DATA FOR EXECS®

DASHBOARD HANDBOOK

HOW TO PLAN, DESIGN AND BUILD FOR BUSINESS LEADERS

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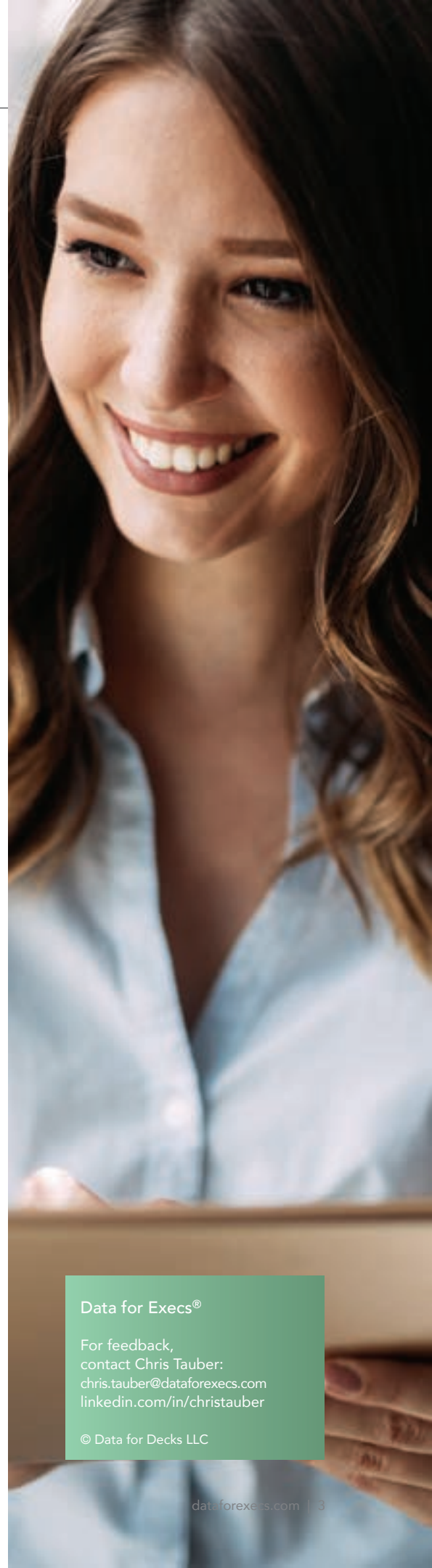
Not a deck, not a dashboard, but something much more



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BETTER DASHBOARDS

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.

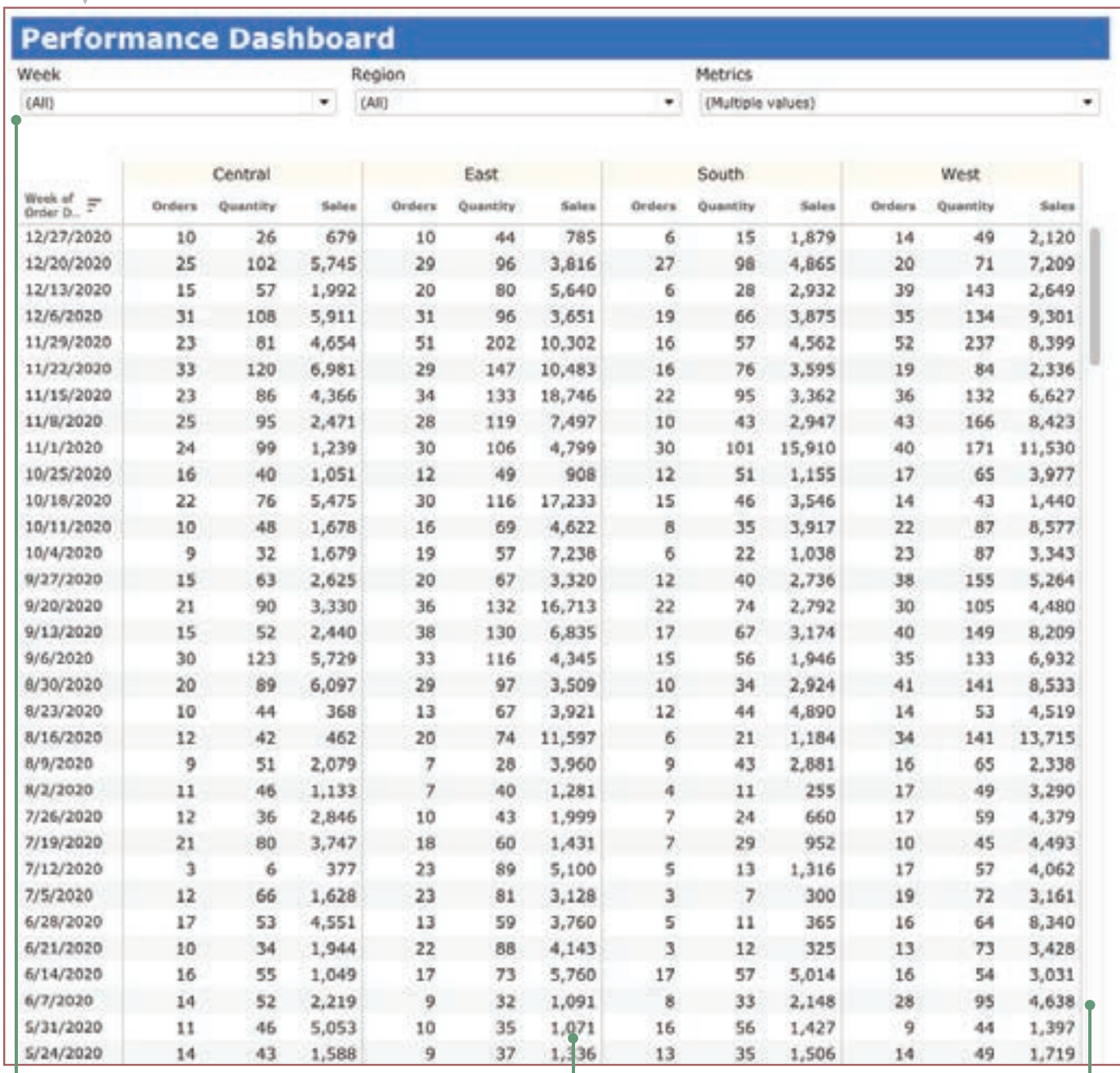
The director then goes to the analyst to look deeper into specific etrics. The analyst needs a lot of flex bility to peer into the data for insights. But when they're found, those insights need to zoom back up to the director, then the CEO.

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.

BEFORE

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?

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

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

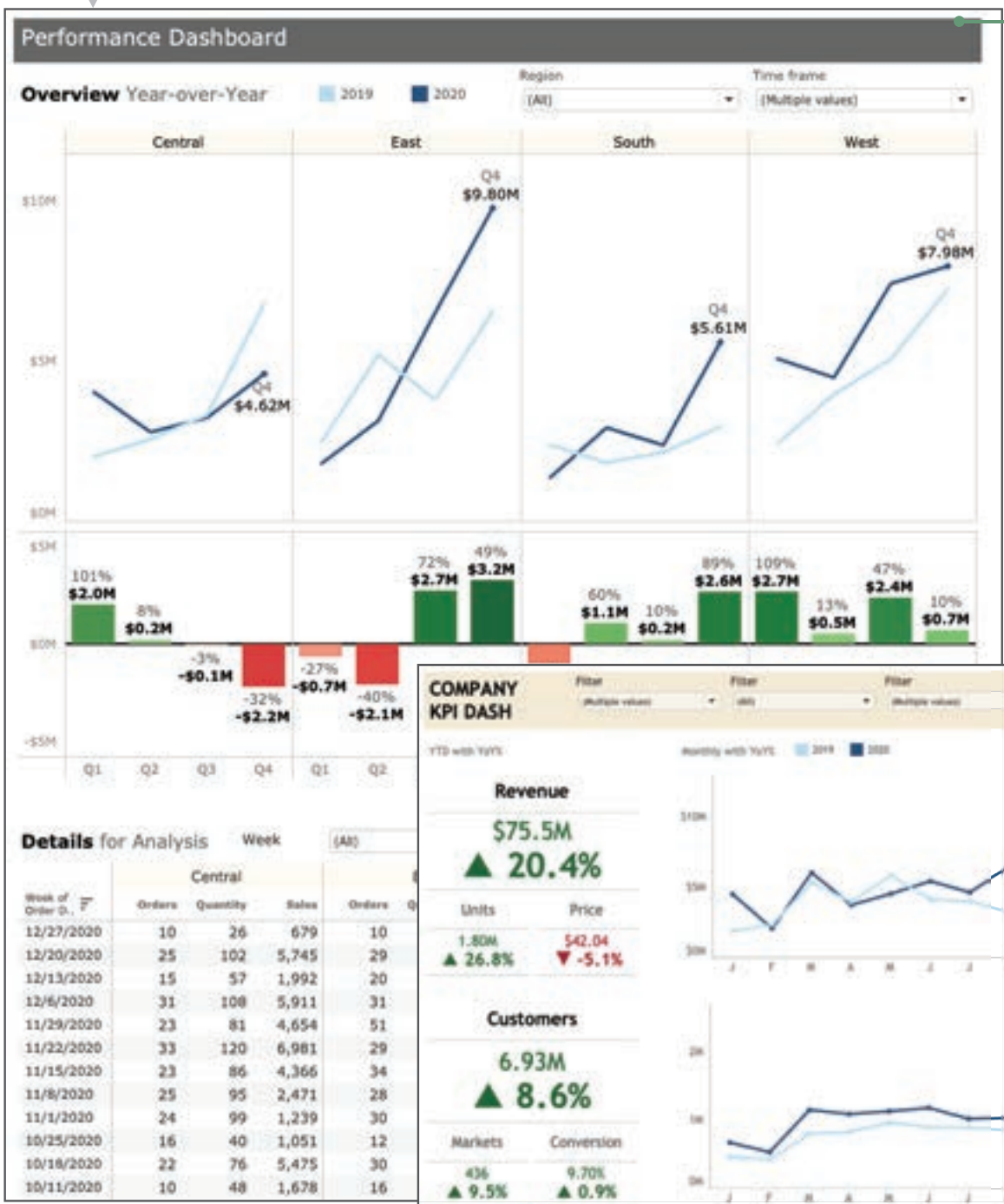
Snapshot views are fine, especially for year-to-date status. But seeing the KPIs plotted in a line chart across a wider time frame vs. prior year or a target completes the picture. It's simple to plot, and it's universal to understand. Then an exec sees not just that a KPI is up, but why.

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.

BEFORE

These dashes are better, but will execs use them?



The filters might not be touched

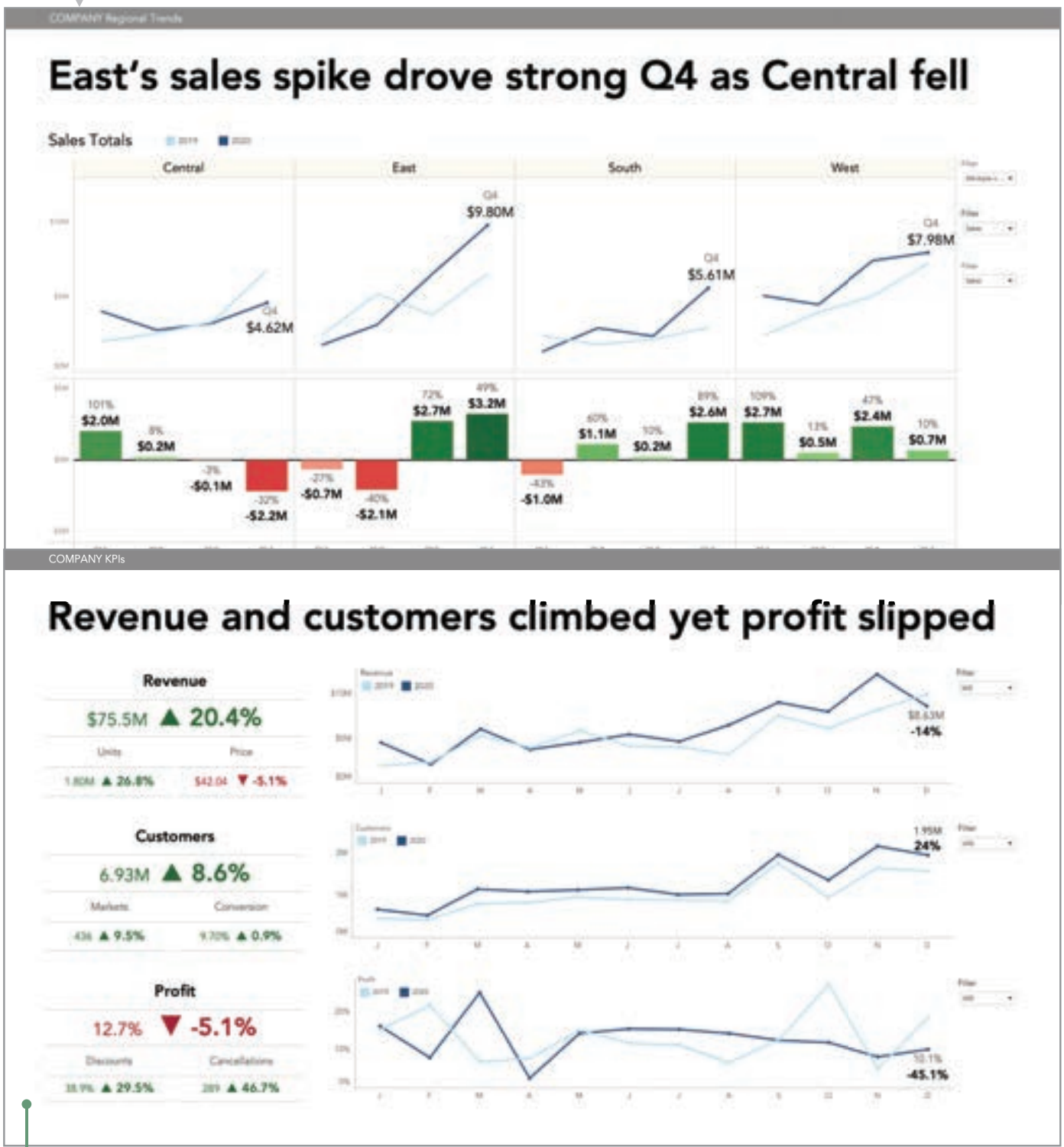
Executives are so pressed for time that they may not have the chance to explore a self-service dashboard, even one like this with a low number of filters and visualizations. They often just want to look quickly and see the story.

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

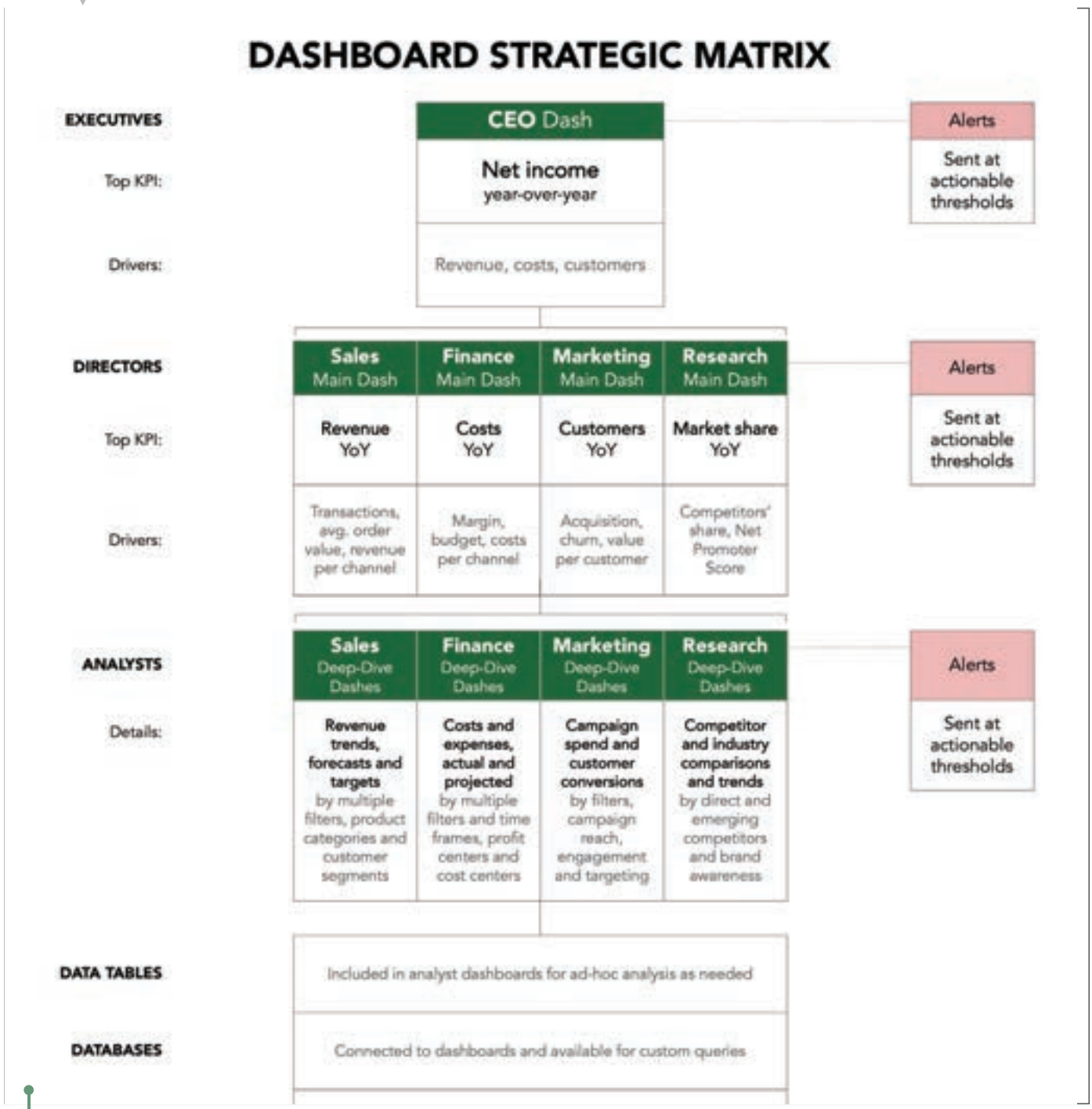
So many dashboards, so ready to be organized

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



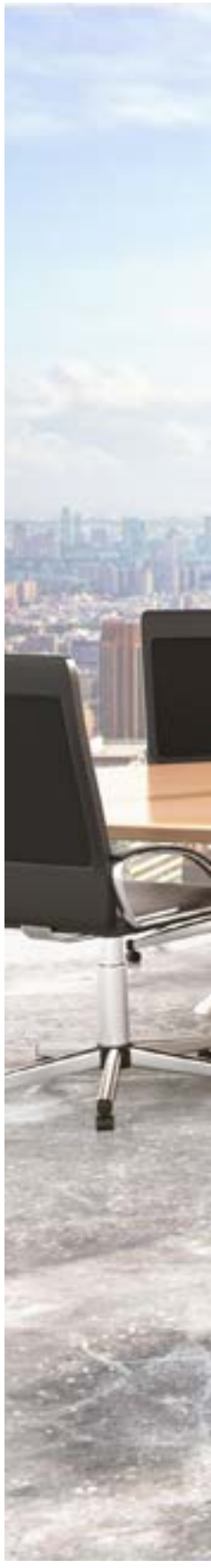
Start with the business, then overlay the dashboard needs

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.

BETTER DASHBOARDS

Dashboard to Boardroom

STEPS TO TRANSFORM DATA AND REPORTS INTO EXECUTIVE SLIDES



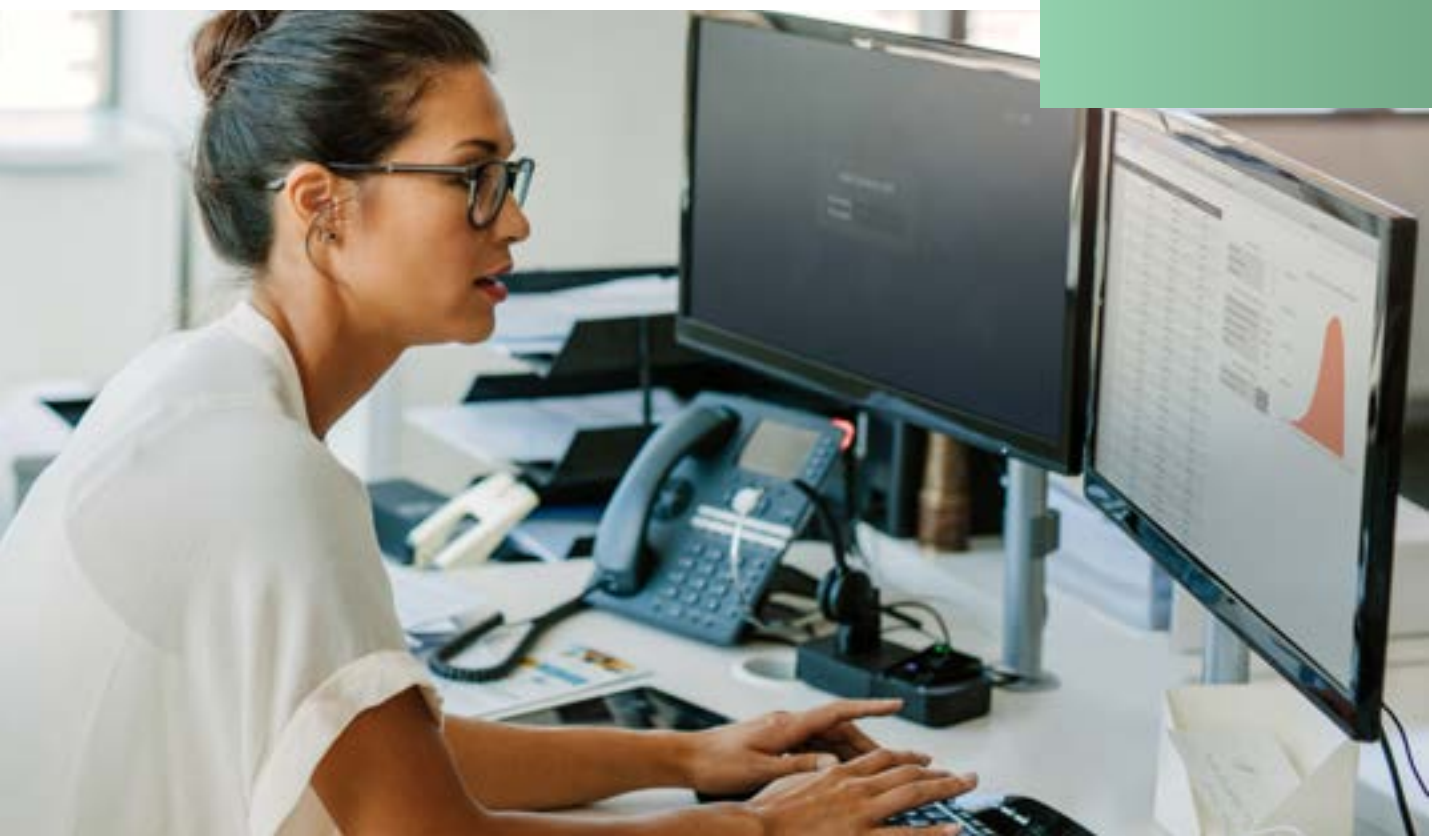
An "executive dashboard" can be an optimistic name, in the hope that executives will actually use it. What has actually happened instead is an email from the executive like this: "Data team, thanks for the new dashboard. Now please go through it and send me insights for this week's board of directors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

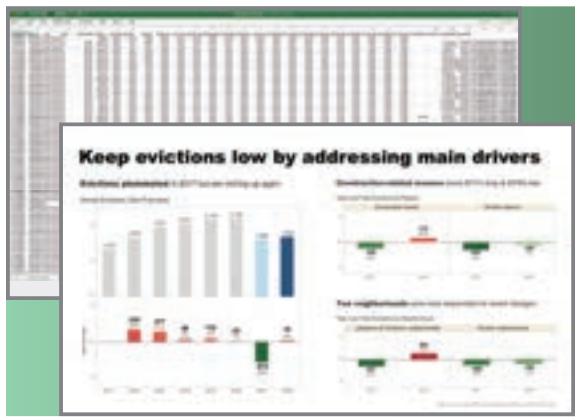
In response, the data team will send screenshots of dashboard charts, slapped onto a slide under a headline. Or send an email of bullet points. Or, in extremely rare cases of being long on bravery but not long for this world, send this reply: "The dashboard is self-service, so you can click through the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

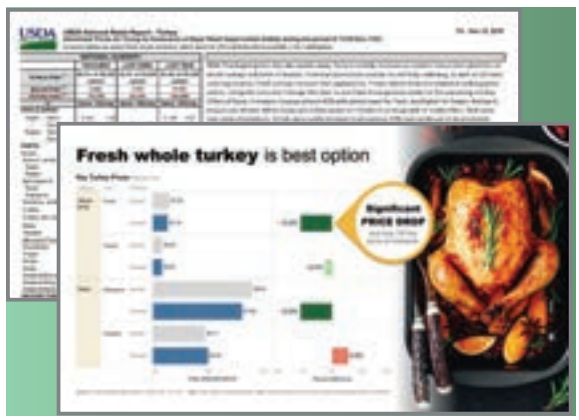
- FOLLOW STRATEGY
- ALIGN TO AUDIENCE
- ISOLATE KEY DATA
- DISTILL TO SLIDE
- STREAMLINE VISUALS
- CLARIFY ACTIONS





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.

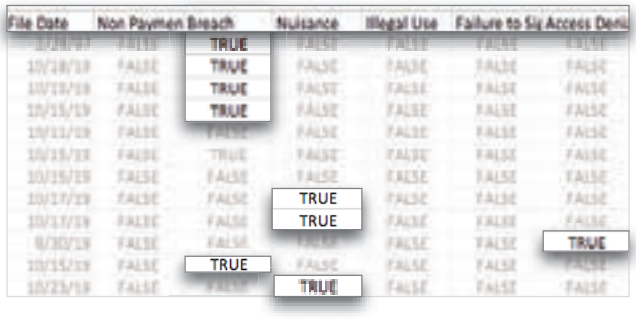
Eviction ID	Address	City	State	Eviction Noti	File Date	Non Paymen	Breach	Nuisance	Illegal Use	Failure to Sig	Access Denie	Unapproved	Owner Move	Demolition	Capital Impr	Substantial F	Ellis Act WH	Condo Co
M191310	300 Block Of	San Francisc	CA		2/28/97	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192806	700 Block Of	San Francisc	CA	94111	10/18/19	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192784	0 Block Of G	San Francisc	CA	94132	10/15/19	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192776	2400 Block C	San Francisc	CA	94123	10/15/19	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192769	2800 Block C	San Francisc	CA	94134	10/11/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192786	0 Block Of Ju	San Francisc	CA	94132	10/15/19	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192780	0 Block Of Ap	San Francisc	CA	94110	10/15/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192799	1100 Block C	San Francisc	CA	94103	10/17/19	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192800	1700 Block C	San Francisc	CA	94124	10/17/19	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192472	1800 Block C	San Francisc	CA	94103	9/30/19	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192789	100 Block Of	San Francisc	CA	94102	10/15/19	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192857	400 Block Of	San Francisc	CA	94109	10/23/19	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192471	4200 Block C	San Francisc	CA	94112	9/30/19	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192858	400 Block Of	San Francisc	CA	94109	10/23/19	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M193064	3600 Block C	San Francisc	CA	94114	8/12/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
M192775	2000 Block C	San Francisc	CA	94109	10/15/19	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192489	100 Block Of	San Francisc	CA	94112	10/7/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE
M190380	400 Block Of	San Francisc	CA	94112	5/20/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
M191504	100 Block Of	San Francisc	CA	94112	6/27/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
M192414	800 Block Of	San Francisc	CA	94133	9/26/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
M192813	2900 Block C	San Francisc	CA	94110	10/11/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
M192793	200 Block Of	San Francisc	CA	94102	10/15/19	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192809	3600 Block C	San Francisc	CA	94123	9/30/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
M191503	100 Block Of	San Francisc	CA	94134	6/27/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
M192471	0 Block Of W	San Francisc	CA	94103	9/30/19	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192431	1400 Block C	San Francisc	CA	94103	9/30/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE
M192429	1400 Block C	San Francisc	CA	94103	9/27/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE
M189998	1300 Block C	San Francisc	CA	94110	5/6/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
M192773	200 Block Of	San Francisc	CA	94123	10/11/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192408	1300 Block C	San Francisc	CA	94110	9/26/19	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192771	1000 Block C	San Francisc	CA	94109	10/11/19	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192811	1500 Block C	San Francisc	CA	94112	10/18/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
M192781	300 Block Of	San Francisc	CA	94102	10/15/19	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192363	900 Block Of	San Francisc	CA	94110	8/28/19	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192478	1000 Block C	San Francisc	CA	94109	10/2/19	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M190803	3800 Block C	San Francisc	CA	94114	6/10/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
M192856	100 Block Of	San Francisc	CA	94114	10/22/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
M192785	0 Block Of Ja	San Francisc	CA	94132	10/15/19	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192723	1400 Block C	San Francisc	CA	94109	10/10/19	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M190474	4200 Block C	San Francisc	CA	94112	9/30/19	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
M192855	400 Block Of	San Francisc	CA	94102	10/22/19	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

Source: Data SF via makeovermonday.co.uk

1

Zero in on what decision this data could inform.

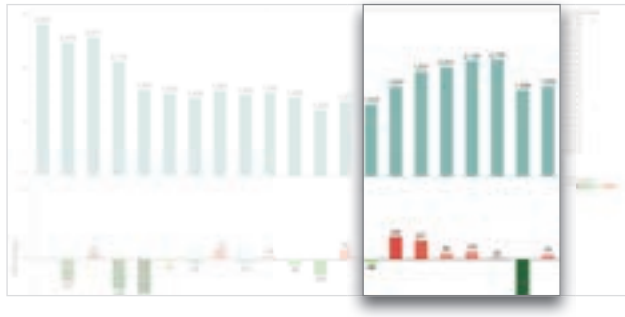
This eviction data includes info on the date, location and reason for the eviction across a number of years. That can reveal trends and drivers, leading to decisions on how to lower evictions going forward.



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

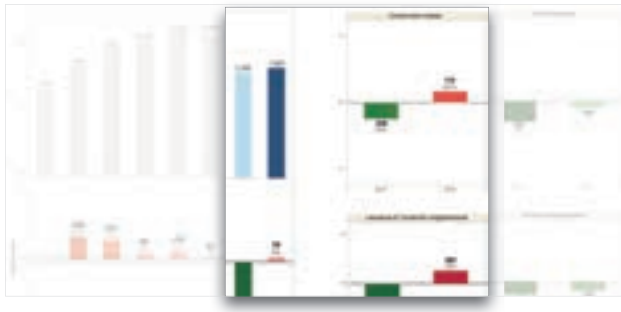
Isolate the drivers with the most impact on the trends.

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

4

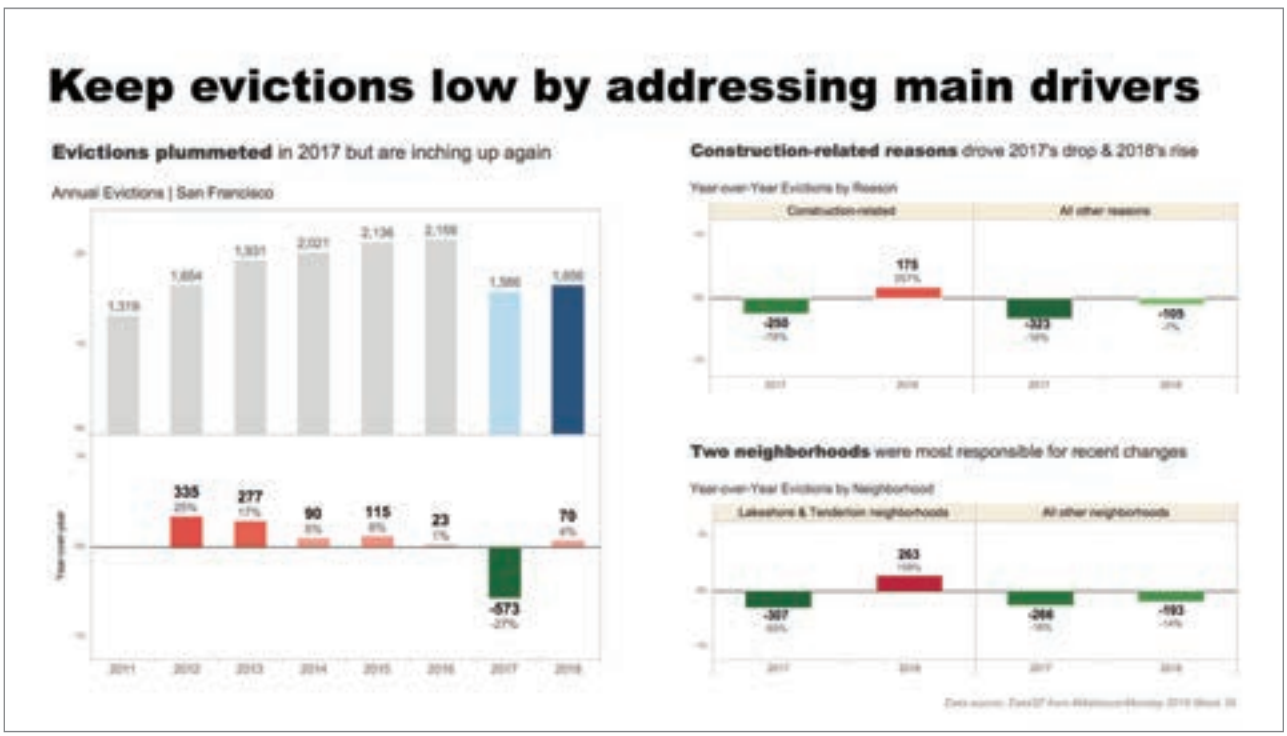
Streamline the charts and add the key insights.

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.



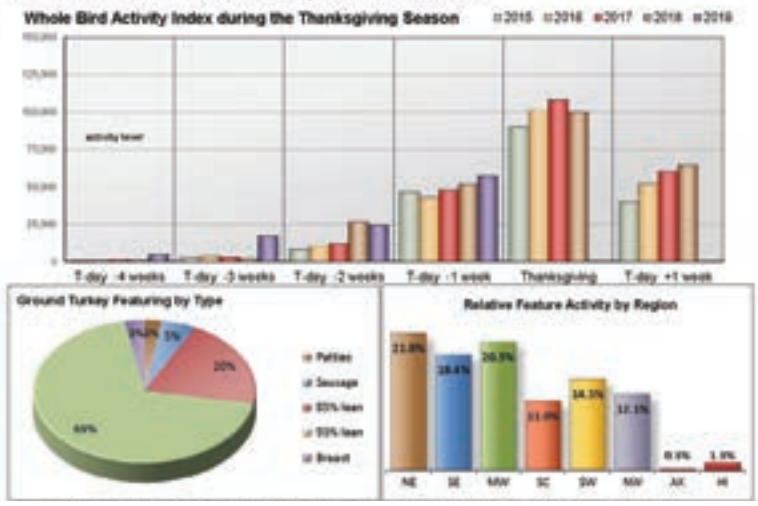
LEGACY REPORTS

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.

NATIONAL SUMMARY

	THIS WEEK	LAST WEEK	LAST YEAR
Feature Rate *	80.2% of 29,200 outlets	33.3% of 29,200 outlets	81.8% of 29,100 outlets
Special Rate **	9.4%	7.2%	11.8%
Activity Index ***	78,359	43,834	124,400
1/	Stores Wtd Avg	Stores Wtd Avg	Stores Wtd Avg
WHOLE BIRDS:			
Fresh - Hens	2,157 1.36		17,120 1.52
" - Toms	2,157 1.36	36 1.09	17,183 1.52
Frozen - Hens	26,311 0.84	11,997 0.93	33,439 0.85
" - Toms	26,628 0.83	12,532 0.92	32,356 0.85
PARTS:			
Breast			
Bone-in, whole			
Fresh	229 2.74	24 2.99	2,228 2.68
Frozen	7,511 1.70	4,666 1.50	14,216 1.59
Split, bone-in			
Fresh			234 3.08
Rotisserie	342 7.99	459 9.07	2,120 8.93
Boneless, whole	64 4.00	89 4.00	114 4.63
Cutlets	349 5.01		251 5.40
Cutlets, thin sliced			58 5.34
Strips			
Tenders	81 4.07		23 4.71
Marinated Tenders	127 3.74	155 4.81	105 3.89
Drumsticks	329 1.41	300 1.74	561 1.58
Thighs	143 1.69	69 3.49	101 1.82
Wings	270 1.50	313 1.36	399 1.31
Necks		10 0.89	30 1.11
Smoked Drumsticks	150 2.01	341 2.07	121 2.17
Smoked Wings	140 1.99	360 2.09	102 2.08
Smoked Necks	164 1.99	225 2.04	9 1.99
GROUND TURKEY:	11,581 3.39	11,018 3.25	2,931 3.67
Patties	261 3.44	674 3.86	491 3.99
Sausage	598 4.11	524 3.55	79 3.39
85% lean	2,361 3.06	2,524 3.05	956 2.95
93% lean	8,007 3.37	7,252 3.25	1,164 3.84
Breast	354 4.69	64 5.49	241 5.14
Rolls (thighs 1 lb.)		34 1.67	163 2.83

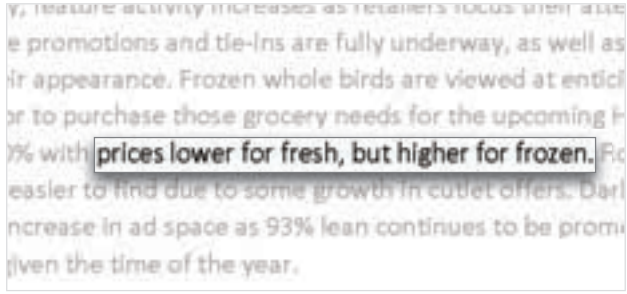
With Thanksgiving less than two weeks away, feature activity increases as retailers focus their attention on whole turkeys and bone-in breasts. Incentive promotions and tie-ins are fully underway, as well as full meal catering services. Fresh turkeys increase their appearance. Frozen whole birds are viewed at enticing price points, luring the consumer through the door to purchase those grocery needs for the upcoming Holiday. Offers of bone-in breasts increase almost 40% with prices lower for fresh, but higher for frozen. Rotisserie breasts are limited. White meats are a little easier to find due to some growth in cutlet offers. Dark parts lose some momentum. Grinds see a subtle increase in ad space as 93% lean continues to be promoted most often. Deli activity slows as expected given the time of the year.



Source: USDA National Retail Report - Turkey

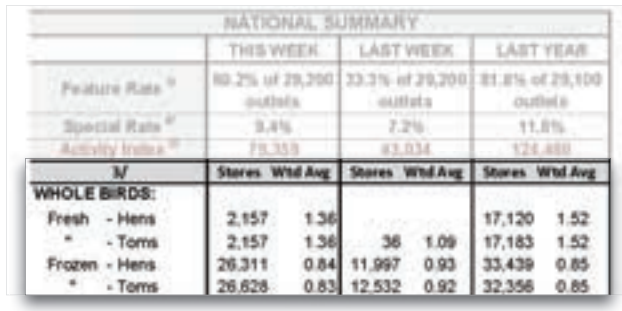
1 Highlight line items and text that give clues to the story.

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.



NATIONAL SUMMARY

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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.

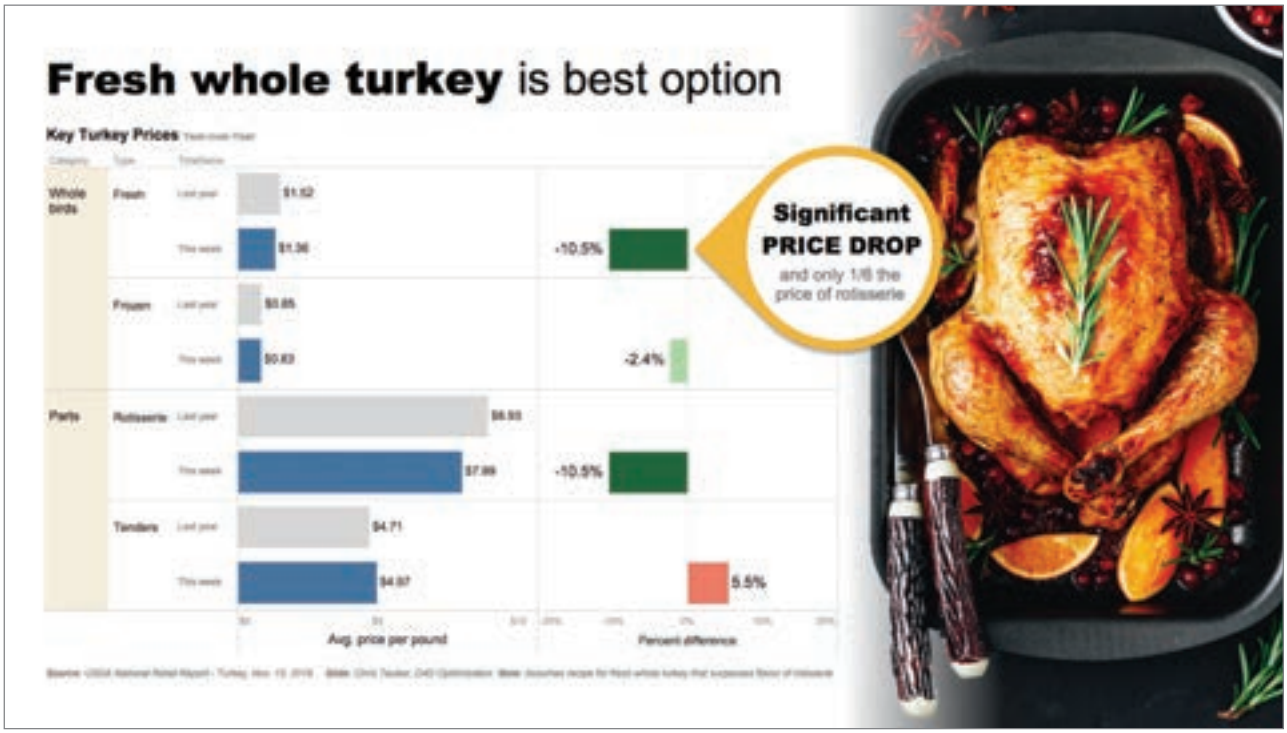
4

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.

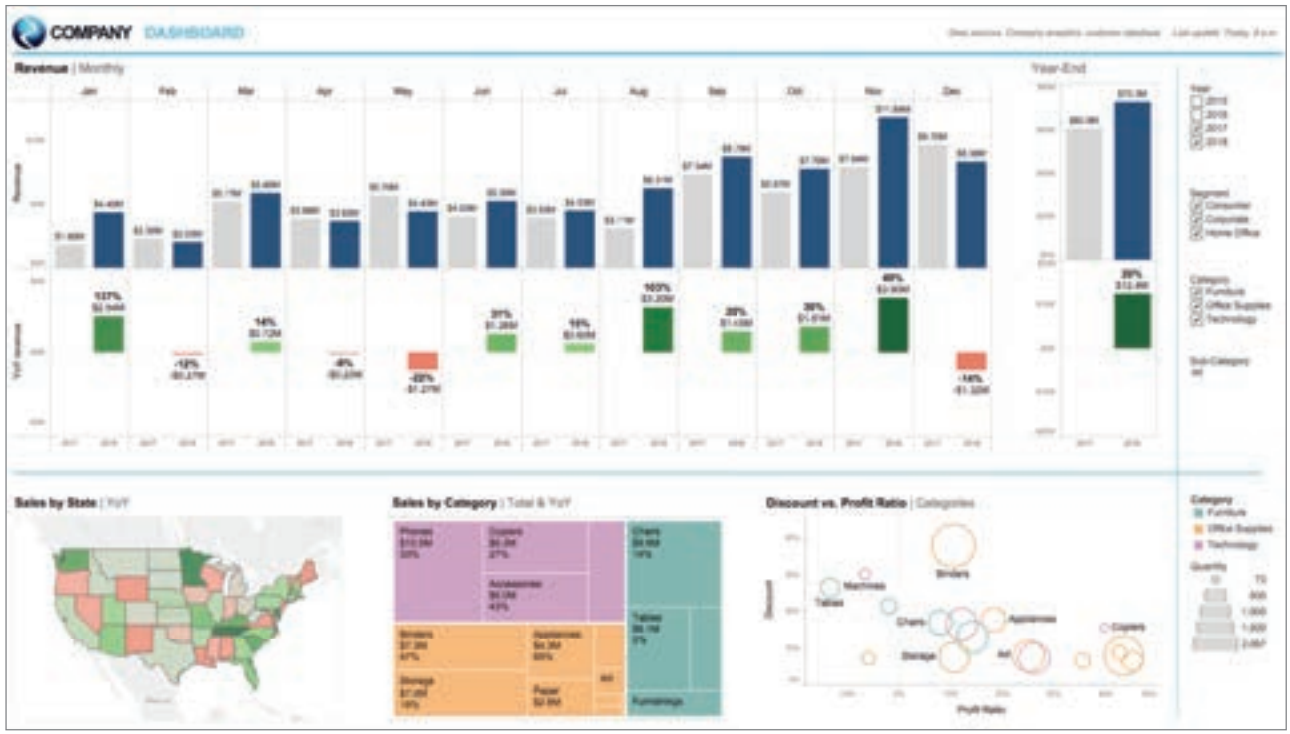
EXECUTIVE SUMMARY

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.

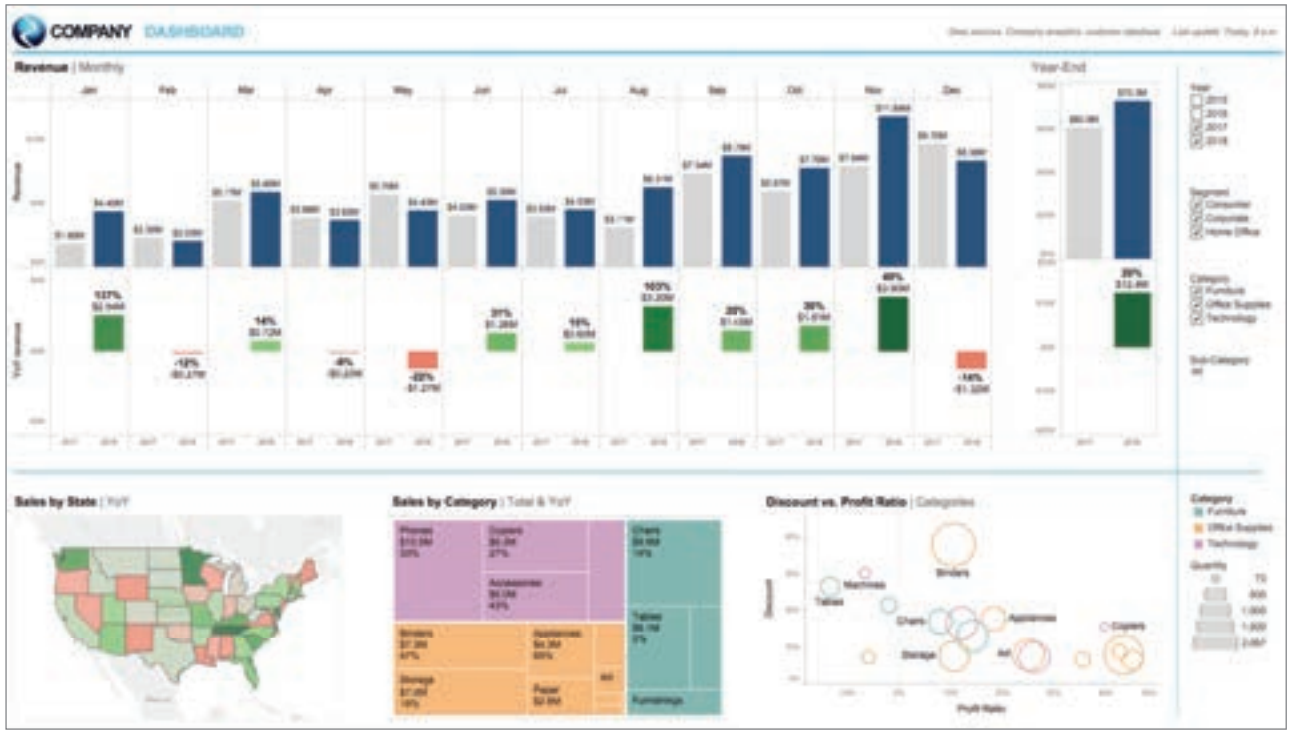
Dashboards are often very clinical looking: lots of numbers and charts but no sense of what this all means to the customer. Here, if tables are driving the sales, show the table.

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.

DASHBOARD

But wait, there's more! The best dash — coupled with an interesting business environment — can be a goldmine of valuable stories.

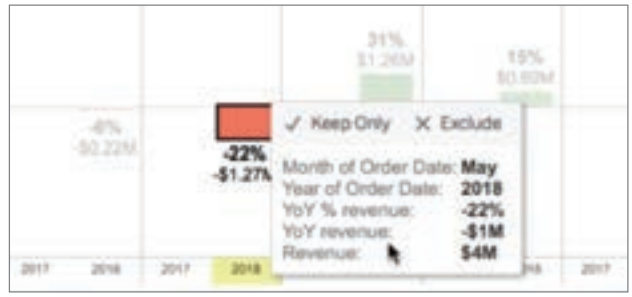


Source: Tableau Super Store sample data

1

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

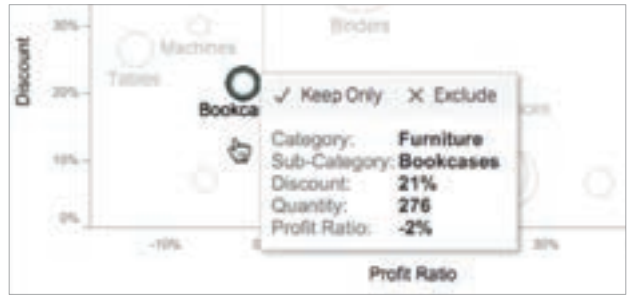
Executives need to see what went right, what went wrong and why. Here, the month with the biggest percent drop year-over-year needs to be addressed with reasons.



2

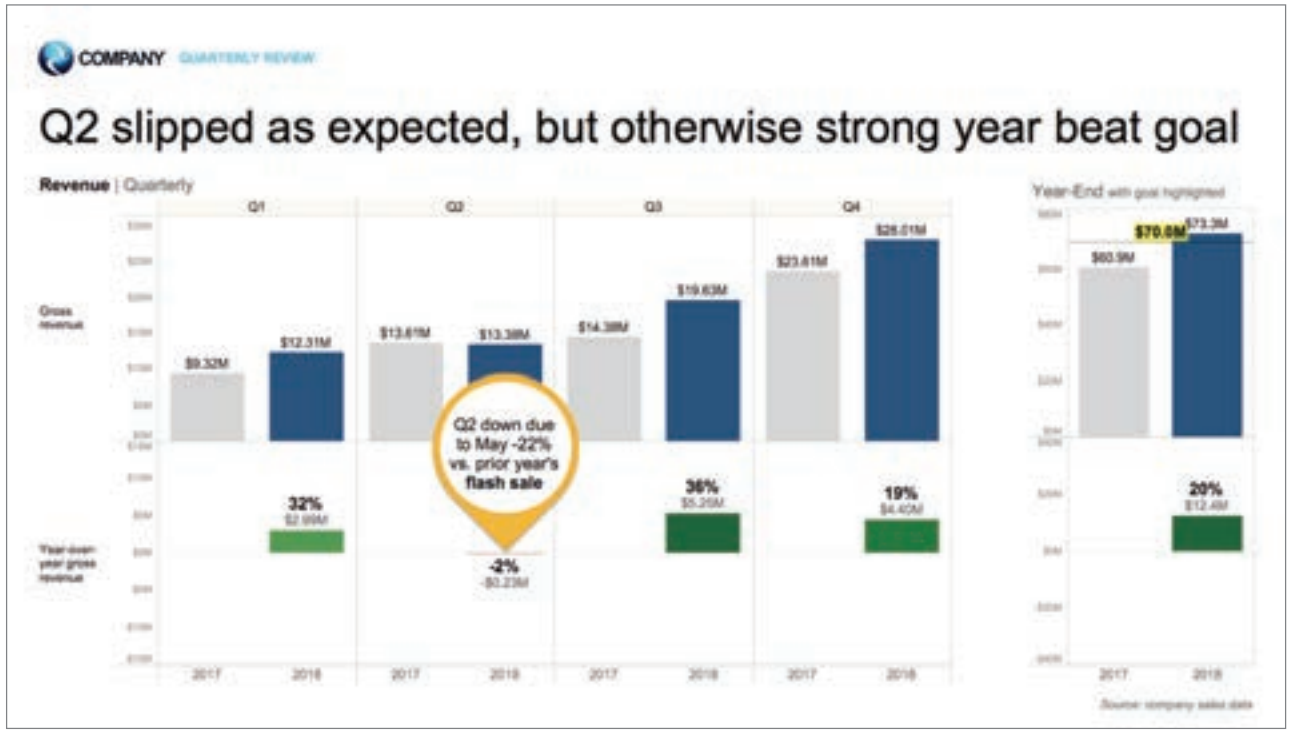
Use filters to uncover hidden but important trends.

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.)

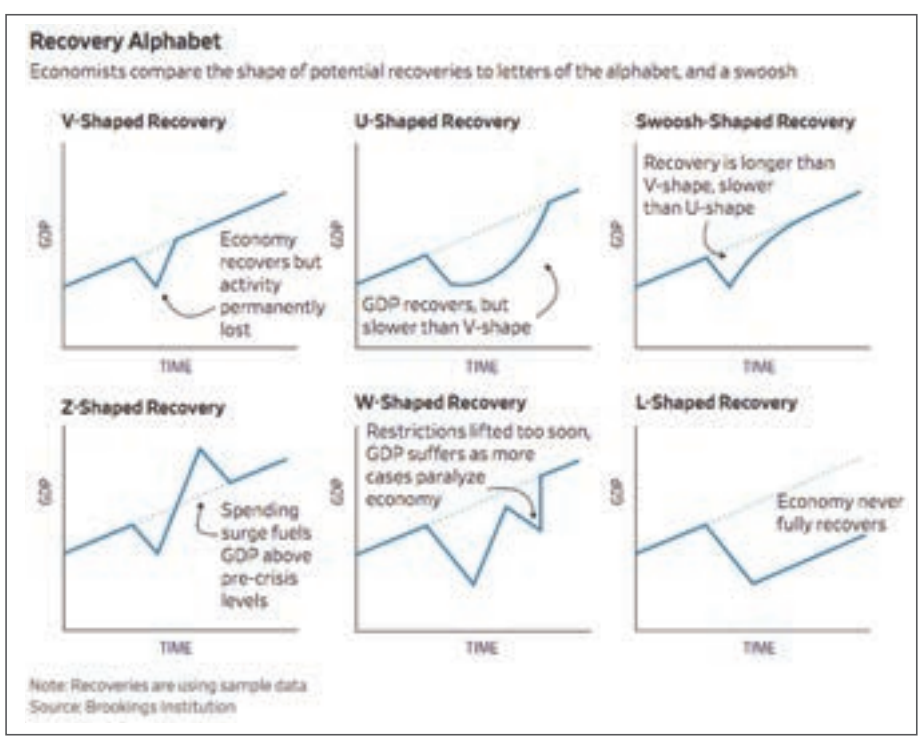
And yet, until this year, I was overconfident in showing what's next. I even fell into the crutch of gathering as much historical data as I could, then building a chart in Tableau, then clicking that simple-yet-powerful "Show Forecast" button.

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



THE INSPIRATION

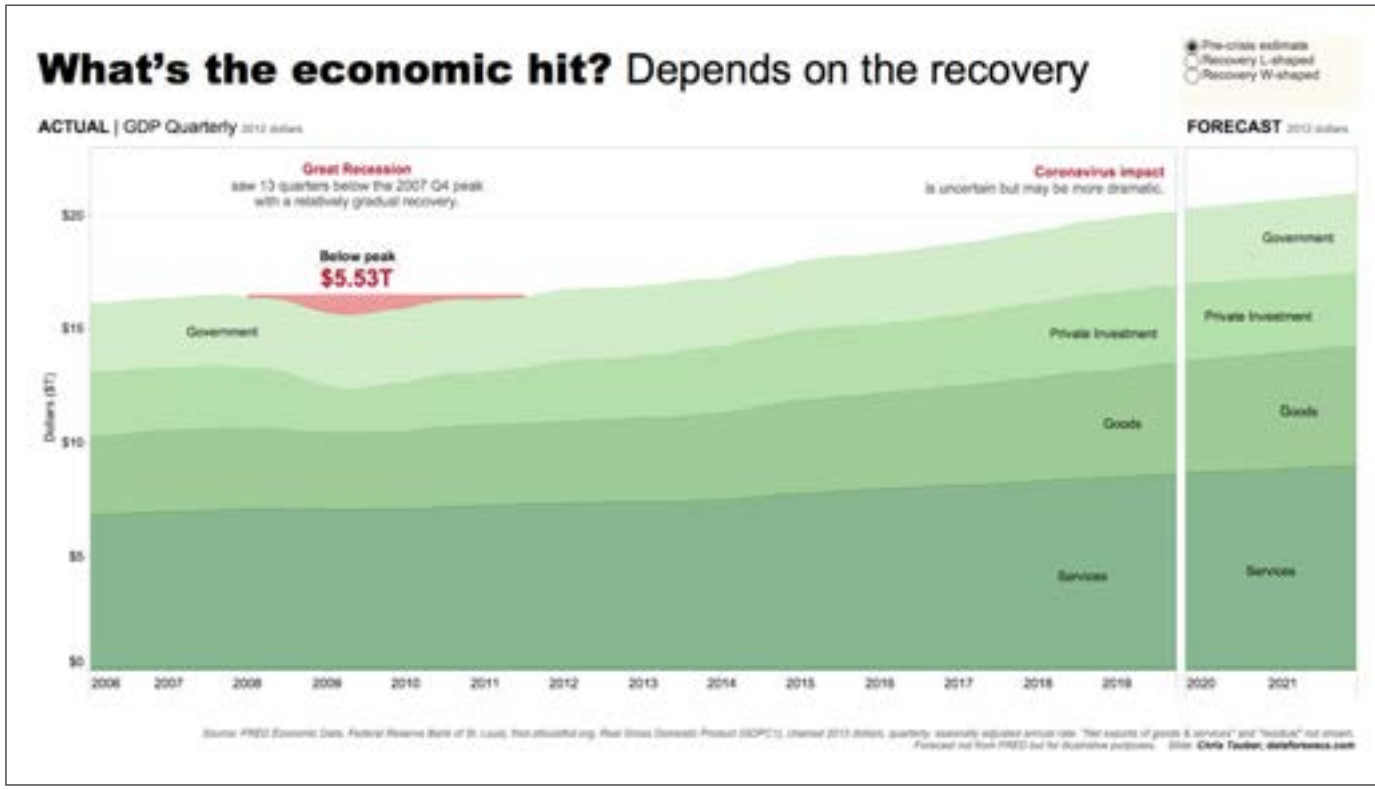
The Federal Reserve Bank of St. Louis (FRED) is an excellent resource for historical data on U.S. GDP, going back decades. Many businesses may not have nearly as much consistent, quality data to draw from for forecasting. But even a few years of data can help guide what might be next.

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.

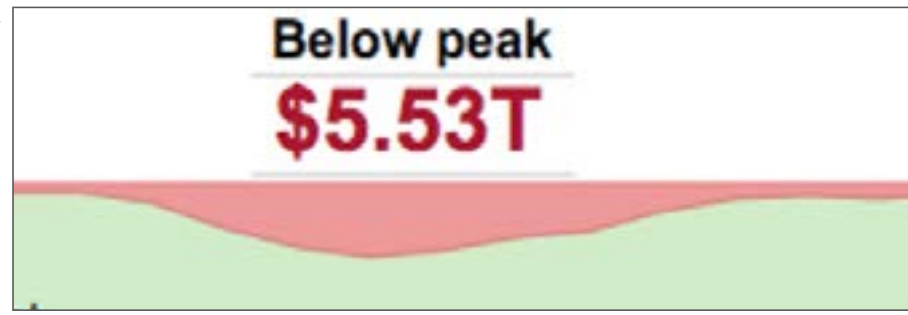
The Past is Prologue, But the Future...

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.

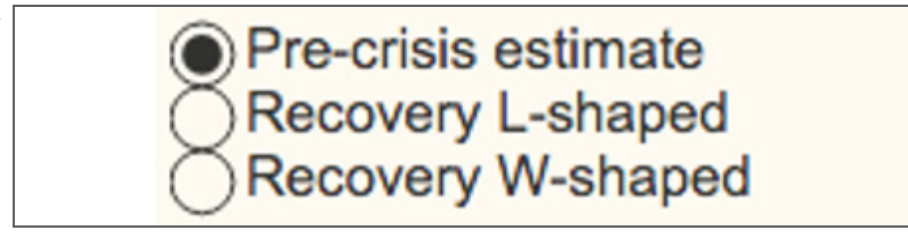


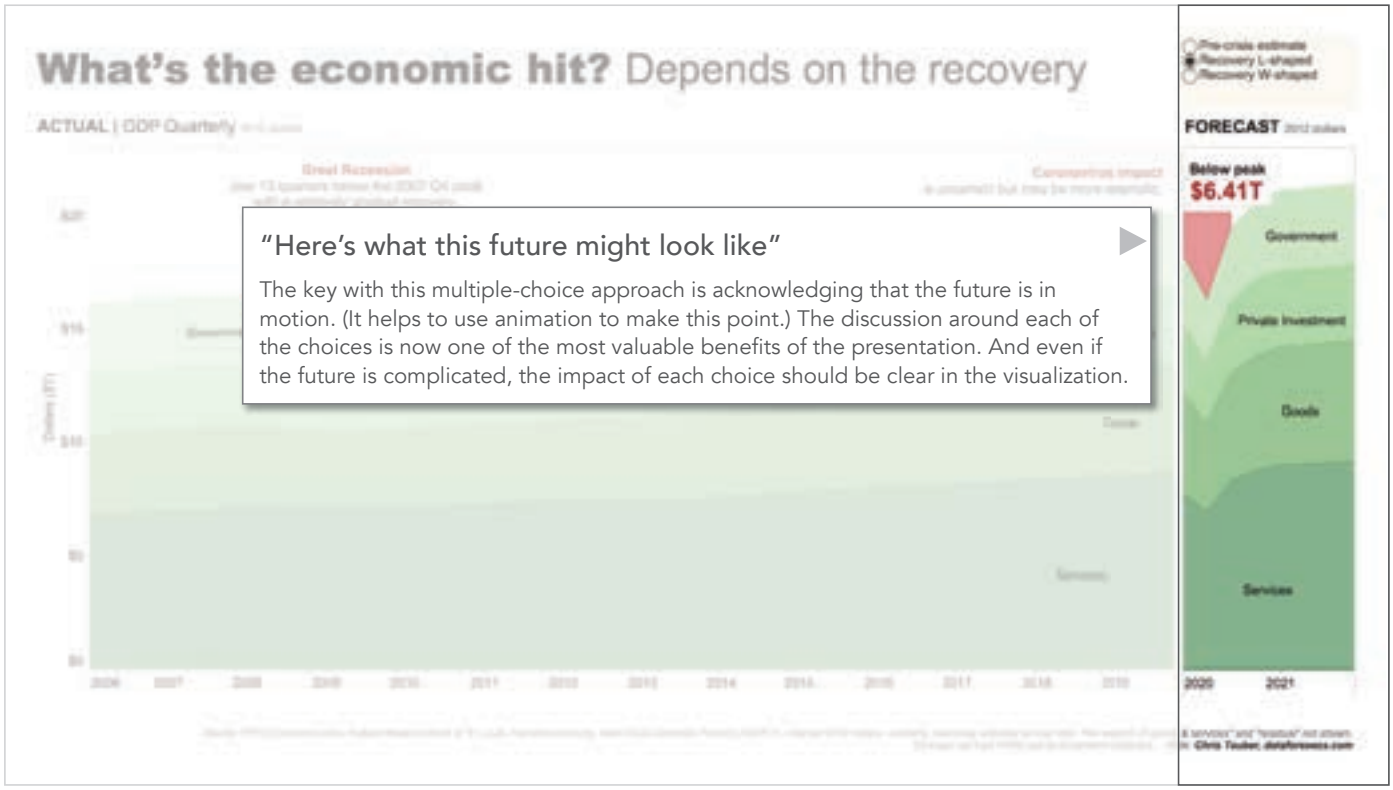
What's happening this time

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.

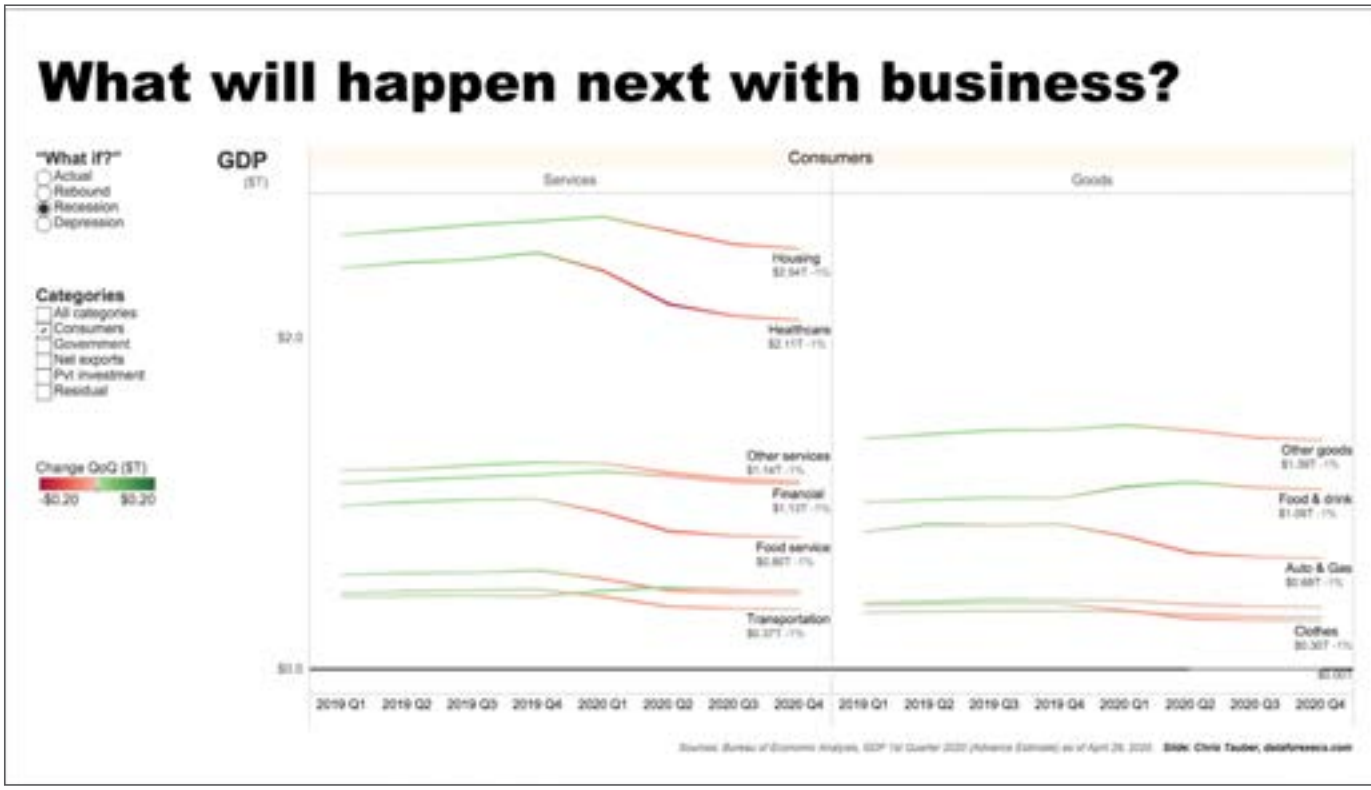



What's the economic hit? Depends on the recovery
ACTUAL | GDP Quarterly
Great Recession
Coronavirus impact
Pre-crisis estimate
Recovery L-shaped
Recovery W-shaped
FORECAST
Below peak
$6.41T
Government
Private Investment
Goods
Services
2020
2021
"Here's what this future might look like"
The key with this 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.


What's the economic hit? Depends on the recovery
ACTUAL | GDP Quarterly
Great Recession
Coronavirus impact
Pre-crisis estimate
Recovery L-shaped
Recovery W-shaped
FORECAST
Below peak
$12.30T
Government
Goods
Services
2020
2021
"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.)

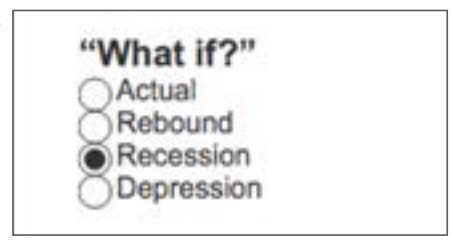
Go Deeper But Keep It Simple

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.



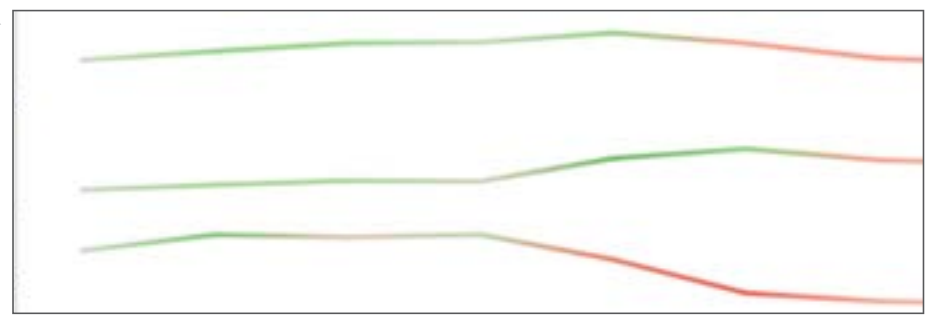
Distill the uncertainty

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.



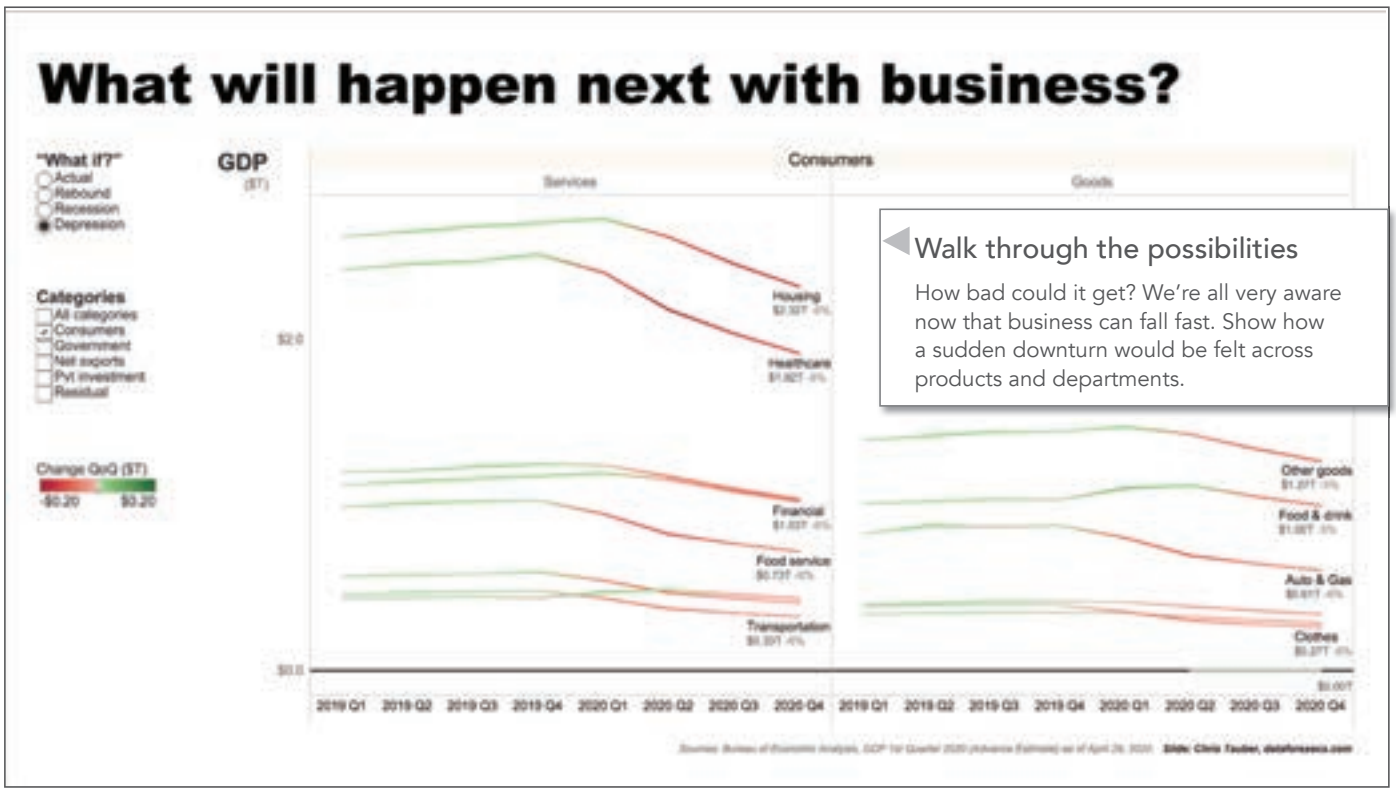
Add color to the trends

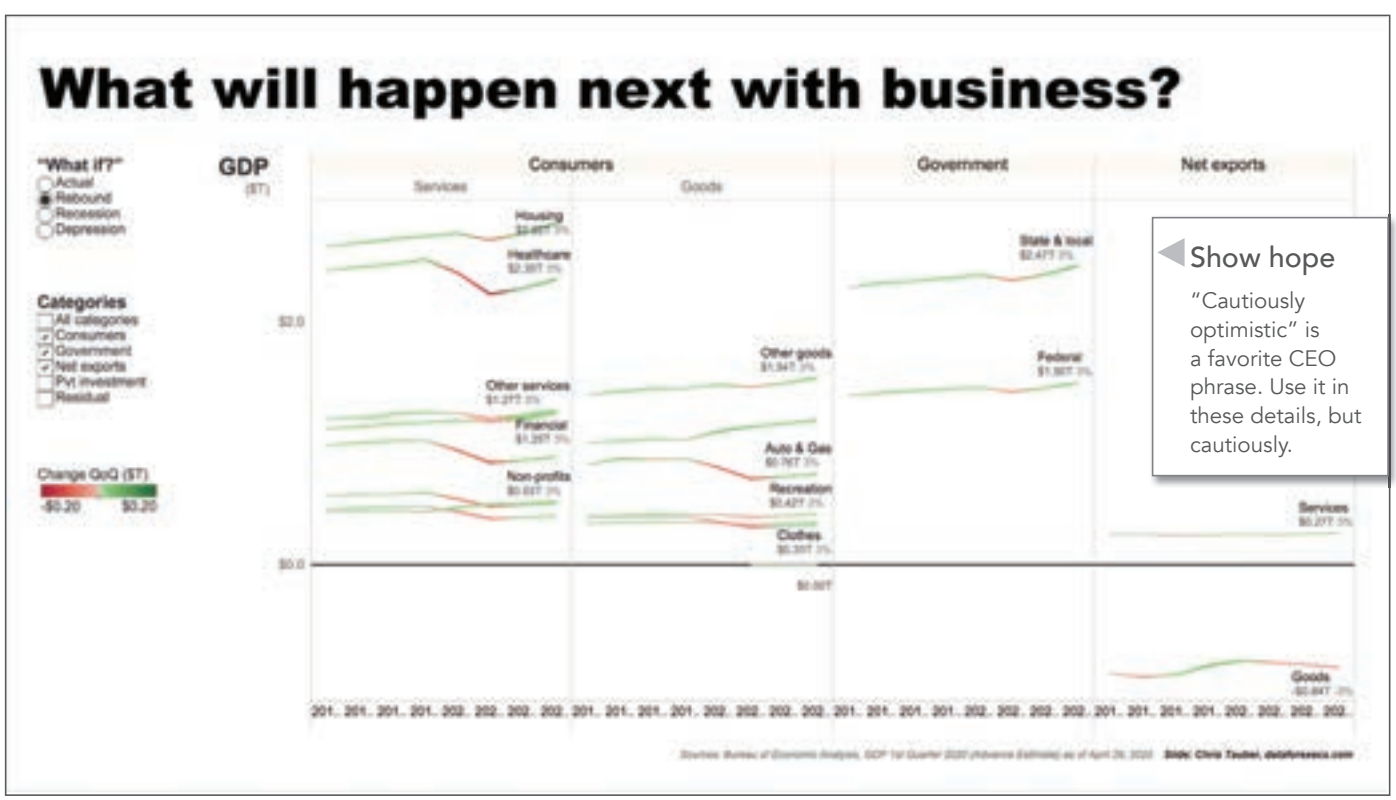
Literally and figurativel . It's most important for business leaders to see what's rising and falling in the current state and forecast. Applying green and red, respectively, reinforces that movement on the line chart. And the approach keeps this digestible at-a-glance.



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?
"What if?"
Actual
Rebound
Recession
Depression
GDP
($T)
Consumers
Services
Goods
Categories
All categories
Consumers
Government
Net exports
Pvt investment
Residual
Change QoQ ($T)
-$0.20
$0.20
$2.0
$0.0
Housing
Healthcare
Financial
Food service
Transportation
Other goods
Food & drink
Auto & Gas
Clothes
2019 Q1
2019 Q2
2019 Q3
2019 Q4
2020 Q1
2020 Q2
2020 Q3
2020 Q4
Walk through the possibilities
How bad could it get? We're all very aware now that business can fall fast. Show how a sudden downturn would be felt across products and departments.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Categories
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Consumers
Government
Net exports
Pvt investment
Residual
Change QoQ ($T)
-$0.20
$0.20
$2.0
$0.0
Housing
Healthcare
Other services
Financial
Non-profits
Other goods
Auto & Gas
Recreation
Clothes
State & local
Federal
Services
Goods
Show hope
"Cautiously optimistic" is a favorite CEO phrase. Use it in these details, but cautiously.

BETTER 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

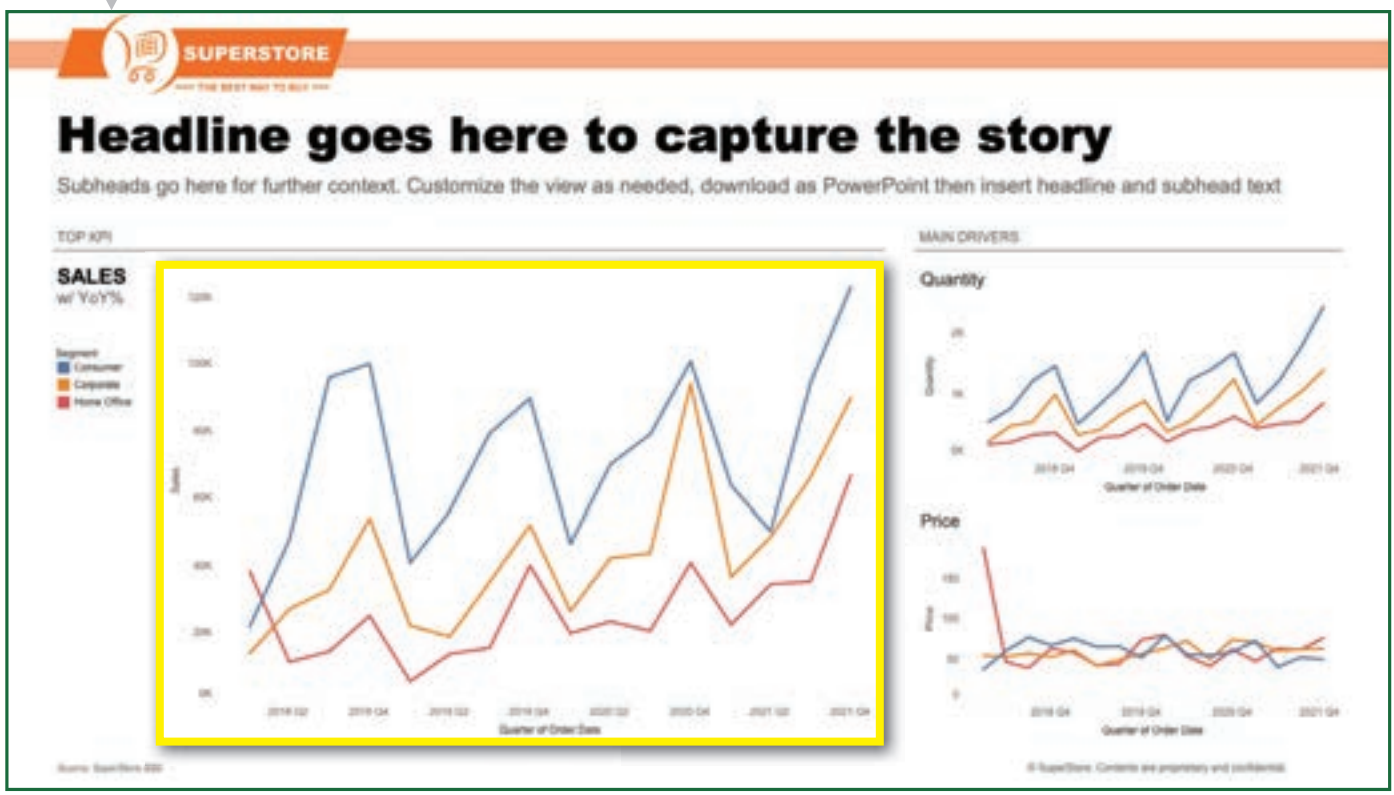
Leverage the best aspects of a dashboard — the interactivity and the underlying data — to build a dynamic slide. Tableau is one visualization tool where you can create a dashboard that looks like a slide.

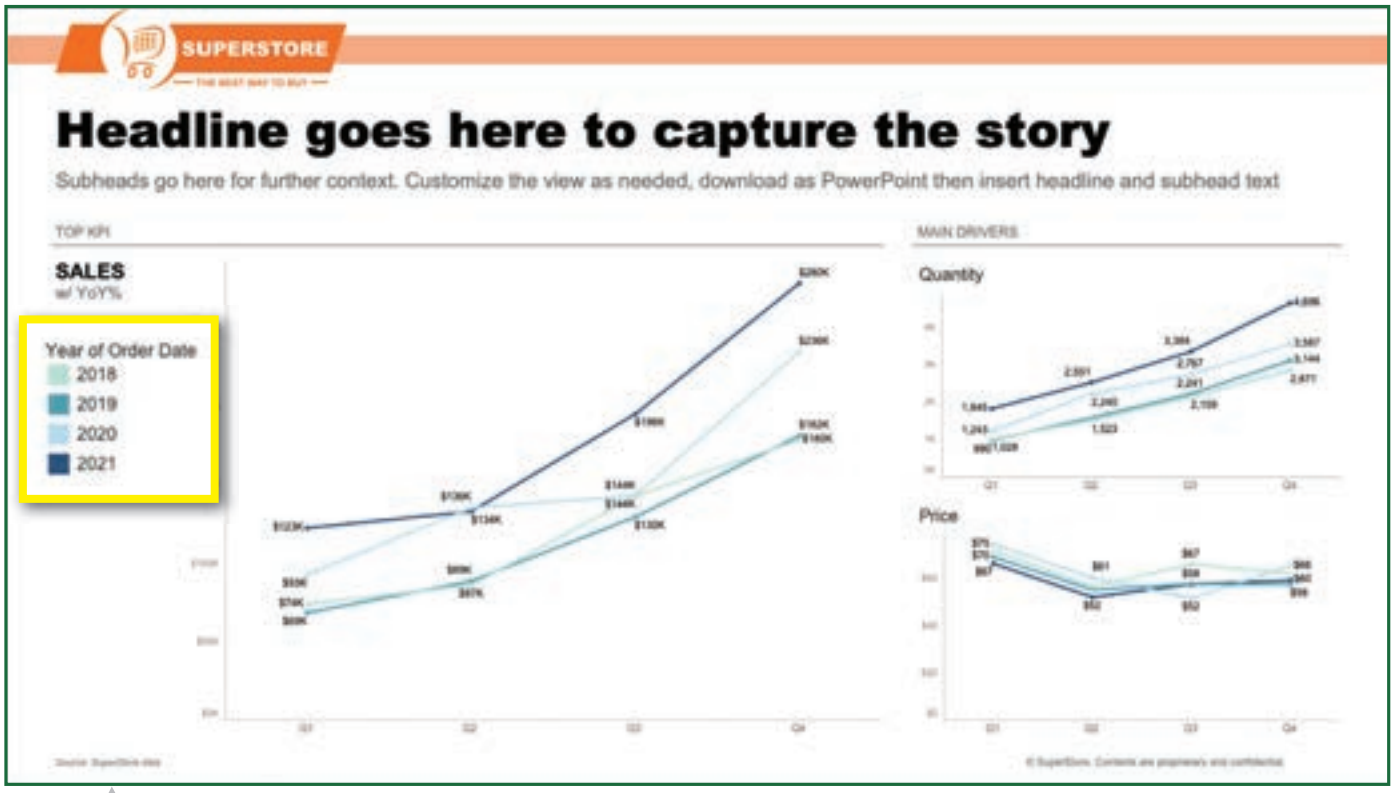
2) TOP KPI

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.



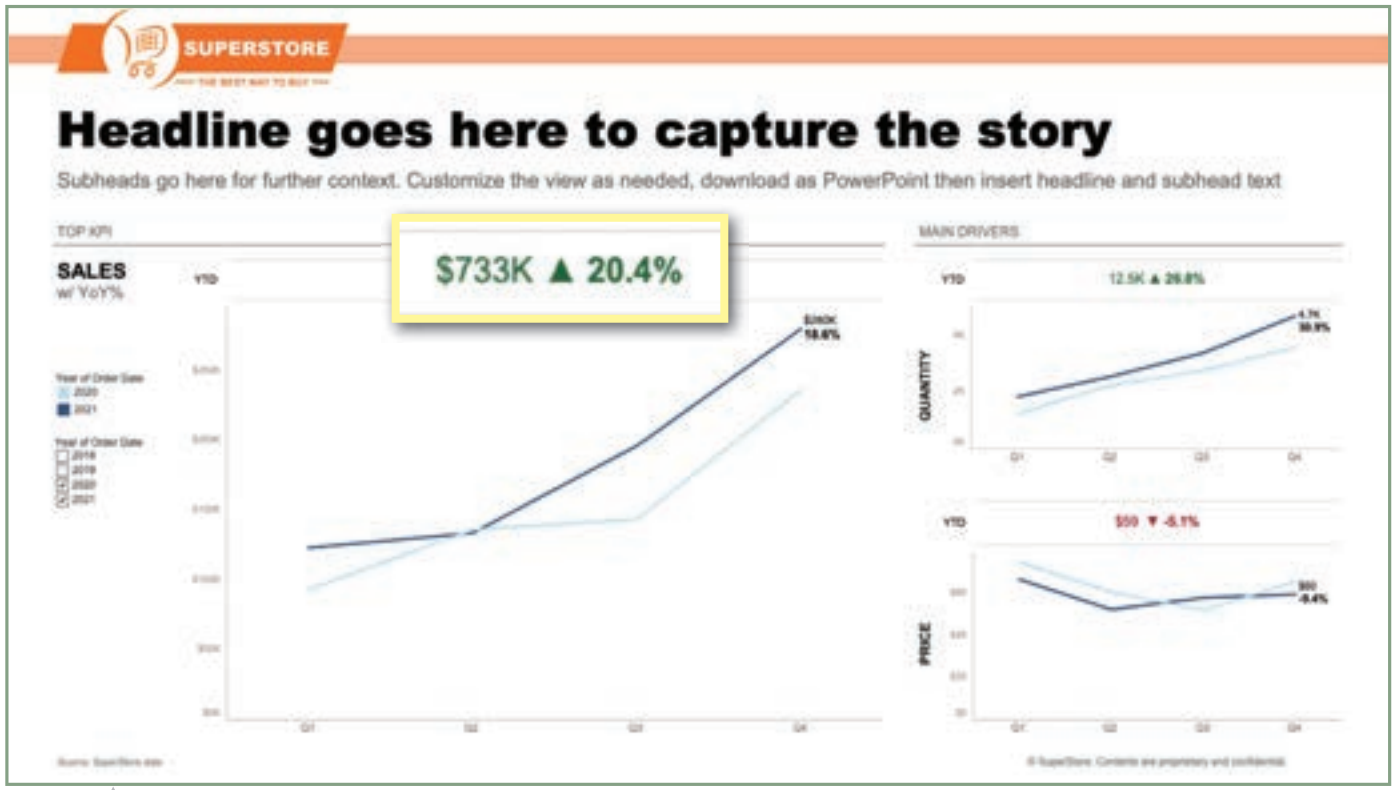


4) CLARIFY

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.

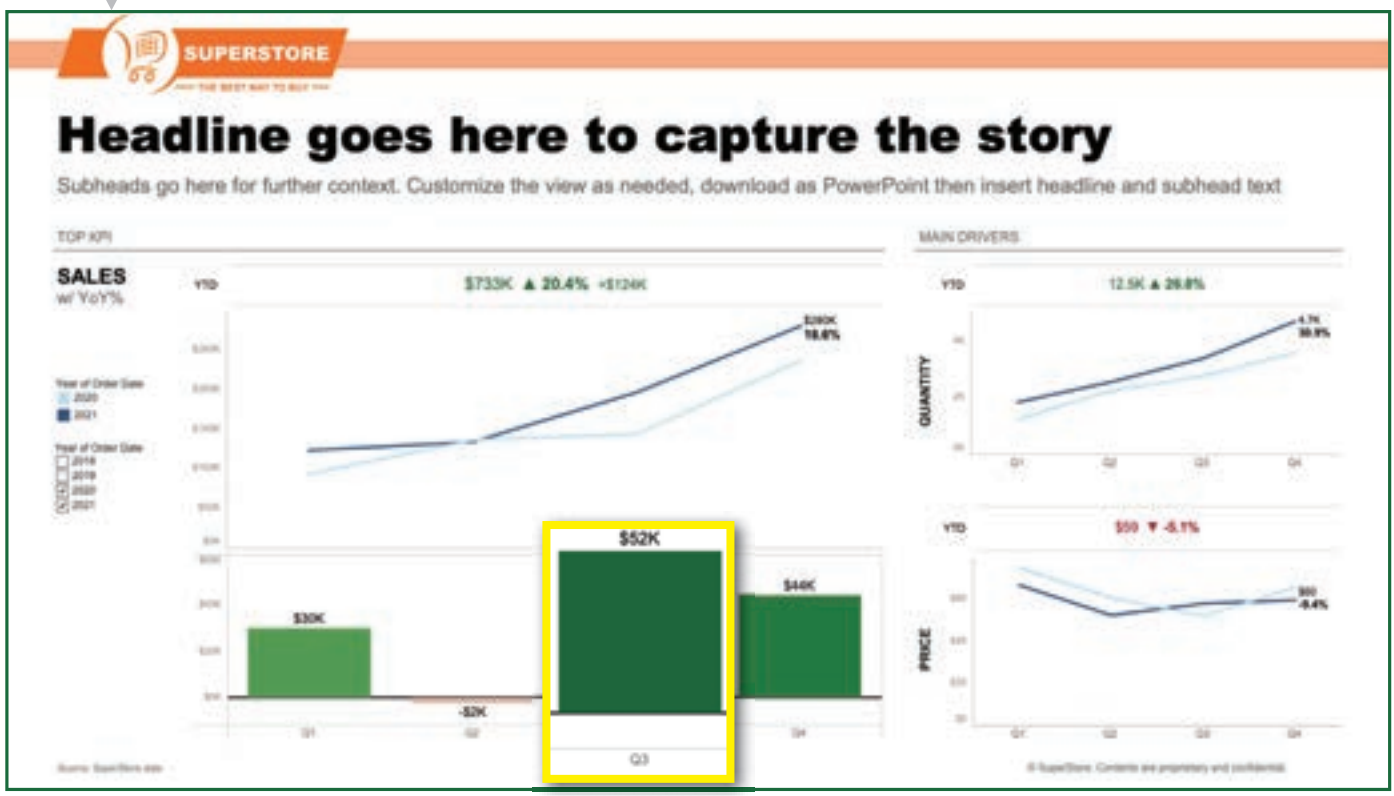


6) CALCULATE

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.



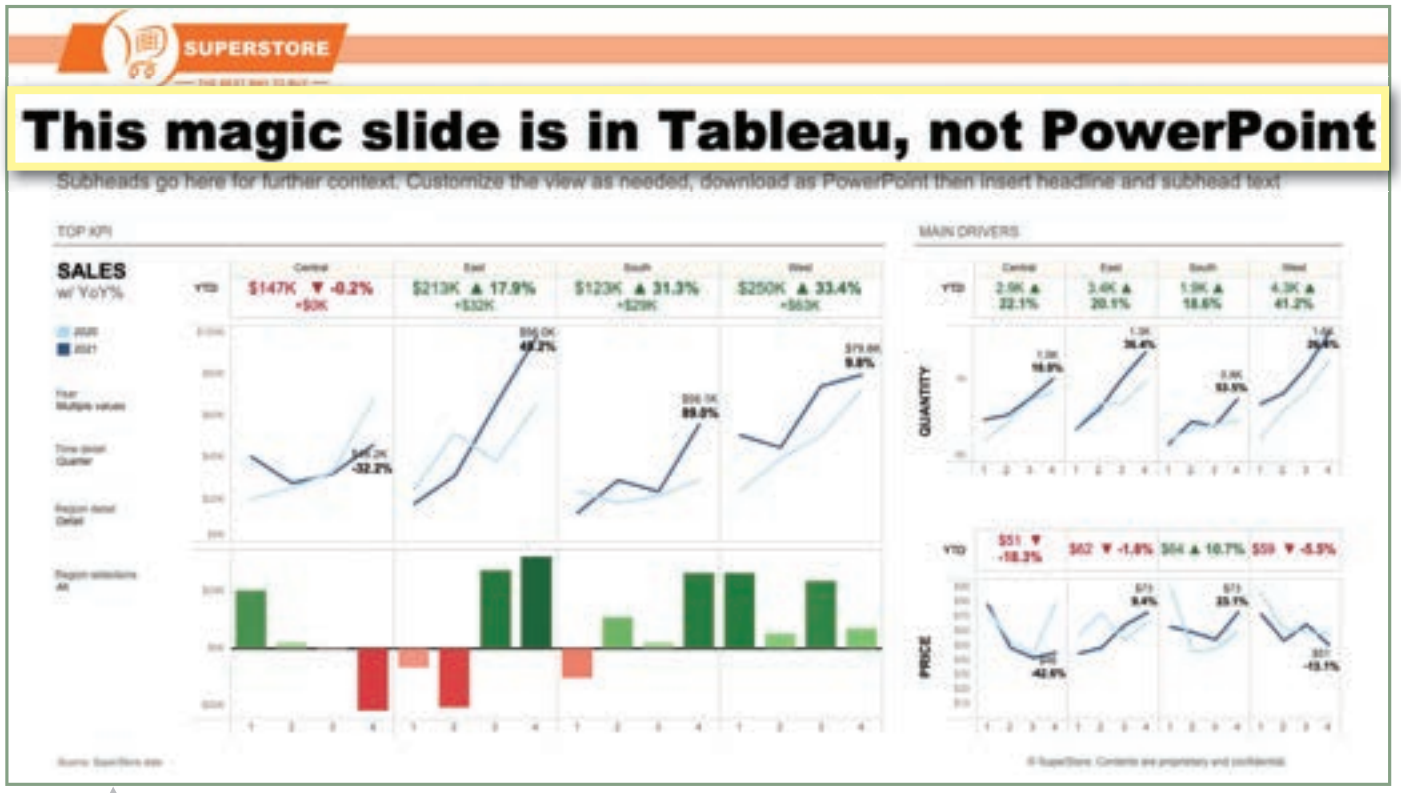
*"Everybody else" must include the color-blind, so make sure charts show the good and bad with more than color, such as with labeling and the size of bars.

8) TIME DETAIL

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.

9) SEGMENTS

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.

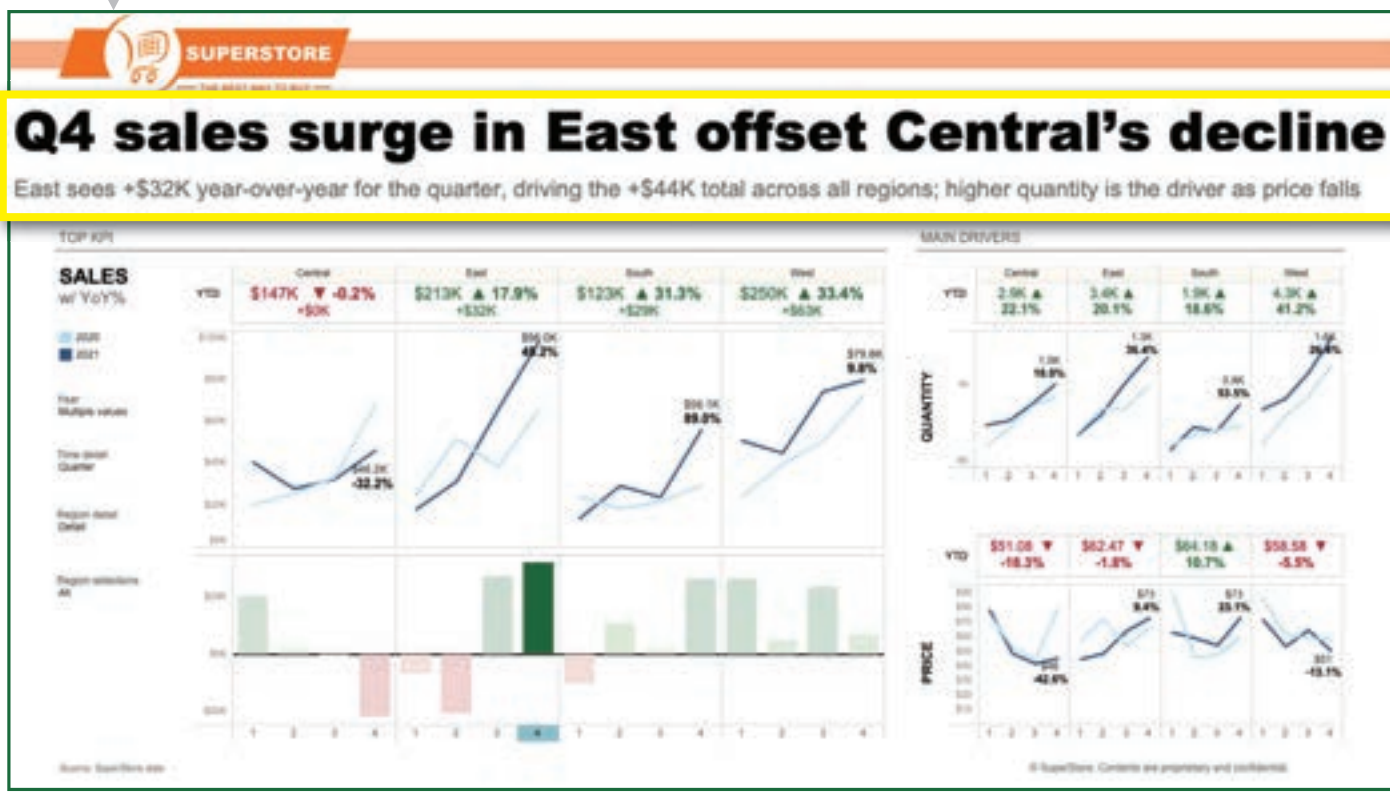


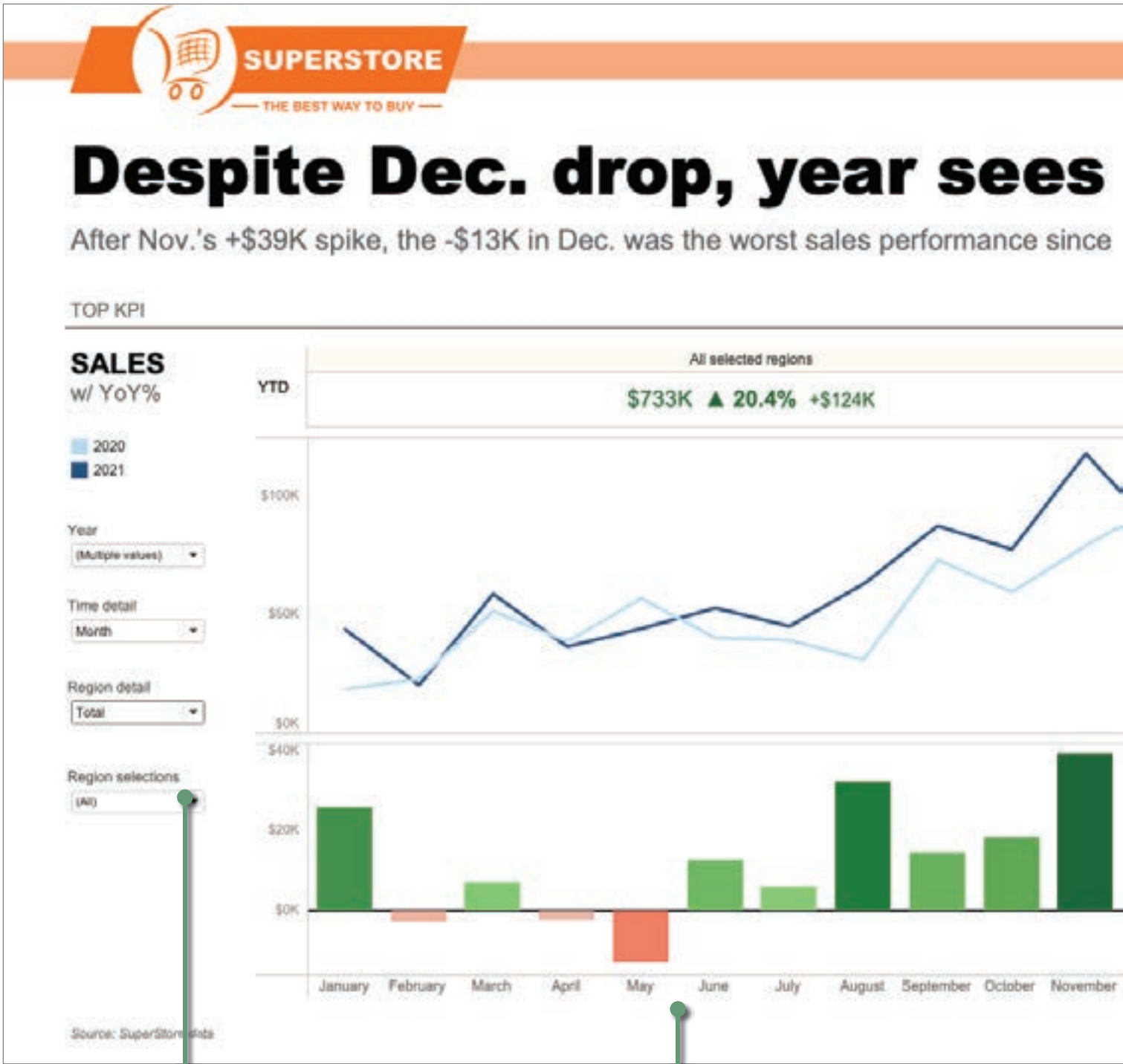
10) HEADLINE

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.





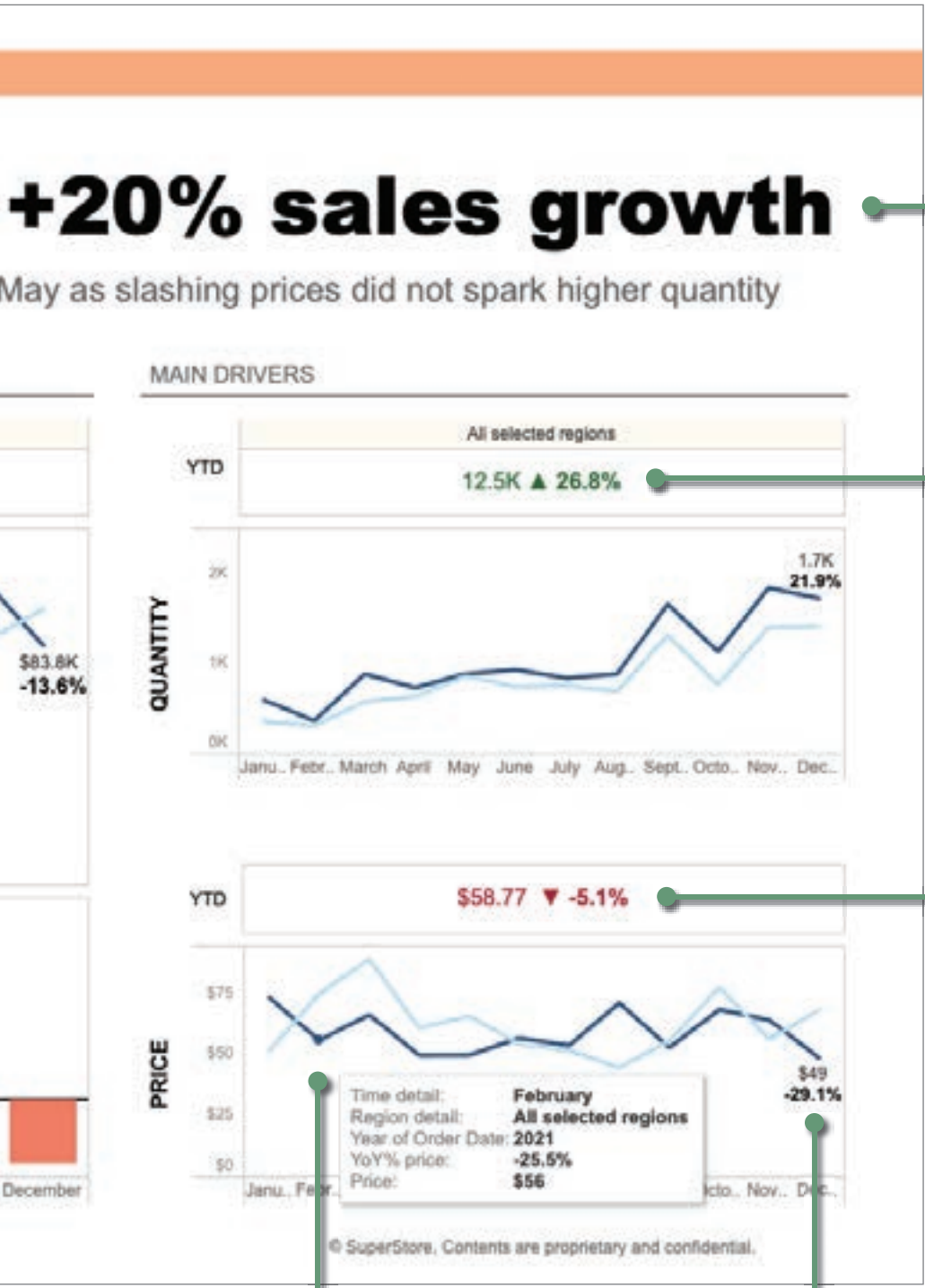
12) PRESENT

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.



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.

BETTER STORYTELLING

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.

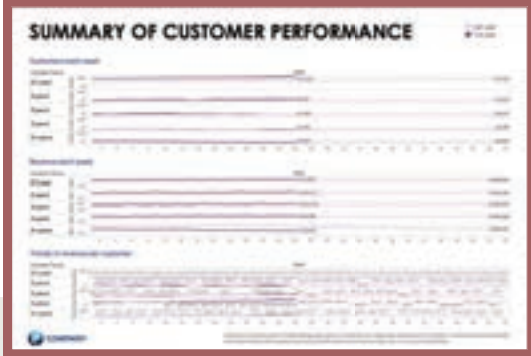
But that story took a turn at last year's Tableau Conference. In a featured session, Cole Nussbaumer Knaflic of Storytelling With Data showed that same linear approach on a giant screen and said, "This is the path we go through as analysts when we're analyzing data," she said. Yep, I nodded. "This is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



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

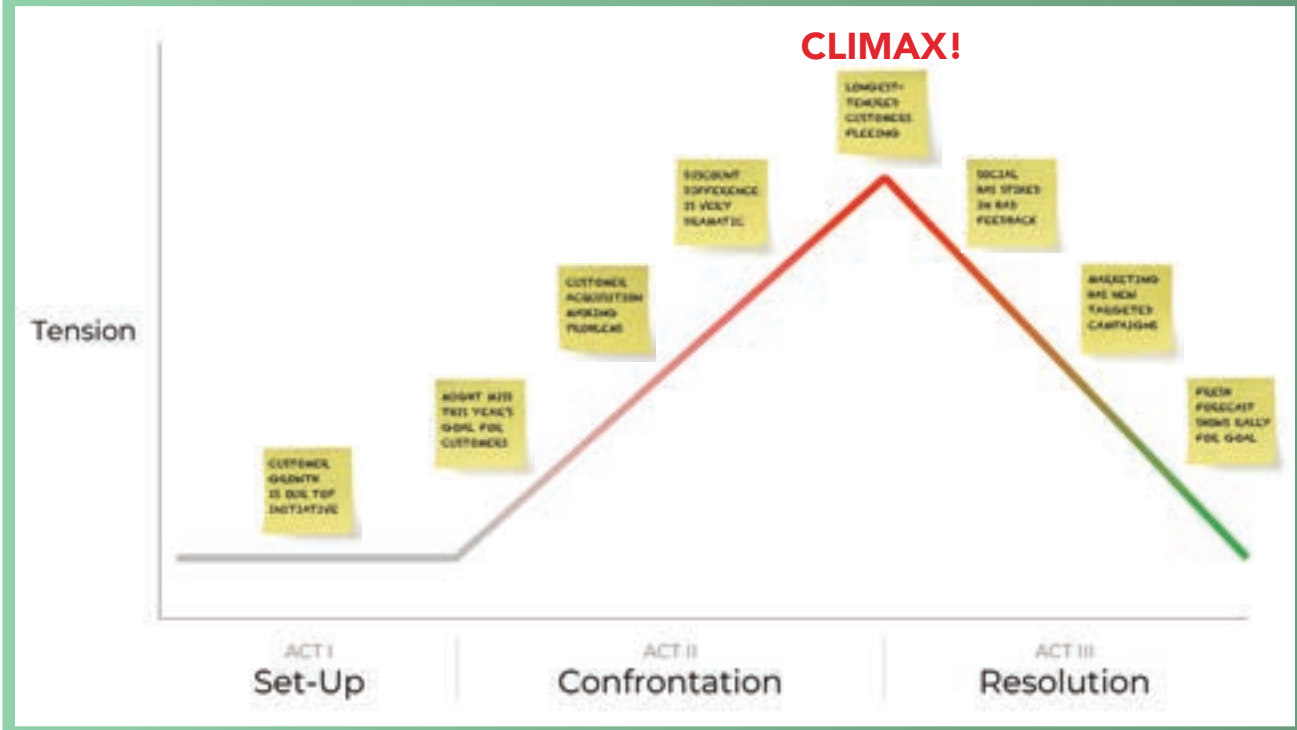
LONGEST-TENURED CUSTOMERS FLEEING

CUSTOMER ACQUISITION MASKING PROBLEMS

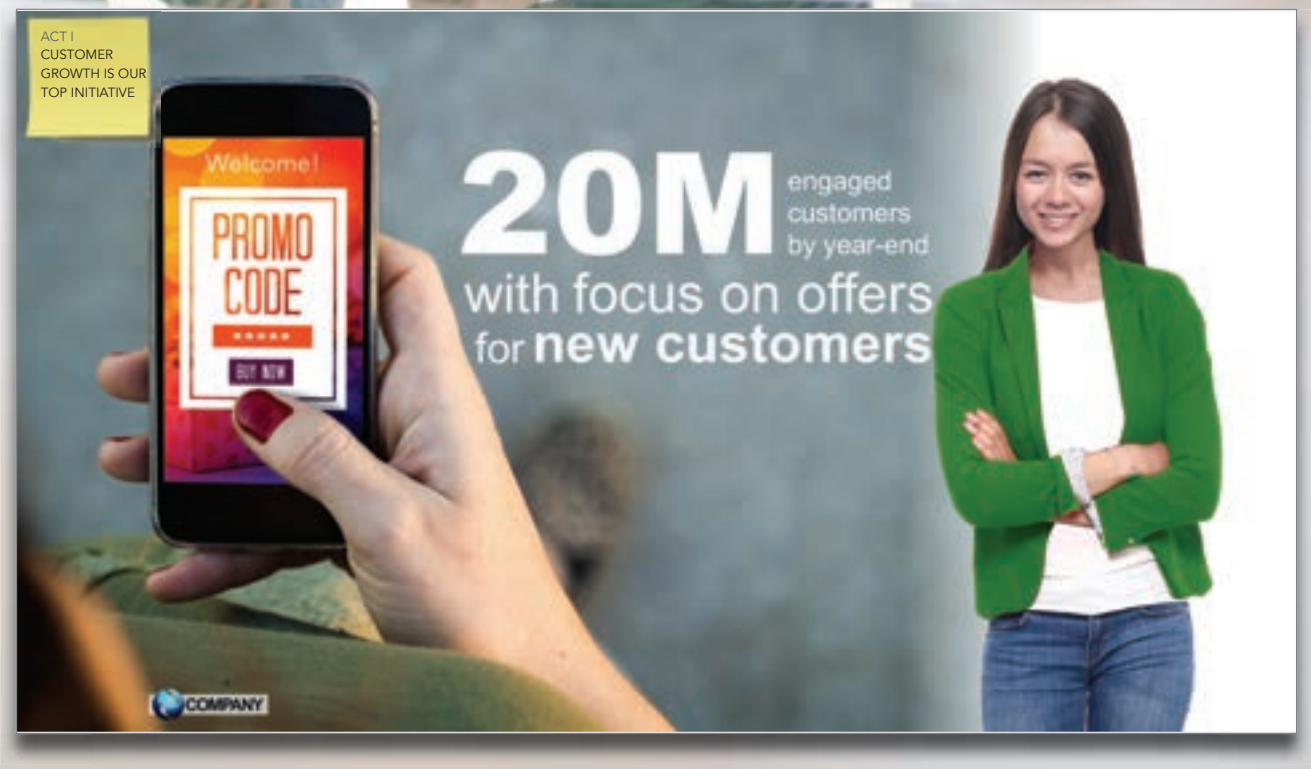
FRESH FORECAST SHOWS RALLY FOR GOAL

3. KEY FINDINGS

4. STORY STRUCTURE



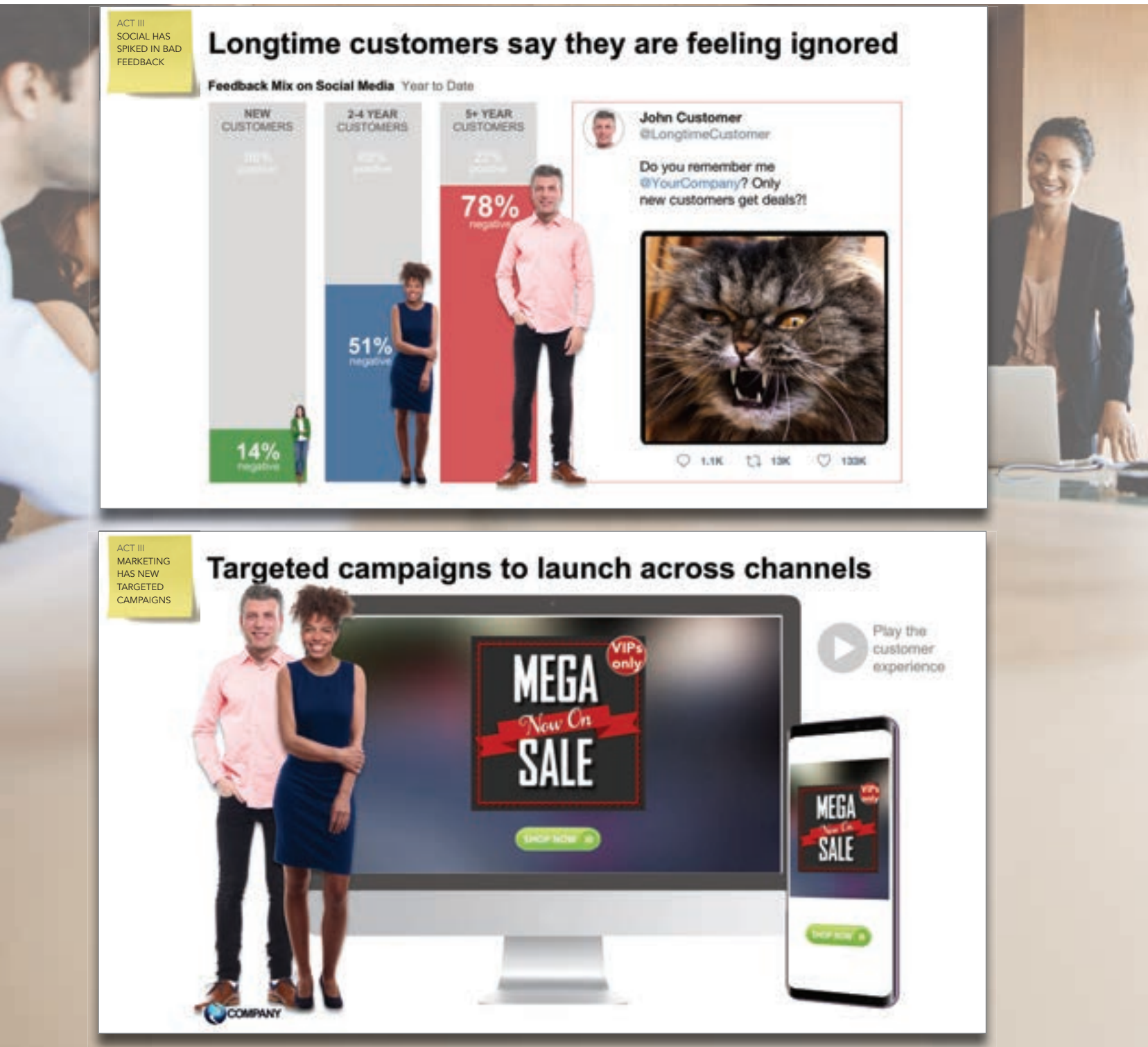
- As with any good story, set the tone with an engaging title and imagery.
- Introduce the tension and indicate that you will be showing the solution.
- Follow this style throughout the presentation for a cohesive experience.



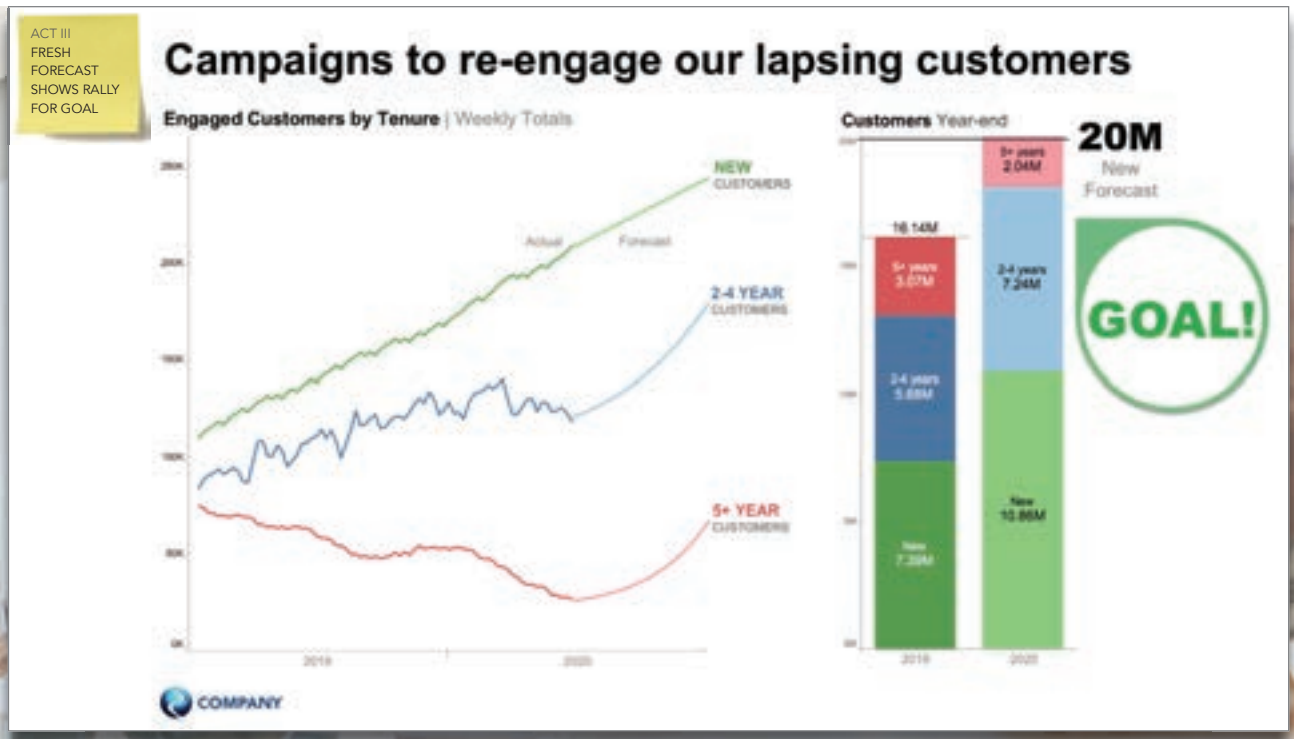
- In Act I, set the scene of what we're trying to accomplish as a business.
- Show the most important data point or goal for the strategy.
- Anchor with a view of the customer experience and the face of the customer.

- 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.



- 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).



- 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.


Joe, you're a VIP!
GIFT
VOUCHER
BUY NOW
What's Next
The campaign roadmap,
investment & decisions

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

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