The ultimate guide to data storytelling like a pro

Yellowfin

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Do you want your data insights to be heard, understood, and acted upon?

Then you need to make them memorable and impactful.

How? By telling stories with data.

"In my analysis of 500 of the most popular TED talks (more than 150 hours), I discovered a remarkable fact: stories make up at least 65% of the content of the most successful TED presentations."

CARMINE GALLO,
Forbes Senior Contributor,
Leadership Communication.

Most people find statistics hard to remember. But you can probably recall hundreds of stories. That's why data storytelling – telling stories around the data – is powerful.

Wasn't it much harder to commit to memory all the dates and names of the leaders of your country in history lessons than it was to recall the story your uncle told you? You know, the one about the time he got kicked out of school for raising a false fire alarm and causing everyone to evacuate during his least favorite lesson.

Stories tend to be longer and more nuanced than the statistics we want people to remember, yet we are more likely to read, remember, and act upon the story than the statistic. It has been scientifically proven that, even if you were quite good at reciting pi to the twentieth decimal or could run through the dates of the country's leaders with ease, stories stick with us better than statistics.

But why do we remember stories more easily? Because stories are emotive. You feel what the people in the story or the narrator of the story feel. In fact, your brain struggles to tell the difference between imagining the feeling and actually experiencing it, so when someone has told you a story effectively, with sufficient detail and emotion, you remember it almost like you were there. And those emotions help anchor things in our brains because they had physical effects, like an increased heart rate or tears.

In contrast, plain, statistical facts have no emotion attached, so there's no anchor. There are multiple studies of how storytelling and emotion affect generosity. They demonstrate that data has a lesser effect on people and a much lower track record of moving people to action than emotional stories. The data point may be interesting in the moment, but it's difficult to recall later unless you have dedicated time and effort to memorizing it. But you probably remember the emotion you had when reading or hearing it.

We have told stories since the beginning of human existence to communicate our movements, to teach history, culture, methodologies, and much more. From how to hunt bison with wooden and flint weapons to hunting down software bugs armed with a computer and code, information is crucial to our survival. And over time, storytelling has evolved from an exclusively oral tradition to include writing. To help spread our messages, we have expanded the mediums of distribution from scribing on skins and carving into clay to producing books, video, radio, websites, TV, blog posts...the list goes on. But all good stories include written or spoken elements and those are supported by drawing, acting, art, visuals, data, and much more. Data alone, however, isn't a story. It needs spoken or written explanation (and much more than an annotation). That's true data storytelling.

The truth is that analysts aren't taught how to tell data stories, which means people are just given statistics. Then we wonder why people are not moved to action in businesses today. There are volumes of pretty looking graphs, intriguing infographics, and visually powerful presentations available. But are they really data stories? Not usually.

So, what is data storytelling really? In this guide, we will take a look at the power of storytelling, learn how to identify a great story in your data, how to tell the story using the power of the story arc, and how to effectively deliver your story with data to move your audience to action.

Why stories are crucial for communicating data

Events that are distinctive enough to merit retelling become stories. We tell them because they have inherent worth. They are valuable for learning or entertaining. But they are also powerful because they are memorable, persuasive, and engaging. They cause us to act in ways that statistics alone could never induce.

"Numbers have an important story to tell. They rely on you to give them a clear and convincing voice."

STEPHEN FEW,
Data Visualization Expert

The bridge between logic and decision-making emotions

It is a well-known psychological fact that, despite what we like to believe, decisions are made based on emotion and backed up by logic - not the other way around. The power of data storytelling is that you can build a bridge from the logic to the influential, emotional area of the brain using both logical data and emotional stories.

Neurologically, more areas of our brains are activated when we hear a story than when we hear a fact. Only Broca's area and Wernicke's area light up with a statistic. With stories, our sensory areas of the brain become active too. Stories light up areas of the brain in a similar pattern to what would happen if we were actually living through the event. That's because our brains struggle to differentiate reality from imagination, so stories lead our brains to believe we are the protagonist. And that is the same for the storyteller. You can try it out for yourself by thinking about the last time you were scared. As you go over the scenario again, your heart rate increases, you start to feel nervous...because your brain is actually reliving it.

A study from Princeton University suggests that the brains of the storyteller and listeners 'synchronize' as we experience the same things within our minds - we are bonded by a shared experience. What a powerful tool for persuasion!

The implication of the neurological activity is that you can plant ideas and emotions into the brains of your audience using stories in data storytelling. That sounds all a little bit like the movie Inception, but if your brain believes it is experiencing the story, your body will cooperate, and you have a real memory - a memory of feelings, emotions, and physical reactions to the story. We only hear statistics but we feel stories.

Data alone doesn't create a memory. But data is needed to appeal to those who don't want to feel like they have been duped by emotive stories alone and need facts to justify their emotional response. Logic and emotion can work together powerfully to move people to action.

Here are some research studies demonstrating the power of stories over statistics so you can start to understand the power of narrative data storytelling.

Saving children's lives with a story

A well-known psychology experiment was conducted using the charity Save the Children. People were given five $1 bills and a flyer from Save the Children for completing an unrelated questionnaire. Participants were then given the opportunity to donate money to the charitable cause advertised on the flyer. Some received a flyer with bold and shocking statistics about starving children, such as 165 million suffer from childhood malnutrition (enough to form a ring around the earth). Others received a flyer with the story of a seven-year-old Malian girl called Rokia who was at risk of starvation before Save the Children intervened.

On a rational level, surely presenting the shocking statistics of the plight of so many people would persuade anyone to give? But we also know that personal, true stories are powerful.

The results? Despite the colorful page of impactful statistics exposing the raw truth and scale of the situation, the little girl's story raised almost twice as much money.

Why? Because the data alone didn't create as much empathy as the personal story did. It didn't light up the reader's brain like the story, through which they 'experienced' Rokia's life.

Deborah Small, a Wharton marketing professor, declared, "It's easy to override people's feelings by giving them statistical information. But it's not so easy to add feelings where feelings aren't naturally there to begin with. It's hard for humans to generate feelings toward statistics."

This demonstrates that the use of stories is powerful in business because you are usually informing a team of a data insight because you want to drive action. If you want people to be more inclined to give of their resources to affect change in your organization, you need to use a story before statistics in your data storytelling.

AVERAGE DONATIONS PER PERSON

Help Rokia $2.25 ***Help Statistical Lives $1.15***

Stories change our brain chemistry

In another study, participants watch a video of two-year-old Ben, who is full of joy following two rounds of chemotherapy and radiation. He feels good again. Ben plays in the background as his father talks to the camera. His voice cracks as he says, “It’s very difficult to play with Ben because Ben thinks everything is wonderful. But I know something Ben doesn’t. Ben’s dying.” The father goes on to talk about how he tries to enjoy playing with Ben and to be joyful around him, but it’s so hard knowing that Ben’s brain tumor will end it all in just a few months. “But it’s an amazing thing,” Ben’s father continues, “to know how little time one has left.” And as he says that, it’s as if he has merged himself with his son. It’s as if the father himself is dying.

The video of Ben and his father was played to many listeners. Before and after, the researchers took blood samples from the participants. They noticed an increase in both cortisol, the chemical linked with distress, and oxytocin, the chemical linked with care, connection, and empathy, in the participants’ blood after watching the narrative. They now had evidence that stories can change the audience’s brain chemistry.

Following the video, the participants were then given the opportunity to give some of the money they earned from being in the experiment to another participant in the room, or, in a very similar study, to a charity that helped sick children. Predictably, those with higher oxytocin levels gave more generously. The researchers found they were even able to predict how generous someone would be just from measuring the viewer’s oxytocin levels.

The incredible thing about this discovery is that we can now see that stories change people’s behaviors by changing their very brain chemistry.

"For me, the best moments in storytelling are the ones where I feel I'm discovering something."

MITCH ALBOM

Students struggled to recollect statistics, but stories...

Chip Heath, a Stanford University lecturer conducted a memory experiment by splitting his class into groups of six to eight students and providing them with a few US crime pattern statistics. He then asked each student to give a one-minute presentation to the rest of their small group arguing why or why not non-violent crime is a problem, based on the data.

After the students rated the presentations, Heath moved on to teaching something else, even showing them a short video on a different subject. After ten minutes, he then sprung a surprise question to the students - what can you remember from the presentations on non-violent crime?

Despite only ten minutes passing since the presentations, the students were alarmed at how little they recalled. The students struggled to recall even one or two ideas from each presentation. Many drew complete blanks on some speeches.

When delivering their one-minute presentations, students used, on average, 2.5 statistics. One student in ten told a story.

The recollection patterns between statistics and stories were staggering. When recalling the one-minute presentations, just 5% of the students remembered an individual statistic, but 63% remembered a story.

Think of the impact you could have if you told stories alongside your statistics.

Now that you understand something of the power of stories, it is clear that you need to do more than present the hard facts when you need people to act. In your business, you may not be trying to raise money for charitable causes, but you may need financial buy-in from the executive team for a new project. Or perhaps you need the sales team to change their strategy, or the warehousing team to adopt a new technology. The ultimate aim of a data story is to drive action. But to get the desired action from the listeners or readers, you need to know how to make the data stick, with data storytelling methods. We need to link the logic with the emotion to prompt a decision and drive action.

What is data storytelling (and what is it not)?

I am sure you would never have handed in a single data visualization, or a string of them, to your creative writing teacher in school in response to a request for a story. Why? Because it's not a story; it's a series of events. This generates no emotional response, which, you remember, is the key to persuasion in decision making.

Do we even remember what a story is?

Fundamentally, in the data industry, we have been mis-sold what a story is in the desperation of product marketers to prove that their tools can help you tell stories. But much of the advice around how to tell data stories is simply shoe-horning a term that's on-trend - data storytelling - into marketing for data and Business Intelligence (BI) products. As a result, 'data storytelling' has been watered down to mean distributing your reports, organized sequentially, in a slide deck with some annotations.

Dashboards and slide decks are not stories, regardless of how many bullet points you add alongside, and neither are reports with multiple annotations. But really, you knew that all along.

Data storytelling is a form of storytelling that uses data to prove the truth of a narrative. Think along the lines of a documentary or narrative journalism. Its aim is to persuade people to take action and cause change to people's behaviors by imparting a powerful idea. We have seen that data alone isn't enough to incite action, so the data needs to be wrapped in a narrative, or multiple narratives, that help people experience the ups and downs, conflicts and triumphs that the data conveys.

Data storytelling is not data exploration, it is data explanation.

How to tell a story, according to Marvel

The foundation of every great and memorable story, whether fiction or data storytelling, is the story arc. The purpose of a story arc is to move a character or a situation from one state to another; in other words, to effect change. Stories are about change over time. That is why a single statistic isn't a story. And a story needs context and conflict, which is why a visualization alone, even if it shows change over time, isn't a story either.

Exposition

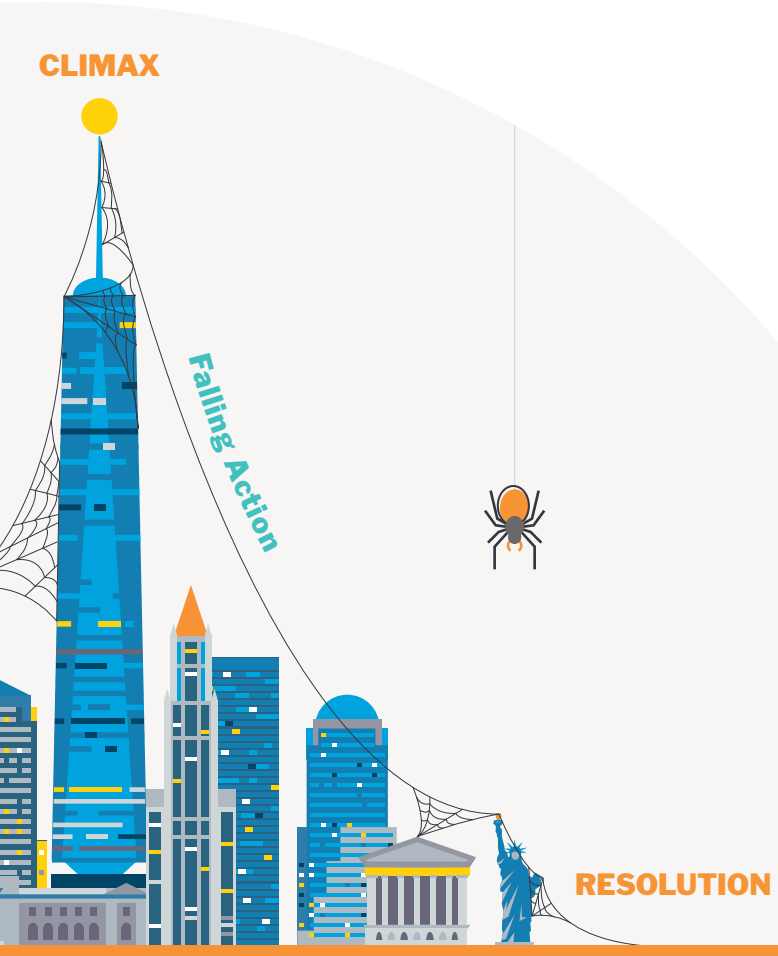
To tell a compelling data story, you first need to set the scene. Answer the who, what, where, and when. Help people understand the context of the story you are about to tell. They need to be able to imagine the scene. But don't just give the audience an information dump. Show them the characters and the mood, don't just state them.

Take Spider-Man, for instance. You are introduced to Peter Parker, the nerdy, high school senior who lives with his uncle and aunt, is an outcast at school, enjoys science, and has a crush on his next-door neighbor. It's the introduction that warms the audience up to the story.

Rising action

Next, you need to sow seeds of conflict. Conflict is the heart of a story and data storytelling - it's the drama that creates tension and raises the 'what happens next?' question in the audience's mind that compels them to keep reading, listening, or watching.

The rising action in Spider-Man begins with Peter being bitten by the genetically modified spider and increases with Norman being exposed to the super soldier formula. Action continues to rise as Spider-Man and Goblin conflict and Peter's relationship with Mary Jane strengthens.



Climax

The climax of the story is the part where everything turns. The conflict comes to a head. Things could go either way and the audience is on the edge of their seats.

When Goblin forces Spider-Man to choose between saving Mary Jane and saving the people in the cable car, then proceeds to fight to the death with him, the Spider-Man movie reaches its climax. The audience is on edge asking 'who will win?'

Falling action

The falling action in storytelling, which includes data storytelling, is where tensions are eased and all the pieces start to come together. Just as the conflict rose, now, after the climax, it must fall.

The action starts to fall in Spider-Man with the death of Goblin/Norman. The primary conflict is over and there is a victor. Spider-Man then deals with the body and attends the funeral. But not all of the loose ends are tied up yet; it's just the climax that has been resolved for the viewer.

Resolution

The resolution ties together all the loose ends and resolves both the plot and subplots of the story. It's the part that leaves you feeling satisfied having seen everything worked out.

In our Spider-Man example, the resolution is Harry restoring his friendship with Peter and Mary Jane's confession to Peter that she loves him. Finally, all the conflicts are all resolved.

How to find a story in your data

It's all well and good knowing how to craft the next Marvel superhero story, but how does that transfer to data storytelling?

Start with a data insight. The whole reason you want to share data is because you made a discovery and you need to persuade people to take action. (Don't start with a story and hunt for data to back it up. The data will simply be a confirmation of your bias.) Your insight should be a fact that changes your mind about a topic or adds depth of understanding and clarity to a particular topic. What does the data tell you? Is it an alarming or amazing change over time? Is it a lesson in what not to do? Is it a fact that is not widely understood or known but people should be aware of?

This insight is the seed of your data story. Your data reveals a truth that you need to communicate in a memorable way through data storytelling.

The narrative you build around the insight could be your own story of discovery. Your lead numbers had suddenly dropped and nobody knew why. Worst of all, you hadn't seen the drop until a week after the downward trend began. You spent hours, days even, digging through the data to find out what the cause could be. Thousands of dollars were being lost in potential revenue each day you spent trying to unearth root cause. The regional manager was panicking and you were awake each night racking your brain for possible answers. Two weeks later, you discovered that leads had dropped for just one particular set of forms. You identified that the connector between your forms to your marketing automation tool had broken so none of the leads were flowing through. You rapidly moved to fix it and the leads started to flow in again. As a result, you want the analytics team to set up a series of alerts on your marketing leads so that if the numbers dropped again, you would find out much sooner.

Or, you could present multiple, shorter narratives as part of your data storytelling. Each one making a different fact memorable and personal, but all of those hang together to inform people of the bigger picture.

Maybe you want to communicate the effects of plastic pollution in the ocean and urge people to act. You could tell a story about the journey of plastics from mismanaged waste facilities into rivers then into the oceans and finally into the digestive tracts of the animals that we put on our dinner plates. Follow that with a story around the plight of people living in coastal areas that are unable to even see the water because of the piles of discarded plastics that are carried to their shore by ocean currents. Finally, tell a story about how a community has begun to make real change to the environment by reducing the plastic waste in their area. This is an example of multiple small stories, which have data of their own, working together to point to a bigger story – plastic pollution and the damage it is wreaking on our world.

At each stage, you can use data and visualizations to bolster your story – global plastic pollution levels by region, which ocean-bound rivers are most polluted by plastics, statistics on plastic pollutants found in animal digestion tracts, and the environmental impact of a community's anti-plastic efforts in a given region. But these are tied together by a compelling story, communicated vividly with detail and emotion, that persuades the audience they need to help stop plastic polluting our oceans.

How to map your data to your story arc

Now you have your insight, you need to craft a data story that will compel them to take action.

First, pinpoint the climax of your data story. It is quite possibly the discovery of the data insight and how that conflicted with previous beliefs or behavior patterns. Once you know your climax, you need to work backwards. What was it that first put you on the path of uncovering the insight? Perhaps you had a problem that couldn't be solved and you set out to find a solution. Perhaps you wanted to see the effects of one variable on another. This is the information you use to set the scene when data storytelling. But don't just list facts. Use emotions and your senses to communicate the reality of the situation and help your audience experience the same.

Sheryl Sandburg, COO of Facebook, started her TED talk with this personal and emotive story:

> *"I left San Francisco, where I live, on Monday, and I was getting on the plane for this conference. And my daughter, who's three, when I dropped her off at preschool, did that whole hugging-the-leg, crying, "Mommy, don't get on the plane" thing. This is hard. I feel guilty sometimes. I know no women, whether they're at home or whether they're in the workforce, who don't feel that sometimes."*

Use scenes, feelings, and scenarios that people can relate to and you will quickly gain their attention when storytelling with data.

Next, think about what events led up to you making the data discovery. Did you hit any roadblocks, or did you misidentify any correlations as causations? This is the rising action in data storytelling. Rarely does someone have a difficulty or query one moment and the very next second they find the answer. There is a journey. Take your audience on that journey with you. Tell them about the pitfalls and steps you took, how they made you feel, and why they were important. You have a theory that you are pursuing, and you can help your audience identify with you as you discover things that bolster then dash your theory.

Then you reach the climax. This is your moment of insight. Your insight reveals a new truth - perhaps entirely new to everyone, perhaps just new to you (and many in your audience). This is your lightbulb moment or the moment of victory.

You then communicate the falling action to resolution stages of your story. Your insight has revealed and changed a behavior or pattern of thinking. You act on it by doing x, y, and z. Finally, the outcome of that change in your actions is your resolution.

Unlike with fiction storytelling, data storytelling should leave your audience ready to make a change. But they need to know how to make that change. Leave them with straightforward action points that they can implement quickly so they can start to see the change you demonstrated in your story. Leave them with a call to action.

Know your audience

To tell a data story that is compelling, you need to know your audience. Are they clued up on this topic already? Or do they need some background information? You need to know how simple or advanced your story needs to be to meet the audience where they're at. A CFO might find the ins and outs of financial events fascinating, but the marketing coordinator may not even know the difference between EBITDA and profit. Here is one method of dividing up your audience to focus your data storytelling:

Novice

For a novice, this is their first exposure to the subject. They need you to guide them through the story, but they don't want oversimplification. Nobody likes being talked down to. So you need to build their understanding as you unfold the data story. You are telling them completely new information, so the story is key to their grasping your information.

Expert

Experts have a thorough understanding of the vast majority of the topic. You can get very technical. With experts, they like to have the ability to explore the topic themselves, so it is worth providing them with the scope for more exploration and discovery. This may mean telling the story as you see it and allowing them to prove it for themselves with the data you have found and supplied.

Generalist

A generalist is aware of the topic. They have a basic grasp of the basics and want an overview understanding of major themes from the data story. You can dip into more detail than with the novice, but the audience doesn't want a technical run-down.

Executive

Time-poor and making decisions at the highest levels, executives only have time to glean the significance and conclusions of weighted probabilities. They need short, punchy stories backed up with data that points to definitive conclusions.

Managerial

Managers have their hands in the details so have an in-depth, actionable understanding of intricacies and interrelationships. In your data storytelling, you can get right into the nitty-gritty with detailed stories.

Tips for delivering your data story

Don't make these data storytelling mistakes

Firstly, don't instantly assume that you can't tell stories. Everyone has the ability to recount what happened to them. The art of great data storytelling just requires you to boil your story down to the bare essential elements of the story arc, then build it back up with just enough emotion and detail to bring it to life. It takes practice, but it's very do-able. Try telling a friend a story then get them to tell you which sections were most interesting and which sections you could have cut out.

In this vein, don't overwhelm your listeners with details. The color of the velvet curtains and the sound of the grandfather clock probably aren't important in a story about visiting your uncle for a lesson on early twentieth century aviation. Only add detail where it is key to the audience grasping the story plot. Action keeps the momentum, so don't halt that with unnecessary descriptions.

Thirdly, don't give yourself the starring role in your data story. Nobody wants to listen to how amazing you are. Sure, you can be the main character, but show yourself with flaws and all. Show your humanity, your mistakes, and what you learned along the way. Better yet, tell stories about people you know, or met and interacted with and how that left a lasting impression on you.

Don't:

- Assume you can't tell stories
- Overwhelm your listeners with details
- Give yourself the starring role as unscathed victor

Capture your audience using these data storytelling tips

Tell the story before you show the statistics. When we see statistics, we think analytically and critically. We put our guard up. When we hear stories, we are willing to hear it out before we decide its truth or not as we expect the story to entertain us rather than scientifically inform us. So, if you want to persuade people with emotion, don't get their guard up first by presenting new and possibly controversial statistics that you try to then back up with a story. Tell the story first, then back it up with the data to prove it.

As mathematician John Allen Paulos observed, "In listening to stories we tend to suspend disbelief in order to be entertained, whereas in evaluating statistics we generally have an opposite inclination to suspend belief in order not to be beguiled."

Secondly, deliver your data story from the heart. It sounds cheesy, but if you don't believe in both the data story you are telling and in the difference that your audiences changed actions could make as a result, then you aren't going to convince anyone else of that either. The best TED talks, which often incorporate data storytelling, are the talks that move you because you are convinced by both the sincerity of the speaker's story and the truth of the data they are presenting.

Notice too that they speak from personal experience and use true stories to convey their message. Find inspiration in your own life experiences that provide you with stories and anecdotes that help prove the points you are making.

Thirdly, identify the central message or moral in your data story. This is what everything else hangs on. Everything needs to build to this climax. Then use that message or moral to urge people to do the right thing, based on the proof of your stories that are backed by your data.

Make sure you are pitching your story and data at the right level for the audience. Choose stories, data, and the level of detail that will best resonate with them. Add more details and data with several small anecdotes for the analytical experts, but stick to a single, compelling story or two and a few impactful data insights for executives, for example.

Also dig into external data to support your data storytelling. Although you have the data insight you discovered to bolster your point, go further and prove that this has been the case in other companies or regions too. The more data you have in your arsenal (though you don't need to use it all in your presentation) the more sure you can be that your story will stand up to scrutiny from the experts. Then select from that data the insights that will resonate most with your audience. This helps your audience hear, "It's not just me saying this - it's true for others too."

Do:

- Tell your story before the statistics
- Deliver the story and data from the heart
- Speak from personal experience and true stories
- Keep the central message central
- Pitch at the right level for your audience
- Use external data to support your insight

The best data storytelling formats

With data stories, you are rarely standing on a platform informing hundreds of people about your new data insight. You are usually trying to convince someone, or a group of people, within the company where you work, that they need to take action based on your finding. The message is targeted and you rarely want the data insights publicized.

You could send an email, call a meeting, or, if the audience is wider, send out a blog post on the intranet. Each of these methods have their strengths and weaknesses. And then there is a new option, which will be introduced...

Email and text documents

Email - we are all familiar with the joys and many woes of this platform. If you are sending a data story via email, you have probably written it up in a text document, like Word, for distribution. It's a time consuming and frustrating method. You need to insert screenshots (which aren't interactive and lose the data lineage), choose your font, format your headers and text spacing, and make it easy to read.

One problem with emailing information is you rarely know if anyone has read it. You have spent time and effort crafting an impactful story, but have no idea whether it is being consumed. And if they did read it, what did they think? Has it changed how they work? People can respond to the email with comments, but it's incredibly difficult to structure discussion over email. Another issue is that you have no control over where that data story is shared. There's a dangerous lack of governance with data storytelling via email.

Email pros:

- A familiar platform for the distributer and consumer
- Targeted audience

Email cons:

- No governance over the sharing or editing of the text document
- No knowledge of who has read it
- Difficult to generate discussion over email
- Data will not be interactive

Presentations

As TED Talks prove, you can deliver powerful data stories as presentations. The power of presentations is that you can add your physical presence, or at least your audible presence if it's a webinar. This allows you to convey much more emotion in even a short story than if you were writing it (unless you are a skilled story writer). In a presentation, you are often combining your voice with a visual slide deck so you can visually and audibly communicate your stories and data.

On your slide deck, you can aid your data storytelling with relevant images and visualizations, but remember to save the data for after you have finished telling your story. Presentations also give you the opportunity to present your data in visually memorable ways, for example, with data points moving and changing as you track through time.

One thing you must never do: distribute your slide deck alone, even if it has some notes at the bottom of the slides. The slides will not tell the story for you. If you want to do written data storytelling, a slide deck is far from the best means to do that.

Presentation pros:

- Can convey greater emotion through your voice
- Combines audio and visual elements
- Opportunity to hold the audience's attention with your presence

Presentation cons:

- You have to perform live which adds pressure
- The audience cannot interact with your data visualizations to examine them
- Little feedback and few ways of measuring the impact of your message

Blog posts and articles

Blog posts and articles allow you to share an in-depth view of the data insights you have and weave them into stories. The written word is a powerful medium because you can go back over it and edit until you have exactly what you want. There are no stumbles or mumbles. However, you may need practice to deliver stories as powerfully in writing as you can in speech because we more often tell our stories verbally.

Another positive of data storytelling through blog posts and articles is that you can get feedback in the form of likes, comments, up-votes, claps etc. It's sometimes easier to gauge what sort of impact your data story or stories have had when using blog posts and articles as your means of communication.

If you're using a blog post or article format that is published on the internet, it may even be possible to embed a live, interactive data visualization into your story. You can at least take screenshots. However, the screenshots remove all trace of the data lineage and any opportunity for interacting with the data.

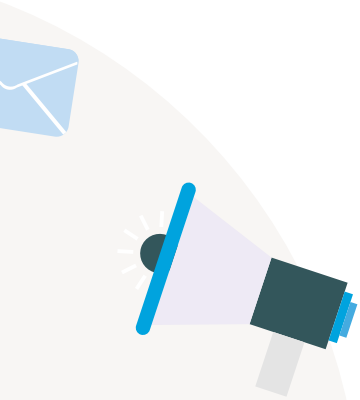
One limitation with blog posts is that you also can't easily publish internal business data stories in blog post format as you need to have governance over the story to make sure only the correct people see it and ensure it doesn't get shared beyond that. Intranets or extranets may help with this, but they often don't have the granular governance you need.

Blog post and article pros:

- Allows for in-depth stories and analysis
- Readers can revisit the content
- Can embed or show images of data visualizations alongside your story
- Can track readership, sharing, and responses through comments, likes etc.

Blog post and article cons:

- Hard to govern readership and distribution of sensitive data insights
- Usually no data interactivity
- Usually a paid-for platform



> Storytelling is powerful; film particularly. We can know a lot of things intellectually, but humans really live on storytelling. Primarily with ourselves; we're all stories of our own narrative.
>
> **RICHARD LINKLATER**

Yellowfin Stories

Now, there is a new format available for data storytelling. Think about a blog post into which you can embed live data visualizations - you can filter, drill, and brush - and you have complete governance over who sees your story and the data that is held inside. You can comment, like, share, and discuss the story. You can even add collaborators and editors to help you write it. This is what Yellowfin Stories is. And you can embed reports from other Business Intelligence and analytics tools.

After multiple frustrations with trying to communicate data insights internally, Yellowfin's CEO, Glen Rabie, knew he needed a way to send data stories that had live, interactive data embedded in them, and that could be responded to via integrated discussion streams and social-media-like interactions. And he needed to be sure that only those with permission to see that data did.

Yellowfin Stories is a new data storytelling product that allows anyone in your business to write a data story in blog post format and distribute it to the rest of the business.

It removes the formatting headaches with a simple, intuitive blogging interface and you can quickly embed videos and live, interactive data reports or snapshots of those so the audience can explore the data for themselves. And because Yellowfin Stories integrates with your BI administration and security permissions, if someone doesn't have permission to see the data you embedded, they won't be able to see that data. You have complete control of the governance.

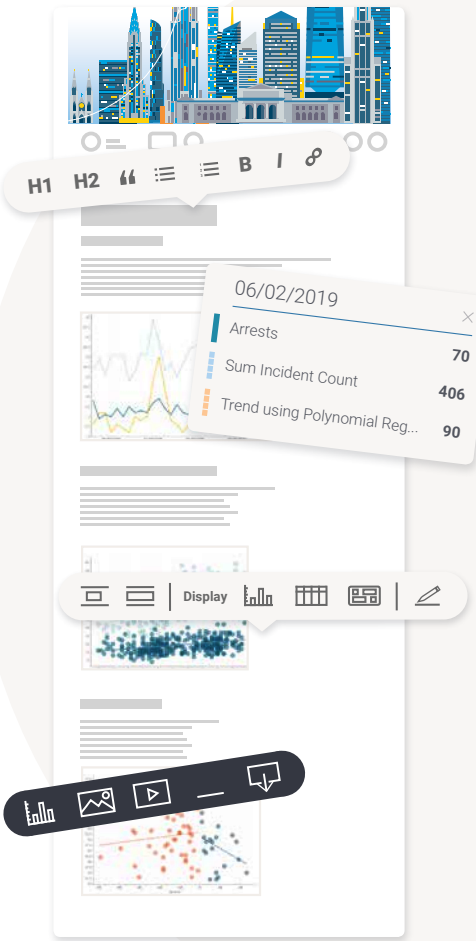
A discussion feature within Stories allows the audience to join and start conversations around the data story so the impact is known and it keeps feedback with the story. The readership is shown and the audience can 'like' the story too. Suddenly, everyone in the business has a voice. They can tell a data story and impact the organization for the better. They can create change and feel valued because they are heard. Imagine everyone in your business relying on data stories for their next move and telling data stories in turn.

Stories pros:

- Allows for in-depth stories and analysis
- Readers can revisit the content
- Can embed or show images of data visualizations alongside your story
- Can track readership, sharing, and responses through comments, likes etc.
- Can start multiple discussions directly on the story
- Can be as narrow or wide in its audience as needed
- Fully governed so only the right people see it

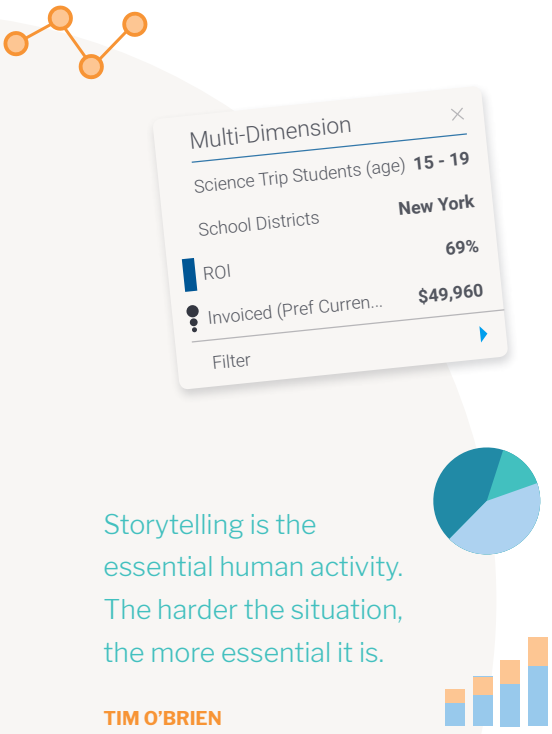
Stories cons:

- It is a paid-for product



Building interactivity into your data story's visualizations

If you are writing your data story on a web page or in Yellowfin Stories, you can embed live data visualizations to support data storytelling. With that capability, it is tempting to allow your audience the full array of interactivity - from tooltips to drilling and brushing. But how much interactivity should you allow?



Storytelling is the essential human activity. The harder the situation, the more essential it is.

TIM O'BRIEN

When you are telling a data story, you are trying to convey a key message with data that supports it. You aren't trying to present an opportunity for data exploration. To keep the audience engaged and on-topic, don't distract them with the chance to do a deep dive into the data using the reports you have embedded in the narrative. You want them to have just enough information to satisfy their interest in the numbers being trustworthy, but not so much that they get lost in other ideas and tangents. Keeping interactivity minimal allows you to keep their attention and focus on the data you have highlighted.

Giving your audience a little interactivity can, however, engage them with the data. Make sure there is enough context and clarity to your data for them to correctly understand what you are communicating. Allow tooltips so they can see specific metrics and, if change over time is important to your narrative, you might want to let them use a time slider.

Think carefully about what is directly helpful to the viewer in understanding your point. If you think an interactive option might be 'an interesting addition', leave it out. This isn't about offering interesting options, it's about communicating your message with precision and clarity to generate action through data storytelling.

Summary

You have now seen the incredible power of stories that physically move us and biochemically change us. They drive real action if they stir emotion. That's why you feel pumped and ready to hit the gym after watching a film like Rocky, or you feel empathy and the desire to help after hearing a story like the one from Ben's father.

Now, it's your turn to tell stories, backed with data, that move people to action. It's your turn to practice true data storytelling.

When you find your data insight and you determine what you want people to do as a result, pull out the story arc, map your narrative to it, back it up with data, and call people to action. Think like a TED talk presenter. Your story will sow an idea, a memory, a feeling. People can't forget that easily, so they have to do something about it.

Like all things do, it will take some time to master the art of data storytelling. But with these tools, you will quickly be persuading people to act on the insights you and the analytics team have unearthed. This isn't about getting what you want, but it is about making people's decisions easier. If they can feel the pain, see the opportunity for change, and understand the action they need to take, the change will be much easier to begin implementing.

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