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Work & Careers

A love of maps should mean using fewer to illustrate data better

When one illustration is not enough, and when you should use none at all

The Chart Doctor



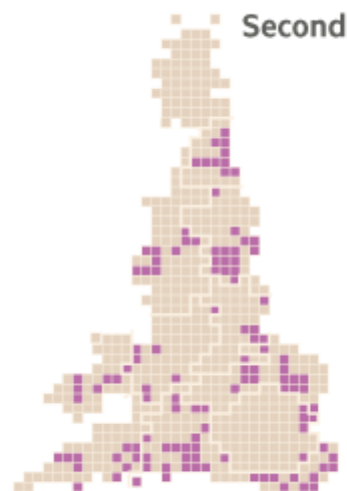
9 HOURS AGO by: **Alan Smith**

As any visitor to my house will be able to tell, I love maps. Our living room is full of them. A [Soviet map \(https://www.wired.com/2015/07/secret-cold-war-maps/\)](https://www.wired.com/2015/07/secret-cold-war-maps/) of Portsmouth (complete with Cyrillic labels) gazes across the room at old maps of South America and Italy. A large Mercator world map occupies an entire wall while Charles Minard's celebrated map of Napoleon's ill-fated Moscow campaign hangs in the hallway.

Judging from the reaction, I am not alone. And with the US election imminent, maps full of data will soon be hard to avoid as news organisations attempt to paint a picture of the political lie of the land.

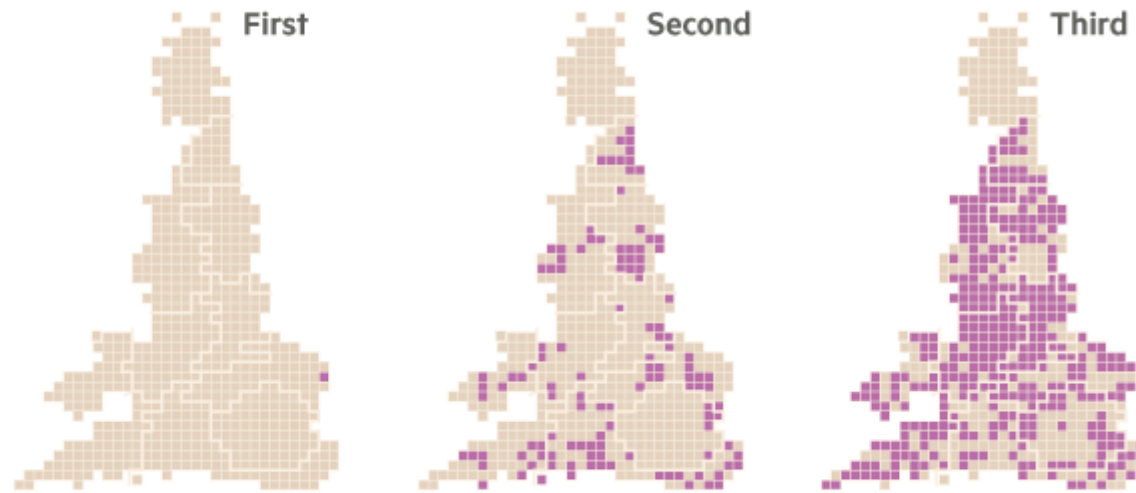
Making the right maps

Sometimes one map is not enough. Last year, for a Financial Times article focusing on Ukip's challenges after the UK general election, my colleague Chris Campbell worked on a map showing the party's second place finishes. The map was designed in the [cartogram](https://en.wikipedia.org/wiki/Cartogram) (<https://en.wikipedia.org/wiki/Cartogram>) form often used for political maps — rather than prioritising geographical accuracy, it represents the constituencies as squares shown equal in size to reflect their equal value in the House of Commons. Those shaded purple show where Ukip finished second.



Having completed the map, Chris realised that this, by itself, did not provide enough information because a second-place finish is ambiguous — for example, it could be seen as either a good thing for Ukip if they were expecting to finish third or a bad thing if they were hoping to win the seat.

Chris extended the graphic to include additional maps of Ukip's first and third place finishes. This revealed a lot more geographical information — the solitary win in Clacton, swaths of third-place finishes across much of the UK, a general absence in Scotland — but still some lingering questions. For example, what about the London-shaped hole in Ukip results? And how did the party's performance compare with others, particularly the Liberal Democrats, Britain's traditional third party?



So Chris tried a full set of first, second and third place maps for all the main UK-wide political parties — 12 maps in total. Suddenly [the final graphic \(http://next.ft.com/content/e789b666-4b44-11e5-b558-8a9722977189\)](http://next.ft.com/content/e789b666-4b44-11e5-b558-8a9722977189) became compelling enough for it to assume central position in the story. Readers were invited to linger on the maps and discover any number of geographical patterns in the election results themselves. Maps in “discovery mode” like this are often irresistible.

REDRAWING THE POLITICAL MAP

Ukip gears up for offensive against Labour in its northern heartland

Winning back support will be one of the most important challenges for the next party leader

JIM PICKARD
CHIEF POLITICAL CORRESPONDENT

The UK Independence party is returning to Doncaster this autumn for its annual conference as it seeks to seize ground from Labour in northern England.

The election result on May 7 seemed an anticlimax for Ukip. It secured just one seat in Clackton and leader Nigel Farage failed to become an MP.

But the party finished second across the north of England and damaged Labour in countless seats. It took nearly a quarter of the votes in the Doncaster North constituency of Labour's then leader Ed Miliband.

Repelling the Ukip northern insurgency will be one of the biggest challenges for whoever wins the Labour leadership race, along with clawing back support in Scotland and southern England.

Ukip, like the Scottish National party, appeals to many in struggling white working class communities, whose children leave school with worse qualifications than their peers in any other ethnic group. In the mid-1980s one in five people worked in manufacturing. Now it is one in 12.

A lot of Ukip voters felt a sense of humiliation because their traditional jobs had gone, and their status with it.

The political map of England and Wales shows how Labour strongholds almost perfectly match towns with steelworks, coal mines and factories: many of which are closed.

Ian Austin, MP for Dudley North, says: "Britain today is massively different to Britain in the 1960s or even the 1980s. Labour has got to change with it."

"People see in us a party that is out of touch," says Andy Burnham, a leadership candidate. "We have lost our emotional connection to millions."

Dan Jarvis, a senior Labour MP – and supporter of Mr Burnham – warned at the weekend that Labour had been "in denial for too long" about the threat from Ukip.

When Dennis Skinner, a leftwing veteran MP, entered parliament in 1970 he was one of 44 former miners there. Now Labour MPs are more likely to have worked as special advisers in the "Westminster bubble".

Gawain Trowler, Ukip's spokesman, says Labour has failed to "water its roots" in the heartlands for years.

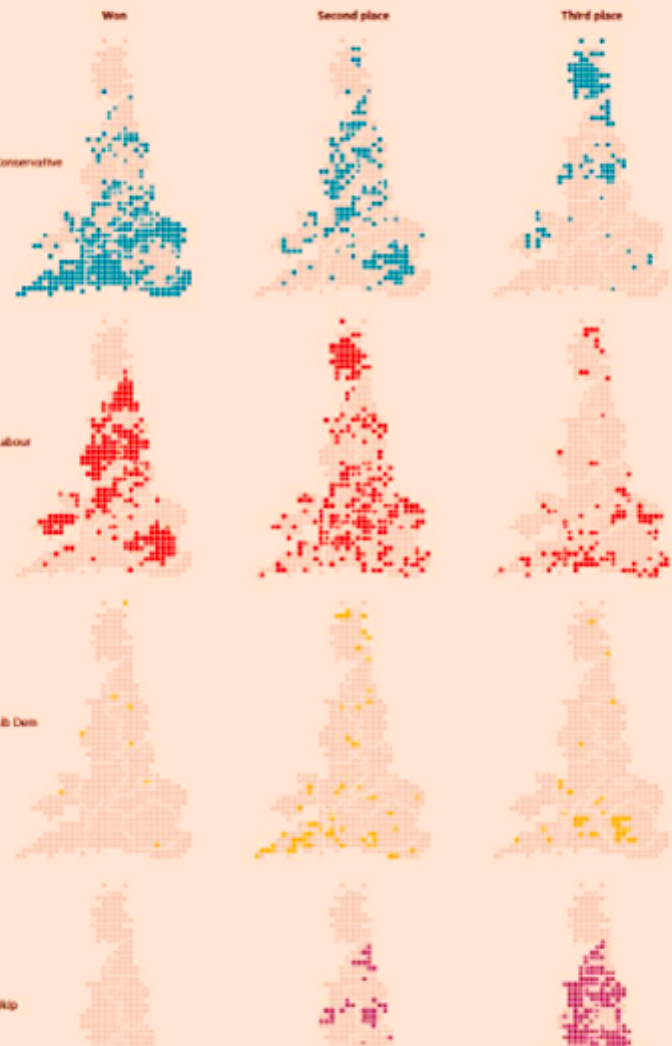
"Even Kinnock was seen as a metropolitan figure. You have to go back as far as Foot or Callaghan to have someone who really listened."

Labour's Rosemary Davis was defeated in Southampton Riven by the Tories after a rally to support her.

The lay of the land

2015 election results

Seats won and runners up



ruling out a referendum on EU membership right to the end.

"It was a mistake not communicating with people who care about immigration and Europe, in fact I think it cost us the election," says Graham Stringer, a Labour MP.

"They [Ukip] picked up support in northern Labour seats even where they didn't have much contact or knocking on doors," says Matthew Goodwin, an academic at Nottingham University.

Labour's pessimists now look fearfully to Scotland as a prelude to what could happen in other former industrial heartlands.

Some party figures fear the EU referendum could crystallise hostility against the Westminster establishment, including their party, once again.

Senior Ukip figures are hoping for an "SNP effect": where even if they lose the vote, their party becomes the main rallying point for eurosceptic voters who dislike migration. "We may end up losing the referendum but winning the vote, like what happened with the SNP," says Aron Banks, a millionaire Ukip donor.

Labour insiders are alive to the danger of the party appearing part of the Westminster establishment yet again.

Mr Stringer says he fears his party will shed support for "blindly" supporting a Yes vote come what may.

New Labour was slow to notice the rising sense of resentment in its heartlands over Europe and immigration.

As wages fell 10 per cent in real terms during the recession many British workers increasingly blamed immigrants, who became a handy scapegoat. "It is our Achilles heel," says Len McCluskey, head of the Unite union.

FT **Voting debate**
Nick Pearce, director of the FPPS think tank, and FT political correspondent Khan Stacey discuss potential effects of a Corbyn victory with Frederick Stedman, comment and analysis editor
fcom/votes

Liz Kendall, the most Blairite of the leadership candidates, says her party was too "casual" about the consequences of globalisation on "alienated" former voters.

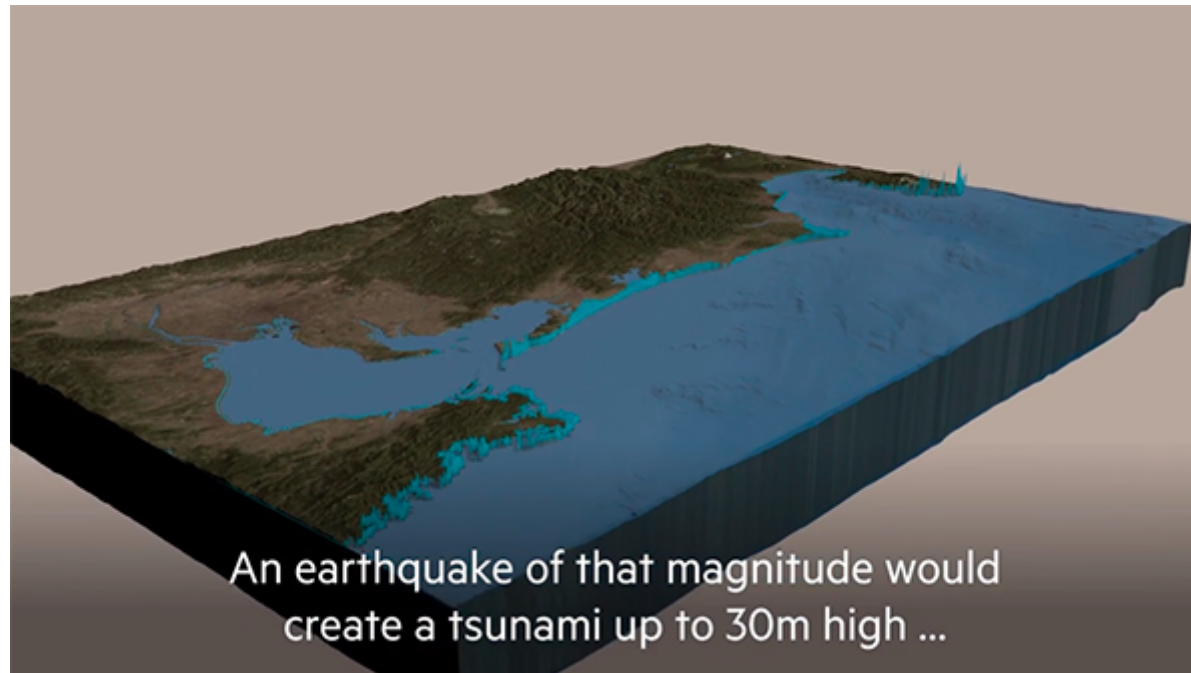
But she says there is no "magic rewind button" to return Britain to the past.

Jeremy Corbyn, the Labour leadership favourite, announced the creation of a new group called "Northern Futures" to promote the region. He told supporters at rallies in Sheffield and Manchester that he would be a champion for the north, ensuring its voice was heard in Westminster.

Mr Corbyn says the key to winning back lost voters from Ukip is more about "giving people hope" and less about individual income. He says it is about



As well as political maps, we can also use topographical maps for local stories. Earlier this year, Steve Bernard, another colleague on the FT graphics desk, produced a striking animated map to illustrate what might happen the next time a big [earthquake hits Japan](https://ig.ft.com/sites/japan-tsunami/) (<https://ig.ft.com/sites/japan-tsunami/>) — this rapidly became the FT's most-watched video on Facebook, highlighting the broad appeal of maps when used to tell a compelling story.



When maps are the wrong route

However, maps are not the solution to every visualisation problem with geographical data. As the [FT Visual Vocabulary](https://github.com/ft-interactive/chart-doctor/blob/master/visual-vocabulary/Visual-vocabulary.pdf) (<https://github.com/ft-interactive/chart-doctor/blob/master/visual-vocabulary/Visual-vocabulary.pdf>) highlights, “spatial” is just one of many possible relationships in data and maps and should be used “only when specific locations or

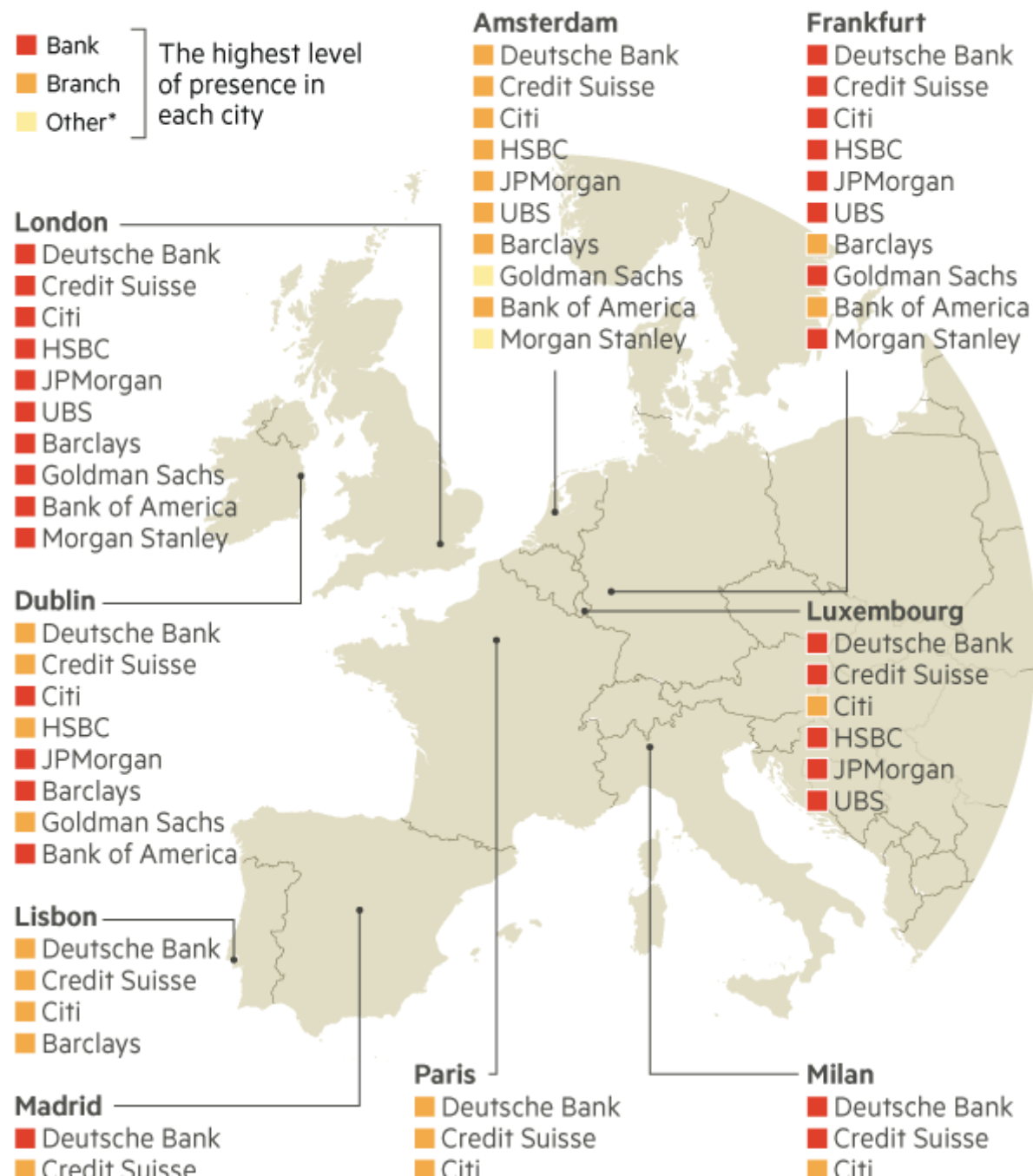
geographical patterns in data are more important to the reader than anything else”. Ignore this advice and maps may end up leaving readers lost.

Recently, some painstaking research by Laura Noonan, the FT’s investment banking correspondent, produced a data set of top banks’ presence in eight cities lining up to take London’s role as the EU’s banking centre. Nearly 5,000 entities, each allocated to one of the eight cities.

When it came to visualising this data, early suggestions revolved around an interactive map — hover over a city to discover more information about the banks in the city.

However, Martin Stabe, the FT’s head of interactive news, has already warned about [defaulting to interactive graphics \(http://next.ft.com/content/c62b21c6-7feb-11e6-8e50-8ec15fb462f4\)](http://next.ft.com/content/c62b21c6-7feb-11e6-8e50-8ec15fb462f4). And putting this information on to a map would presume (incorrectly, I hope) that our readers either did not know where Madrid, Paris, Dublin or Amsterdam were — or that the distance between the cities was of importance to the story (it is not).

The Brexit banking matrix: The contenders lining up for London's crown





* Broker dealer branches are included for Morgan Stanley and Goldman Sachs as they are a significant part of their European network

Deutsche Bank has a London subsidiary but its main entity is a branch

Source: FT research

FT

Instead, we focused on patterns in the data we wanted to draw out and identified two key aspects: the strength of the general banking presence in each city and the strength of specific banks (Deutsche Bank, Barclays etc) across all of the cities.

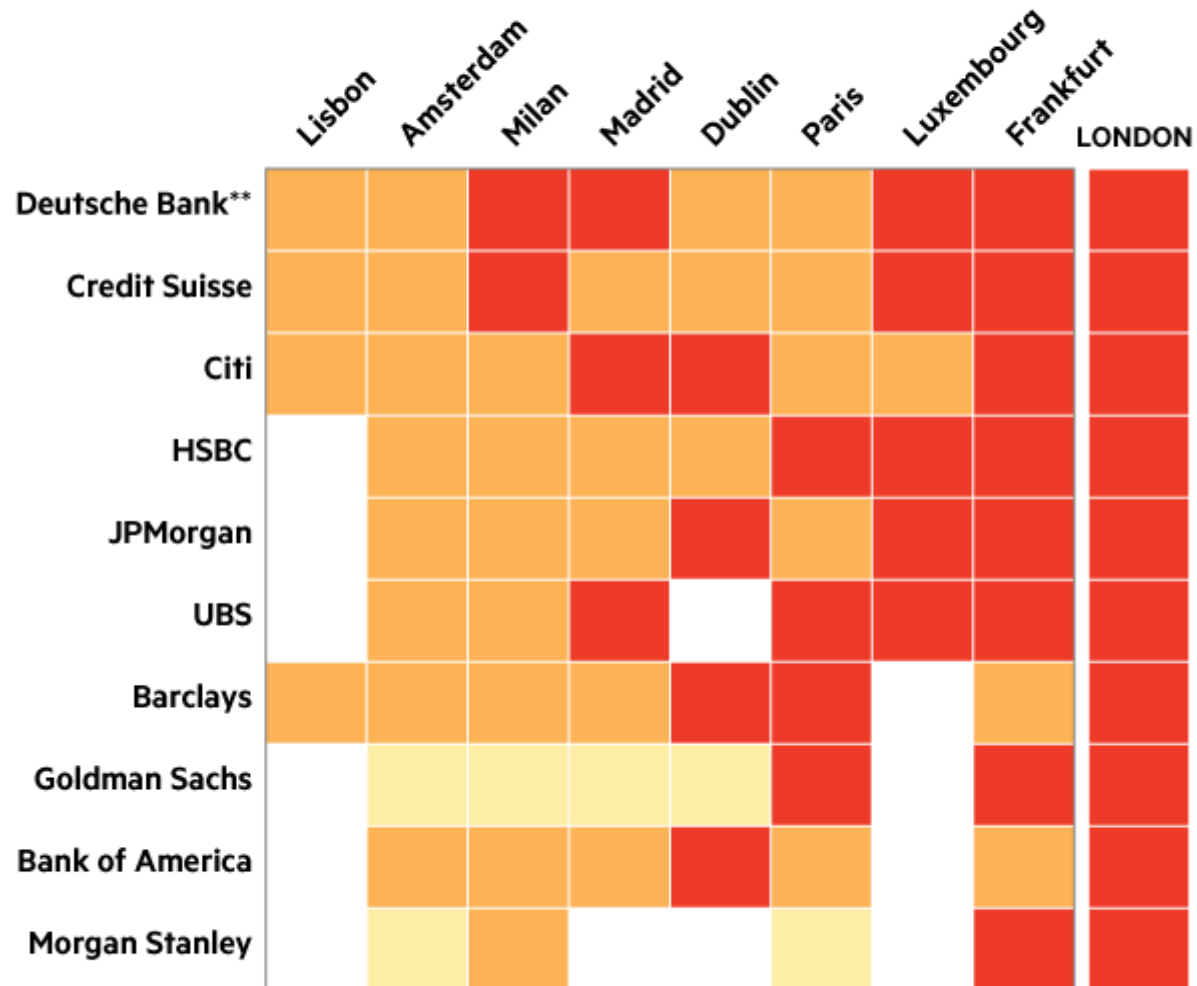
It was this latter requirement that ended discussions of a map, because readers would have to memorise bank activity in locations and scan from city to city. Instead, we looked to another part of the Visual Vocabulary, and discussed a simple grid design for displaying the relationship between banks and cities.

The draft grid aimed to show the highest level of banking presence in each city. For example, a bank having a fully formed subsidiary in the city would be shown on the grid as a higher level of presence than just having a branch or nothing at all. Sorting the data — by the highest level of presence — in both rows and columns helped to highlight the key patterns on the grid.

I showed the draft to a few people — a useful suggestion from some was to add the data for London itself, which would provide useful context about how the “challenger cities” matched up. Feedback from colleagues on evolving graphics is valuable; it can validate your design decisions — and they may well see something that you have missed.

Final polish included adding some detail on how to read the chart (columns relate to cities; rows relate to banks) so readers would know how to interpret it.

The Brexit banking matrix: The contenders lining up for London's crown



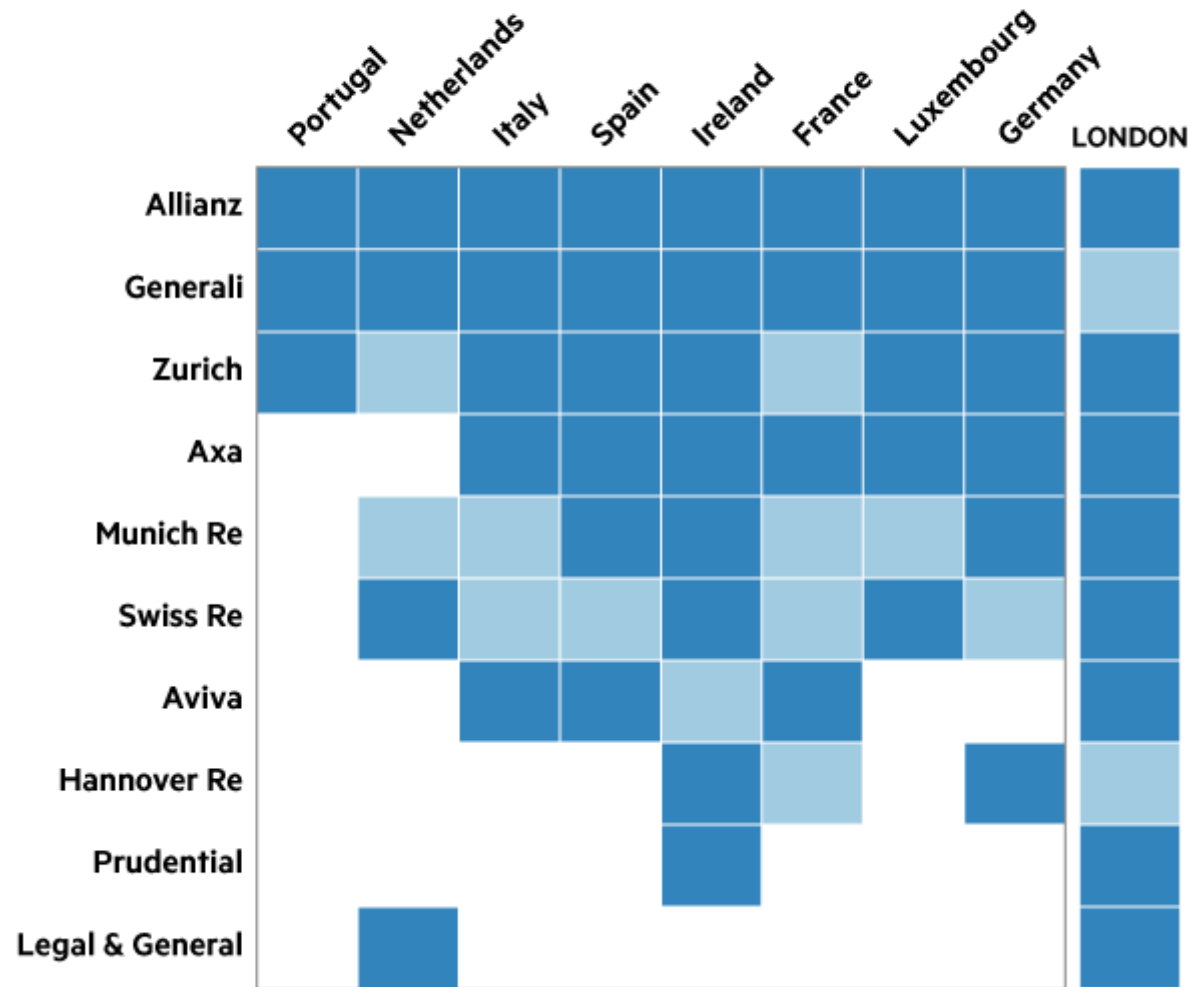
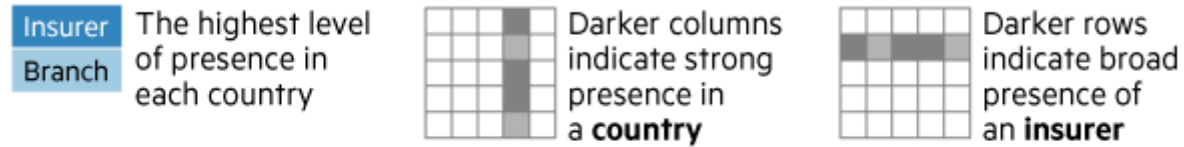
* Broker dealer branches are included for Morgan Stanley and Goldman Sachs as they are a significant part of their European network

** Deutsche Bank has a London subsidiary but its main entity is a branch

Compare the final version of the graphic against how the same information would have looked presented on a map. As much as I like looking at maps, the gridded version is far more effective at communicating those patterns in the data we needed to draw out. In particular, look at how hard it is to identify the trends in a specific bank on the map.

Similar information on insurers was compiled by Oliver Ralph, the FT's insurance correspondent, which allowed us to [reuse the grid design \(http://next.ft.com/content/43686054-8c94-11e6-8aa5-f79f5696c731\)](http://next.ft.com/content/43686054-8c94-11e6-8aa5-f79f5696c731) with that data too. Having learnt how to read the first chart, we felt readers would find the second one even easier to digest.

The national grid: Europe's biggest insurers



FT graphic Alan Smith Source: FT research

FT

We at the FT are not alone in being sceptical about producing maps in volume. Matthew Ericson, associate editor at the New York Times, [wrote \(http://www.ericson.net/content/2011/10/when-maps-shouldnt-be-maps/\)](http://www.ericson.net/content/2011/10/when-maps-shouldnt-be-maps/) a few years ago about maps that he felt should not be maps.

So as lovers of maps, we are keen to create beautiful ones whenever they offer a crucial addition. Truly appreciating them, however, means not defaulting to a map just because you can. Like a lot of things in the world of data visualisation, the right way to use them is to follow the mantra “fewer, but better”.

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