

Part 1: The essential collection of visualisation resources

This is the first part of a [multi-part series](#) designed to share with readers an inspiring collection of the most important, effective, useful and practical data visualisation resources. The series will cover visualisation tools, resources for sourcing and handling data, online learning tutorials, visualisation blogs, visualisation books and academic papers. Your feedback is most welcome to help capture any additions or revisions so that this collection can live up to its claim as the essential list of resources.

Essential Visualisation Resources

Part 1: Tools for Analysis, Graphing and Enterprise

This first part presents the data visualisation tools associated with conducting analysis, creating effective graphs and implementing business intelligence operations.

Please note, I may not have personally used all tools presented but have seen sufficient evidence of their value from other sources. Also, to avoid re-inventing the wheel, descriptive text may have been reproduced from the native websites for some resources.

Microsoft Excel

Microsoft Excel is the most popular spreadsheet tool in the world with over 400 million users and therefore the most accessible tool for conducting analysis and presenting data in graphical format. The package receives a great deal of justified criticism within the visualisation field for the appalling default and range of bad practice graph designs it promotes, yet in the right hands it can be an incredibly powerful and effective visualisation tool.

[Find out more information](#) | Cost: Trial > under £100/\$150 per license | Tags: Spreadsheet, Office, Graphing

Good examples and references: [Peltier Tech](#) | [Excel Charts Blog](#) | [Chandoo](#)

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Open Office Calc

For those who cannot afford or get access to a Microsoft Excel license, OpenOffice.org is an open-source project providing an online office platform mirroring much of the functionality provided by Microsoft Office. The aim is “to create the best possible office suite that all can use”. The Excel equivalent is Calc and although some of the graphing features are limited it is an ever-evolving tool that is being used by many and is only going to improve.

[Find out more information](#) | Cost: Free | Tags: Spreadsheet, Office, Graphing

Examples and references: [Gallery of chart types](#)



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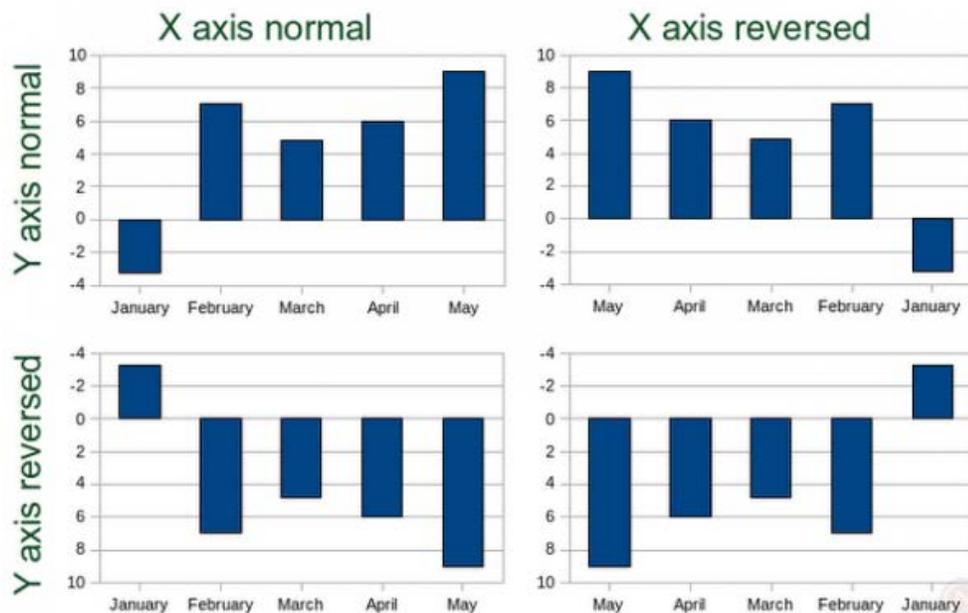


Tableau Desktop

Tableau Desktop is based on breakthrough technology from Stanford University that lets you drag & drop to analyse data rapidly and fluidly, connect to data in a few clicks, then visualise and create interactive dashboards in an instant. Tableau have based their product on years of research to build a system that supports people's natural ability to think visually providing a tool that lets you easily build beautiful, effective, rich data visualisations.

[Find out more information](#) | Cost: Trial > £600/\$999 Personal, £1200/\$1999 Professional | Tags: Statistical Analysis, Business Intelligence, Dashboard

Examples and references: [The Information Lab](#) | [The Data Studio](#) | [Freakalytics](#)

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Free Trial of Datameer

Big Data Analytics on your Desktop



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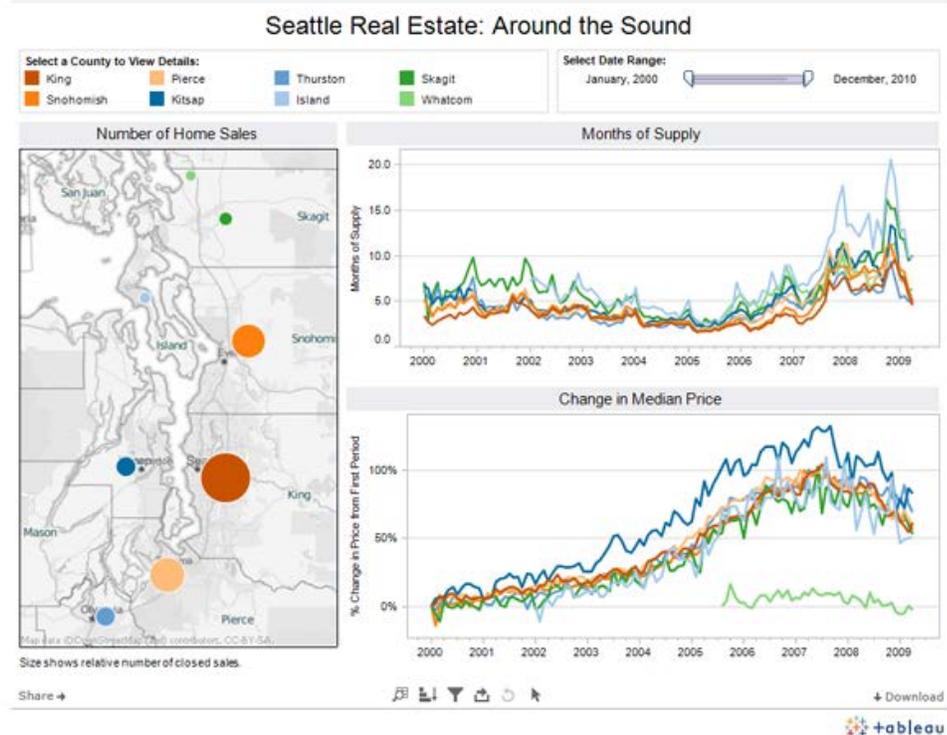


Tableau Public

Tableau Public is the web-based, publicly accessible version of Tableau Desktop which enables you to create interactive visualisations and embed them into your website, publish them on the Tableau Public Gallery or share within the Tableau Public community. Note, the visualisations cannot be saved locally, that is the 'public' essence of this free tool.

[Find out more information](#) | Cost: Free | Tags: Statistical Analysis, Business Intelligence, Community

Examples and references: [The Information Lab](#) | [Joe Mako](#) | [OECD Factblog](#)

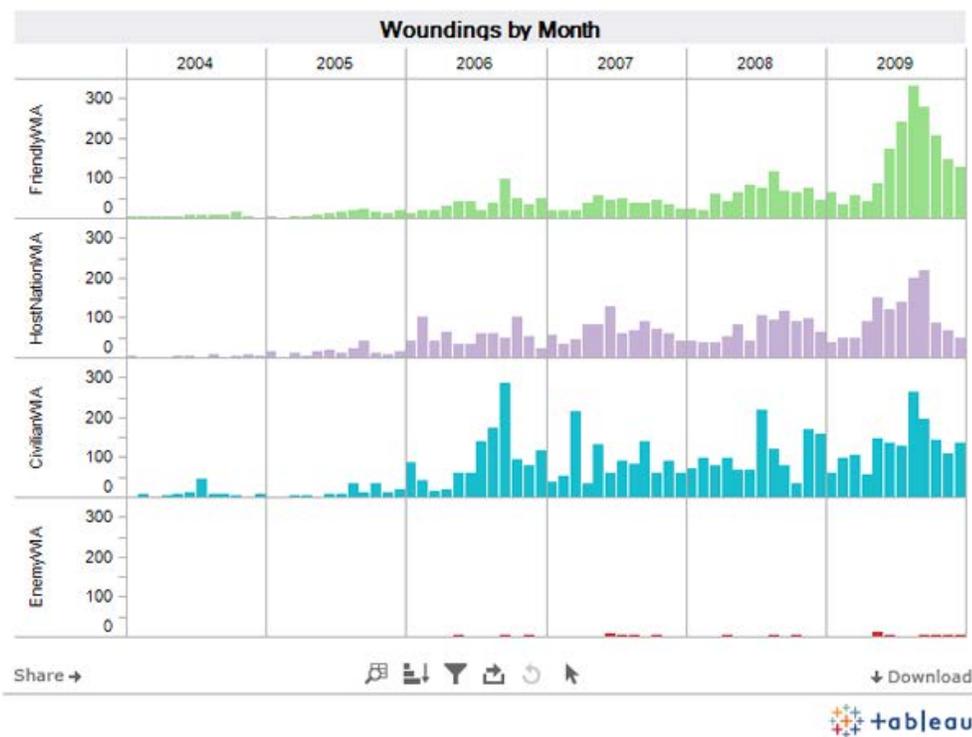
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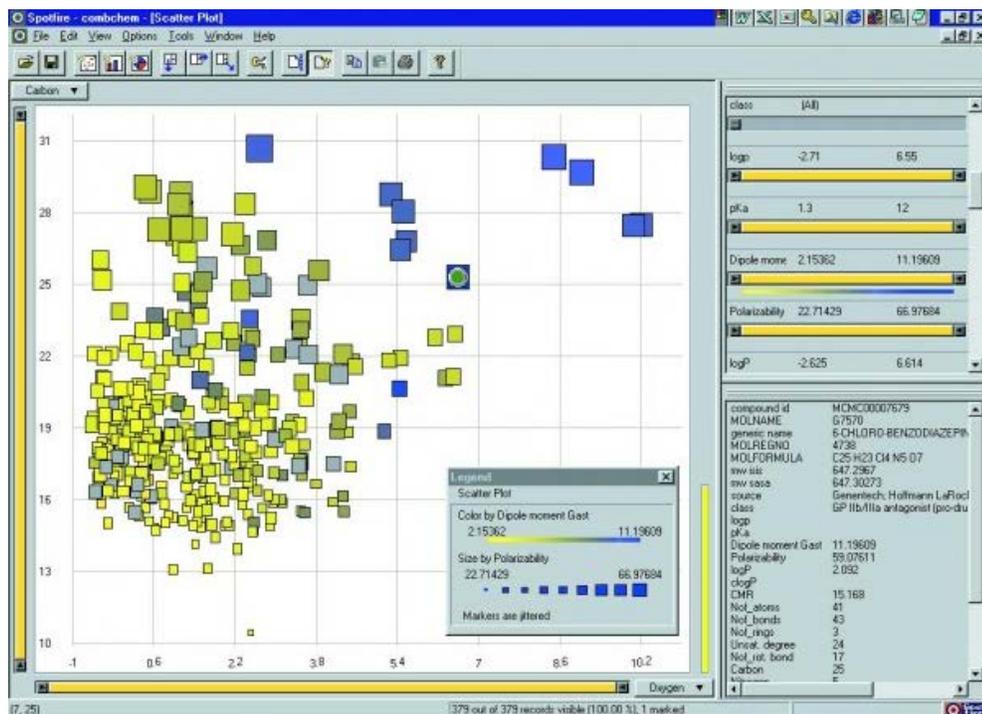
TIBCO Spotfire

TIBCO Spotfire Professional aims to make it easier to build and deploy analytic applications over the web or perform ad-hoc analytics on-the-fly by letting you interactively query, visualise, aggregate, filter, and drill into datasets of virtually any size.

[Find out more information](#) | Cost: Trial > £/\$ unknown | Tags: Statistical Analysis, Business Intelligence

Examples and references: [Demo Gallery](#)

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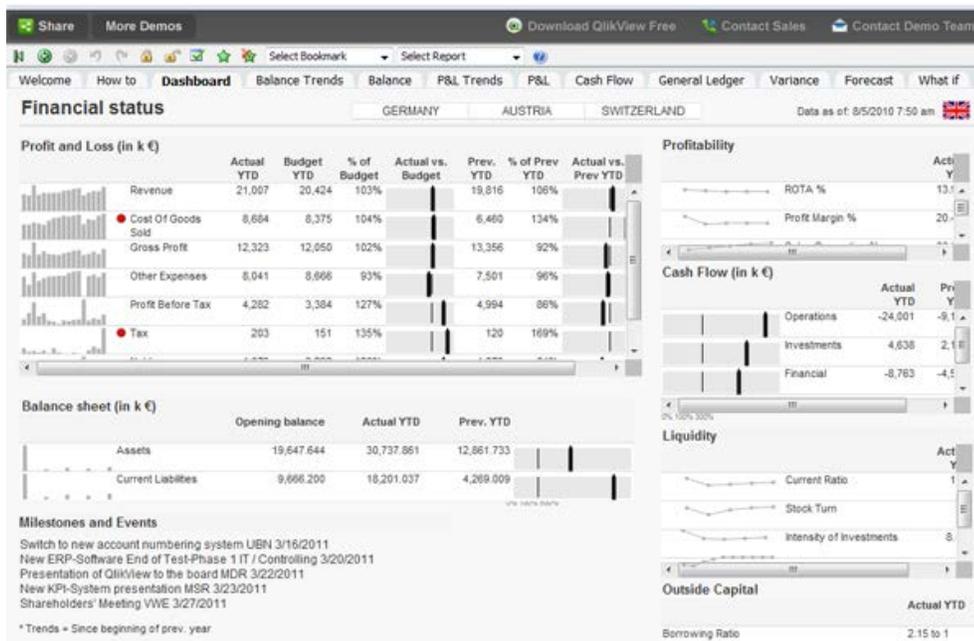
QlikView

The QlikView platform aims to bridge the gap between traditional BI solutions and standalone office productivity applications, enabling users to forge new paths and make new discoveries. QlikView infuses a broad set of new capabilities, analysis, insight, and value to existing data stores with user interfaces that are clean, simple, and straightforward.

[Find out more information](#) | Cost: Trial > £/\$ unknown | Tags: Statistical Analysis, Business Intelligence, Dashboard

Examples and references: [Demo Gallery](#)

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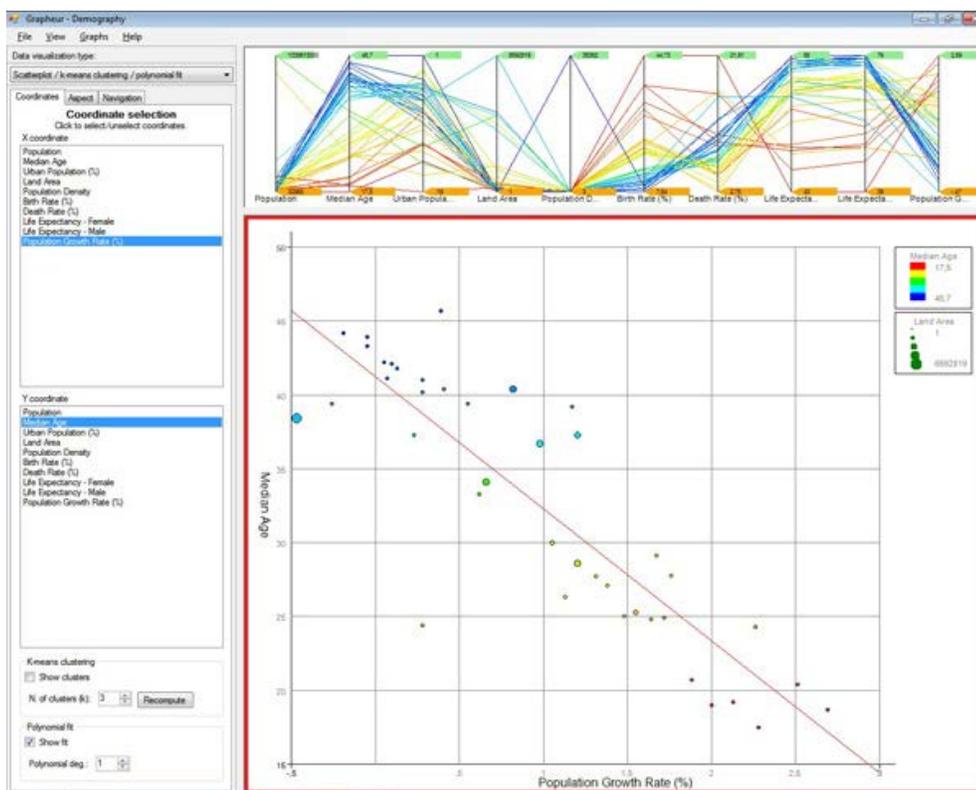
Grpheur

Grpheur is a reactive Business Intelligence tool integrating data mining, modeling, multi-variate analysis and interactive visualisation into an end-to-end discovery and continuous innovation process powered by creativity and curiosity.

[Find out more information](#) | Cost: Trial > £/\$ unknown | Tags: Statistical Analysis, Business Intelligence, Multi-Variate

Examples and references: [Demo Gallery](#)

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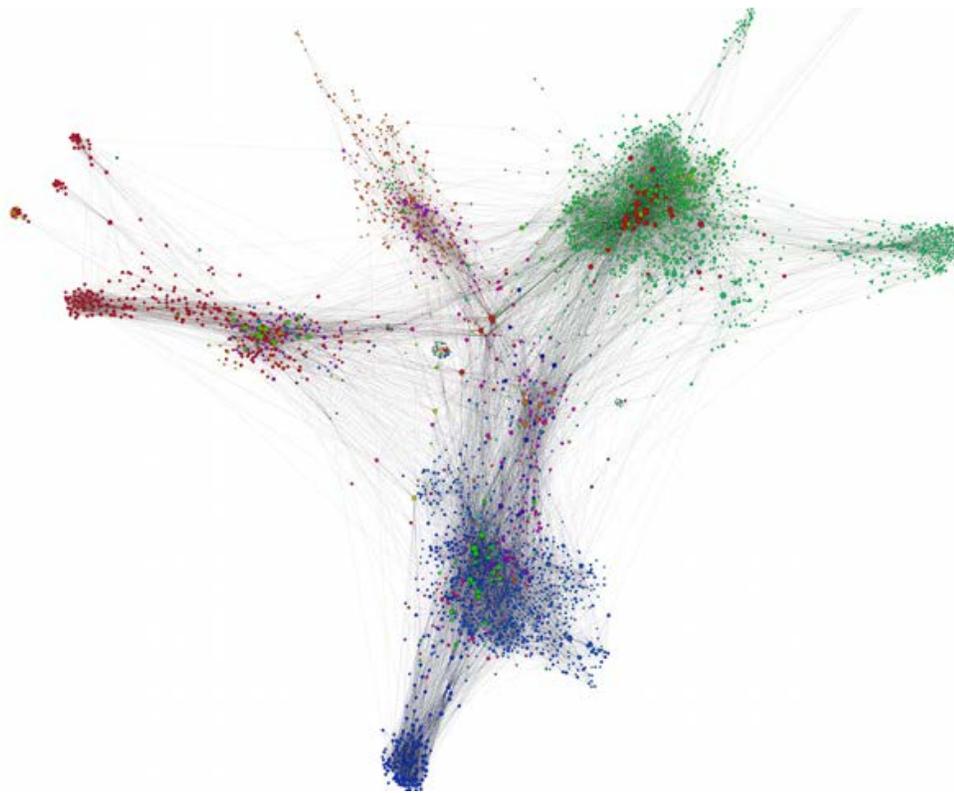
Gephi

Gephi is an open-source, free interactive visualisation and exploration platform for all kinds of networks and complex systems, dynamic and hierarchical graphs. It claims to be “like Photoshop but for data”, allowing the user to interact with the data representation, manipulate structures, shapes and colors to reveal hidden properties.

[Find out more information](#) | Cost: Free | Tags: Statistical Analysis, Business Intelligence, Complex Systems

Examples and references: [Demo Gallery](#) | [The VIZoSPHERE](#)

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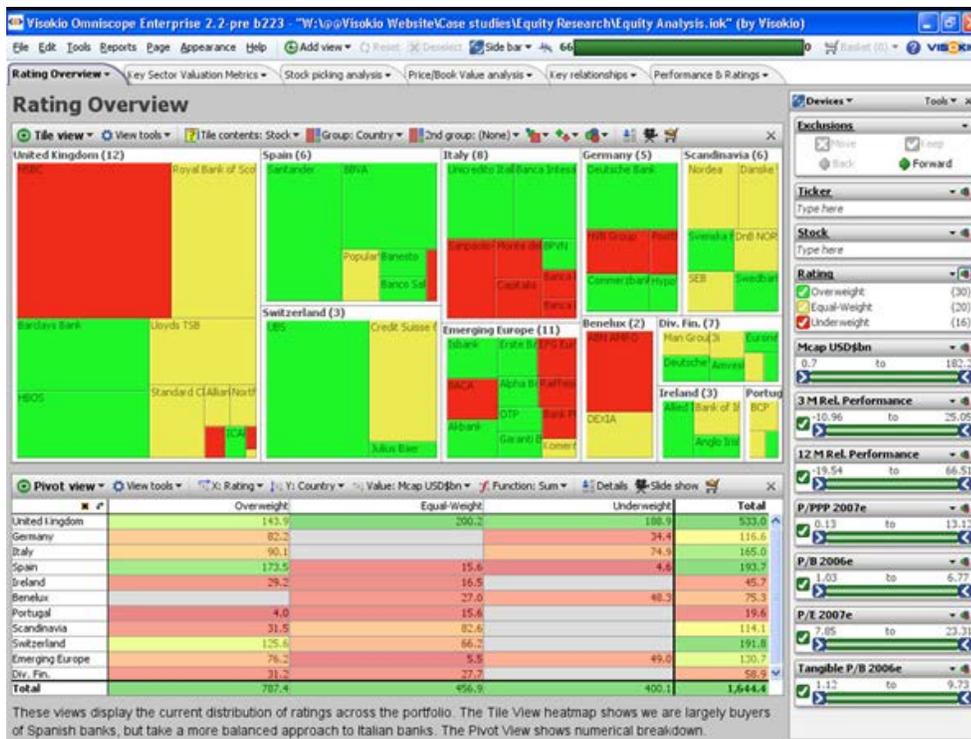
Viskio Omniscop

Viskio Omniscop is a versatile, multi-tab and multi-view interactive data analysis, filtering and presentation tool. It offers a powerful new way to visualise, explore and report on large tables of data – with related images, maps, links, and more – then lets you share your file with others using the free Viewer.

[Find out more information](#) | Cost: Trial > £/\$ unknown | Tags: Statistical Analysis, Business Intelligence, Multi-Format

Examples and references: [Demo Gallery](#)

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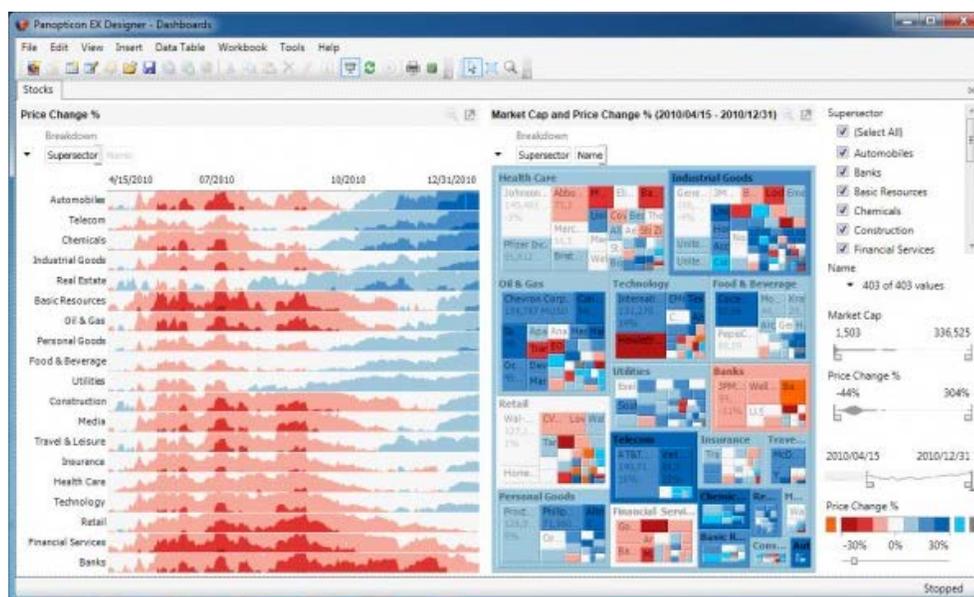
Panopticon

Panopticon data visualisation software supports rapid analysis of fast-changing and historical time series data sets. You can deploy it on the desktop or over the web — or embed it into your own enterprise applications. Originally focusing on real-time treemap visualisations, the product suite is now much broader encompassing traditional options such as bar charts, line graphs and an innovative time-series solution termed ‘horizon graphs’ and more contemporary solutions such as Stephen Few’s bullet graph and Edward Tufte’s sparklines. This creates a great variety of innovative and effective visualisations that can be combined into a single powerful, interactive dashboard display. Most importantly they employ best practice visual principles throughout their offering which stands them apart from other competitors.

[Find out more information](#) | Cost: Trial > £/\$ unknown | Tags: Statistical Analysis, Business Intelligence, Dashboard

Good examples and references: [Gallery](#) | [Review from Stephen Few](#) | [White papers](#)

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Notable Others...

Here are some additional suggestions you may wish to consider within this category of visualisation resources:

[Wolfram Mathematica](#) | Bring in your data, combine it with Wolfram Alpha’s ever-increasing store of knowledge, apply sophisticated symbolic and numeric analysis, and create state-of-the-art visualizations—all in one system, with one integrated workflow.

[Data Graph](#) | DataGraph is a simple and powerful graphing application for Mac OS X – a companion for Excel, Numbers or any of the big statistical packages.

[OmniGraphSketcher](#) | OmniGraphSketcher helps you make elegant and precise graphs in seconds, whether you have specific data to visualise or you just have a concept to explain.

[PLOT](#) | PLOT is a scientific 2D plotting program for Mac OS X designed for everyday plotting – it is easy to use, to create high quality plots, it allows easy and powerful manipulations and calculations of data and it is free.

[MATLAB](#) | All the graphics features that are required to visualise engineering and scientific data are available in MATLAB®, including 2-D and 3-D plotting functions, 3-D volume visualization functions, tools for interactively creating plots, and the ability to export results to all popular graphics formats.

[SPSS Visualisation Designer](#) | Easily develop and build new visualisations that enable new ways to portray and communicate analytics to others. No extensive programming skills are required to conceive, create and share compelling visualizations.

[STATA](#) | Stata is a complete, integrated statistical package that provides everything you need for data analysis, data management, and graphics – you get everything you need in one package.

[Visualize Free](#) | Visualize Free is a free visual analysis tool, providing the perfect solution for visually exploring and presenting data that standard office charting software cannot handle.

[Dundas](#) | Dundas Dashboard brings together all of the tools you need to build meaningful, interactive and fully customized dashboards in one easy to use platform.

[Wondergraphs](#) | Wondergraphs strives to be the best way to get and share insights from your data, offering free > premium set of online, graphical report design tools for analysts and businesses.

That completes the first part of this [collection of essential visualisation tools](#). Please leave any comments or feedback any suggestions you have to add to this collection or to enhance the detail presented above.



Related posts:

1. [Part 5: The essential collection of visualisation resources](#)
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March 17th, 2011 in [resources](#)

8 Comments

vwiggin March 17th, 2011 at 10:57 am

Thank you so much this is really helpful.
I'm looking forward to the rest!

ScipleNeuro March 17th, 2011 at 1:04 pm

This is EXACTLY what I was looking for!!!
Thank you so much!
I would also suggest PLOT (Even though it is not extremely flexible)
It is a freeware for mac, mainly for scientific data. But with a little practice and creativity you can generate beautiful visualizations.

Andy Kirk March 17th, 2011 at 2:25 pm

Thanks for the feedback guys. Hope to have the remaining parts compiled and published over the next week or so. ScipleNeuro, thanks for PLOT suggestion I'll look into that as I transfer the content from post to a permanent blog page.

Mat Richardson March 17th, 2011 at 2:41 pm

I would definitely also suggest Many Eyes as another free online offering in the same realm as Tableau:-

<http://www-958.ibm.com/software/data/cognos/manyeyes/>

And for another desktop solution I'd have added 'R', which I expect will appear a lot more in these kinds of blogs in the future.

Mat

Andy Kirk March 17th, 2011 at 2:44 pm

Thanks Mat, you'll see those two crop up in parts 2 and 4 of this collection...

Joshua March 24th, 2011 at 4:47 pm

Great post. I would have separated Flash and AfterEffect into a "making it pretty" category. They are not meant to do data visualizations, just visualizations, and as such, are quite hard to use. But great post non the less.

Andy Kirk March 24th, 2011 at 7:14 pm

Many thanks for the feedback Joshua. I take your point and understand where you're coming from. Whilst there are frustrating applications of Flash and AfterEffects being used on projects simply for aesthetic value, there are equally (especially in Flash's case) many wonderful examples of creativity and interactivity being deployed to maximise the information exchange. I guess the purpose of this series is to present the existence and capability of the tools that, in the right hands, provide visualisation designers with the best means to optimise their practices, regardless of whether they are commonly used them to best effect.

» Collection March 31st, 2011 at 6:59 pm

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