
‘Why are we changing maps?’
The power of data visualisation for storytelling
esri UK
B2B Marketing

Contents

3
Intro: 'Why are we changing maps?'

5
Data visualisation is intuitive

6
Data stories old and new

'Why are we changing maps?':
The power of data visualisation for storytelling

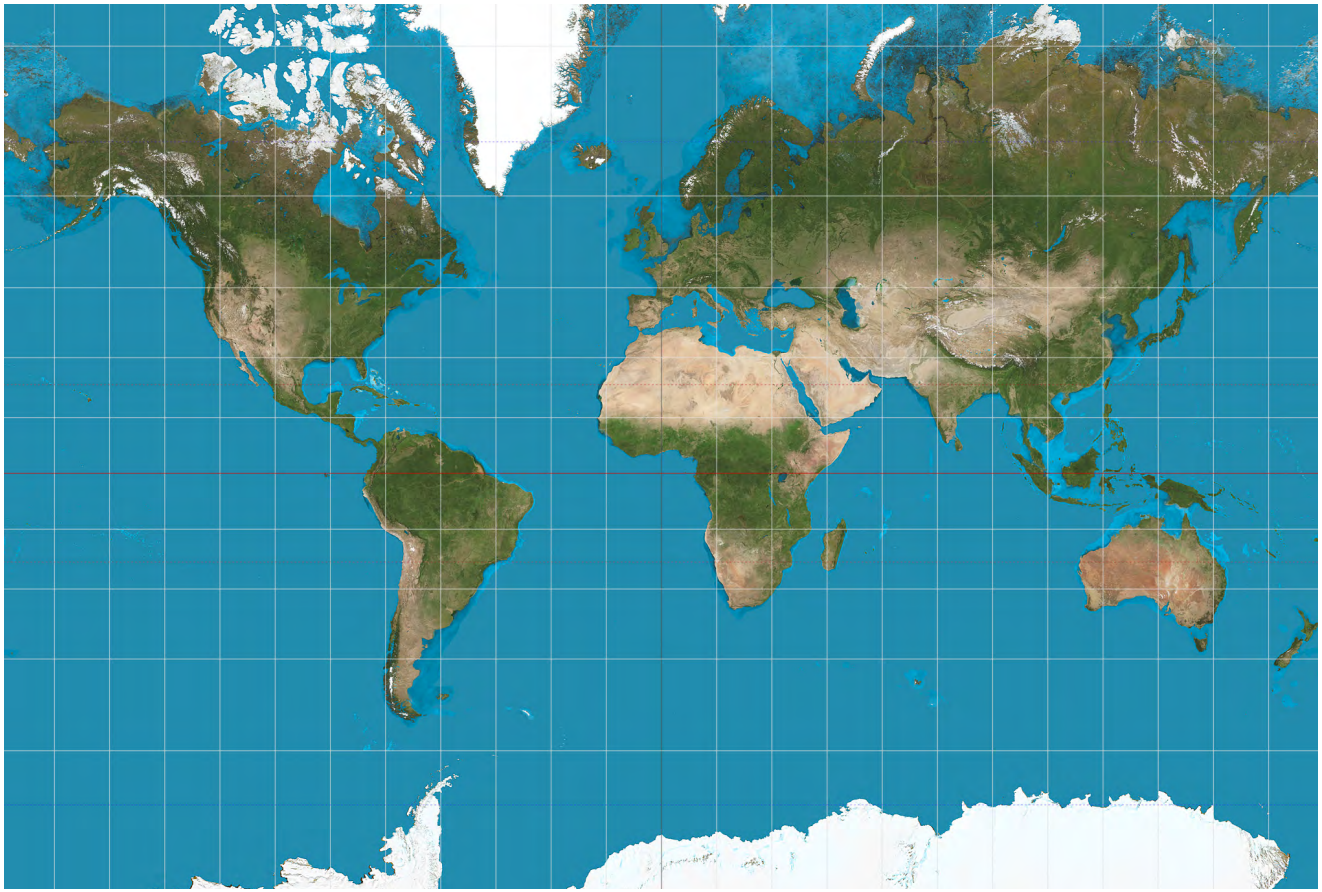
8
Making your data shine

9
Using data stories

10
Maps changing marketing

‘Why are we changing maps?’:
The power of data visualisation for storytelling

© B2B Marketing 2016



Biased: The Mercator map

There’s a brilliant scene in the totemic US political drama *The West Wing*, where press secretary CJ and a deeply sceptical Josh are visited by members of lobbying group Cartographers for Social Equality. You can watch it on YouTube here, but the gist is this: the CSE want President Bartlett to support legislation that ensures public schools teach geography using the Peters Projection rather than the traditional Mercator global map.

But why, asks CJ, are we changing maps?

The answer is, because data visualisation matters. It’s not simply a question of presenting data in an interesting way: the way data is presented profoundly affects how we process that information and make assumptions about the world around us.

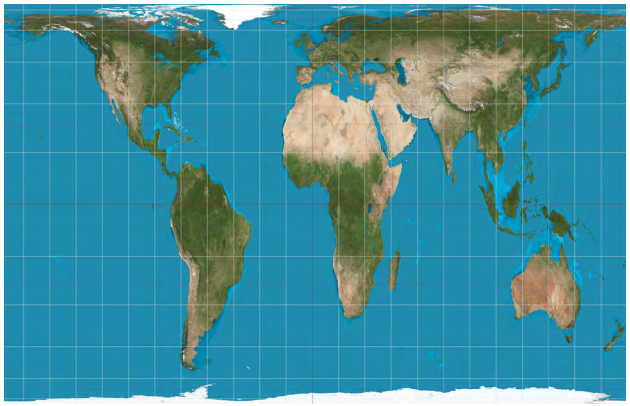
In the *West Wing* example, the Mercator map is just one way of visualising the globe. In the 1569 version of his map, German cartographer Mercator enlarges the areas at the poles to create straight lines of constant bearing which make oceans easier to cross for European sailors.

© B2B Marketing 2016

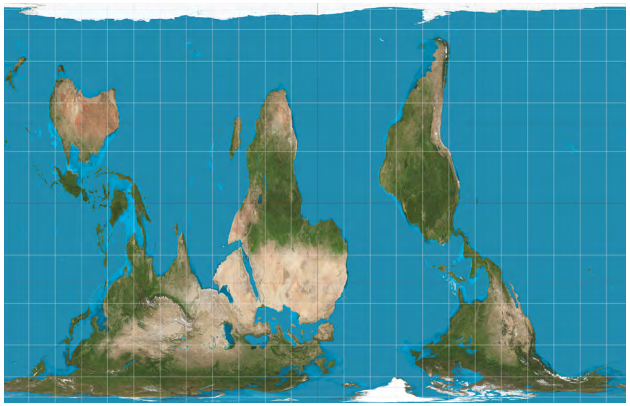
While this representation of the data is technically 'true', it also has a distorting effect on the relative size of nations and continents: Greenland and the continent of Africa appear to be the same size, where in fact Africa is 14 times larger. Europe appears considerably larger than South America, but the southern hemisphere continent is actually twice as large. And so on.

The impact? As Dr. John Falwell explains: "When third world countries are misrepresented, they're likely to be valued less. When Mercator maps exaggerate the importance of Western civilisation, when the top of the map is given a northern hemisphere, and the bottom is given a southern hemisphere, people will tend to adopt top and bottom attitudes."

By changing the maps, adopting the Peters Projection – or even by flipping the map on its head – we get a whole new insight into what our planet looks like.



The real world: The Peters Projection map



A new perspective: The Peters Projection map upside down

By changing the maps, adopting the Peters Projection – or even by flipping the map on its head – we get a whole new insight into what our planet looks like

Data visualisation is intuitive

© B2B Marketing 2016

Away from the *West Wing's* philosophical socio-political example, the importance of data visualisation is something most people understand intuitively. Even if you don't think about it in those terms, if you are trying to demonstrate the importance of a piece of data to someone who you want to know about it, you'd never send them a raw spreadsheet with every single piece of data in every category.

So, what *would* you do? Well, there are lots of examples that most people will know: pie-charts, bar charts, line graphs, frequency diagrams, timelines and so on. And their popularity is well-founded. These 2D data visualisation techniques are popular largely for two reasons:

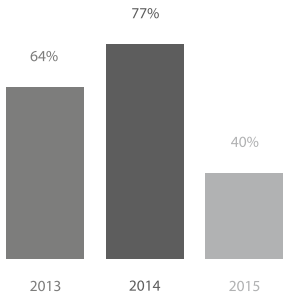
- They're easy to create: creating graphs using data from an Excel spreadsheet is something even the most ardent technophobe can do.
- They're easy to understand: pretty much most people will be able to see that one area of a pie-chart is bigger than another, or that a line is trending upwards, or the progression of sequential dates.

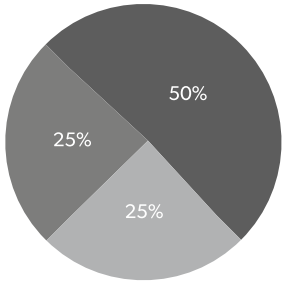
But, they do have their drawbacks. First, if there are too many bits of data these visualisations can quickly become messy or too complex to understand – undermining their very purpose.

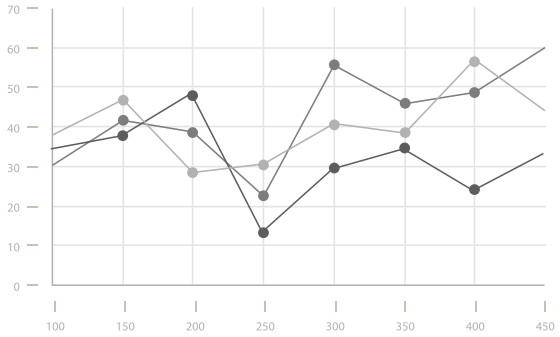
Because of this, 2D data visualisations are also fairly inefficient in showing how data sets interact with each other.

But mainly, in most cases, the biggest problem with these most basic of data representations is that they are BORING. However significant or thrilling the implications of the data, who can honestly say they are excited about the prospect of being shown a pie-chart?

Using these visualisations to represent your data means you're not embracing the storytelling age. At best, you're using visual elements to complement your story, not making data visualisation part of the story itself.







Yawn: Generic bar chart, generic pie chart, generic line graph

Data stories old and new

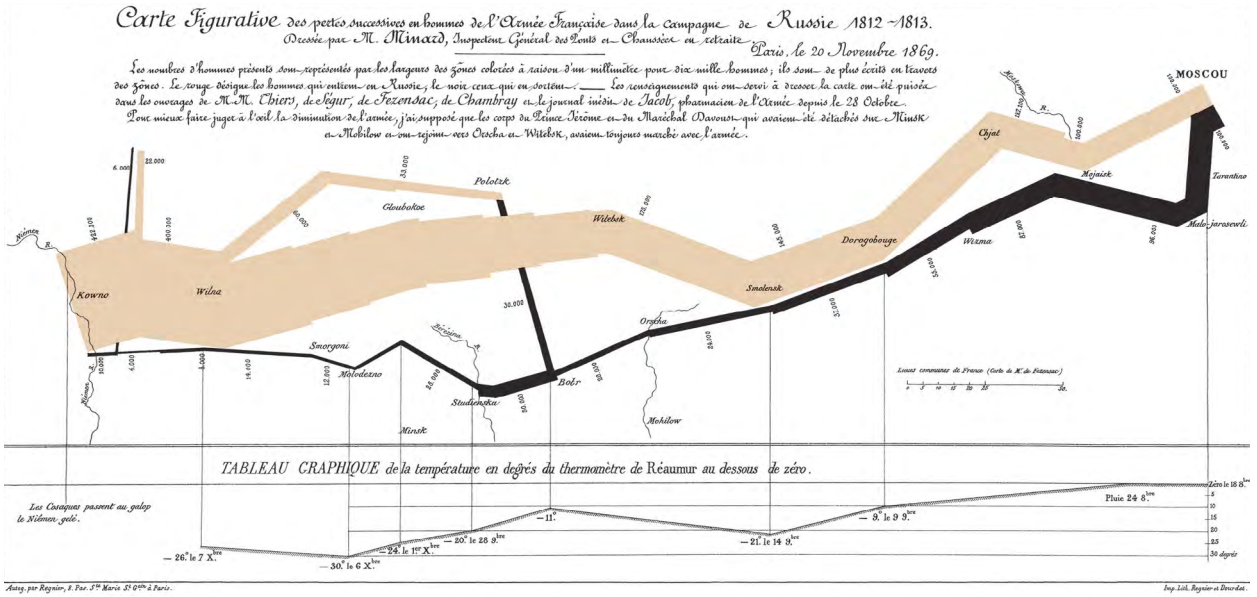
© B2B Marketing 2016

To demonstrate just how effective, dramatic and even emotionally moving data visualisation can be, have a look at what Doug Kessler, co-founder of Velocity Partners, calls 'the greatest infographic ever'.

Created over 150 years ago, Charles Joseph Minard's infographic displays the horror of Napoleon's disastrous Russian campaign in vivid detail with minimal text. For Kessler's full analysis of the greatness of this data storytelling, read the full article, but here's a summary of why it's great:

- The big picture story is easy to understand: as the text of the original explain: "The numbers of men present are represented by the widths of the coloured zones in a rate of one millimeter for ten thousand men; these are also written beside the zones. Red designates men moving into Russia, black those on retreat." A gigantic army is reduced to virtually nothing.
- It beautifully marries six data sets: the number of troops; distance; temperature; the latitude and longitude; the direction of travel; and location relative to specific dates are all mapped clearly, complementing each other without ever clashing.
- It draws the viewer in – and then rewards attention: pie-charts and line graphs are all well and good for getting a piece of information across quickly, but they don't hold attention. In Minard's infographic there are details everywhere waiting to be explored and interpreted by a diligent reader, all contributing to the overall story.

Now, as Kessler concludes, the first step in visualising data this well is 'be a genius'. But if that's not an option, advances in technology have made being inventive with data visualisation easier than ever before.



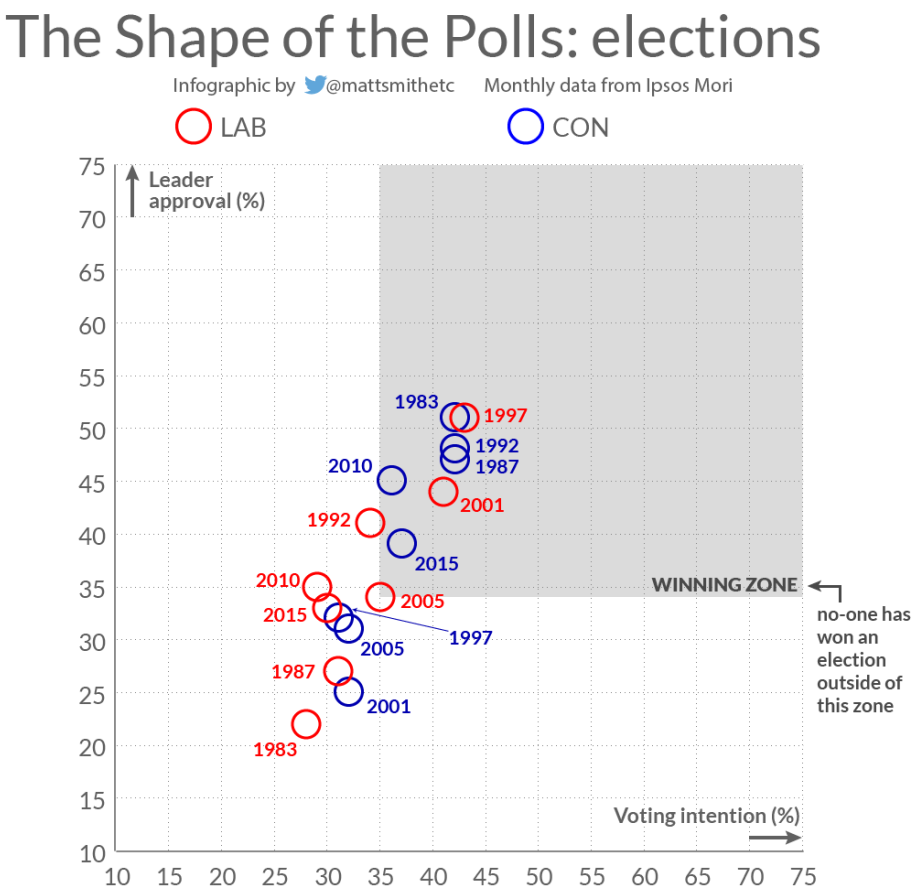
Genius: Minard's infographic

© B2B Marketing 2016

For example, look at the beautiful simplicity of Matt Smith's story of why the general election pollsters got it so wrong back in May 2015. He contends that rather than rely solely on 'voting intention' metrics, pollsters should also consider 'leadership satisfaction' metrics. To tell his story, he plots leadership satisfaction against voting intention and draws on data for the leaders of the two major political parties year-on-year to show the change.

The gif style format, where the plotted points move every second to reflect each year, artfully demonstrates the rise and fall of political fortunes from 1979 to the present day. It takes little more than 30 seconds to watch it once – but to get a full appreciation of the story, you need to watch it several times, drinking in each metric and seeing how they relate to each other.

Like Minard's infographic, the lesson here is that in order to tell a story with data, you have to appreciate the viewer doesn't just want to be told. To hold their attention and get the story across, you have to give them the opportunity to *explore,* find their own connections, and discover the conclusions.



Engaging: Matt Smith polling chart

© B2B Marketing 2016

Making your data shine

As one of the foremost specialists in data visualisation and mapping, Esri has developed a range of technologies that can help marketers tell their data stories. Their AcrGIS Online software is a cloud-based mapping platform that allows people to tell beautiful stories with their data.

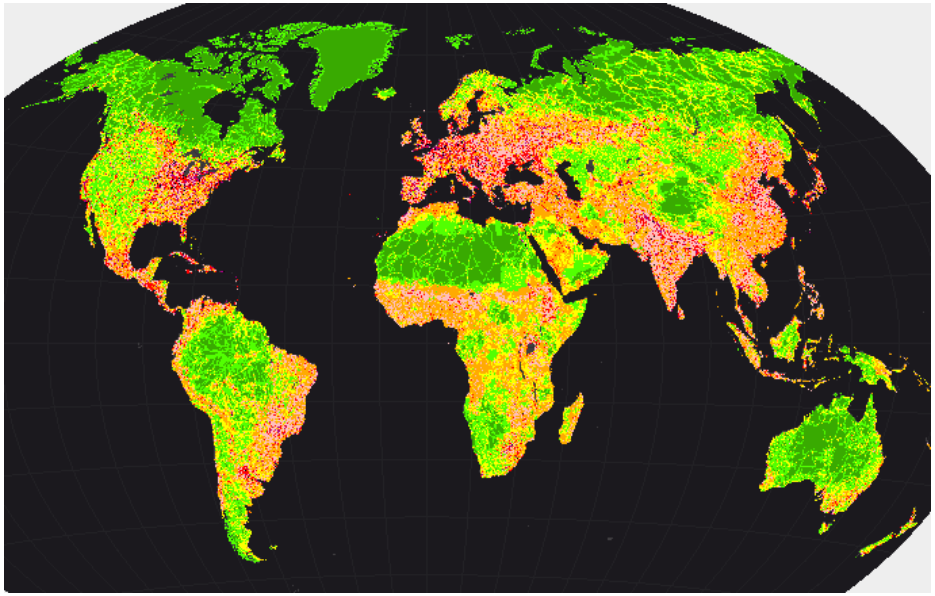
Even if you don't have a Minard-style genius on your marketing team, the technology allows you to visualise large amounts of data and convey complex ideas in a visually rich, easily digestible context.

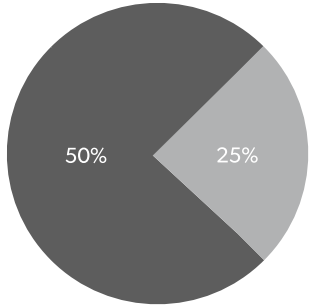
The advantages of such visualisation as compared to traditional data visualisation techniques are myriad. First, by mapping data in this way, it's easy to get your main message across quickly, while also including the finer details which can be explored at greater length.

This map, for instance, from the report The Age of Humans instantly shows the distribution of the world's 7.2 billion people with red pixels demonstrating the density spread. By scrolling to specific areas, it is then possible to see this density in far more granular detail, supported by text, infographics and whatever supporting data is required. The same technique is then used to demonstrate other key global stats: land management, forest loss, extinction rates and so on.

Each page has a clear narrative that can be understood immediately; but also uses massive data sets to visualise this message across the whole planet. How much more evocative is this compared to a pie-chart visualising the same message?

No contest: Esri data map versus a pie-chart showing the same information





Using data stories

© B2B Marketing 2016

As with any marketing technology, telling stories with data is not just about doing it for its own sake. Fortunately, there are multiple creative ways to use visual mapping technology in modern marketing.

Starbucks, for instance, uses mapping technology to visualise their marketing decision making. From picking the perfect location for a new store based on demographics down to weather-forecasting for targeting cold drink promotions, the coffee giant uses Esri systems to visualise data and make better marketing decisions.



At the end of 2014 in the depths of the Ebola crisis, MapAction used a story map to convey the devastating impact of the disease in Western Africa and how MapAction was helping to relieve suffering. Not only did the map achieve its primary goal and raise significant interest and money for the Big Give Christmas Challenge, it also showed the increased effectiveness of encouraging people to follow a call-to-action using story mapping.



Media outlets are also seeing the benefit of interactive maps. The *Independent,* for instance, used a story map to support a piece on UK rent affordability and the *Daily Mirror* used visual mapping to great effect during the hunt for flight MH370. Both saw greatly increased traffic and, perhaps more significantly, increased dwell times as users investigated the data more thoroughly.

There's no reason these benefits should be the sole preserve of newspapers. All marketers want to create eye-catching, sticky, shareable stories: if the story is good enough, this technology provides the opportunity to tell that story in the best possible form.



© B2B Marketing 2016

Maps changing marketing

We started this whitepaper asking 'why are we changing maps?' Well, we're not: but maps and visual data mapping *do* have the power to change marketing. Here are the key takeaways:

Data visualisation matters: the way data is presented affects how we process and retain that information.

Presenting data in different ways promotes new insights and allows you to see more connections.

Visualisation is intuitive: we know that a chart is easier to understand than a great big list of numbers.

But simplistic visualisations are inefficient and yawn-inducing.

Data visualisation should *tell* the story in its own right – not just be a sideshow.

Charles Joseph Minard was a genius.

But technological improvements can help us *all* be geniuses.

Esri's ArcGIS Online software lets you show off your data stories and get real marketing results.

About

© B2B Marketing 2016

About B2B Marketing

B2B Marketing is the comprehensive information resource for B2B marketers. Its mission is to provide practitioners with the information they need to perform better and achieve more, whatever sector of the B2B space they are operating in.

Launched in 2004 as *B2B Marketing* magazine, it has since evolved into a multi-faceted resource, delivering a broad range of content in a variety of different forms and formats.

Its key products are:

- Online community
- Magazine
- Awards
- Research and reports
- Training
- Events
- Membership

For more information on any of these products or services
go to b2bmarketing.net
or call +44 (0)20 7014 4920.

B2B Marketing

About Esri

Esri is the world's leading provider of Geographic Information Systems (GIS). We help people understand their world and design a smarter future.

Add a new dimension to your content marketing strategy with the new interactive Story Map App from Esri. Our ready to use App comes with a wide range of templates that enable you to combine text, images, videos, interactive maps, web forms and powerful data visualisation tools to create compelling digital stories.

The Story Map App makes it easy for you to share digital stories, empowering brands to engage with new audiences and take the same message to market across web, social and PR.

To find out how modern marketing departments are creating dynamic stories that captivate and convert
visit esriuk.com/marketing
or call 01296 765500

esri UK

B2B Marketing
Clover House
147–149 Farringdon Road
London, EC1R 3HN

+44 (0)20 7014 4920
info@b2bmarketing.net
b2bmarketing.net

esri UK

B2B Marketing

'Why are we changing maps?'

© B2B Marketing 2016

