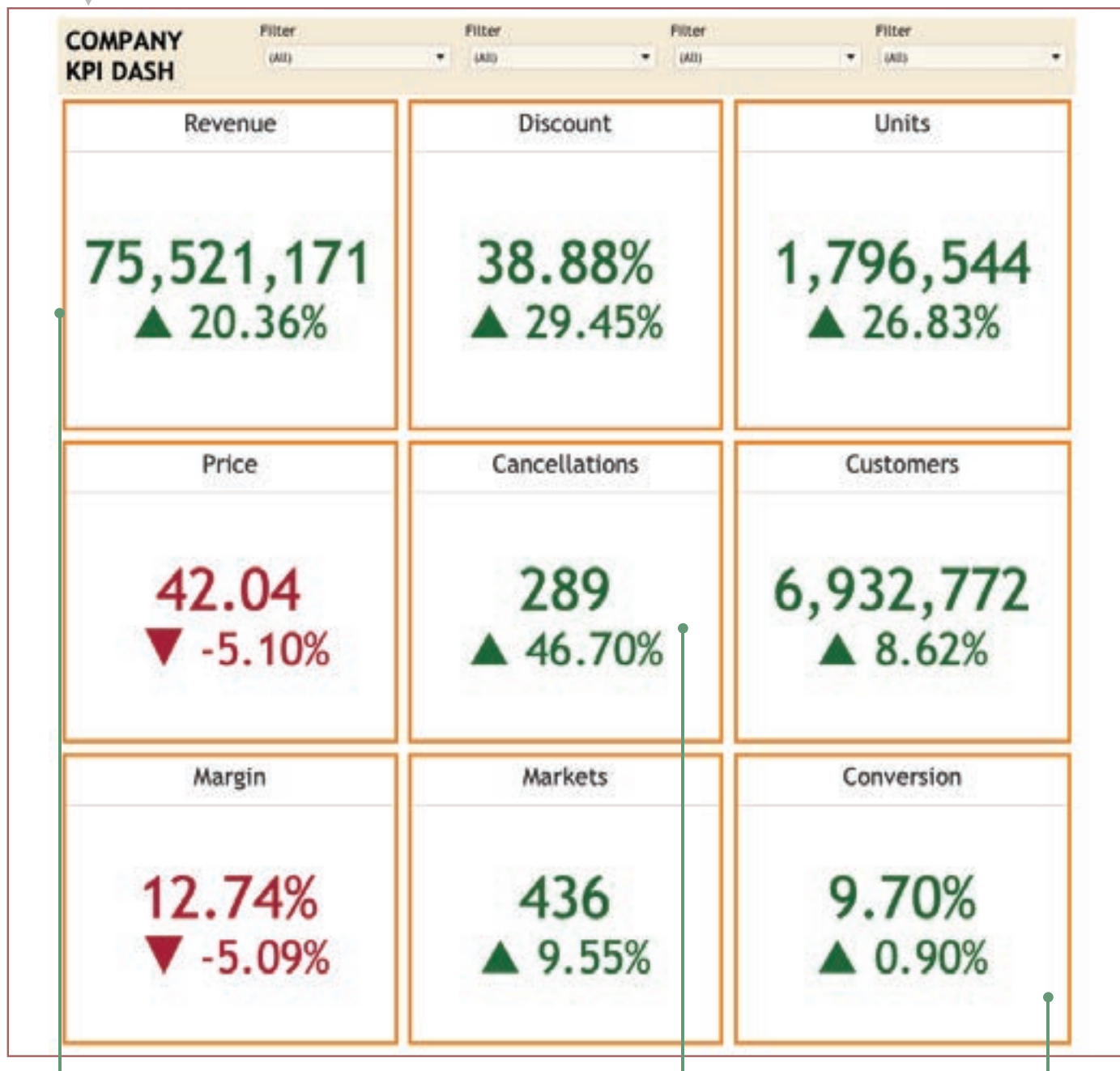
You *can* go overboard with big KPI numbers

In the must-read *The Big Book of Dashboards* by Andy Cotgreave, Jeffrey Shaffer and Steve Wexler, the authors talk about the use of BANs (Big Ass Numbers). Often, they're effective in drawing attention to the top KPIs. Also often, people go too big, too much.

Who knows where this trend is heading next

Limiting a KPI to a big number and an up-or-down arrow is fine for a snapshot view, one moment in time. But executives need to prep for what's coming. Are we about to roll over a huge sales spike from last year? Do we face headwinds from seasonality? One arrow doesn't capture it.

The grid gives everything importance … and nothing

Variations of this KPI grid do exist at business right now. And while some executives may like it, the grid places equal weight on each KPI when that's not how the business works. Certain KPIs are most important, others are secondary drivers, not primary metrics.

AFTER ## Clarify the KPI hierarchy and the drivers for each key metric

COMPANY KPI DASH

Filter	Filter	Filter	Filter
(Multiple values)	(All)	(Multiple values)	(Multiple values)

YTD with YoY%

Monthly with YoY% ▢ 2019 ■ 2020

Revenue
$75.5M
▲ 20.4%

Units	Price
1.80M	$42.04
▲ 26.8%	▼ -5.1%

$8.63M
-14%

Customers
6.93M
▲ 8.6%

Markets	Conversion
436	9.70%
▲ 9.5%	▲ 0.9%

1.95M
24%

Profit
12.7%
▼ -5.1%

Discounts	Cancellations
38.9%	289
▲ 29.5%	▲ 46.7%

10.1%
-45.1%

Put the KPIs in order of what's most important

Reading a dashboard is like reading a book. The natural eye flow is left to right and top to bottom. Structure a dash in that flow. If revenue is the top KPI, put it at the top. Clarify the hierarchy so that, at a glance, anyone can differentiate actual KPIs from their respective drivers.

Show the trends alongside the KPIs

Snapshot views are fine, especially for year-to-date status. But seeing the KPIs plotted in a line chart across a wider time frame vs. prior year or a target completes the picture. It's simple to plot, and it's universal to understand. Then an exec sees not just that a KPI is up, but why.

Highlight key details in the visuals

Labeling the most recent data point with the value and the year-over-year percent is an effective default. Make sure each point in the line chart has more info when hovering over it. With this dash overhaul, we've used the same space to tell the big story, just with medium-ass numbers.

These dashes are better, but will execs use them?
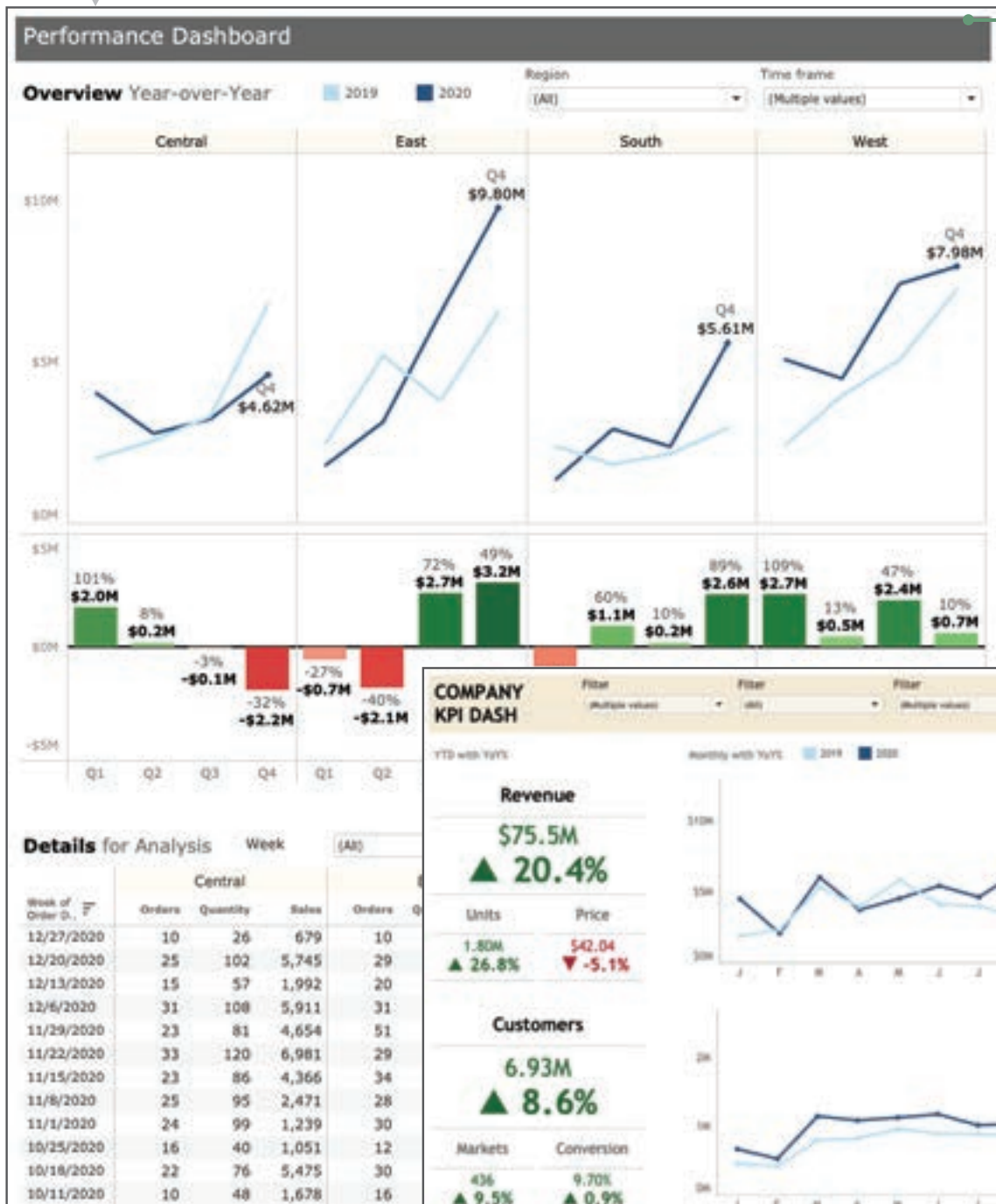
The filters might not be touched

Executives are so pressed for time that they may not have the chance to explore a self-service dashboard, even one like this with a low number of filters and visualizations. They often just want to look quickly and see the story.

Awkward dashboard sizes make it hard to present

The language of executives is still often in PowerPoint. But so many dashboards aren't widescreen size. That's fine when scrolling through them at your desk, not so easy when showing data to leaders.

AFTER   Is this a PowerPoint slide or is it a dashboard? Yes
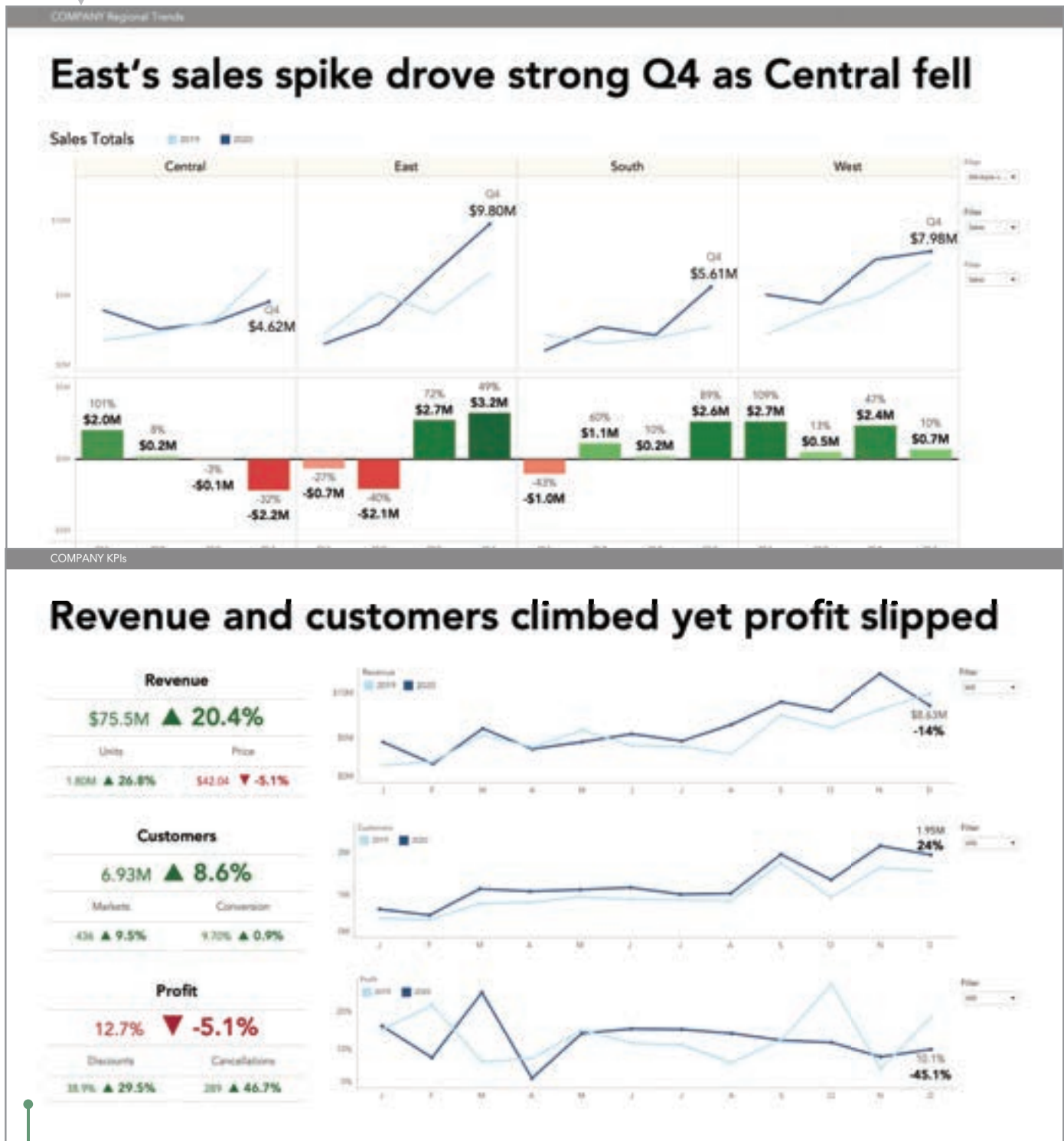
Create an interactive hybrid of a dash that looks like a slide

This can be a secret weapon. It has all the features of a dash — the filters, the info pop-ups, even the animations. Yet it's designed like a widescreen slide, so it's easy to understand, easy to present, easy to share. Not every dashboard needs this approach. But C-level, VPs and directors will love it because it speaks in their language.

BEFORE **So many dashboards, so ready to be organized**
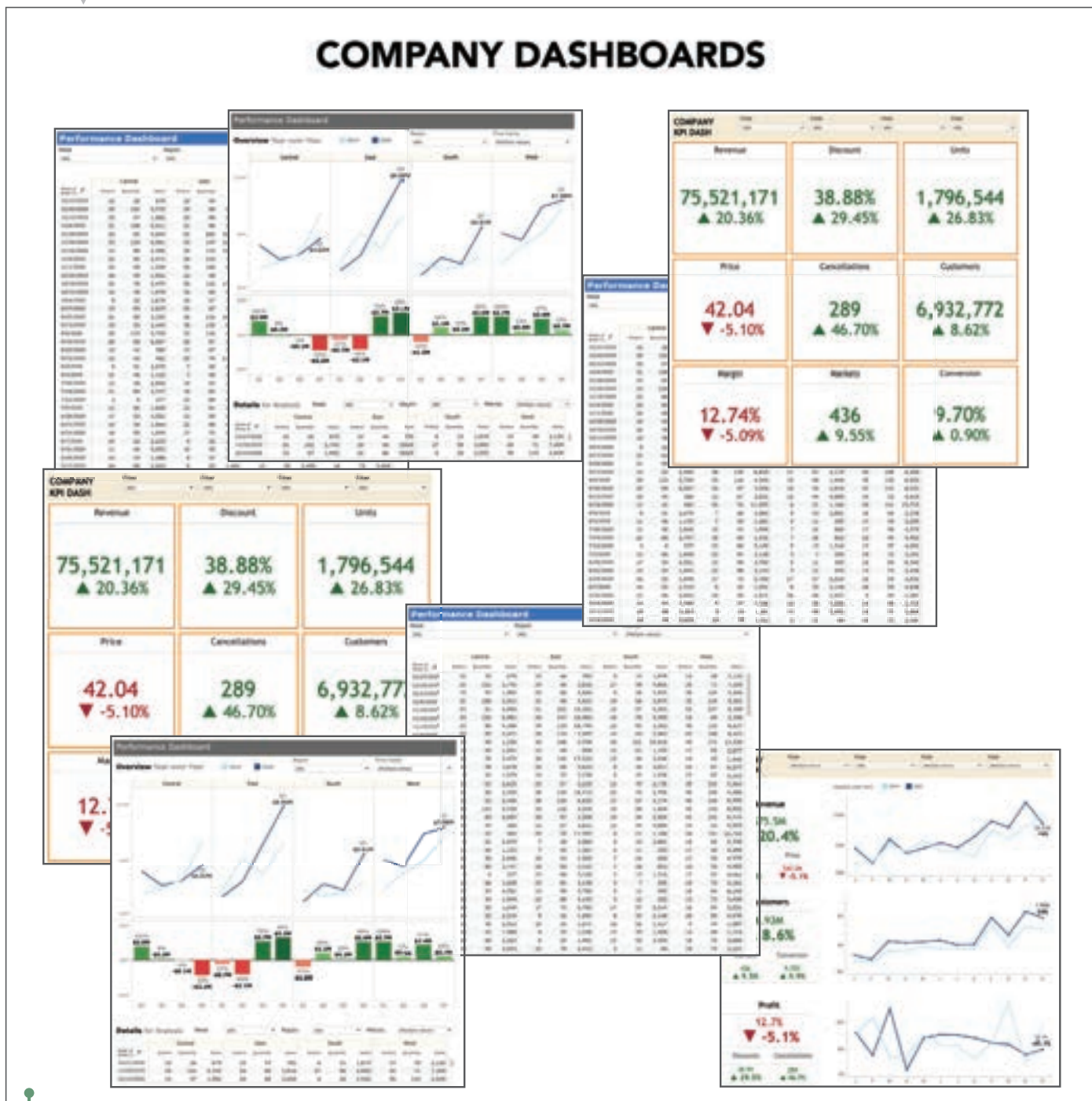
It's easier to create dashes than it is to fit them together

The proliferation of dashboard tools has led to a proliferation of dashboards. That can be hard for business leaders to navigate. What's happening with the business? Where do I go for specific questions about performance? If I see a red flag or a success story, what happens next? When those questions become overwhelming, it may be time for a top-down major dashboard overhaul. The good news is, those dashboard tools are making it easier and easier to rebuild dashboards so they're all in strategic alignment.

AFTER   Dashboards can be structured like the company org chart

DASHBOARD STRATEGIC MATRIX

	CEO Dash				Alerts
EXECUTIVES	**Net income** year-over-year				Sent at actionable thresholds
Top KPI:					
Drivers:	Revenue, costs, customers				

	Sales Main Dash	Finance Main Dash	Marketing Main Dash	Research Main Dash	Alerts
DIRECTORS					Sent at actionable thresholds
Top KPI:	Revenue YoY	Costs YoY	Customers YoY	Market share YoY	
Drivers:	Transactions, avg. order value, revenue per channel	Margin, budget, costs per channel	Acquisition, churn, value per customer	Competitors' share, Net Promoter Score	

	Sales Deep-Dive Dashes	Finance Deep-Dive Dashes	Marketing Deep-Dive Dashes	Research Deep-Dive Dashes	Alerts
ANALYSTS					Sent at actionable thresholds
Details:	Revenue trends, forecasts and targets by multiple filters, product categories and customer segments	Costs and expenses, actual and projected by multiple filters and time frames, profit centers and cost centers	Campaign spend and customer conversions by filters, campaign reach, engagement and targeting	Competitor and industry comparisons and trends by direct and emerging competitors and brand awareness	

DATA TABLES	Included in analyst dashboards for ad-hoc analysis as needed
DATABASES	Connected to dashboards and available for custom queries

Start with the business, then overlay the dashboard needs

Here's how a top-down dashboard structure can look. The key is building it off the company's org chart, with the CEO at top. One last car metaphor: Think of this like the chassis. It's the underlying framework for how your business moves. The purpose of dashboards is to help that business run faster and better. What is the CEO's top KPI? How does department leaders support that KPI? What metrics drive each department? This approach clarifies and prioritizes success metrics. Now, rebuild the dashboards.

How Dynamic Slides Can Change EVERYTHING

NOT A DASHBOARD, NOT A DECK, BUT SOMETHING MUCH MORE

During a high-stakes presentation, how do you respond when an executive asks, "Let's dive in deeper on that metric"? Do you say, "OK, I'll follow up with the data team and get back to you"? Or do you say, "Sure, let's explore this right now"?

If you're presenting only with old-fashioned static slides, usually your only option is the first one. But that second option is possible right now.

The key is creating dynamic slides. They look like PowerPoint, showing a story in the widescreen format that executives expect. But the presentation is actually in, say, Tableau or another visualization tool. Dynamic slides act like a dashboard, integrating interactive elements and animation to show a story at a high level while allowing for on-the-fly deep dives.

That approach evolves the presentation from a droning monologue ("Here's this chart, here's this chart, here's this chart") to an engaging dialogue ("Here's what we found but we can explore further together"). If a chart is showing a monthly view but an executive wants to see March's daily view, that can happen with a click. If a spike in total sales can be explained by one product category, the visualization can toggle between the "total sales" and "sales by category." Insights, understanding and executive action can happen immediately.

The impact ripples across the business. These slide/dashboard hybrids aren't just for executive presentations. They work as self-service tools for managers and directors too. All team members can explore on their own prior to that big meeting. The slide format naturally focuses teams on the data points that matter most and the stories that will make a difference. Find the story with the team, then bring it to the meeting for the big decisions. Once you go dynamic, there's no going back.

BEFORE — A typical dashboard that looks like this is really for an analyst analyzing, not for a director presenting. Taking a screenshot of these charts and pasting them into a static executive slide is lose-lose too.

1) TEMPLATE — Leverage the best aspects of a dashboard — the interactivity and the underlying data — to build a dynamic slide. Tableau is one visualization tool where you can create a dashboard that looks like a slide.
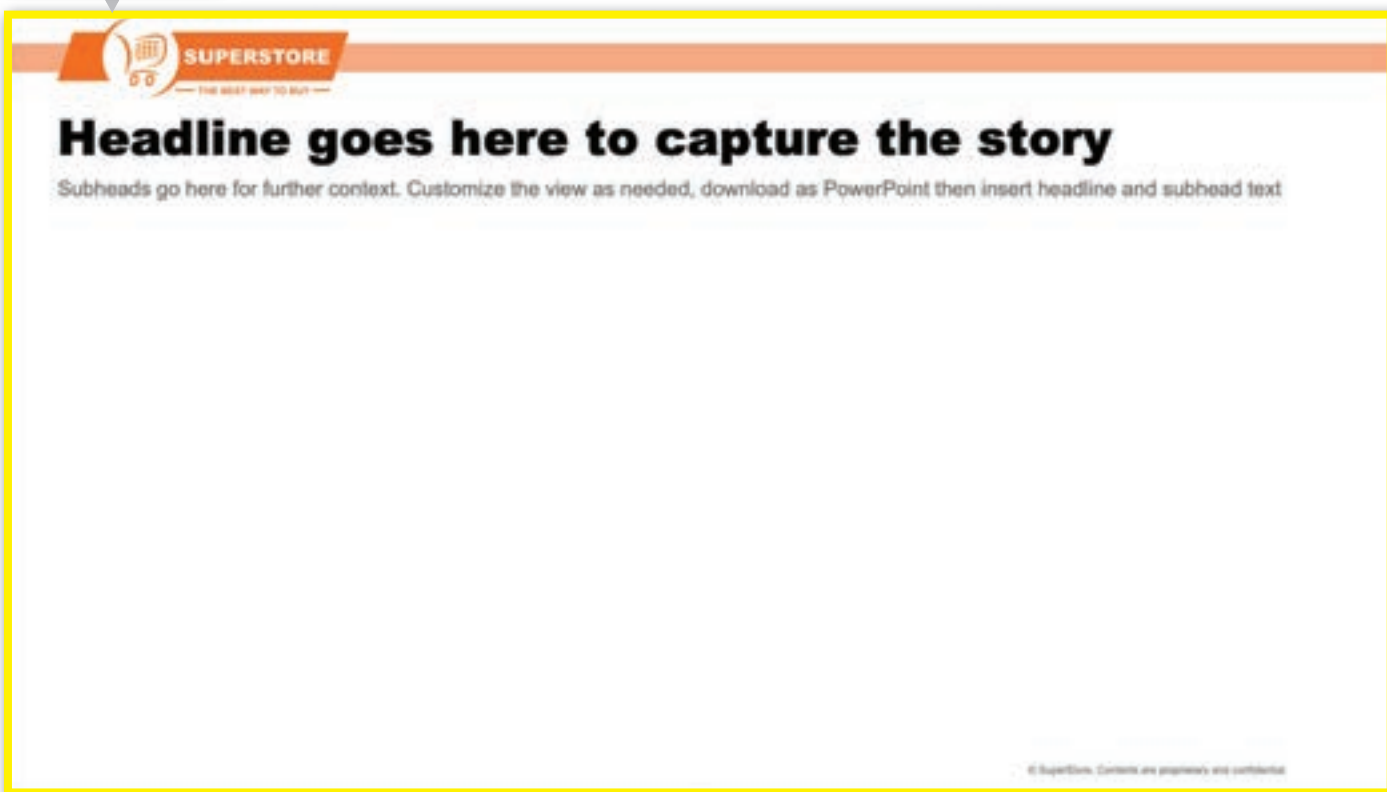
2) TOP KPI — Don't just port over an existing dashboard into a PowerPoint-friendly 1,600 x 900 template. Focus on what's most important. In this example, we look at the top KPI and the two main drivers of that KPI.

3) ORGANIZE — Let's say the year-over-year sales performance is the top KPI for the leadership team. That KPI dominates the slide, underscoring its importance. The two drivers of quantity and price are then along the right side.
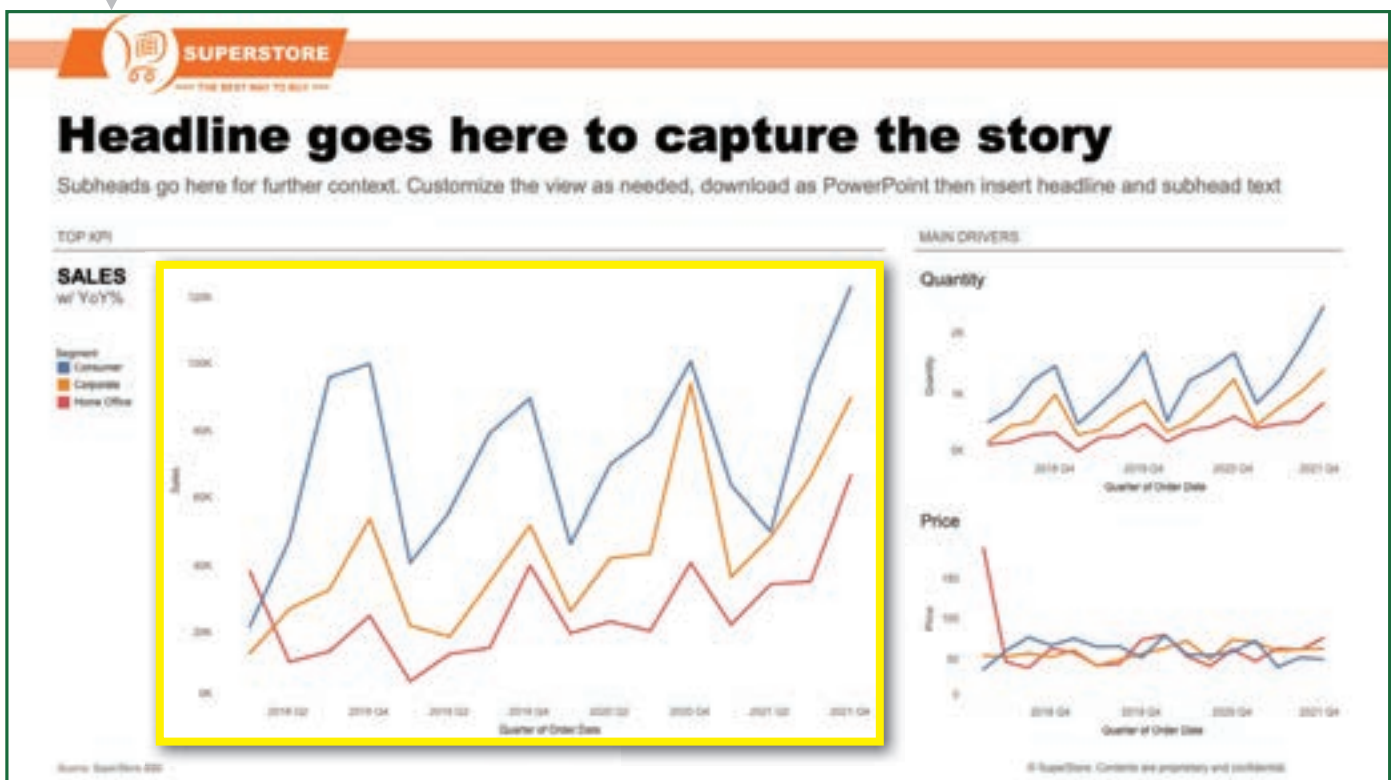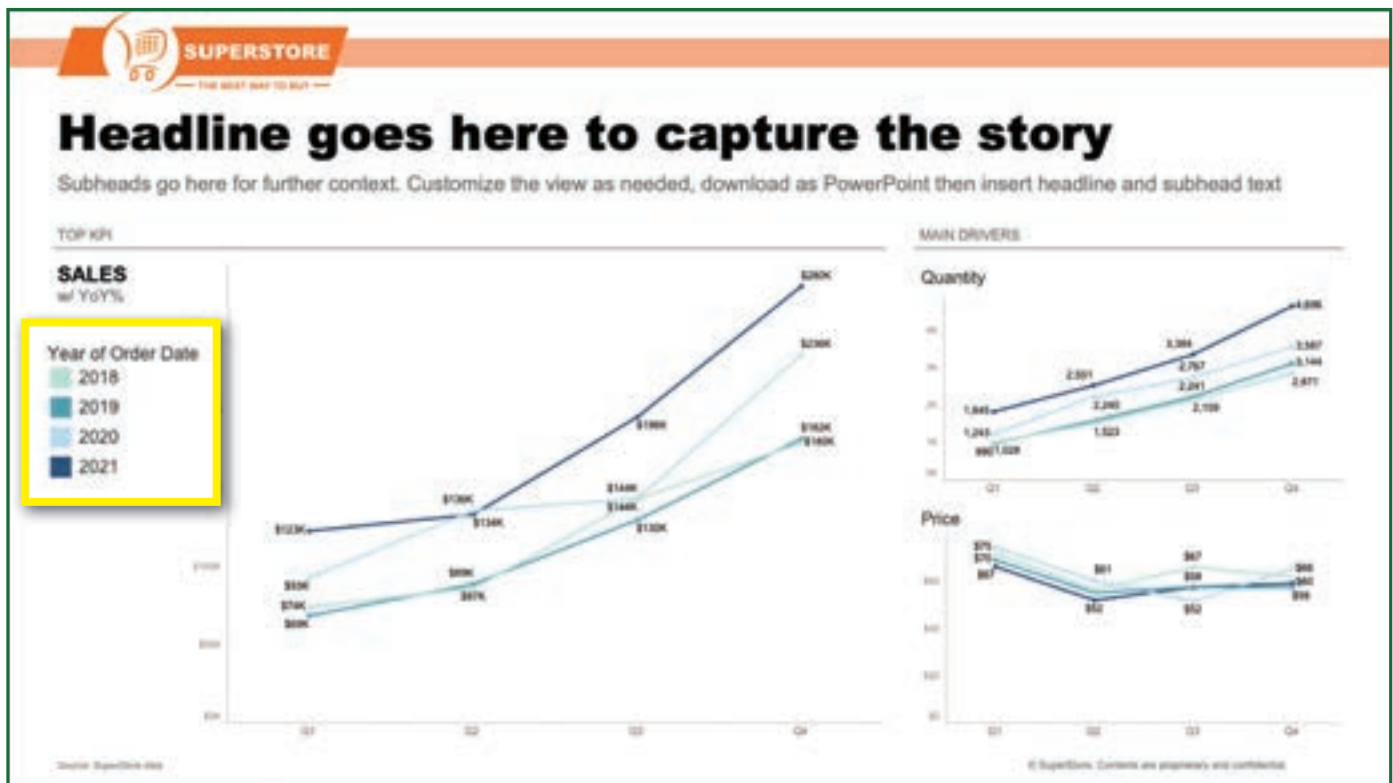
4) CLARIFY

Best practices for data visualization are essential. If only an analyst is seeing these charts, then fine, use a rainbow palette. But for an executive audience, colors and labeling have to be as clear as possible.

5) ISOLATE

A slide will groan under the weight of too many lines, bars and numbers. The audience will too. Only show what needs to stand out at a glance. Change filters or hover over charts to reveal deeper data.
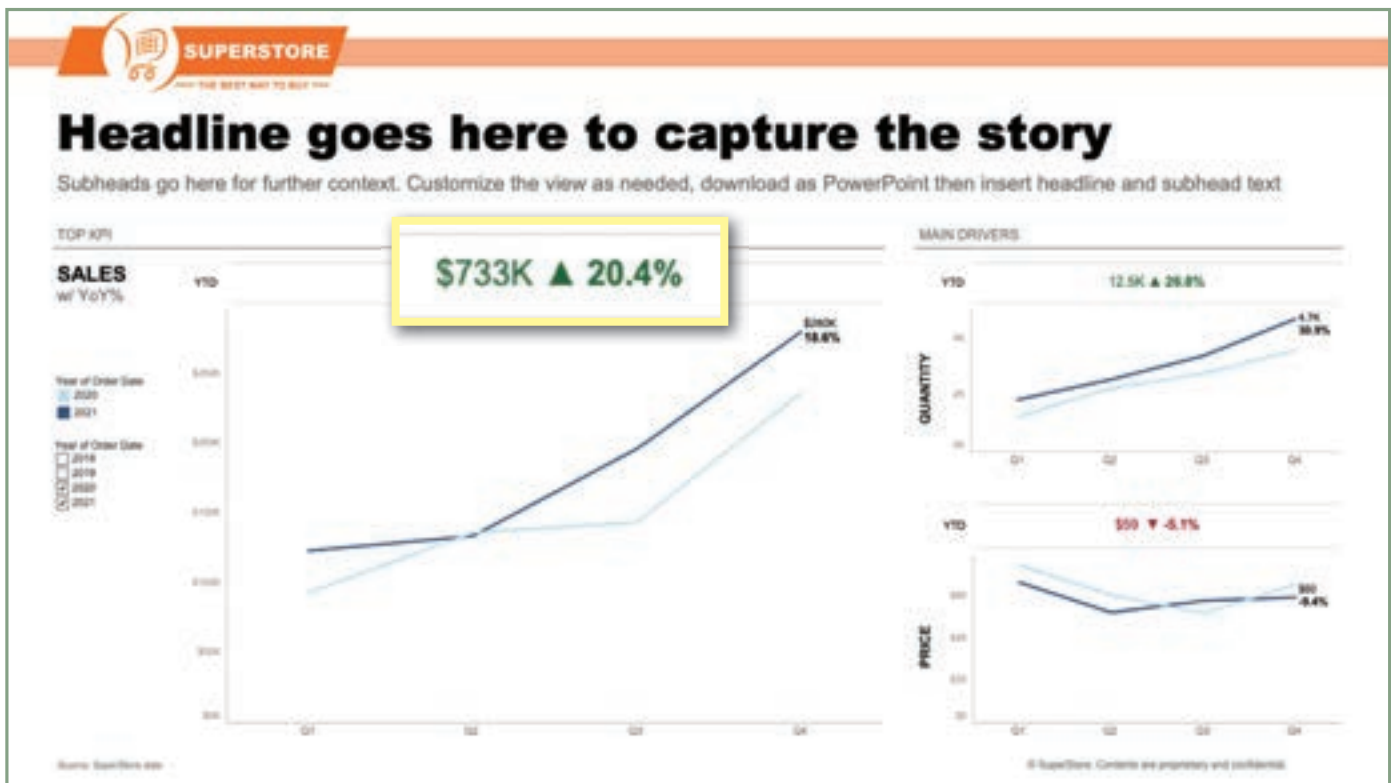
6) CALCULATE It's not just the visuals that are dynamic; so are the calculations. Year-to-date totals and year-over-year percentages, for example, can be shown literally up to the minute and can change based on the filters.

7) GOOD/BAD Green is good. Red is bad. A lot of green is really good. And a lot of red, well, you and everybody else* will get the idea. Add a prominent element to the top KPI that shows just how good or bad things are.
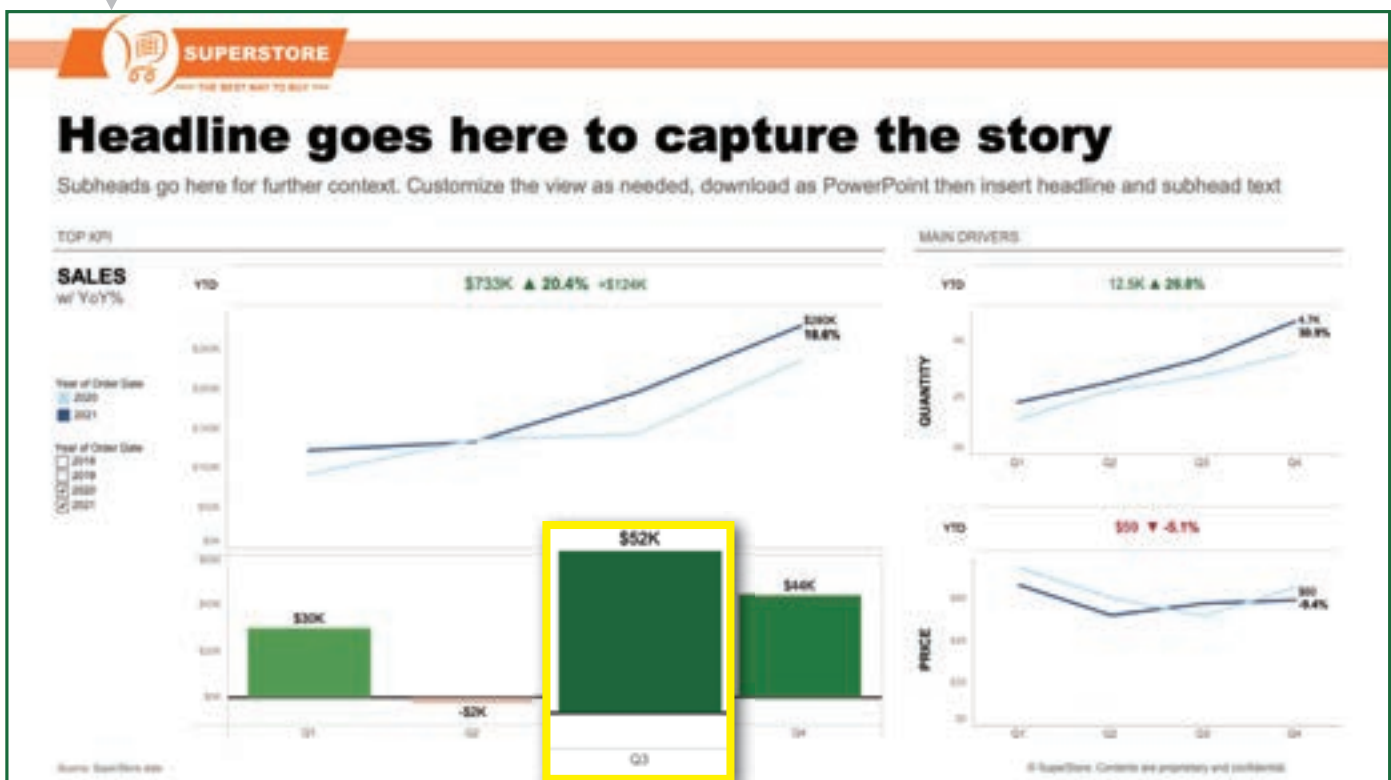
"Everybody else" must include the color-blind, so make sure charts show the good and bad with more than color, such as with labeling and the size of bars.

To show the full story often means showing the full range of time detail. That can happen on one dynamic slide, where switching from a quarterly to a monthly view is easy. Animation also helps show this switch.

Like the time detail, toggling between segment detail and the total allows for a walk-through of the full story. In this example, the sales total can instantly switch to a region detail and even by a specific region.
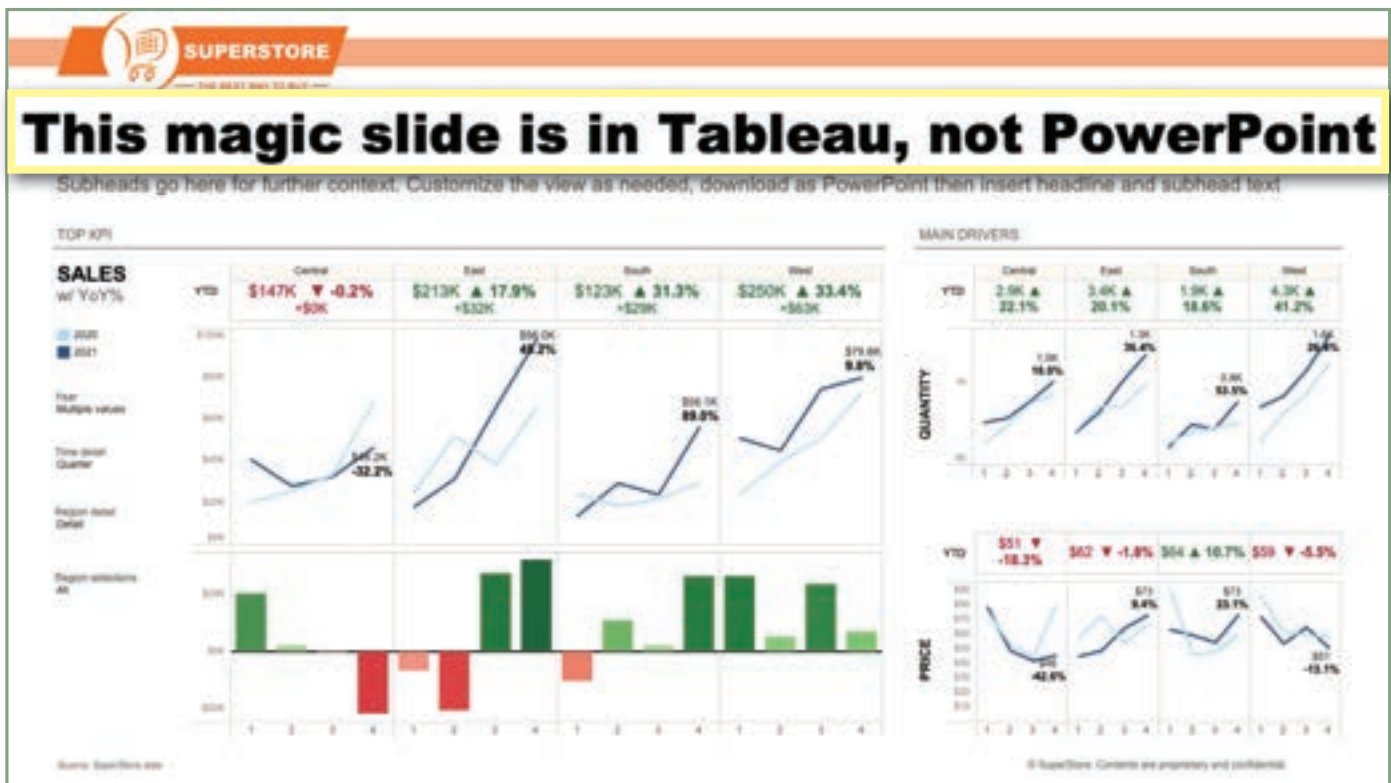
10) HEADLINE — Write the all-important headline right into the slide. Add room for a subhead and an area for bullet points if needed. The tile mode in Tableau ensures these text boxes will be neatly lined up with other elements.

11) STORY — The headline captures the story as it does in a static slide. But this dynamic slide, the headline can tee up the exploration you can do by quickly adjusting filters and hovering over key data points.

SUPERSTORE
— THE BEST WAY TO BUY —

Despite Dec. drop, year sees

After Nov.'s +$39K spike, the -$13K in Dec. was the worst sales performance since

TOP KPI

SALES
w/ YoY%

■ 2020
■ 2021

All selected regions

YTD $733K ▲ 20.4% +$124K

Year
(Multiple values) ▼

Time detail
Month ▼

Region detail
Total ▼

Region selections
(All) ▼

Source: SuperStore data
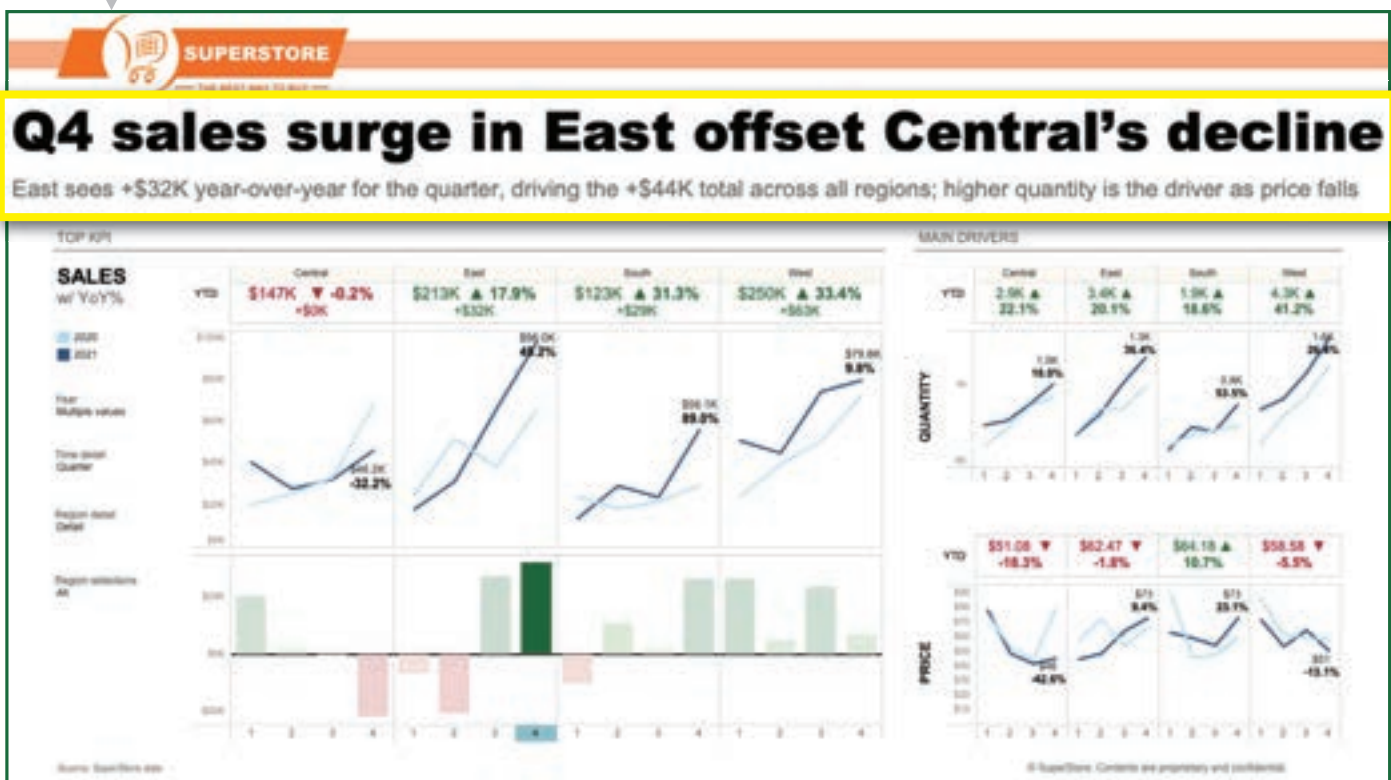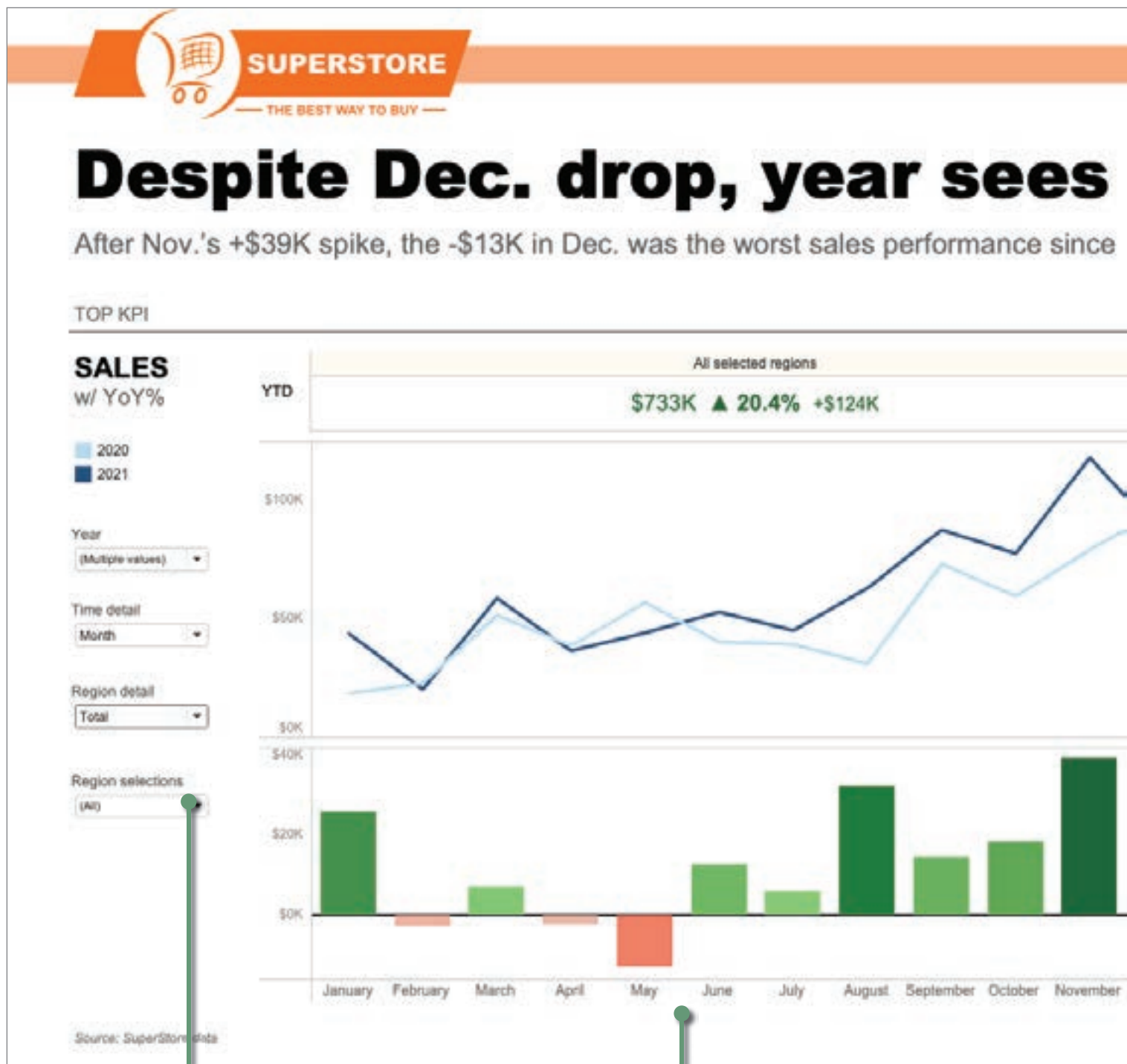
12) PRESENT

Set the filters
to show the main story

This guides the storytelling. Create your jumping off point with the starting view. Often, that best initial look is the total rather than the segment detail. Show the high level, then go deeper.

Consider which time detail
illustrates the story best

Plan your story flow along the time detail. Here, the monthly detail shows how that +20% overall sales growth wasn't a steady climb month-to-month, and there's a red flag in December.

+20% sales growth

May as slashing prices did not spark higher quantity

MAIN DRIVERS

All selected regions

YTD   12.5K ▲ 26.8%

QUANTITY

2K   1.7K
                                                                      21.9%
1K

0K

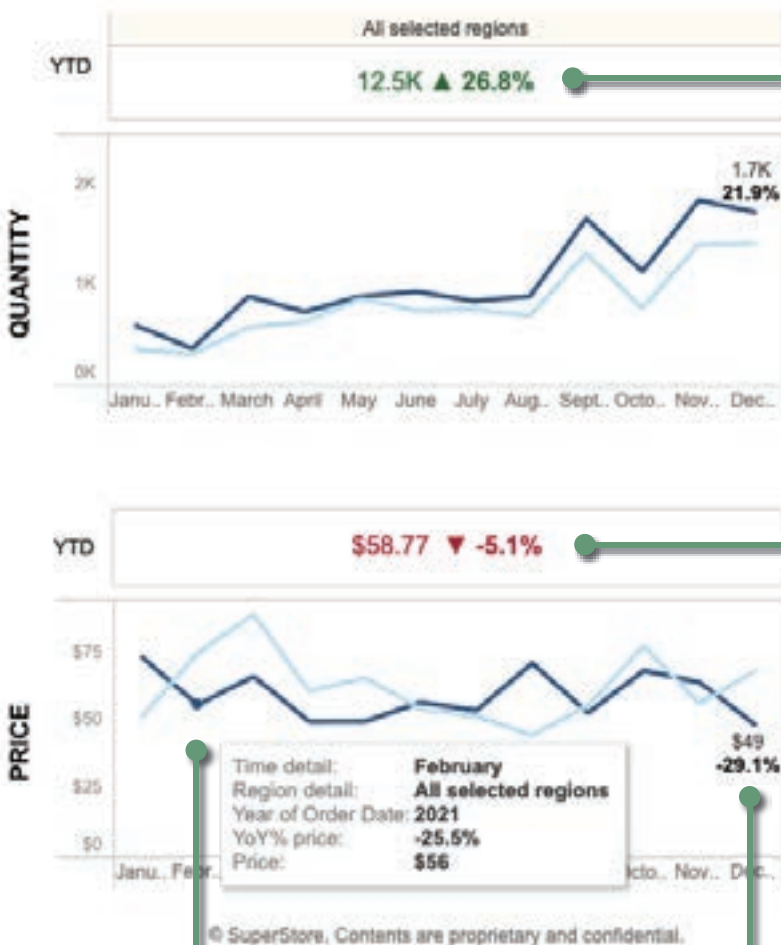Janu.. Febr.. March April May June July Aug.. Sept.. Octo.. Nov.. Dec.

YTD $58.77 ▼ -5.1%

PRICE

$75

$50 $49
                                                                      -29.1%
$25   Time detail: February
       Region detail: All selected regions
       Year of Order Date: 2021
$0   YoY% price: -25.5%
       Price: $56

Janu.. Feb..   cto.. Nov.. Dec.

© SuperStore. Contents are proprietary and confidential.

$83.8K
-13.6%

December

Write a headline that prompts discussion

A distinction here from headlines for static slides is that this headline can cover not just what you're showing in the initial view but what you *can* show as you interact with the visualizations.

Bold the metrics that deserve the most attention

And be consistent throughout. If the strategic objective is to increase the year-over-year growth rate, bold that across the slide and across the dynamic views. That also helps guide the story as the views change.

Stay consistent with placement and format

As the views change dynamically during the discussion, keeping metrics in the same place and with the same fonts, colors and other elements keeps the executives oriented.

Have deeper detail easy to see when hovering

These pop-up windows are an excellent opportunity to have a large amount of data available at your fingertips, from each time period to more expansive metrics.

Label only the points that you have to

The ability to hover means not every point needs to be labeled. In fact, hardly any do. In this example, simply labeling the most recent time period shows where we are right now.

Show the C-Level Story

HOW TO PACKAGE YOUR DATA SLIDES INTO A WINNING NARRATIVE

These stickies were not my idea. Sure, my monitor is papered with Post-its, my desk has stacks of sketches, and my Mac is packed with PowerPoints. When I'm working on an executive presentation, I scribble down data points and slide ideas as I'm pulling together the deck. I follow a clean approach of data and analysis, findings, then recommendation. That was my story, and I was sticking to it.

But that story took a turn at last year's Tableau Conference. In a featured session, Cole Nussbaumer Knaflic of Storytelling With Data showed that same linear approach on a giant screen and said, "This is the path we go through as analysts when we're analyzing data," she said. Yep, I nodded. "This is a very selfish path." Yep, I … wait, what?

Long story short, that talk (watch on YouTube by searching "tc19 cole storytelling") evolved how I show data to executives. She brainstorms with stickies, then maps them onto a tried-and-true story arc that rises, hits a climax, and falls through a resolution. I've tweaked that arc here to follow the traditional three-act structure. Then the stickies become slides.

To deepen the story beyond charts, I incorporate images and video to layer on more meaning and put a face on the data. Bringing it together in a story structure engages executives and guides decisions. So let's take an example data set (from the before/after slides on pg. 16) through this process. Follow these steps to be the hero of this story and the boardroom.

1. GATHER THE DATA

2. ANALYZE & DISCUSS

3. LIST KEY FINDINGS

4. PLOT THE STORY

1. THE DATA

SUMMARY OF CUSTOMER PERFORMANCE

2. ANALYSIS & DISCUSSION

MIGHT MISS THIS YEAR'S GOAL FOR CUSTOMERS

DISCOUNT DIFFERENCE IS VERY DRAMATIC

MARKETING HAS NEW TARGETED CAMPAIGNS

SOCIAL HAS SPIKED IN BAD FEEDBACK

CUSTOMER GROWTH IS OUR TOP INITIATIVE

LONGEST-TENURED CUSTOMERS FLEEING

CUSTOMER ACQUISITION MASKING PROBLEMS

FRESH FORECAST SHOWS RALLY FOR GOAL

3. KEY FINDINGS

4. STORY STRUCTURE

CLIMAX!

Tension

ACT I
Set-Up

ACT II
Confrontation

ACT III
Resolution
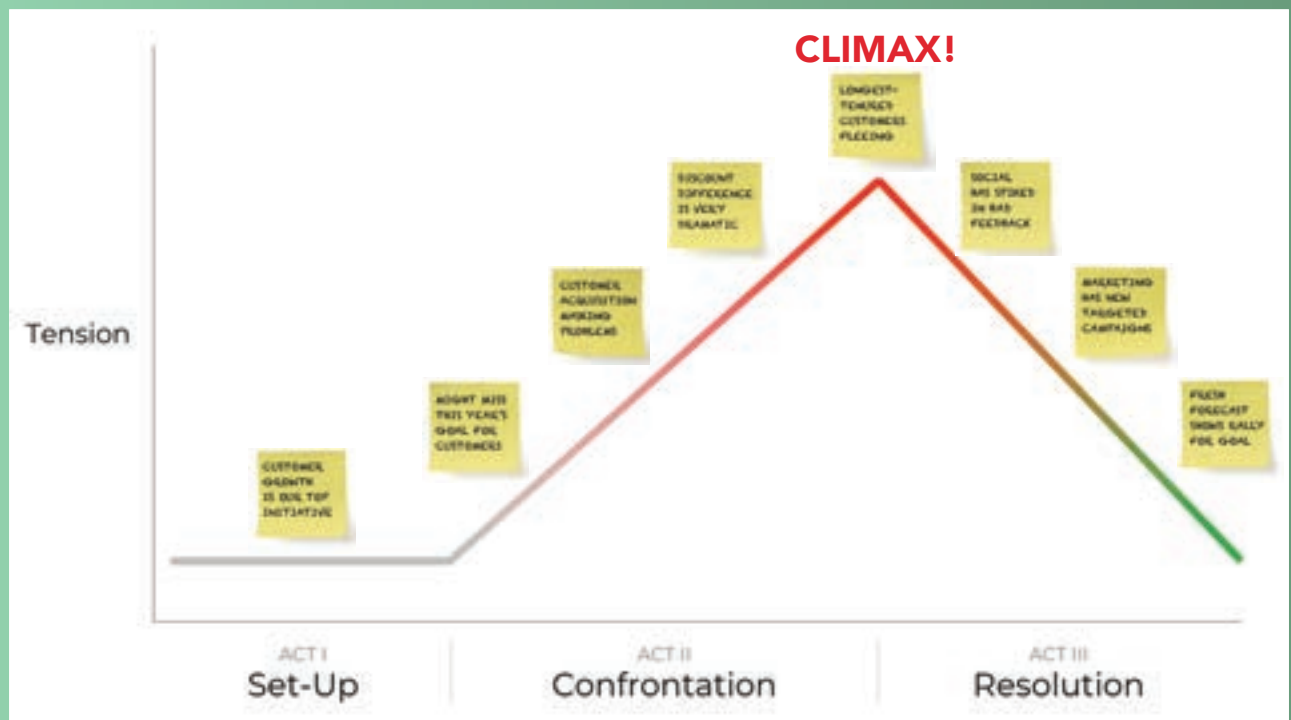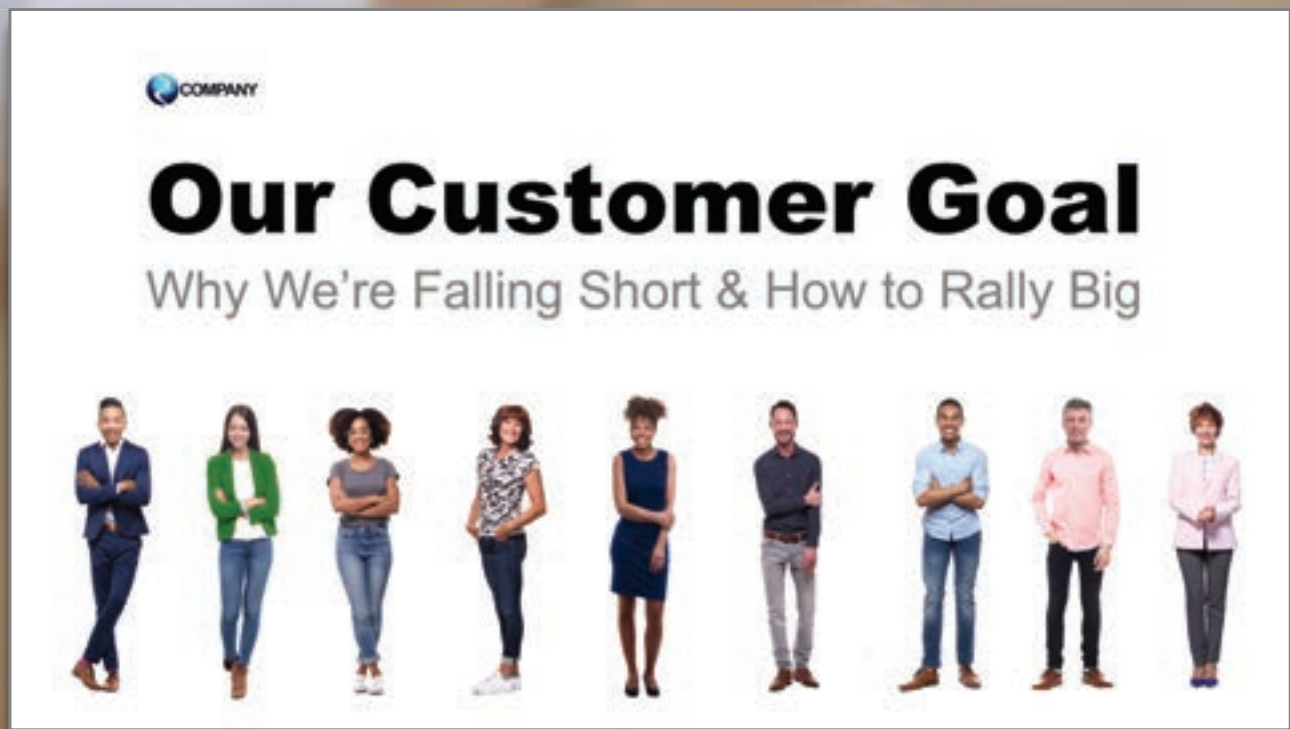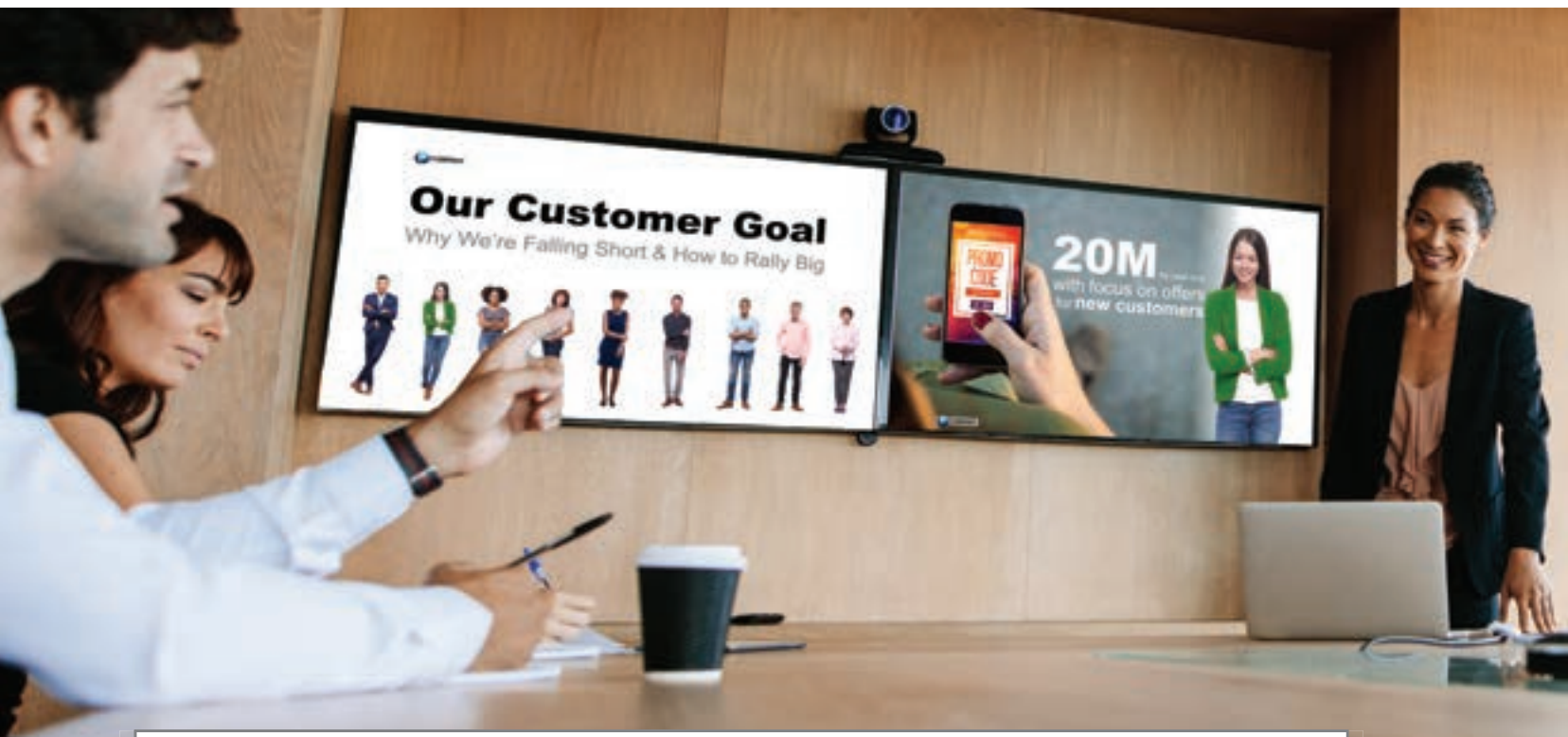
- As with any good story, set the tone with an engaging title and imagery.
- Introduce the tension and indicate that you will be showing the solution.
- Follow this style throughout the presentation for a cohesive experience.

ACT I
CUSTOMER
GROWTH IS OUR
TOP INITIATIVE

Welcome!

PROMO
CODE

BUY NOW

20M engaged
customers
by year-end

with focus on offers
for **new customers**

COMPANY

- In Act I, set the scene of what we're trying to accomplish as a business.
- Show the most important data point or goal for the strategy.
- Anchor with a view of the customer experience and the face of the customer.
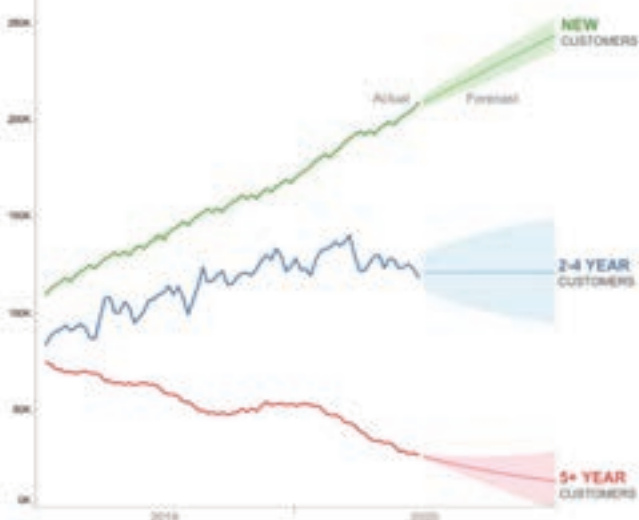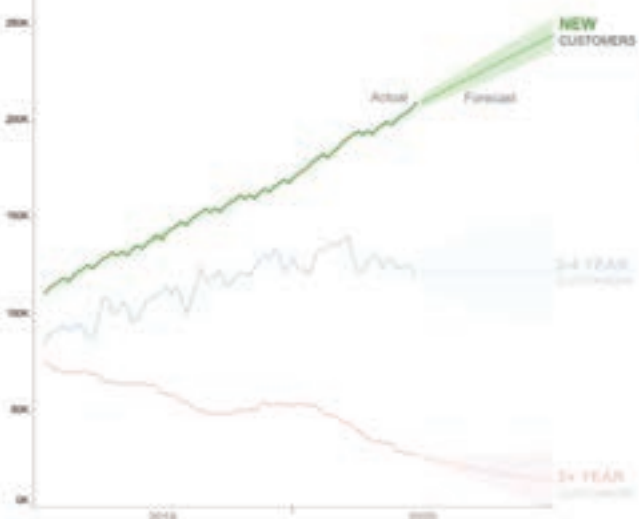
- In Act II, start the tension rising with the critical issue and the drivers.
- Establish the data visualizations and use them consistently throughout.
- Bubble up additional key data points that were revealed in the analysis.

- Show the story through the data by drawing the focus to the big problem.
- Work step-by-step through the chart to extract the business insights.
- Build to the climax in a logical way that demonstrates the impact.

ACT III
SOCIAL HAS
SPIKED IN BAD
FEEDBACK

Longtime customers say they are feeling ignored

Feedback Mix on Social Media Year to Date

NEW CUSTOMERS

2-4 YEAR CUSTOMERS

5+ YEAR CUSTOMERS

78%
negative

51%
negative

14%
negative

John Customer
@LongtimeCustomer

Do you remember me
@YourCompany? Only
new customers get deals?!

1.1K   13K   133K

ACT III
MARKETING
HAS NEW
TARGETED
CAMPAIGNS

Targeted campaigns to launch across channels

MEGA
Now On
SALE

VIP's only

SHOP NOW

Play the
customer
experience

COMPANY

- Release the tension by showing how the climax sparked answers.
- Mix in additional data that pointed toward how to resolve the problem.
- Show how the customer experience gets better (use video if you can).

ACT III
FRESH
FORECAST
SHOWS RALLY
FOR GOAL

Campaigns to re-engage our lapsing customers
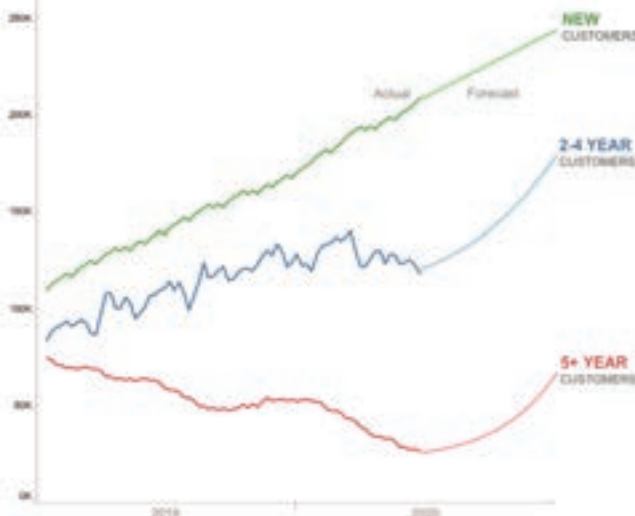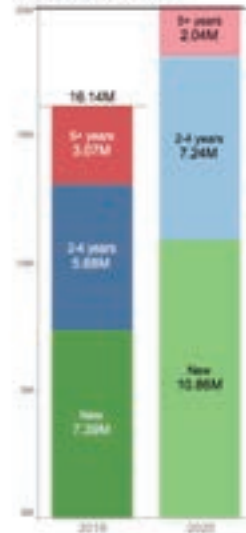
NEXT
WHAT'S
NEEDED FOR
EXECUTIVE
SIGN-OFF

What's Next
The campaign roadmap, investment & decisions

- Bookend this story with the original chart, this time with the issue resolved.
- Tension is now gone from this story thanks to you. You're a hero!
- Show what executive approvals are needed for this story to end happily.

> **"**
>
> Great analysis. Makes sense.
> Let's move on this right now.
> I'll champion this initiative."
>
> — *Executive Leadership*

Get Creative With Stories

HOW TO PUT A FACE ON THE DATA — AND ADD A DASH OF FEAR

"He steps off he tree branch into the air."

Reading that sentence, are you worried? Maybe even scared? Want to know what happens next?

When I wrote that sentence quite a few years ago, I knew it was the perfect start to my story. I was an editor at a luxury travel magazine, just back from a father-son trip to a treehouse resort in Jamaica. I couldn't just talk about the itinerary, the number of rooms, the menu. To get the audience engaged, the story needed a compelling hero and a lot of tension. My young son, perched up in an almond tree over a virtually bottomless lagoon in a secret cove, became the narrative thread to the story.

The same approach works for data stories. Don't just talk about the numbers. To get an executive audience engaged, a data story needs a hero and

tension. Even better is going beyond tension to a healthy sense of fear. If your business has nothing to fear but fear itself, you don't have to go down this road. But if the data has warning signs of softening customer demand or new threats from competitors, that's a scary story. Executives will take notice.

For my Jamaica treehouse story, my words alone weren't strong enough. Photos of my son, the treehouse resort and the lagoon adventure, all designed together in one magazine article, made the story as engaging as possible.

Again, those techniques apply to data stories. Bring the data to life with images of the customers and of their experience. What does it look like for this story to have a happy ending? Step off i to the air and show what happens next. Here's how.

Three-Act Structure

For a story to hold an audience's attention, here's the proven approach for creating, building and resolving tension. Every book and movie follows this. So does every good data story, with the end being "Next Steps."

Meaningful Images

A picture can be worth 1,000 Excel cells. Not every data chart can — or should — be illustrated with imagery. But when you see the opportunity with a natural fit, take it. T e right image can communicate so much.

Cast of Characters

This is the face of the data and the narrative arc that your audience can follow from the story's beginning to end. Create relatable characters that complement the data. Execs can picture the problem and the solution.

Customer Experience

If there's a low conversion rate due to a key pain point, show that pain point, not just a chart. If higher sales are coming from targeted marketing, show what that looks like. Connect data and visuals to complete the story.
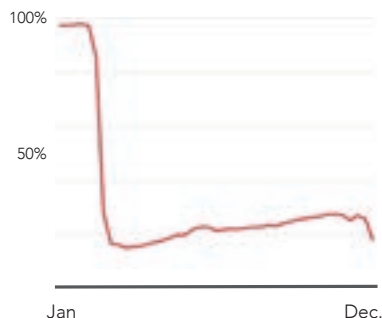
STORY

Office Workers

Many offices are still empty amid COVID.

Share of workers in offices

Source: Kastle Systems

How does this data look in the real world?

The chart above is based on an actual visualization from *The Wall Street Journal* about the pandemic's effect on office space as people continued to work from home. The line of workers in offices has two dramatic elements: the drop-off and the long, long plateau at a low level. There's a genuine sense of fear in that data, from how quickly offices emptied and how so many of them are still dark. The story techniques from the previous pages reinvented this chart as an example of bringing data to life.

Have office workers

94%
Pre-COVID

15%
April low

Percent of U.S

Work with an image that adds to the meaning

Here, a classic office tower symbolized this data story. At the beginning of this story, the building is fully lit up. Isolating just one tower also is a natural way to convey the story in a bar chart.

Build the tension by introducing conflict

The sudden emptying out of the office tower is more impactful even than the plunge in the original line chart. And it introduces the genuine fear: How long will these offices stay dark?

s returned? No, not even close

23%
June rally

27%
Oct. high

18%
Last week
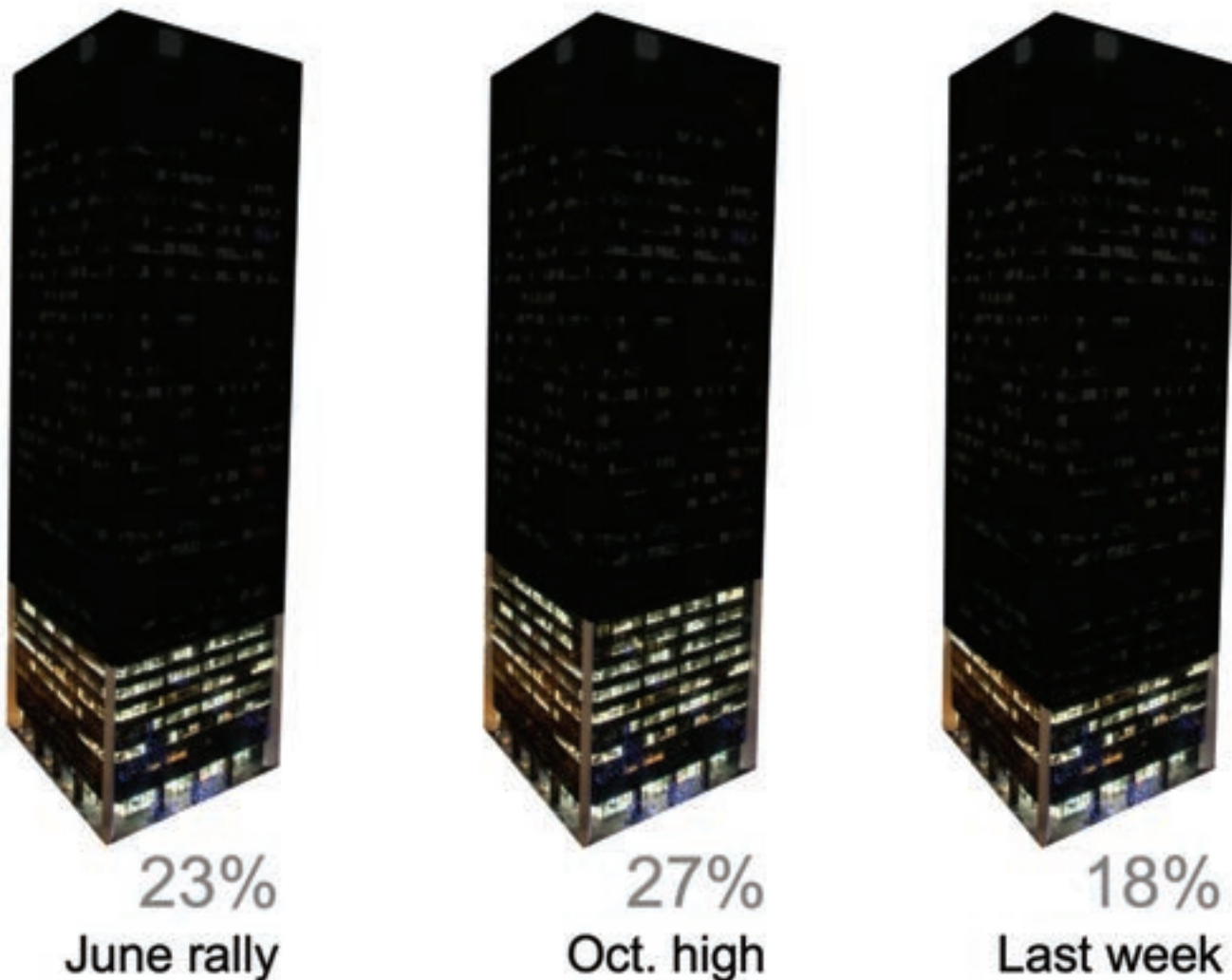
workers returning to the office, based on "Pandemic Pressure" chart in The Wall Street Journal, Dec. 2, 2020. Source: Kastle Systems

Highlight the key points in the narrative

As the lights start coming back on — and yes, the lighted floors are representative of those percentages — there's a sense of hope that the rebound may build momentum for a fully lit tower again.

Don't create a happy ending where there isn't one

Let the data guide the story. Here, the ending is a downturn in the rally and, for the audience, a downturn in emotions too. In this case, a happy ending is farther out than the data can show.

Who is affected by this data?

Numbers are people, too. Even executives who insist they just want to see the data may be missing opportunities with such a clinical focus that strips out further context and emotion. The human element helps.

Conversion rate is trending flat

Monthly Conversion Rate
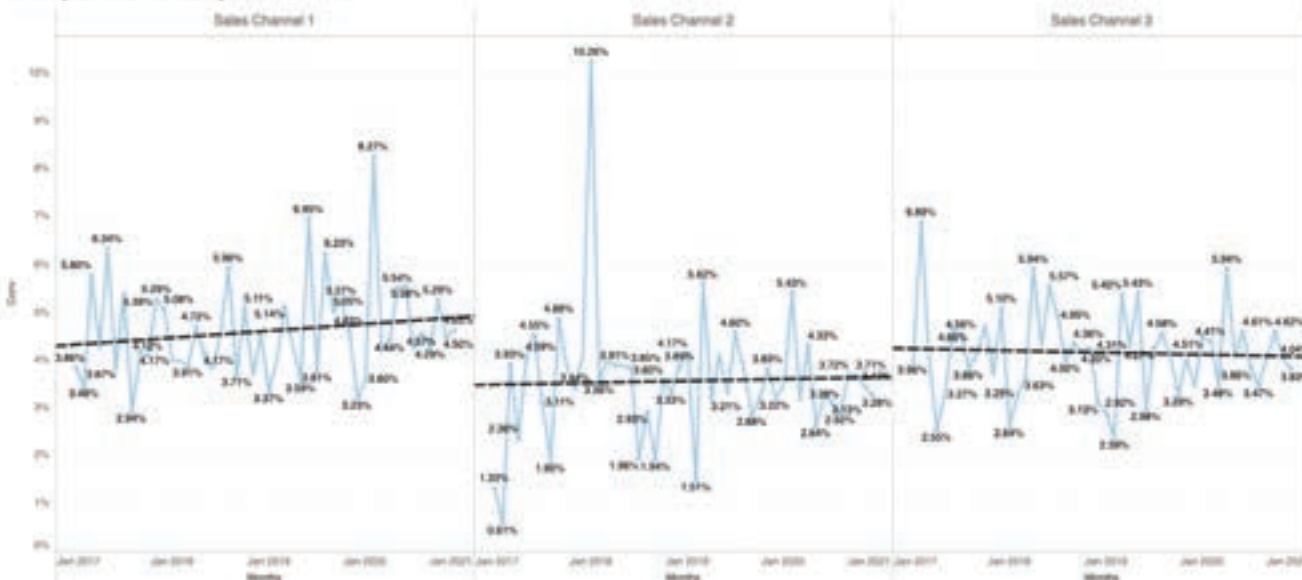
Consider this a rough draft

Writers often start with a lot of notes. That's what a basic data chart like this is, raw material that's just the start.

Zero in on what matters

This rough draft has glimmers of a story. Recognize those glimmers and build out your story based on that.

Sales Channel 1 and a key spike show positive signs

Monthly Conversion Rate by Sales Channel

What cast of characters can capture this data?

STORY

In this example, a conversion rate that's flatlining likely means a lot of irritation from customers. Executives, directors, analysts — we all can picture irritation. So simply do that: show a picture of irritation with the data.

Customers are frustrated with us
Conversion rates have stayed flat amid pain points in purchase flow

Monthly Conversion Rate

All Sales Channels

2.61%

Low point
Feb 2019
due to friction in
checkout and signing in

"Why is it so hard to check out?"

Align chart and character

Low conversion rate, and that low point, can make customers angry. Have that emotion come from the chart, too.

Create a cohesive look

This isn't just dropping a picture next to a chart. First, he's yelling at the chart. Then he's cheering as the data shows

We've identified what works
Channel analysis reveals what customers like and what stops them

Monthly Conversion Rate

| Sales Channel 1 | Sales Channel 2 | Sales Channel 3 |

"This is the easiest checkout."

"I still remember this flash sale."

"I have trouble signing in."

Targeted marketing has been a success

Customer segment	Before	After
NEW <1 year	$742,550	$1,367,218 84.12%
REGULAR 1-3 years	$1,218,859	$2,258,553 85.30%
LOYAL 3+ years	$1,955,810	$3,628,808 85.54%

What's the connection to the customer experience?

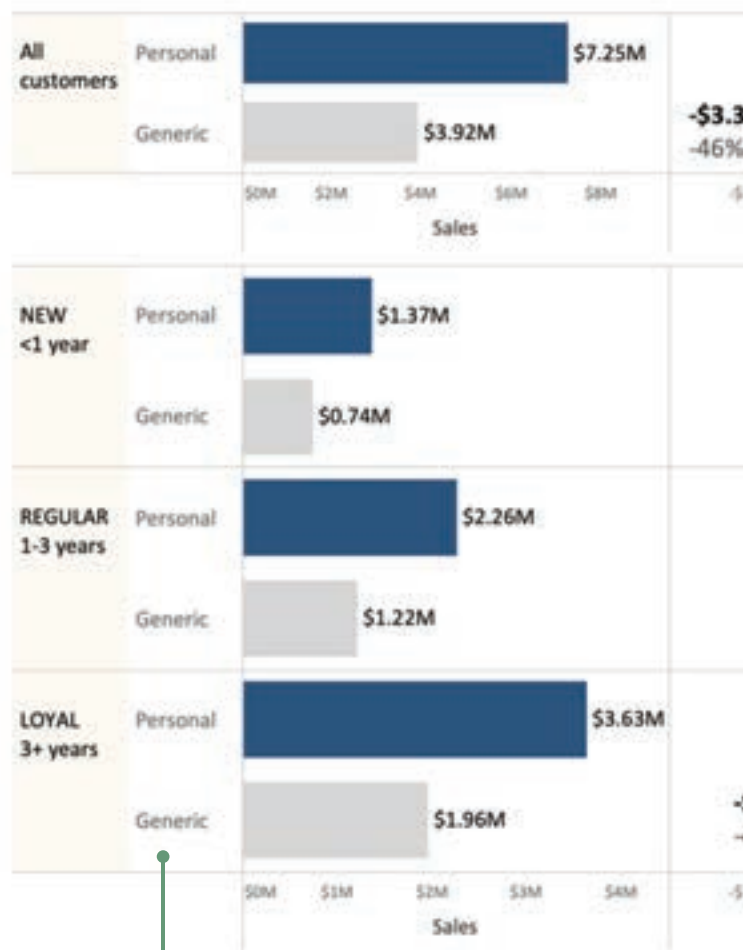The data shows what happened, but including the customer experience helps complete the story of *why*. Targeted marketing is a great example of this. Yes, you can simply use a bar chart to show that a personalized campaign shows more efficiency in the metrics than a generic campaign. Or you can connect that performance to what the customer saw: a unique greeting an offer in the right place at the right time. No wonder it worked! Plus, that sparks discussion on how to further optimize and scale the success for the next initiative.
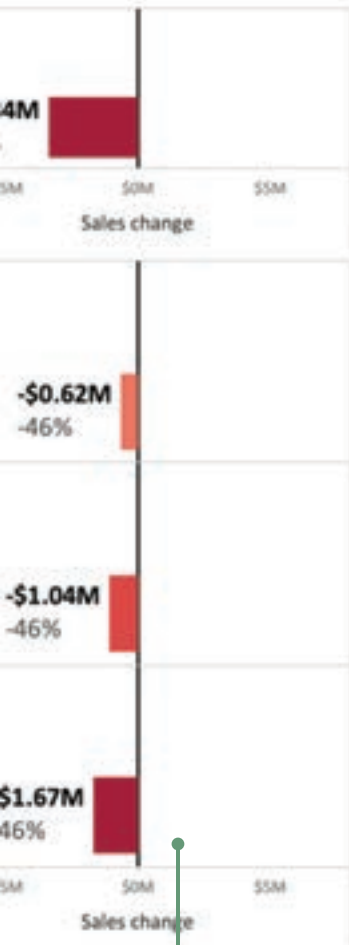
Targeting adds +

SALES Comparison of marketing initiatives

		Sales	
All customers	Personal	$7.25M	-$3.3 -46%
	Generic	$3.92M	
NEW <1 year	Personal	$1.37M	
	Generic	$0.74M	
REGULAR 1-3 years	Personal	$2.26M	
	Generic	$1.22M	
LOYAL 3+ years	Personal	$3.63M	
	Generic	$1.96M	

Think of the chart from the customer's perspective

Little touches help. So here, instead of labels from the business perspective of "Targeted" vs. "Non-Targeted," a subtle switch to "Personal" vs. "Generic" tees up the visual of the customer experience.

+$3.3M

MALE 37

YOUR PERSONALIZED OFFER:

Blue Shirt $49

LOYAL campaign
Example of targeting customers with a new personalized offer

-4M

-$0.62M
-46%

-$1.04M
-46%

$1.67M
46%

Sales change

Sales change

Don't forget to add in healthy fear if appropriate

This bar chart could be shown with green gains of how "Personal" beats "Generic." Or take this approach, showing red losses of how "Generic" underperforms vs. "Personal." Everyone is afraid of losses.

Showcase an example of what performs best

Cut to the chase with a visual of the customer experience that drives the best success metrics. Better than just showing the data, having this CX example is now a jumping off point for what to do next.

Make Your Story
BIG NEWS

HOW TO BE VERY LOUD AND VERY CLEAR WITH DATA INSIGHTS

"Don't bury the lede" is Journalism 101. I actually learned that in Journalism 101 (along with the fact-checking mantra, "If your mother says she loves you, check it out"). That advice popped up from data experts in the previous feature. But we'll explore it further here with real-world examples. Because if you don't start your story with a bang, no one will pay attention.

So what does that mean when presenting data to executives? It means if your analysis saves the company $50 million, do not list that on a slide as the fourth bullet point in the third section under the second-rate non-headline, "Our Findings."

Oh no. That's the lede (and yes, that's how newspaper people spell it). Don't bury it. Celebrate it. The first-rate headline should be, "New analysis reveals $50M in savings" — literally in big, bold type. Then make sure the

visuals emphasize that story, showing exactly where and how you found all that money. That gets an executive's attention right away. That can make a difference. That's the whole point.

And yet every day, I see great insights buried in a slide or a chart or a list of bullet points. So much work goes into creating those insights that it can actually be painful to see an audience skip over all that work.

Fortunately, there are a few techniques that can dig out the insights from where they're buried and put them in the spotlight where they belong. The big test is to think like a time-pressed executive — or like anyone reading an old-fashioned newspaper. Can you glance through the material to see the most important headlines, which then lead you to the lede and then into the story? If so, you're doing it right.

BURIED   Bullet Bonanza
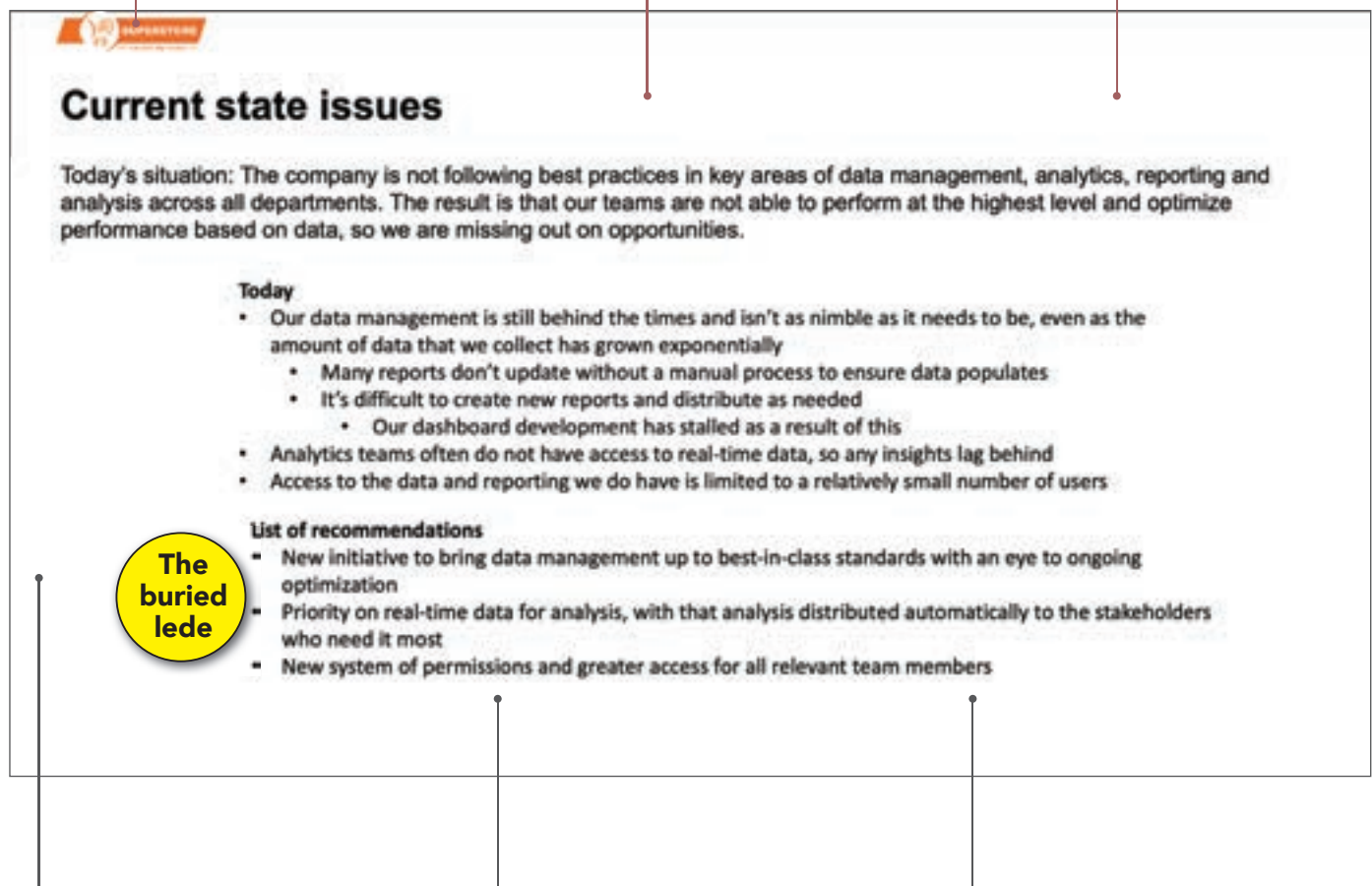
A headline's only purpose is to shout the news

That's why they're designed with those big fonts and are placed at the top. Yet too often, this precious text is used to simply label what the content is, like this common example.

A slide should never look like a newspaper

And yes, that includes the "slideument." Sure, you can use text, but this widescreen communication format (a.k.a. a slide) is an inherently visual vehicle. Approach it like that.

Watch out for columns that are too wide

The human eye has trouble reading across columns more than a couple alphabets wide. So text like this that stretches across the slide will bury anything you put in them.

Current state issues

Today's situation: The company is not following best practices in key areas of data management, analytics, reporting and analysis across all departments. The result is that our teams are not able to perform at the highest level and optimize performance based on data, so we are missing out on opportunities.

Today
- Our data management is still behind the times and isn't as nimble as it needs to be, even as the amount of data that we collect has grown exponentially
  - Many reports don't update without a manual process to ensure data populates
  - It's difficult to create new reports and distribute as needed
    - Our dashboard development has stalled as a result of this
- Analytics teams often do not have access to real-time data, so any insights lag behind
- Access to the data and reporting we do have is limited to a relatively small number of users

List of recommendations
- New initiative to bring data management up to best-in-class standards with an eye to ongoing optimization
- Priority on real-time data for analysis, with that analysis distributed automatically to the stakeholders who need it most
- New system of permissions and greater access for all relevant team members

The buried lede

Don't use white space as an afterthought

Every part of the slide should help bring out the main story. Here, the white space is arbitrary and does nothing to draw attention to what's most important.

It's easy to lose the news in a huge list of bullets

Similar to advice elsewhere in this issue, this list is really a rough draft. Jot down all your insights in bullets like this, but don't ever show it to an audience. It's the start, not the end.

Everything is buried when the color is all the same

All the content is 100% black. So everything looks the same. Nothing stands out. Color can help make sure big news surfaces to the top instead of drowning in the black sea.

BIG   # Recommendations Chart
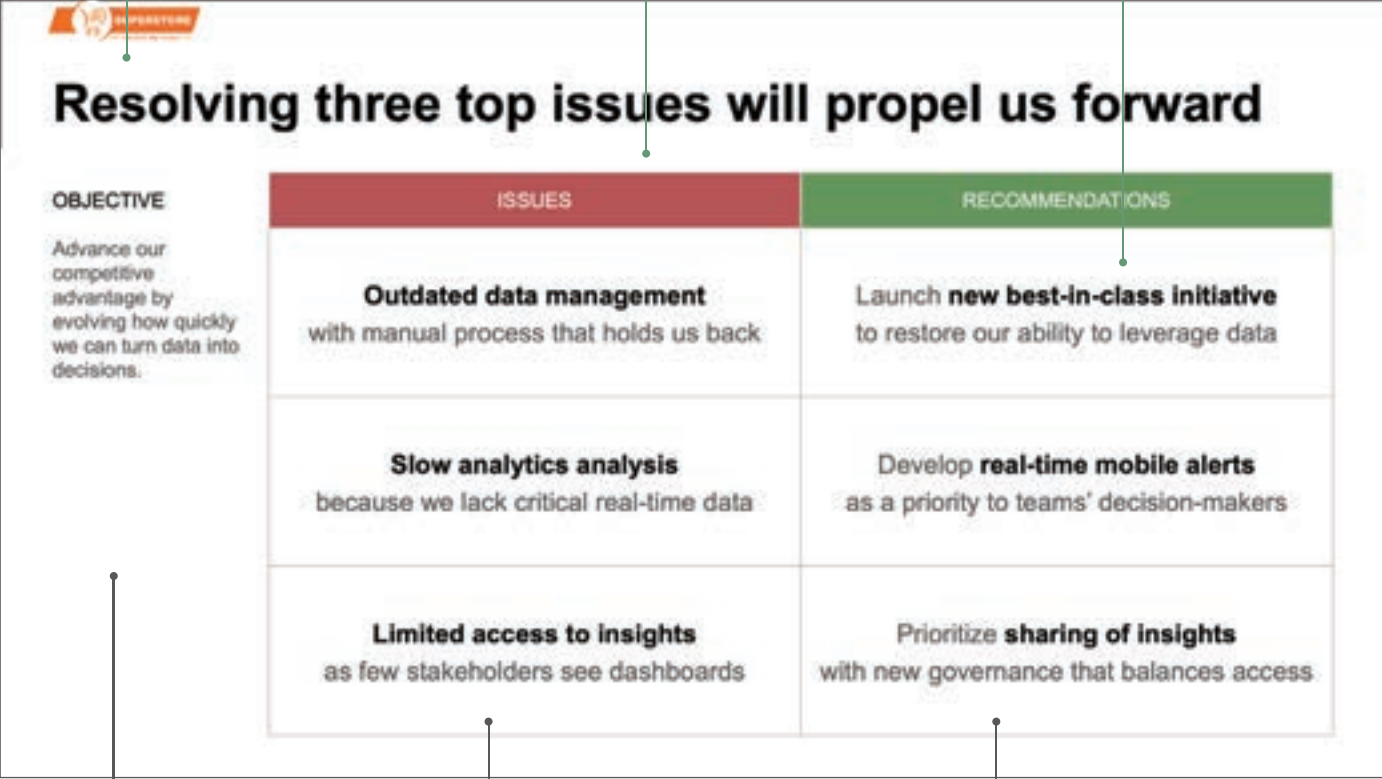
Celebrate the insight with the headline

The bigger the headline, the more attention it commands. And yes, the fewer words you have to use. That's OK. Distilling the insight into a short, memorable headline is critical.

The slide should show the big news at a glance

Always think, "How could I show this news visually?" In this example, three issues that were buried in that bullet list made all the difference. Make them big in an at-a-glance chart.

Keep your columns thin and concise

There's usually no need to go wider than a column that's about one-third the width of the slide. The thinner the better for quick readability (to a point, of course). Is it a quick read? Good.

Resolving three top issues will propel us forward

OBJECTIVE	ISSUES	RECOMMENDATIONS
Advance our competitive advantage by evolving how quickly we can turn data into decisions.	**Outdated data management** with manual process that holds us back	Launch **new best-in-class initiative** to restore our ability to leverage data
	Slow analytics analysis because we lack critical real-time data	Develop **real-time mobile alerts** as a priority to teams' decision-makers
	Limited access to insights as few stakeholders see dashboards	Prioritize **sharing of insights** with new governance that balances access

Use white space to direct people through the story

Here the white space serves to draw attention to the short "Objective" nugget, which itself is a very thin column for readability. Then the eye naturally moves over to the chart.

Distill the news to a carefully edited list

When making a rough draft of bullets, you honestly may not know what the lede is and you accidentally bury it. Honing down the list, editing and editing again, gets to what matters.

Careful color choices bring the news to light

Using red and green and black and grays are all to make sure the lede is not buried. All these choices are in service to the story, guiding the audience through the material.

BURIED Visualization Overload

Create a cohesive flow to the story

Like with a newspaper, readers will move from top to bottom, left to right, with eyes drawn to headlines and major visuals. Think about that when putting it all together.

Only write words that are absolutely needed

One way to bury a lede is to simply have too many words, so the biggest news gets lost in the wordiness. That happens often with headlines and bullets. Write as short as you can.

Beware of losing insights in pie charts

Continuing a thread that runs throughout this issue, the pie chart is almost always the wrong choice, especially when trying to make sure your story is loud and clear.
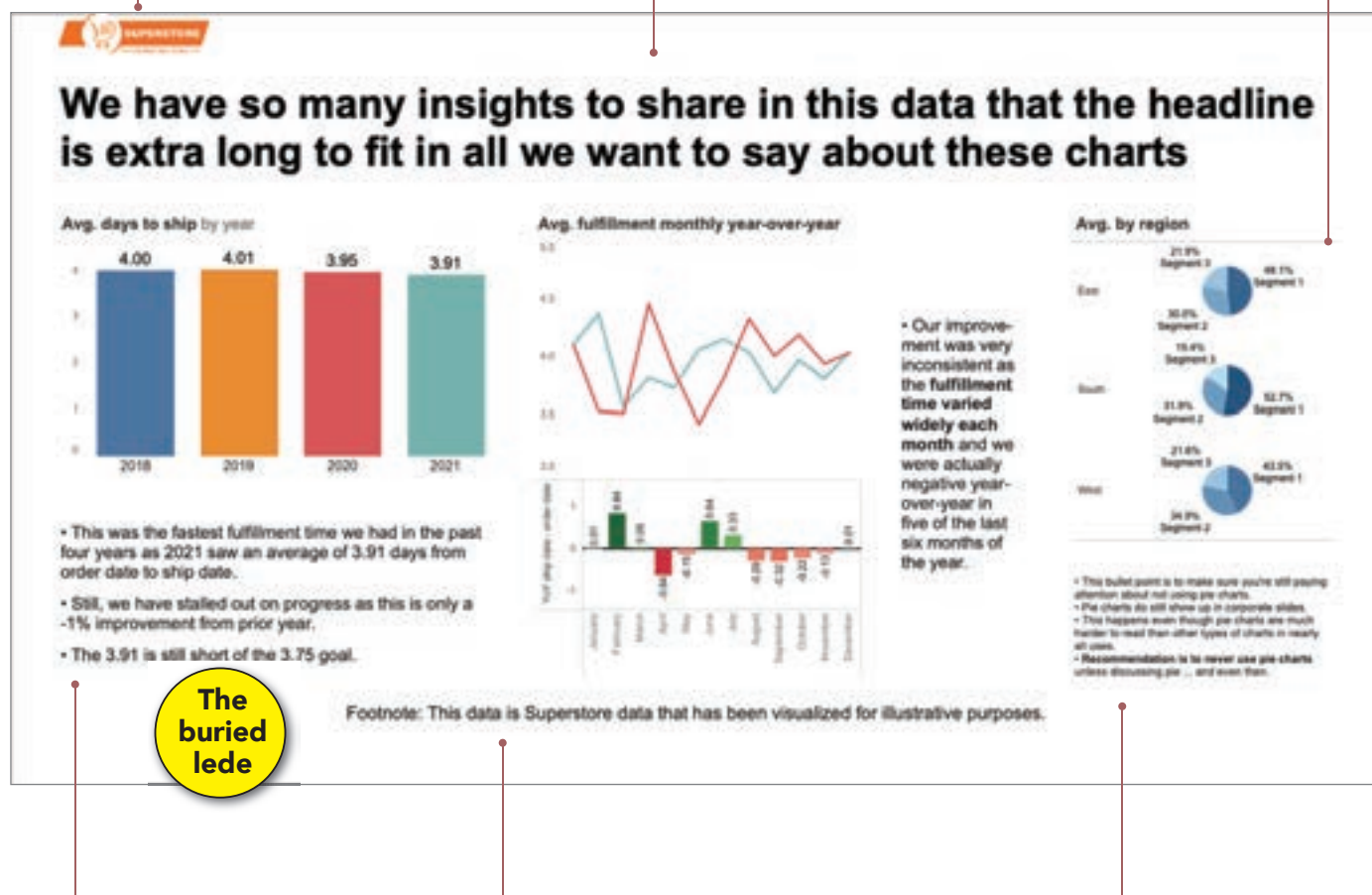
Surpassing or missing a goal is usually the lede

This happens where effort is spent getting all the material analyzed and on a slide, there isn't enough time to take a step back and see where the lede is. Hint: Search for "goal."

The footnote should never look like the news

Here, the font and weight of the footnote is the same or larger than the rest of the content. Footnotes should not ever compete with the actual content.

Have too few bullets and charts rather than too many

That's a sure-fire way to bury the lede, by cramming too much onto a slide. Get rid of anything that does not support the news. (And yes, this is where a dynamic slide helps a lot.)

BIG

Structured Story

### Prioritize how the story will flow through the material

In this case, the headline does what it's supposed to, bringing the lede to the top. The audience moves down and left to right to intuitively walk through the data and findings.

Always one line a headline should be. No more, no less

This is specific to the main headline at the top of a slide. The more lines you feel you have to add, the more you're robbing the headline of its impact, which is its only purpose.

Use simple column charts to organize the story

Like in the preceding example, this basic chart is an elegant, effective way to structure your story. And be very clear, even labeling columns with "Insights" and "Actions."

2021 falls short of goal, but new plan launching
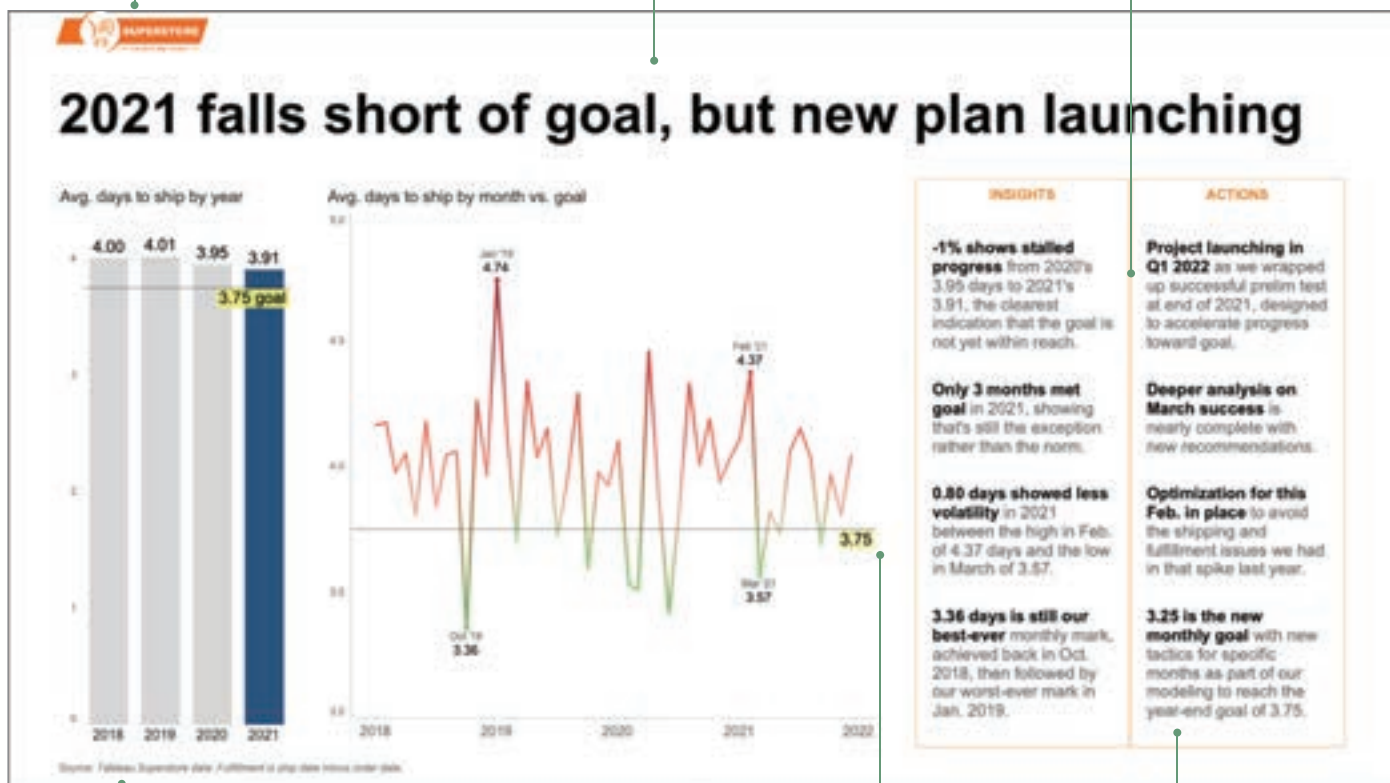
Bury the footnote. It's OK

That's the only thing that should be buried. The footnote exists for people who really need to dig to see the specific data sources or methodology or other considerations. Make it small.

Make the goal and actuals the focus of the visuals

Many times, that's the lede — if you went above or below a goal and by how much. Bring that to the surface and design easy visual cues that showcase that story for the audience.

Trim, trim, trim until you can't trim anymore

Pruning anything that isn't relevant means the story has room to breathe. And doing all of that work before the presentation means the execs don't have to dig out your lede for you.

EXECUTIVE SUMMARY

Strategy + Slides + Story = Money

THESE TAKEAWAYS HELP YOU RUN FASTER TOWARD YOUR BUSINESS GOALS

———

"No one wants a drill. What they want is the hole." Or so the saying goes. Yet after an entire magazine devoted to data, dashboards and decks, I have to admit, no executive wants any of that. What they want is the money.

For now, though, the best way to get a hole in the wall is to use a drill. And for the foreseeable future, the best way to get the money is to use data, dashboards and decks.

That's what this magazine is about and why what you're holding is called the "Action Issue." Now is the time to take action with what you learn from this magazine and what you can then draw from your own data. Read this whole Issue 3 (and go back to Issues 1 and 2) for ideas on how to evolve your company's data, dashboards and decks.

Each article in this issue is designed to standalone with quick tips and examples to grasp at a glance. Some of those tips are geared more for the people who are hands-on with the data and the tools, who can make some clearer visualizations in Tableau or drop story elements into PowerPoint.

For executives, the most valuable insight is building your decision-making on the strategic dashboard matrix. That's where all your data and dashboards are aligned to the company org chart. Without that underlying structure, we're just making prettier charts for pretty's sake.

That structure makes the data more powerful. It ensures dashboards tier up to the company's top goals. And it means presenting that data will capture the most meaningful story. Because what you want, what you need, is more customers, more revenue, more profits — more money. Th s approach makes that happen.

DASHBOARD STRATEGIC MATRIX

1) Strategy

Align your data and dashboards to your org chart

Everyone across the company knows which data is most important and how their insights tier up and down the organization. Executives, directors and analysts each have a dedicated tier with dashboards and metrics designed to their needs within the big picture.

Revenue and customers climbed yet profit slipped

2) Slides

Create visualizations that speak executives' language

This isn't a dashboard and it isn't a PowerPoint slide; it's the best of both, a hybrid view that's accessible and presentable. If the world's most incredible dashboard isn't in a widescreen format with a clear headline that can be presented to company leadership, does it make a sound? Dash/slide hybrids amplify your data's value.

We've identified what works
Channel analysis reveals what customers like and what stops them

3) Story

Put a face on data to connect it with what matters most

Here's the critical last step to drive the right decisions that make the money. Data is usually just a proxy for people: the frustrated customers, the happy loyalists, the prospect you can acquire if you only knew how. Layer the narrative, tension and emotion onto your data to create a compelling story that drives customers, revenue and profit higher and higher.

4 Secrets of a Boss Slide

HELP HIGHER-UPS WITH DATA THAT MAKES EVERYONE LOOK GOOD
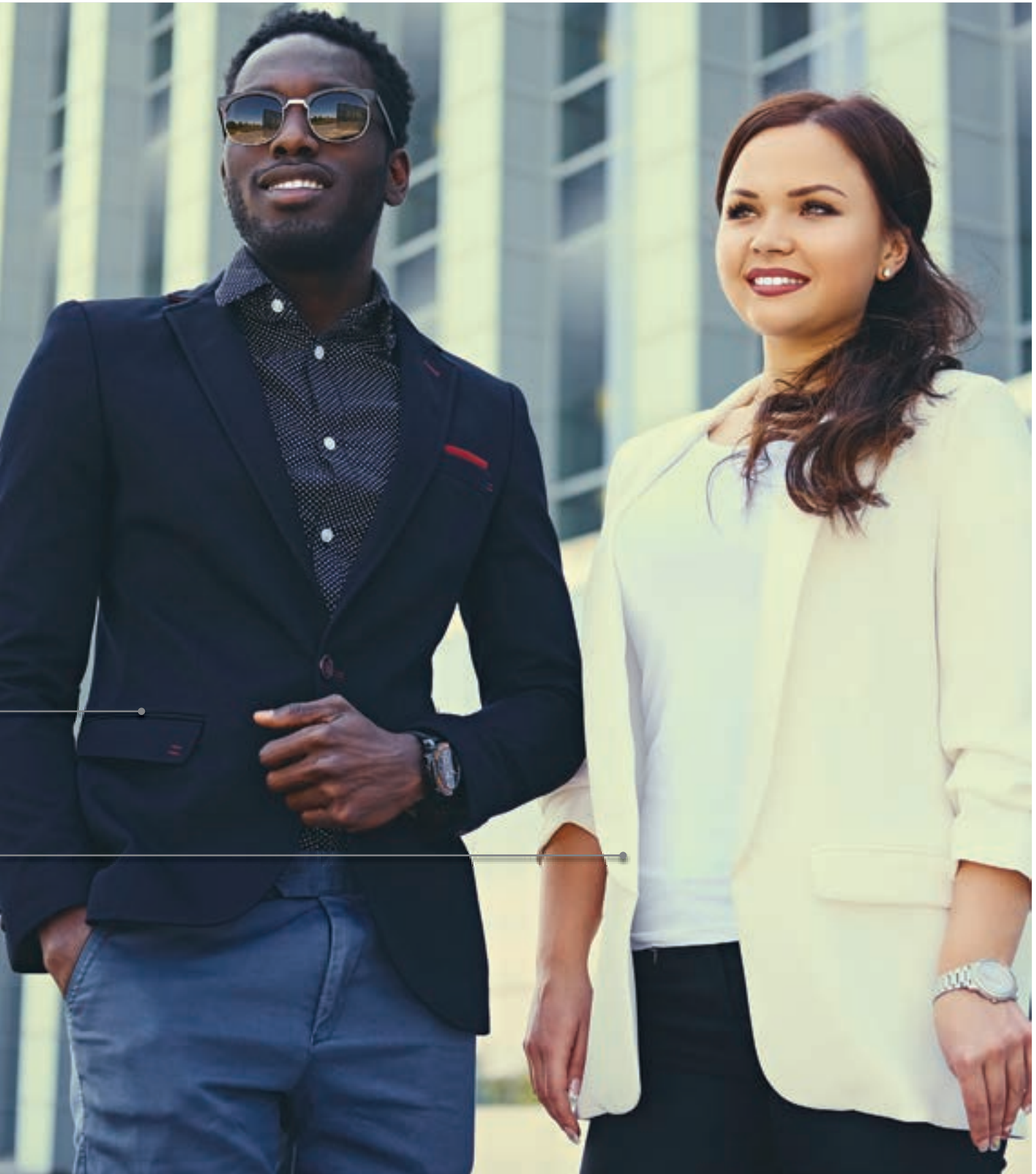
ROCK STAR
He surprised his boss with a persuasive industry story illustrated in one slide.

HAPPY BOSS
She's impressed and eager to share this insight with the entire leadership team.

Ranking The Top 50 Fast-Food Chains in America

THE QSR 50 / BY THE NUMBERS

RANK	COMPANY	CATEGORY	2019 SYSTEMWIDE SALES MILLIONS
1	McDonald's	Burger	38,524.05
2	Starbucks*	Snack	19,700.00
3	Subway*	Sandwich	10,410.34
4	Taco Bell	Global	10,300.00

qsrmagazine.com

Your boss saw the same news article that you did. Your brand moved up on the latest industry ranking. Great news! You both scroll through the list, see how other competitors are shifting, and maybe send the link to your team.

But what if that news article was a huge opportunity to showcase a data insight. And by doing that, you could impress your boss, who could then impress her boss, who could impress his boss, so that your business strategy actually changes for the better. And everyone's star rises. It can happen.

Here's how to do that, based on an example from the QSR 50, an invaluable annual ranking of the top quick-service restaurant brands by QSR magazine. A recent #MakeoverMonday challenge featured the 2019 list, with qsrmagazine.com having data from past years.

The ranking itself stands alone as solid content. But with every company eager to benchmark against competitors, identify emerging threats and plan how to guard competitive advantage, the ranking's data is a goldmine of business value. If you want to stand out, it's a perfect data set to dig into, analyze, and then craft a story that's visually persuasive. This approach leads to a slide that's aligned to business objectives, that's quick to understand and that's easy to share.

It could spark wider analysis, a larger presentation and a major strategic initiative.

You can get that ball rolling by going above and beyond for a boss slide.

THE INDUSTRY DATA

Some executives do love seeing a spreadsheet of numbers, but data rock stars can turn this into business insights that are memorable and moving. It just takes some consideration on what the data can tell us.

	Rank	Company	Category	U.S. systemwide sales (millions)	U.S. avg sales per unit (thousands)	Number of franchised units	Number of company units	Total units	Total change in units	Report year	Date year
52	1	McDonald's	Burger	38,524.05	2,768.73	13,229	685	13,914	-122	2019	2018
53	2	Starbucks*	Snack	19,700.00	1,349.32	6,332	8,493	14,825	895	2019	2018
54	3	Subway*	Sandwich	10,410.34	420	24,798	0	24,798	-1,110	2019	2018
55	4	Taco Bell	Global	10,300.00	1,600.00	6,126	462	6,588	142	2019	2018
56	5	Chick-fil-A*	Chicken	10,000.00	4,166.67	2,400	0	2,400	175	2019	2018
57	6	Wendy's	Burger	9,993.70	1,636.40	5,825	353	6,711	77	2019	2018
58	7	Burger King*	Burger	9,950.00	1,357.00	7,278	49	7,327	101	2019	2018
59	8	Dunkin'	Snack	8,787.00	933	9,419	0	9,419	278	2019	2018
60	9	Domino's*	Pizza	6,600.00	1,123.00	5,486	390	5,876	258	2019	2018
61	10	Panera Bread*	Sandwich	5,734.63	2,739.91	1,131	963	2,093	50	2019	2018
62	11	Pizza Hut	Pizza	5,500.00	878	7,432	24	7,456	-41	2019	2018
63	12	Chipotle	Global	4,800.00	2,000.00	0	2,491	2,491	83	2019	2018
64	13	Sonic Drive-In	Burger	4,447.10	1,350.00	3,427	179	3,606	13	2019	2018
65	14	KFC	Chicken	4,400.00	1,210.00	4,019	55	4,074	-35	2019	2018
66	15	Arby's	Sandwich	3,896.90	1,177.00	2,197	1,132	3,329	46	2019	2018
67	16	Little Caesars*	Pizza	3,800.00	874	3,700	562	4,262	-74	2019	2018
68	17	Dairy Queen	Snack	3,650.00	1,204.58	4,404	2	4,406	-49	2019	2018
69	18	Jack in the Box	Burger	3,466.13	1,553.00	2,100	137	2,237	-14	2019	2018
70	19	Panda Express*	Global	3,400.00	1,616.00	125	1,979	2,104	93	2019	2019
71	20	Popeyes*	Chicken	3,325.00	1,415.00	2,327	41	2,368	148	2019	2018
72	21	Papa John's*	Pizza	2,720.00	815	2,691	646	3,337	23	2019	2018
73	22	Whataburger	Burger	2,416.00	2,928.50	126	699	825	4	2019	2018
74	23	Jimmy John's*	Sandwich	2,200.00	772	2,748	55	2,803	48	2019	2018
75	24	Hardee's*	Burger	2,110.00	1,131.00	1,745	119	1,864	16	2019	2018
76	25	Zaxby's*	Chicken	1,850.00	2,060.00	757	141	898	21	2019	2018
77	26	Five Guys	Burger	1,615.84	1,274.80	866	492	1,358	37	2019	2018
78	27	Culver's	Burger	1,590.00	2,390.00	682	6	688	45	2019	2018
79	28	Carl's Jr.*	Burger	1,425.00	1,238.00	1,106	50	1,156	-7	2019	2018
80	29	Bojangles'	Chicken	1,296.21	1,741.06	440	319	759	-5	2019	2018
81	30	Wingstop	Chicken	1,261.03	1,139.00	1,095	29	1,358	225	2019	2018

How strong is the leader?
Everyone wants to chase and displace the top company, especially amid signs of weakness.

Which categories are shifting?
Maybe all the brands in one category are struggling because of larger consumer trends.

Is top growth rate due to low volume?
Look at the change alongside the sales dollars and unit volume to give the right context.

Which changes show larger trends?
Sometimes year-over-year fluctuations are just isolated volatility or a sign of something big.

Who's falling and rising fastest?
These are opportunities to learn what's working and what's not in the industry.

What other factors impact the ranking?
Here, consider corporate control vs. brands heavier on franchisees.

1

Gather data beyond what your boss has already seen.

Going this extra mile won't just set you apart in the eyes of your boss, it can add valuable context. Here, qsrmagazine.com has a decade of data that can reveal more than just one year's snapshot.


FREE REPORT DOWNLOAD

QSR 50: 2008-2018

Get 10 years of data from QSR's annual ranking of the top chains in quick service and fast casual in one convenient, no-cost PDF download!

2

Calculate metrics that matter most to your boss.

You have more flexibility with that additional data. In this case, you can take a larger view than just year-over-year to calculate the executive-friendly compound annual growth rate, set at five years, for a view that smooths out
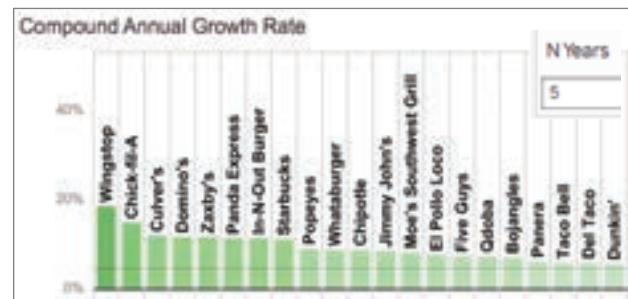
3

Anticipate boss follow-ups and show that data, too.

"That's a high CAGR but on what sales?" your boss says. You're ready. "Right at $10 billion, so still in the top 10 of brands last year but about a quarter of McDonald's," you say. "Got it," your boss says.
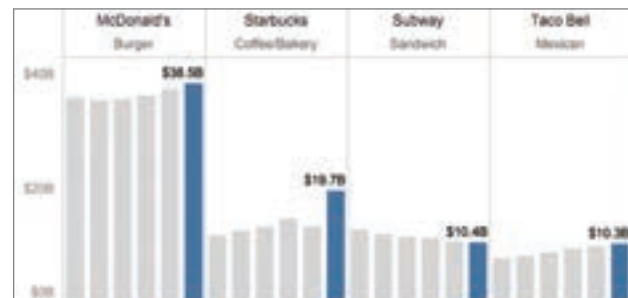
4

Make the slide pop for your boss and all the bosses.

Layer on elements that enhance the story, including a bold image, a takeaway, an industry benchmark, clear data labels, and footnotes for other follow-ups. Any boss up the ladder should be able to understand it.

THE BOSS SLIDE

You've taken the initiative on key industry news to give a unique, tailored analysis for your boss, shown in a way that's compelling and perfect for the next senior leadership team meeting. You rocked it!
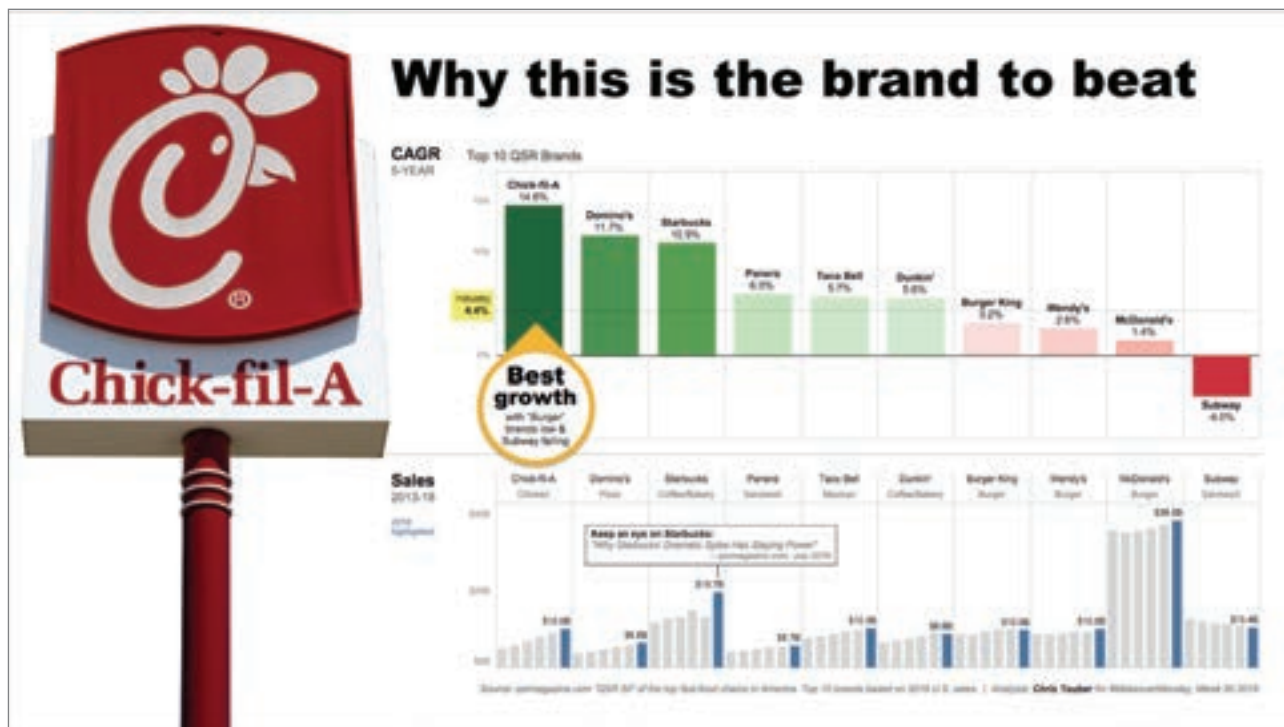
Here's the leader your boss wants.
If CAGR, not sales volume, is your strategic benchmark, draw that out.

Key categories are moving together.
The takeaway and labels show the rise and fall of certain segments.

Sales volume is often comparable.
McDonald's is an outlier in a top 10 that otherwise works for a CAGR look.

The wider timeframe spotlights trends.
This helps inform your boss's decisions on 1-, 3- and 5-year initiatives.

These competitors are your bellwethers.
Learn from the industry leaders, then drill down if needed for smaller brands.

Discuss your boss's view on other factors.
This analysis can frame leadership insights to guide the business to success.

SECRETS & SURPRISES

The Animation Revolution

DATA MAKES MORE SENSE WHEN IT MOVES — AND NOW IT FINALLY CAN
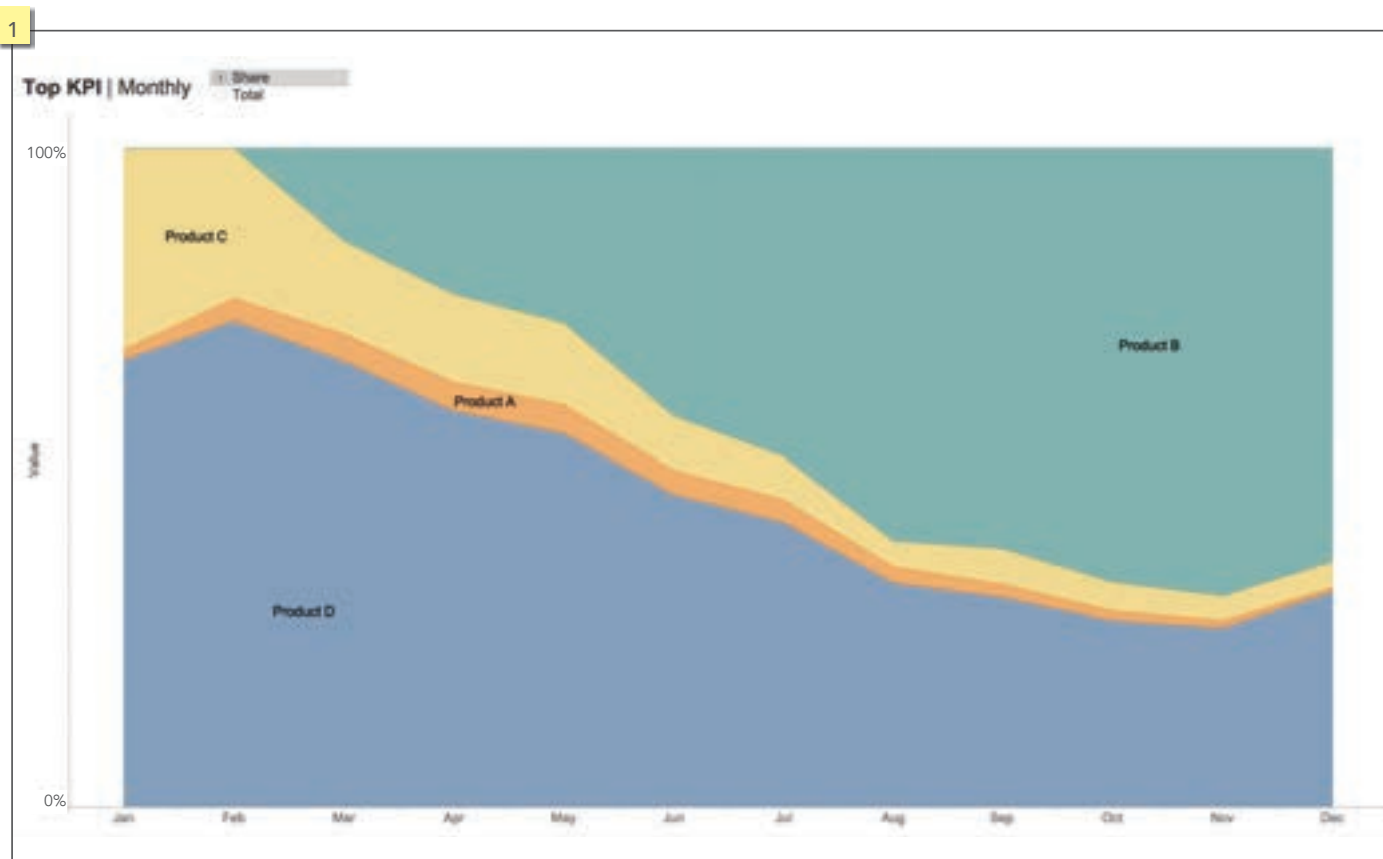
Before 2020 went sideways, this could have been the year of data animation. As charts keep evolving in their use of color, size and shapes, they usually still just sit there. But if these charts could move — if that sales line could literally skyrocket — executives would love it. When animation is done with purpose, the communication can become so much clearer.

The promise of animation has been bubbling for years. Swedish data legend Hans Rosling captured its promise in videos like his 2006 TED Talk, "The Best Stats You've Ever Seen." He showed his famous scatter plots in motion, with running commentary, plus area charts that built up to insights.

But Rosling's Trendalyzer software or a lot of technical know-how was needed to get the data to move like that. So for years, most charts were motionless. Up until last year, Tableau only had a rudimentary flip-book-style feature to make data jump around awkwardly. (Yes, 2019 had "bar chart races" of certain bars leapfrogging over others through time, but that was more of a YouTube phenomenon than a boardroom breakthrough.)

Then last November, Tableau's Paul Isaacs and Phil Naranjo gave a sneak peek at the software's new animation features for 2020. Suddenly, bar charts could rise and fall, scatter plots could actually scatter, dashboards could come alive like never before. Thousands and thousands of data analysts and business leaders across the world would have access to possibly the easiest tool yet for animating data. The animation debuted in late February — right before the pandemic upended the best-laid plans.

Whether it comes this year or next, the animation revolution is moving closer. Here are a few ideas to get you and your data moving.

From percents to actual values

This example, inspired by an animated chart on CNN.com, shows how to fluidly switch between the share of the total and the value itself. The transition helps show the data's story.
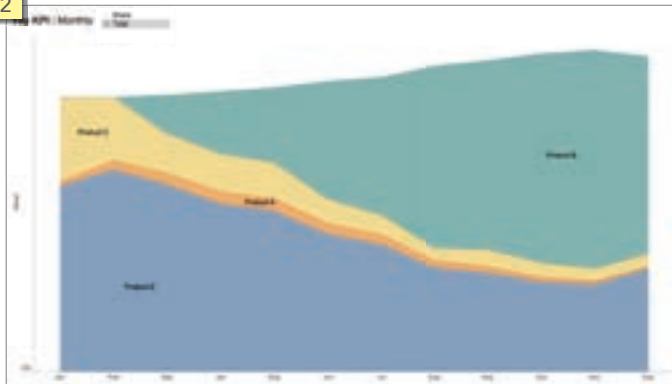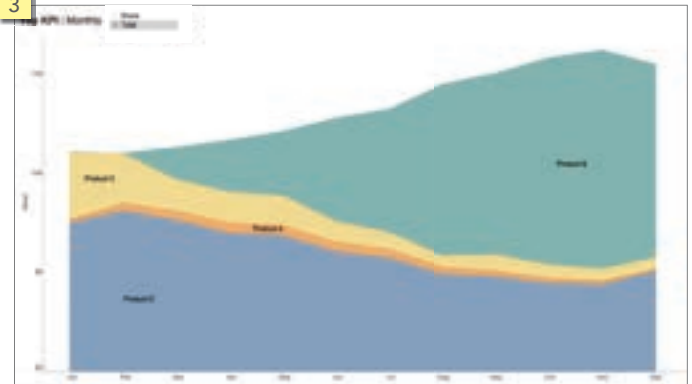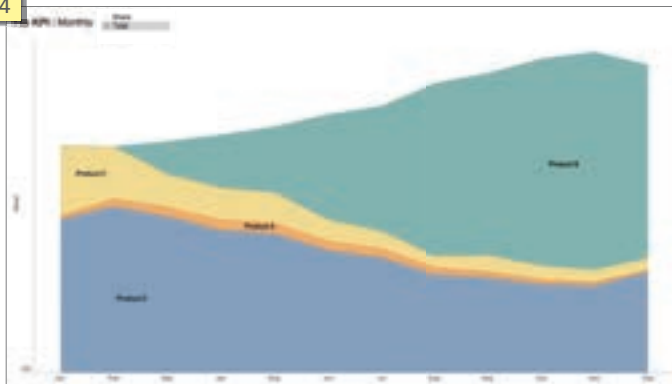
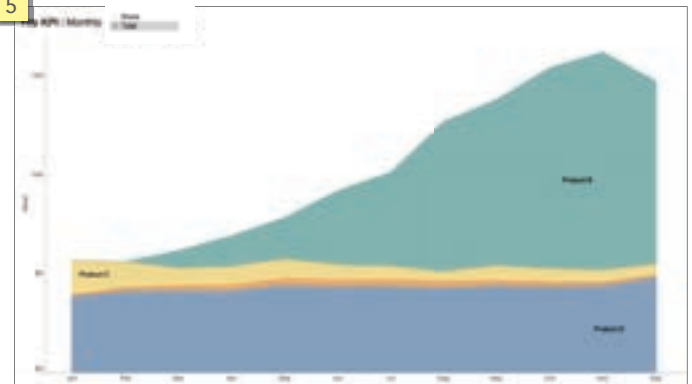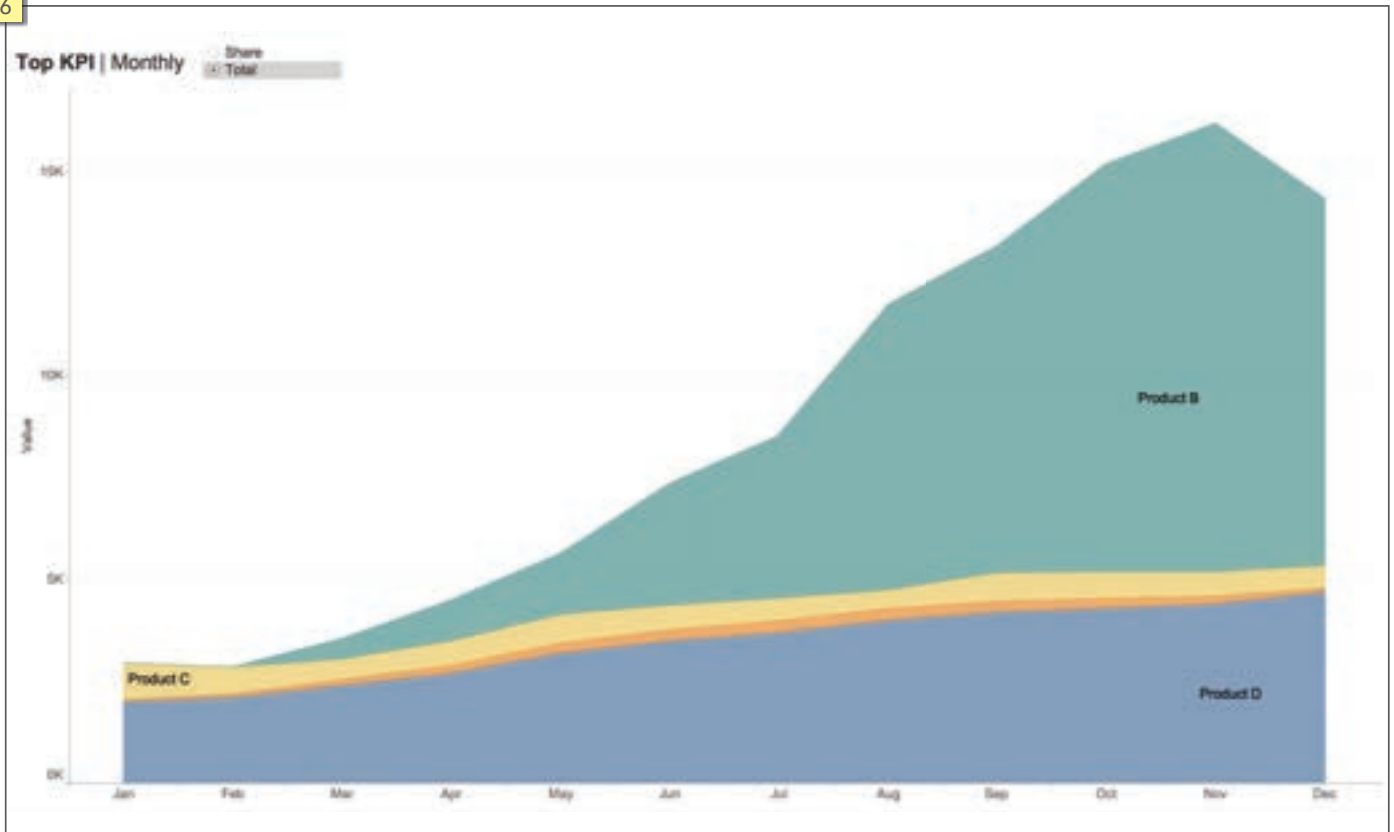## KEEP THE ANIMATION SIMPLE

Going overboard with animation is easy to do, especially if presenting to executives not used to charts that can move. If everything is shifting around, nothing makes sense. This example, based on Google searches of "pizza" vs. pandemic-related words, starts with a basic chart with one line and a reference line for the average. Here's our baseline, both for the data and for the upcoming animation.
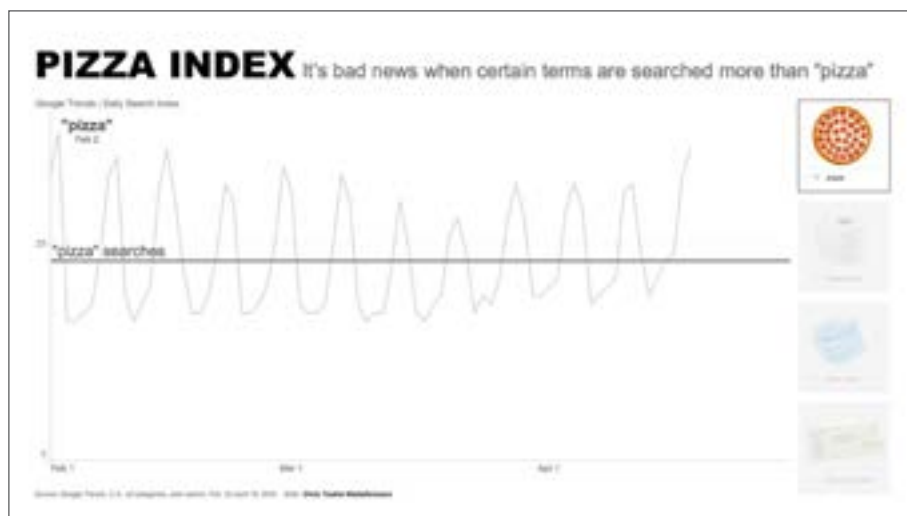

The filters that cont ol this animation are basic by design. The chart starts with just the big pizza icon selected. Click on the next choice, the toilet paper, and the first animated transition begins. In this case, the "toilet paper" line fades in and drops down below the baseline. The icons maintain the clarity of what data we're seeing.
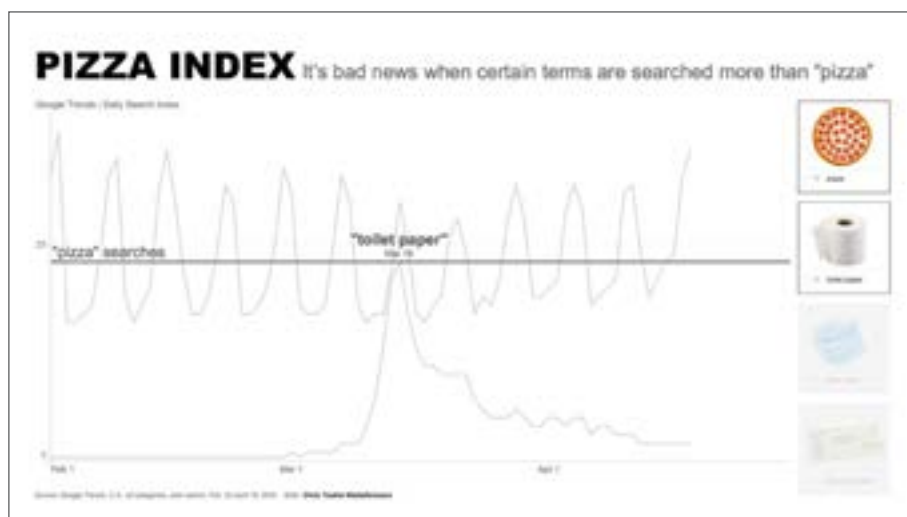
One additional layer of meaning here is the color of the line. It's green when the search volume is low, red when it spikes. Like the icons on the right, this basic use of color is meant to reinforce the meaning of the chart without distracting. Pay attention to the animation first, the color second
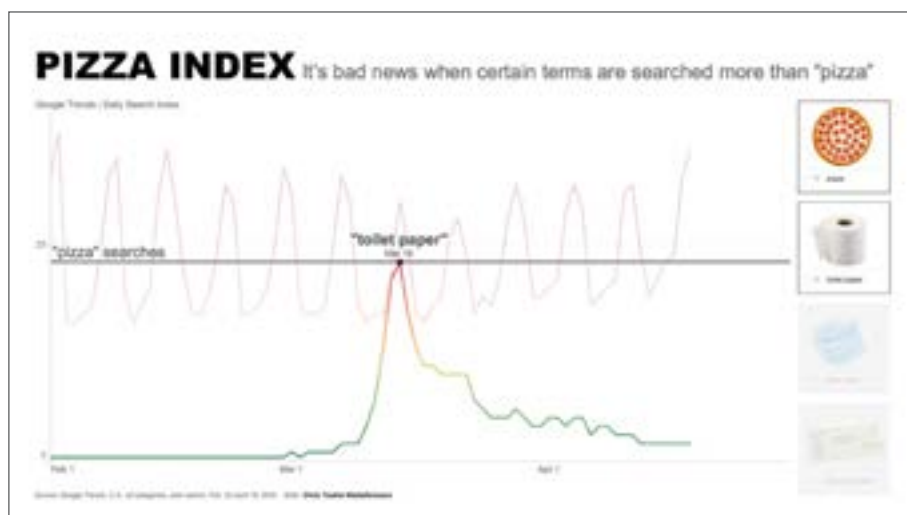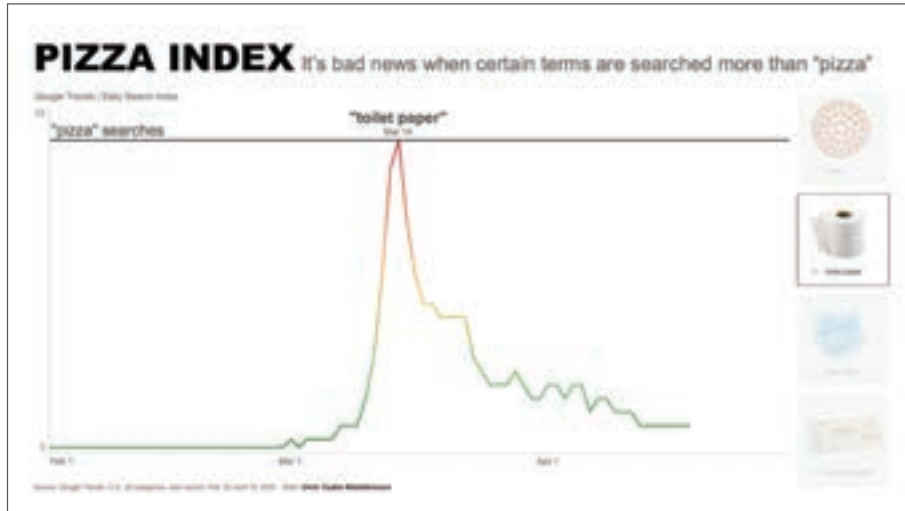
The dynamic axis is a key animation for illustrating the story. In this case, deselecting "pizza" then changes the vertical axis so that the "toilet paper" peak is at the height of the chart. The presentation can pause for a moment, letting that new baseline sink in.
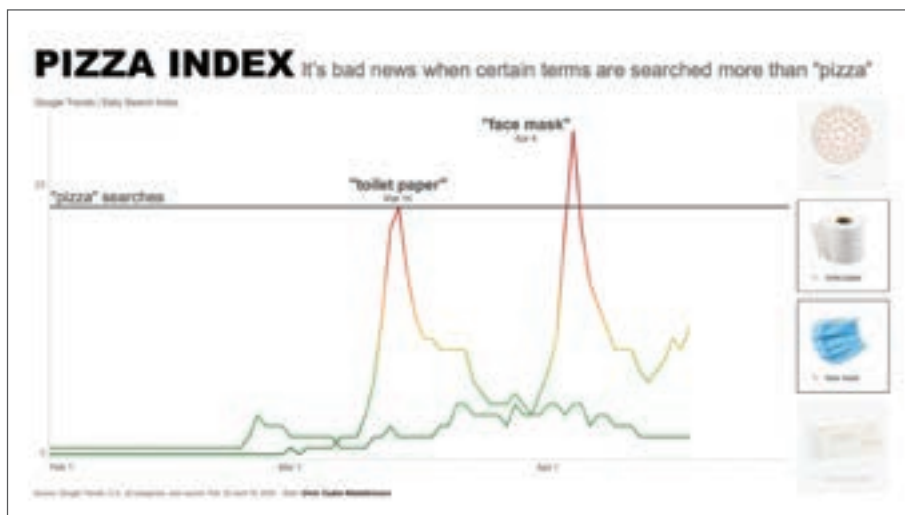
Then when "face mask" is selected alongside "toilet paper," that new line fades onto the chart and the vertical axis changes again. This time, "face mask" is the peak. Watching how "pizza" and "toilet paper" move down, the audience can see how this chart will likely progress as the story unfolds with each searched item. The data labels and the colors are also talking points for how a household concern of toilet paper eased while the health concern of face masks spiked.
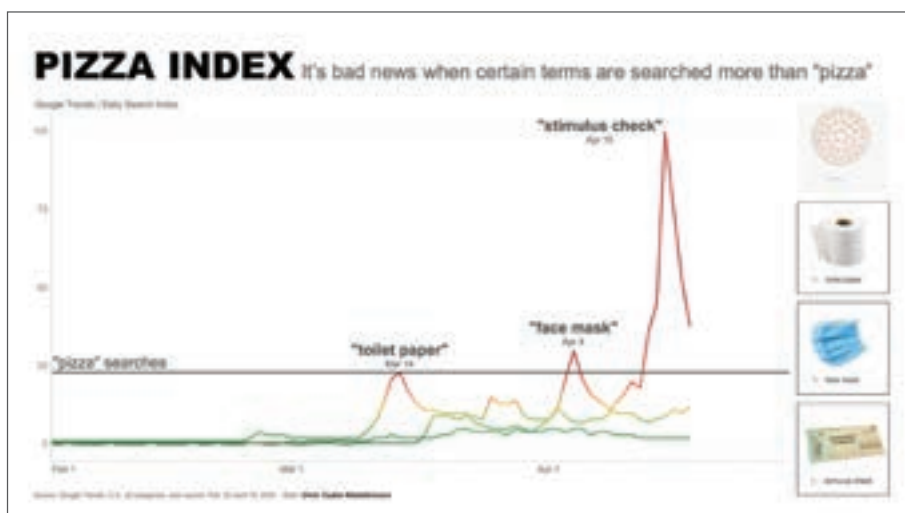

The animation gives more impact to the visual climax, as the last searched item, "stimulus checks," is selected. The vertical axis shifts in the most dramatic movement, making room for the major spike from "stimulus check" to appear. That's a proxy for the growing economic concern as the crisis continues. If this chart had been static, with no animation, the story would have less chance of holding an executive's attention and making an impact.

SCATTER EVERYTHING ONCE...

Hans Rosling was a master in animating scatter plots. But his complicated visualizations worked so well because he too was incredibly animated. He gesticulated and provided commentary on what to pay attention to like a symphony conductor mixed with a sportscaster. Unless you're him, that's hard to do. Scatter plots can convey so much more when they're animated. But start small until you too become a master. Here, the audience is asked to focus on only five points on the scatter plot — each a sports icon to further maintain clarity.

Football still rules the sports world but is slipping

In this example, the animation is restricted to a simple "then" and "now" filter. The vertical axis is a straightforward "Are you a fan?" percentage, and the horizontal axis is a "Favorite sport to watch" percentage. When the filter is changed from "then" to "now," the sports icons move to new spots as interest has changed over time. No symphony conducting needed. The audience can keep track on their own.

Football still rules the sports world but is slipping

The animation can help with engagement, but to ensure communication, a final static version can cement the insight. Here, the somewhat transparent icons from "then" still imply the animation. But seeing both the "then" and "now" at the same time further clarifies how the data points have changed. And pointing to the most important insight brings it all home. This can also serve as a non-animated version that can be distributed to stakeholders.


Football still rules the sports world but is slipping
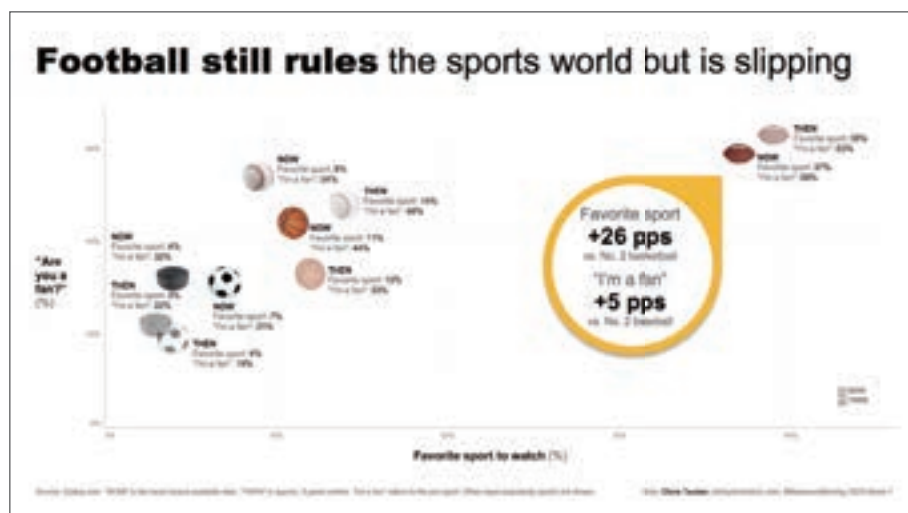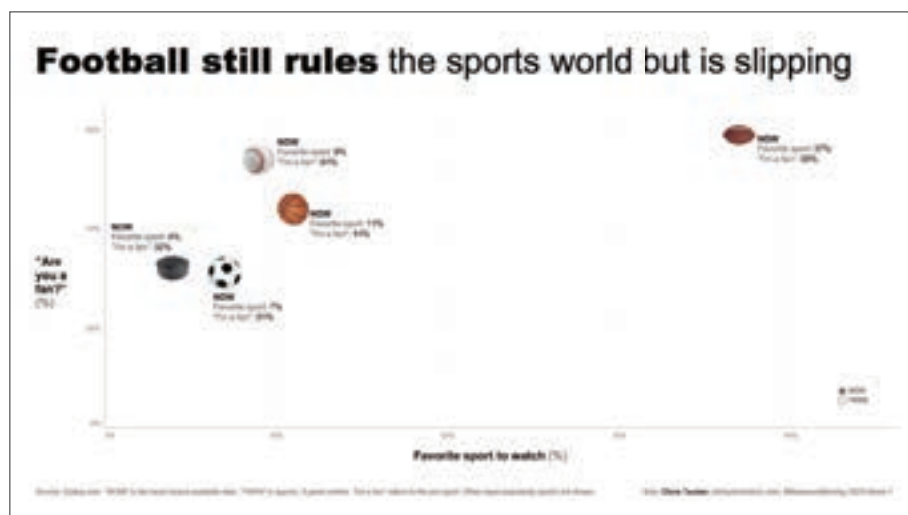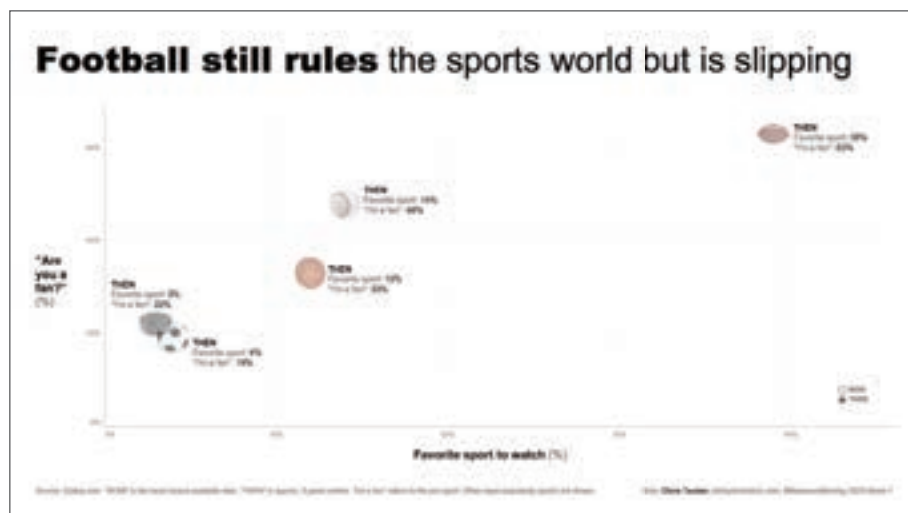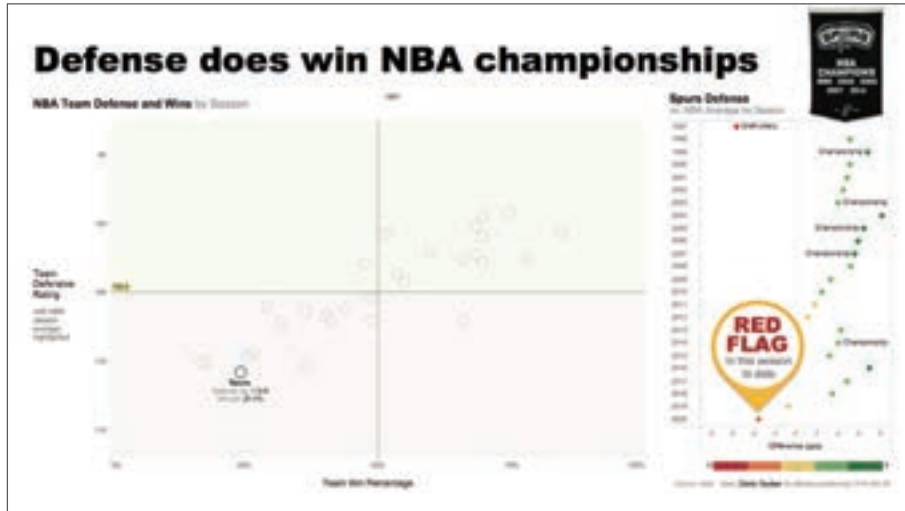
...OR SCATTER JUST ONE THING

This NBA chart is an example of a possibly overwhelming scatter plot. In this case, up to 30 points can be moving at once, representing each NBA team while going through years 1997 to 2020. So to focus on the story, only one point is highlighted with a darker color and a data label. The story here: The San Antonio Spurs have shown that defense wins championships. In seasons where the team's defense rose above average (the vertical axis), the winning percentage improved (the horizontal axis). The far-right chart shows which of those seasons ended in championships — or the draft lottery.
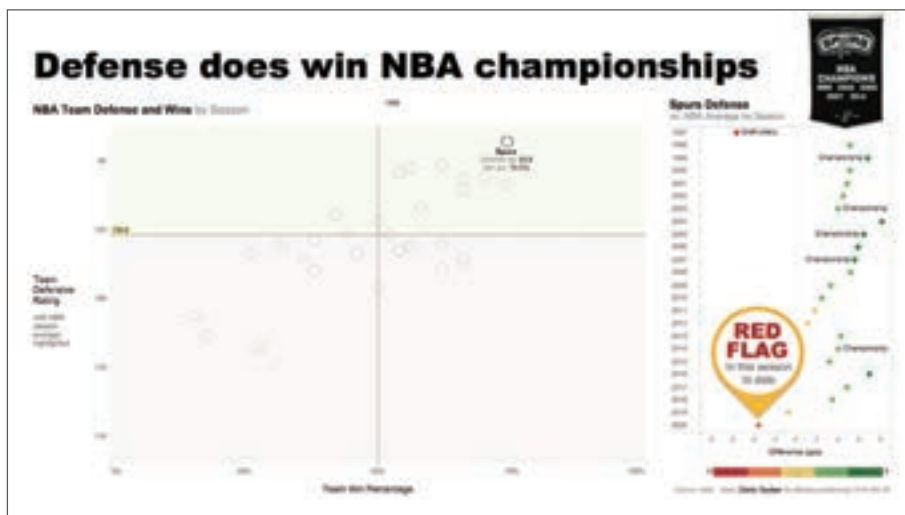

As the animation goes through the seasons, the Spurs' dot that was so deep in the red in 1997 is shown literally rising above the fray. Very quickly, the Spurs in 1999 race to the top of the vertical axis for team defense and the far-right on the horizontal axis for winning percentage. It's a championship season. Continuing through the years, the Spurs' dot stays in this best quadrant while all the other teams rise and fall. Hovering over any of the dots shows that NBA team and its data points.
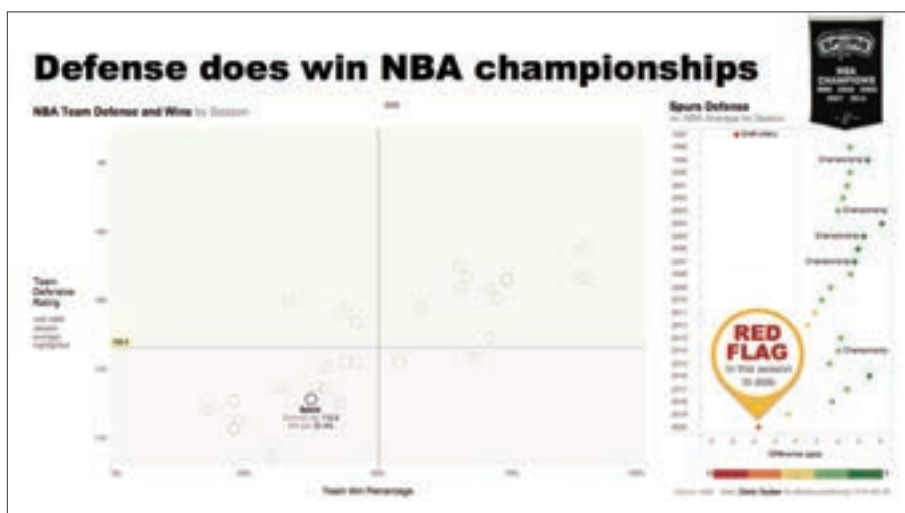
The animation here is still in service of the story. With each season, the fact that the Spurs barely move from the quadrant for top defense and top wins is impressive, especially against the backdrop of so much other movement among the league's teams. The climax then becomes the most recent data, from the truncated 2019-2020 season. The Spurs finally drop down to the quadrant for poor defense and poor winning percentage. The chart on the right clarifies how unprecedented this is in the past 20-plus years. Showing all of this in motion helps convey the story. In this case, a bit of animated sportscasting can help too.

If Napoleon Had to Present to the Board

Charles Minard's pioneering data visualization gets a modern makeover for today's executives
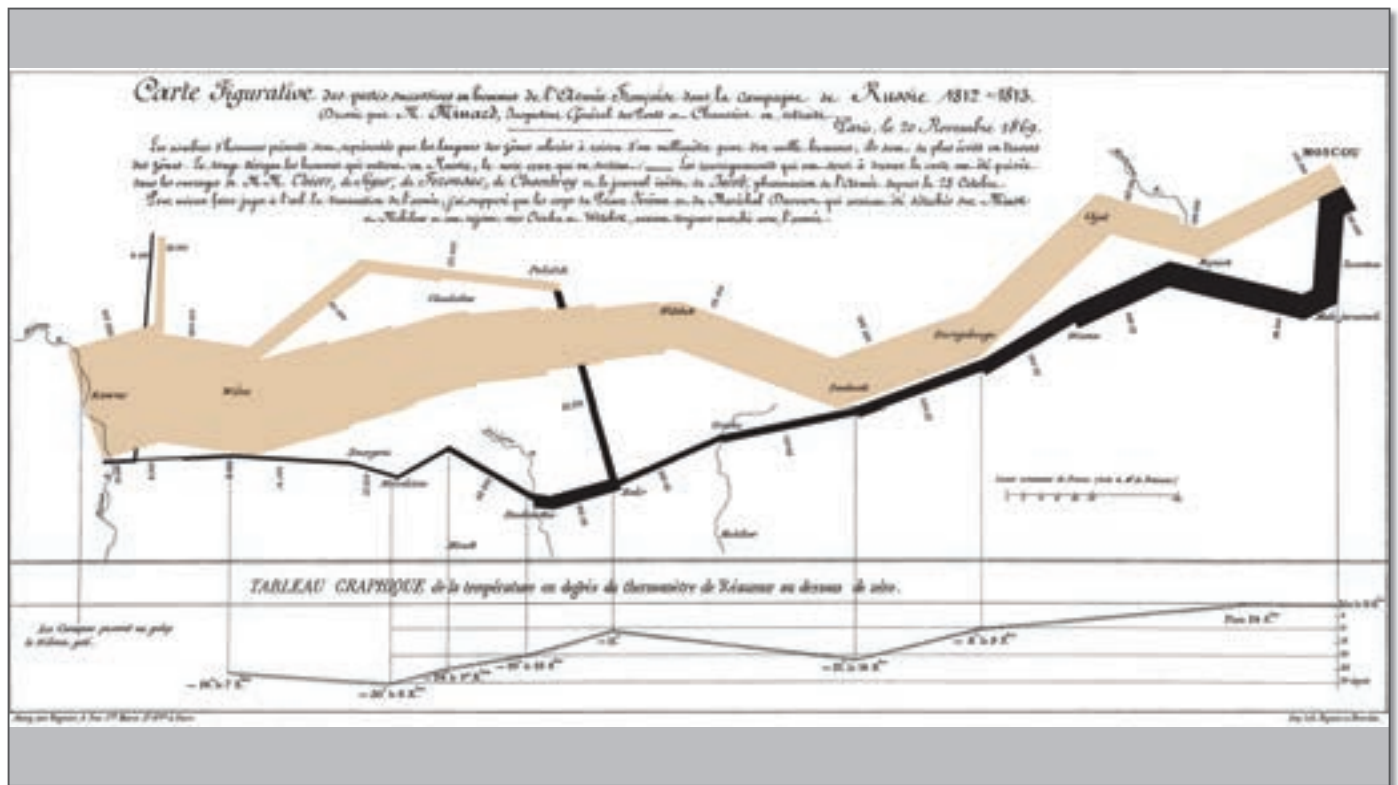

Draw out the insights that can inform recommendations

French engineer Charles Minard was a data visionary when, in 1869, he created this chart of Napoleon's 1812 march on Russia. Now more than 150 years later, Minard's visualization still endures, regarded as "the best graphic ever produced." And yet, like many of today's charts, it's not easy to understand at a glance. The dominant element — the large tan band that shrinks in height — represents the horrific death toll of Napoleon's soldiers as he advanced deep into Russia, then retreated. But it takes time to study this chart to extract that meaning.


◀ Identify the most important data point

The data labels on the far left show the scope of this tragedy. Napoleon started the march with 422,000 and returned with only 10,000. Why did that happen and how can it never happen again? That's what leaders need to know to guide their decisions.
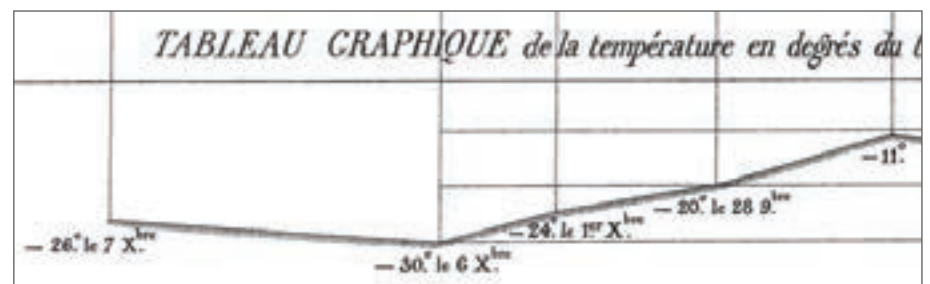
▲ Strip away visual distractions from the main story

This chart is important but potentially confusing. It's of falling temperatures that only apply to the black line of the retreating army, already decimated from 422,000 to 100,000.

Losses spark 3 key recommendations

Napoleon's Army | March to Moscow 1812
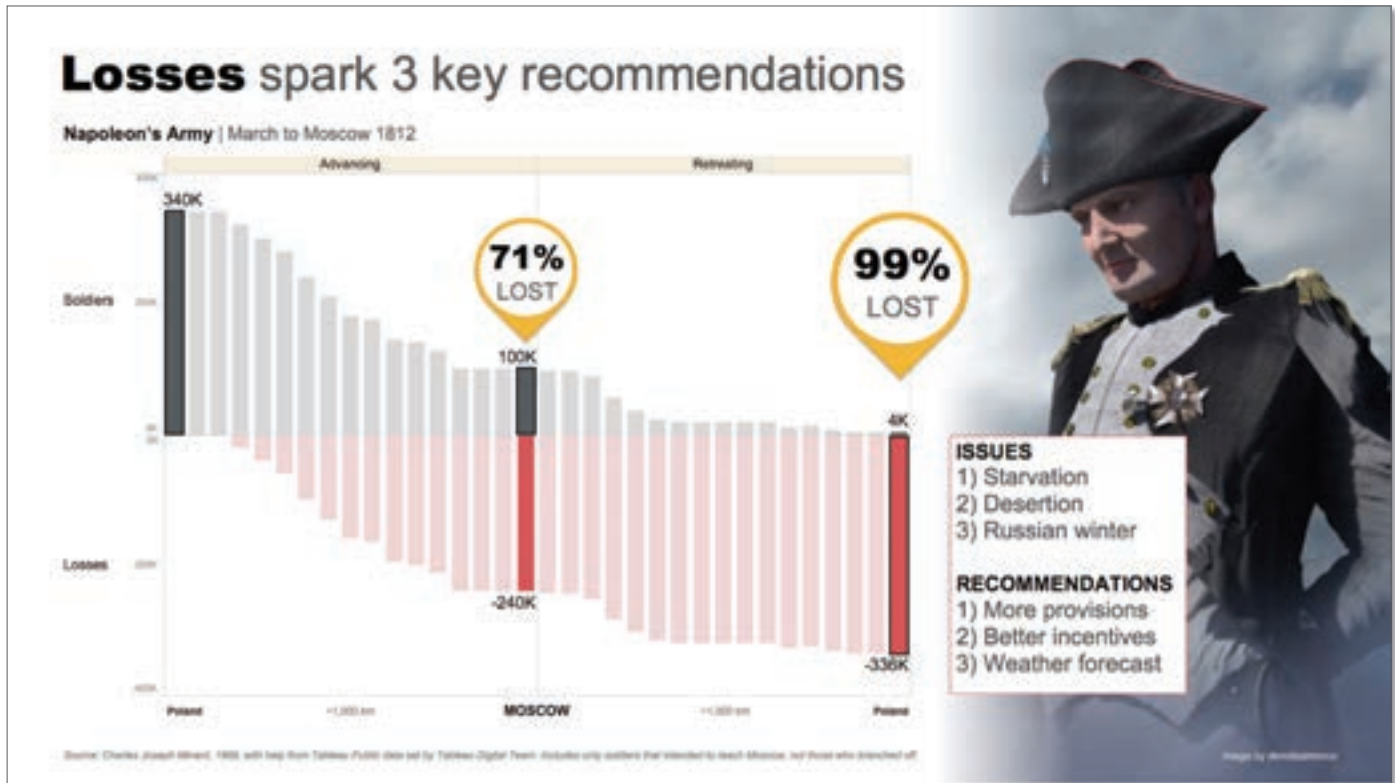
Communicate with a clear headline, image and callouts that complement the visualization

When the audience for a chart shifts from analysts to executives, it's an opportunity for reimagining how to show the data. The extensive detail in Minard's chart isn't necessarily needed, especially the names of rivers and towns, the daily winter temperatures, and the extensive notes on the data source and methodology. The executive version instead distills the story into a simple headline, a basic bar chart, and the visage of Napoleon looming over this disaster. As an (albeit extreme) example, the findings are condensed into very short bullet points.

Showcase the key data point

This callout now makes it impossible to miss the point. The headline and even Napoleon's face draw attention to the callout. Extraneous data has also been stripped away for this "99%" calculation, specifically soldiers that did not set out on the full march (now footnoted).

Napoleon's Army | March to Moscow 1812
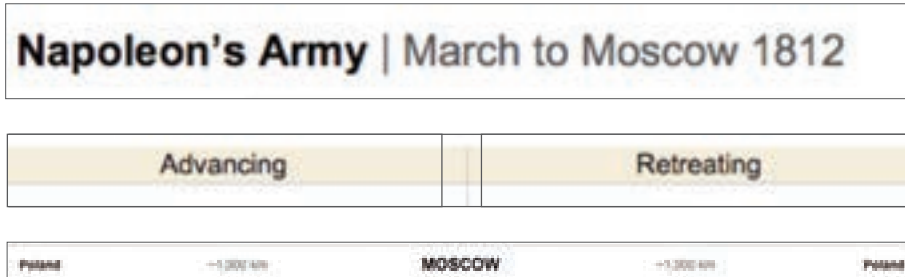
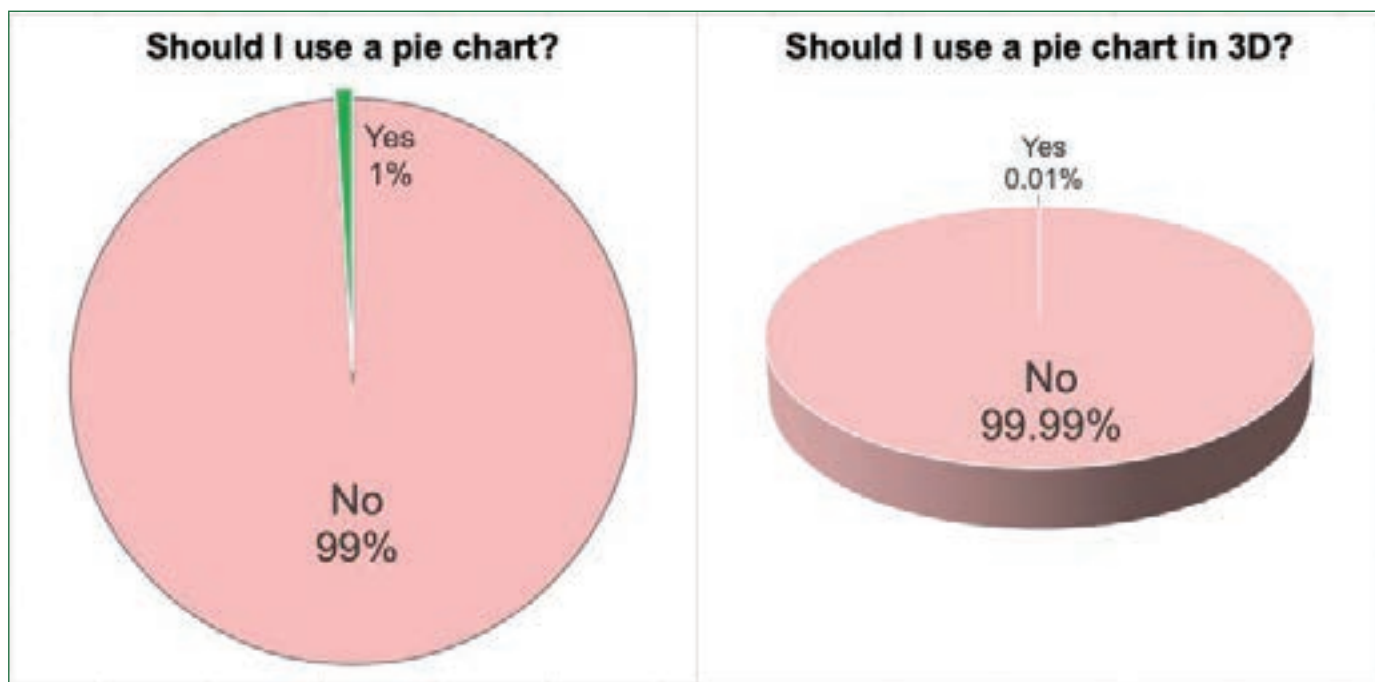▲ **Simplify the labeling to what's essential for the story**

The map-like style of the original is synthesized into "Advancing" and "Retreating" with Poland as the endpoints and Moscow as the literal turning point. The story is now clearer.
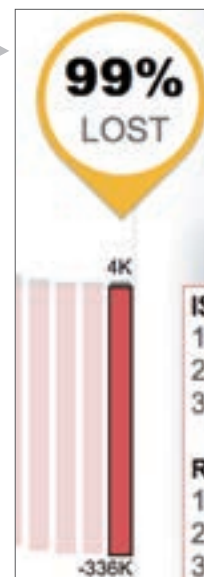
Should you give an exec a pie chart?

Should I use a pie chart?

Yes
1%

No
99%

Should I use a pie chart in 3D?

Yes
0.01%

No
99.99%

First, dashboard guru Nick Desbarats posted a chart on LinkedIn about when to use a pie chart. I replied with my smart-aleck "Yes, 1%" pie. Then not a day later, I saw a client deck loaded with not just pie charts, but 3-D pie charts. So I made the even more smart-aleck chart you see above, then showed it to the client in (I hope) a helpful way and posted it on LinkedIn. The responses were fantastic. Highlights:

"I'll suggest better ways of presenting the data. Maybe they asked for a pie chart because they didn't know other options."
— *Jennifer Chien, analyst at Cigna*

"There are situations where a pie chart is a better way of displaying quantitative information than a bar chart and we have to respect that. For example, to compare if the sum of two category values (wedges) is more than 50% of the total. It is easier to spot that kind of an answer on a pie chart."
— *Hrvoje Smolic, founder at Graphite Note*

"Friends don't let friends use pie charts."
— *Jason Krantz, CEO of Strategy Titan*

"If the audience wants it, then give it. They may appreciate a more visual presentation. However, there are caveats."
— *Irene Beatty, education director of Life Choices*

"Agreed on never. I've yet to see a good reason to ever use one without an alternative approach. I've also conditioned my children to hate them as well."
— *Aaron Simmons, senior associate at Data Meaning*

"Does an executive want a pie or want to see sales broken down by product type? The choice of visual is a data professional's job."
— *Andrew Mason, data warehouse and BI manager*

"You could get the response (which I have had in the past): 'Look, I'm the executive and I just want a pie chart.'"
— *Carl Shovlin, co-founder of Itology Technical Solutions*

"I'm quite partial to exploding pie charts. Shhhh, it's my dark side."
— *Dr. Leslie Wasson, director at Samuel Meritt University*

"In my experience, the more impressive the chart, the less impressive the story."
— *Kate Bruce, content creator for Tech Futures Lab*

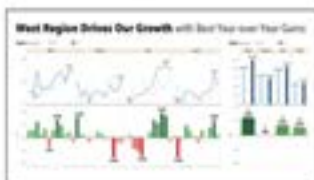Hope you enjoyed this edition! Share feedback, join the conversation and follow Data for Execs on LinkedIn.   **DATA**

DATA FOR EXECS®

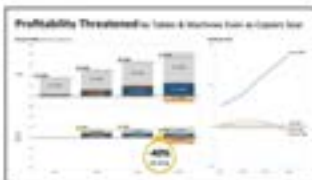Home   About   Services   Videos   Articles   Issues | Q   🛒   A

Executive Presentations
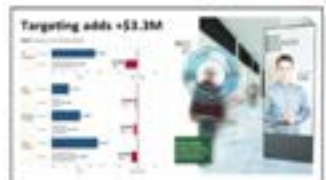Powerful decks that tell the story of the data

Slide Emergencies
Fast fixes for big meetings happening now

Deck Redesigns
Revamp your content to give it big impact

Business Stories
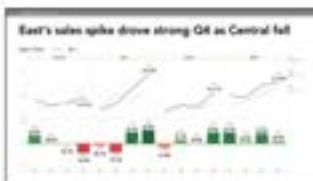Creating any deck from a clean slate

Innovative Dashboards
You've seen dashes in Tableau, but not like this

Dash Enhancements
Improvements to your existing dashboards

Dash Overhauls
All-new Tableau builds for clearer insights

Dashboard Matrix
Strategic overhaul to change your business

Data Storytelling
Leading the way and showing your team how to follow

Story Revisions
Reworking your existing content

All-New Stories
Translating your data into amazing stories

Story Workshops
Teaching your team the story technique

Get issues for your team and more at
dataforexecs.com