

# WHAT CAME FIRST, THE DATA OR THE VIZ?

Combining data and visualisation with experience design is essential to break new ground with your customers.

All of us – data experts or not – have exercised our skills with data visualisation: a graph at school, a pie chart, or maybe a complex network visualisation with more than 37,000 nodes. The first experiments with information visualisation can be traced back to 32,000 B.C., with the first tally marks to keep track of lunar cycles or quantities of livestock.

We've come a long way since then. René Descartes gave us the plot graph in the 17th century. William Playfair created the pie chart in the early 19th century. However, compared to other forms of communication, from speech to written words, data visualisation is a relatively early form of expression. Which is **great** news as it means this journey has only just begun.

Information design and visualisation is proving powerful not just to lift complex data to a level of abstraction that everyone can understand but also to support problem resolution and decision making. But that power comes with its own curse: it is incredibly easy for a designer to lose control of the visualisation and make it look good but lose the meaning or – even worse – be misleading.

The key is to work on two fronts concurrently. On one side, we should never stop at the hero image, spoiling legibility and meaning for the sake of a beautiful image (yes, designers, admit, we have all done this). On the other side, it's vitally important that we keep working for a better visual literacy from our data at any level

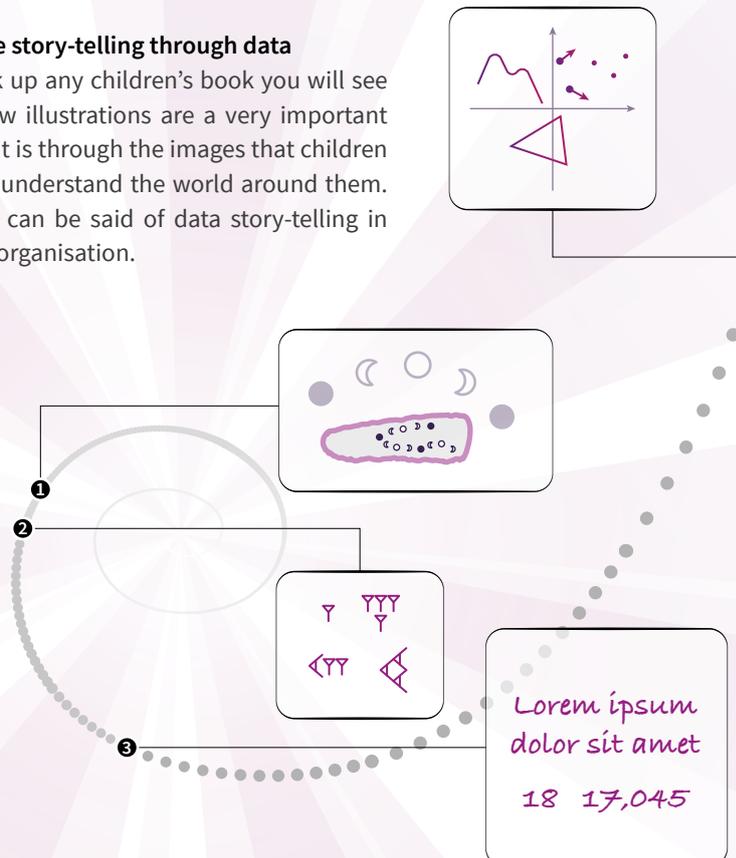
of the business. It is this tension that is at the heart of great visualisation.

If you don't teach people how to speak your language they will never understand what you are saying. When Playfair came up with bar charts and pie charts, more than 200 years ago, someone surely would have said to him "can't I just have some numbers instead?". Think about this when someone politely asks you something very similar when you create your next design and decide whether you want to influence the future of data visualisation in your own way. Or not!

## Encourage story-telling through data

If you pick up any children's book you will see clearly how illustrations are a very important part of it. It is through the images that children learn and understand the world around them. The same can be said of data story-telling in your own organisation.

- 1 Tallies to keep track of the moon phases (35000 BC circa)**  
First attempt of data collection and information visualisation.
- 2 Sumeric numerals (2000 BC circa)**  
Visual representation of quantities. Possibly, the first ancestor of infographics.
- 3 Complex written language, base ten and decimal numerals (between 3000 and 350 BC circa)**  
The origin of complex written information.
- 4**



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#### 4 Cartesian chart (1637)

René Descartes set the foundation for modern line charts and plots.

#### 5-6 Bar charts and pie charts (early 19th Century)

William Playfair published what could potentially be the first bar charts and pie charts in history. This could be considered the start of modern data visualisation.

#### 7 Sankey diagram (1898)

Captain Matthew Henry Phineas Riall Sankey's flow chart is possibly one of the earliest representations of complex information.

#### 8 Systems of interactive visualisations (early 21st Century)

The rise of the internet and PC's with tools to create digital data visualisation have become a game changer.

#### 9 Data experiences (today)

Seeing data is not enough. Experiences get the heart of your audience. They are the present and the future.

The advent of information availability has made the world around us complex and simple at the same time. Complex if we do not know how to comprehend it and simple if we deploy the right techniques and technologies to make it understandable. And yet taking your organisation on the journey of understanding the value of story-telling through data still poses a challenge. Try focusing on a valuable business problem that everyone in the organisation identifies with. Take the associated data and tooling, and combine it with good information design to bring the problem to light. Then, develop a set of narratives that supports the analytics and the problem resolution - and bring the story to life. It's not just about slick reports but about the right teams being able to make connections in the data that others might not see.

Information and data visualisation helps your audience to focus, engage and retain information longer. As usage spreads, it becomes easier and quicker to spot patterns, connections or anomalies. Start using data in your business stories and remember to weave in the right pictures that illustrate your point. Just like a child picking up their first book.

#### Be the future

We live in an age of experiences. Our brain is constantly overloaded with information, especially through our eyes, and we can ignore or easily forget anything that we don't connect

with visually. But experiences are more likely to last. Being actively involved, experiencing firsthand, can greatly help the audience to truly connect with information.

Experiences built with data can help your audience understand the past, live the present and see the future. We came across the art of designing experiences as we were trying to find new ways to help organisations deploy innovative techniques for solving their problems.

Amongst these experiences, we have built a scale model of a data lab in a shoe box, created a 3D version of an FS Risk data model and had a negotiation with a Tier 1 bank's security guards regarding escorting a robot into the building for a meeting (we won by the way).

We have gone even further, immersing our audience in a live data room. Specifically, we borrowed Obeya (Big Room) "Learn By Doing" practice from The Toyota Management System and made a physical space that delivers goal visualisation, performance data and problem resolution in a new, interactive medium. It's not innovation theatre, it's real innovation, as the board of this bank will testify.

Imagination sometimes needs a little encouragement - capture that spark through data experience and you'll start a fire.