

DATA VISUALISATION & INFOGRAPHICS

Training by Andy Kirk

Two-day workshops

TRAINING OBJECTIVES

These training workshops aim to provide delegates with an accessible and advanced understanding of data visualisation and infographic design: how to effectively communicate data visually.

The focus of the training is to teach the craft of this discipline, helping delegates to know *what* to think, *when* to think and *how* to think about all the analytical and design decisions involved in any data-driven communication. There are four key learning aims for these workshops:

To **challenge** your existing thinking about creating and consuming visualisation works, helping to clarify your convictions about what differentiates the good from bad in visualisation design.

To **enlighten** you with an appreciation of the wide range of analytical and design options, covering all chart types, interactivity techniques, ways of annotating, applications of colour, and features of composition.

To **equip** you with an efficient design process giving you the confidence to make astute choices based on sound principles and contextual influences.

To **inspire** you to elevate your ambitions, by broadening your visual vocabulary and exposing you to the best contemporary techniques.

THE APPROACH

The training is structured around a proven design process. Across the session delegates will build up, stage by stage, a detailed understanding of all the different aspects of decision-making that goes into any data visualisation challenge, whether for one-off projects or recurring works.

The content is delivered through a vibrant blend of teaching, discussion, and group practice. The practical exercises vary in nature from evaluating work, interrogating data, conceiving ideas, and assessing design choices.

This is not a technical course and the teaching is not framed around specific tools or applications. Across the session there will be references to some of the most common, contemporary visualisation technologies but the emphasis is on learning the underlying craft, regardless of your tools.

Materials will be issued digitally (e.g. Dropbox/USB flash drive) covering all teaching content, exercise files and useful resources. Attendees are required to bring fully-charged laptops to use as a convenient workspace with the only software requirements being Excel, a modern browser and pdf reader: no other technical or skill-based prerequisites exist.

TRAINER PROFILE

Andy Kirk is an experienced UK-based data visualisation specialist: design consultant, teacher, author, speaker, researcher, podcast host (soon!) and editor of visualisingdata.com. Since founding Visualising Data Ltd. in 2011, Andy has delivered over 275 public and private training events in 27 countries, with clients like Spotify, Google, EU Council, and CERN. He has held visiting lecturer roles at MICA (USA) and Imperial College (UK), and now has a similar role teaching at UCL (UK). He is the author of three books, with the most recent title published in August 2019 by Sage, 'Visualising Data: A Handbook for Data Driven Design (second edition)'. Andy also provides data visualisation services to Arsenal F.C.

WHO SHOULD ATTEND?

Over 6,000 people have attended Andy Kirk's training events with delegates coming from all backgrounds, organisation types and domain areas: they are intended for and useful for *any* participant demographic.

You might be an analyst, statistician, or researcher looking to enhance the creativity and impact of your communications. Perhaps you possess creative flair, as a designer or developer, but you're seeking to enhance the rigour of your data-driven thinking? Maybe you do not personally get your hands on the analysis of data but coordinate colleagues who do?

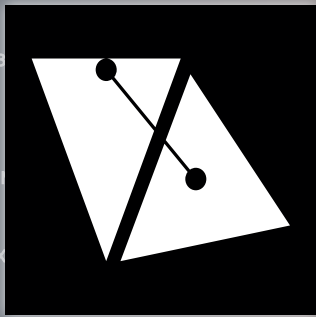
In contemporary society we cannot avoid being regular consumers of data visualisations, as we encounter visual displays in the media and through our workplaces. A key aspect of this training is to enhance our visual literacy as readers, interpreters and evaluators of visualisations.

The most crucial pre-requisite attribute is to demonstrate curiosity - an instinct for and interest in discovering and sharing insights from data. You will need an appetite to find a fresh approach to communicating data through visual representation and presentation. You should also be willing to contribute to and learn from discussions with fellow delegates during exercise activities and do so in a respectful and constructive manner.

TOPICS COVERED

An indicative agenda for the workshop is provided over the page. The training content, its sequencing, and the session's rhythm is constantly being refined to optimise the impact of the teaching. The final itinerary and precise times presented may therefore evolve. Here is an outline of the main topics that will be covered:

- Defining data visualisation and its juxtaposition with related fields
- Overview of a process-driven approach for efficiency and effectiveness
- The key principles of good data visualisation design
- The role of consuming in developing a sophisticated visualisation literacy
- The influence of contextual requirements and circumstances
- Appreciation of the spectrum of contemporary styles of visualisation work
- Assessing the physicality and potential of your data
- Using visual techniques to explore data
- The influence and components of editorial thinking
- The data visualisation design anatomy
- The building blocks of data encoding
- The vast spectrum of different chart types and their roles
- References to 1000+ examples and solutions via the 'chartmaker directory'
- The features and role of interactivity in visualisation design
- The role of effective annotation for assistance and insight
- Colour theories and best practice applications
- The composition decisions around organising the layout your work
- Understanding the component skills across the 7-hats of visualisation
- Profiles of the key visualisation tools, applications and libraries



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DAY ONE

- 9:30 WELCOME TO DAY ONE
Overview of the workshop
- 10:00 INTRODUCTION
Exercise 0 – Warm-up | Discussion
Defining data visualisation
Exercise 1 – Instinctive critical evaluations | Discussion
- 11:10 BREAK
- 11:30 THE VISUALISATION DESIGN PROCESS
The three principles of good visualisation design
- 11:50 STAGE 1: FORMULATING YOUR BRIEF
Exercise 2 – Thinking about curiosity | Discussion
Context: Curiosity, circumstances
Exercise 3 – Thinking about context | Discussion
Vision: Purpose, ideas
- 12:45 LUNCH
- 13:45 STAGE 2: WORKING WITH DATA
Four steps towards developing intimacy with your data
Exercise 4 – Visualising the Olympics (1/3)
- 14:35 *Project 1 – Formulating your brief*
Project 2 – Working with data
- 15:05 BREAK
- 15:25 STAGE 3: ESTABLISHING EDITORIAL THINKING
Defining editorial thinking
The three editorial perspectives
Exercise 5 – Visualising the Olympics (2/3)
- 15:55 *Project 3 – Editorial thinking*
- 16:20 STAGE 4: DEVELOPING YOUR DESIGN SOLUTION
A profile of key tools, applications and libraries
Exercise 6 – Encoding data | Discussion
- 16:50 WRAP-UP & REVIEW
- 17:00 FINISH

DAY TWO

- 9:30 WELCOME TO DAY TWO
Review of day one, preview of day two
- 9:35 4.1: DATA REPRESENTATION
Visual encoding and the gallery of chart types
Influencing factors and considerations
Exercise 7 – Visualising the Olympics (3/3) | Discussion
- 11:00 BREAK
- 11:20 *Project 4.1 – Data representation*
- 11:40 4.2: INTERACTIVITY
Techniques for interactivity in data visualisation
Influencing factors and considerations
Exercise 8 – Forensic critical evaluations (1)
- 12:20 4.3: ANNOTATION
Features of annotation in data visualisation
Influencing factors and considerations
Exercise 8 – Forensic critical evaluations (2)
- 12:45 LUNCH
- 13:45 *Project 4.2 – Interactivity & Project 4.3 – Annotation*
- 14:10 4.4: COLOUR
Applications of colour in data visualisation
Influencing factors and considerations
Exercise 8 – Forensic critical evaluations (3)
- 14:35 4.5: COMPOSITION
Decisions about composition in data visualisation
Influencing factors and considerations
Exercise 8 – Forensic critical evaluations (4)
- 15:00 BREAK
- 15:20 *Exercise 8 – Forensic critical evaluations | Discussion*
- 15:45 *Project 4.4 – Colour & Project 4.5 – Composition*
16:10 *Project Final – Group presentations | Discussion*
- 16:50 WORKSHOP WRAP-UP
Final review and Q&A
- 17:00 FINISH