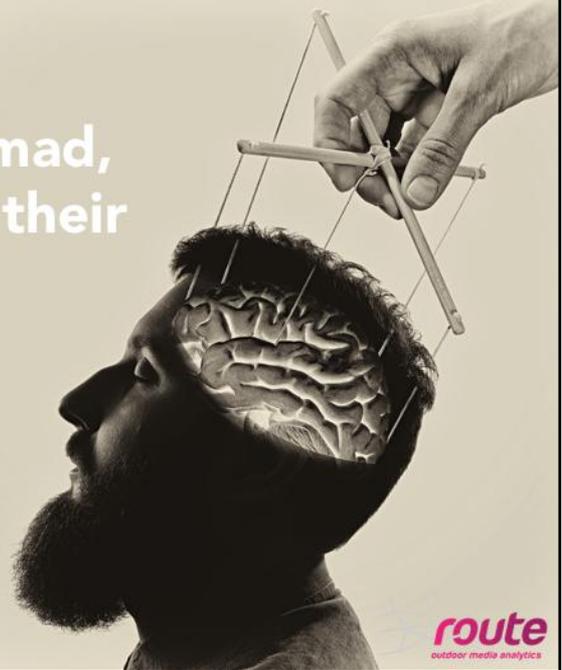


“Almost everyone is mad,
but some can control their
madness”

Euan Mackay
Route Research



Hello, In the next 9 and a bit minutes, I'm going to talk to you about why Route took the seemingly crazy decision to go evidence first and forsake incorporating super trendy mobile operator data into our audience measurement calculations while we were evolving our methods.



Route operates in the out of home advertising market.

To sell out of home advertising there is a need to measure who sees the ads and for how long they see them.

In order to measure advertising exposure, you first need to be able to precisely understand people's out of home behaviours...

Route has been doing this since 2013.

We are evolving to stay best in class



Last year saw us sign a new contract with Ipsos that will take us through to 2023.

As part of this, we decided to evolve, update and modernise our methodology to ensure that we remain fit for our purpose in providing the best data possible to the industry.

Our final solution required more investment than ever before from our stakeholders.

We opted for a solution that included the best in class technology and a world first in people tracking

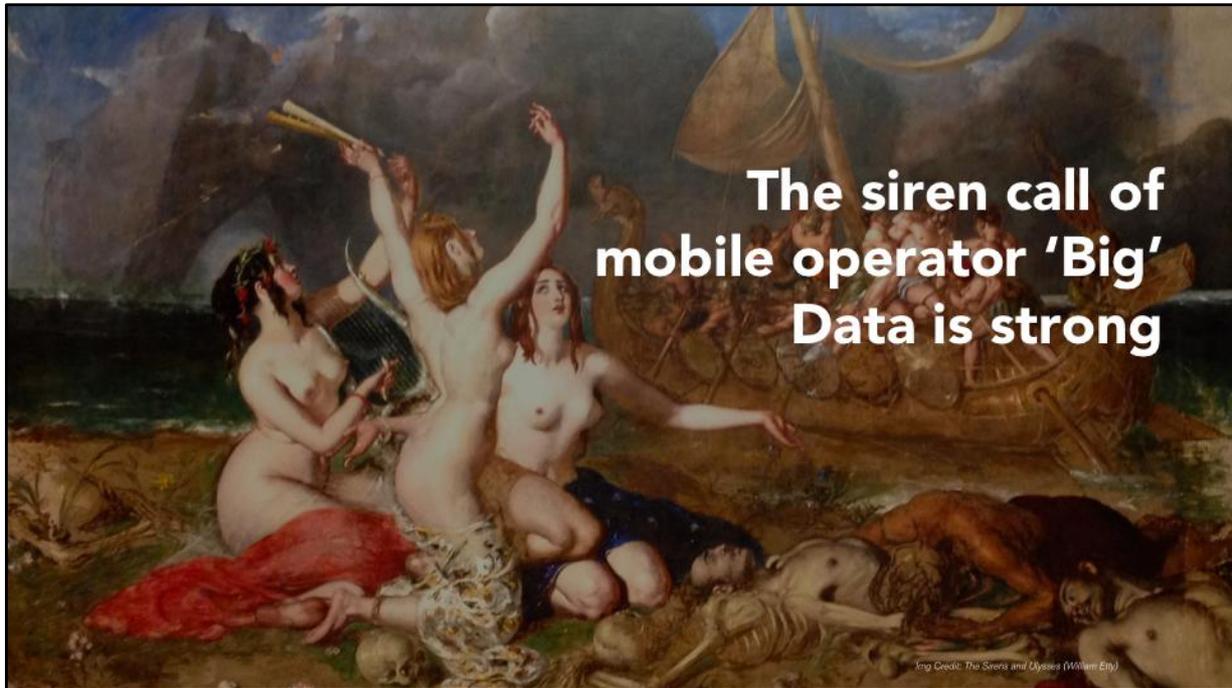


Today, there are many ways to measure people's movements and not all are as obvious as Craig Revel-Horwood.

Recently, many of the sensors that are typically used for measuring people have been incorporated in your mobile phone.

And, the mobile operators have access to the sensor data and are willing to part with it, at a price.

This makes the mobile data seem like a potentially useful data source in determining who does what when out of home.



On paper, the siren call of mobile operator data has lots going for it...

There's lots of it – it comes in huge volumes

It's granular – you can identify individual devices

It's time stamped – so you know when devices do things

It's quick – and can offer "real-time" insights

It's continuous

It's passive

It's digital

It's sexy

It comes from a mobile phone which means it holds a certain trendiness kudos...



Yet we decided against it.

We're a bit contrary and don't really go in for fashion.

We're a JIC.

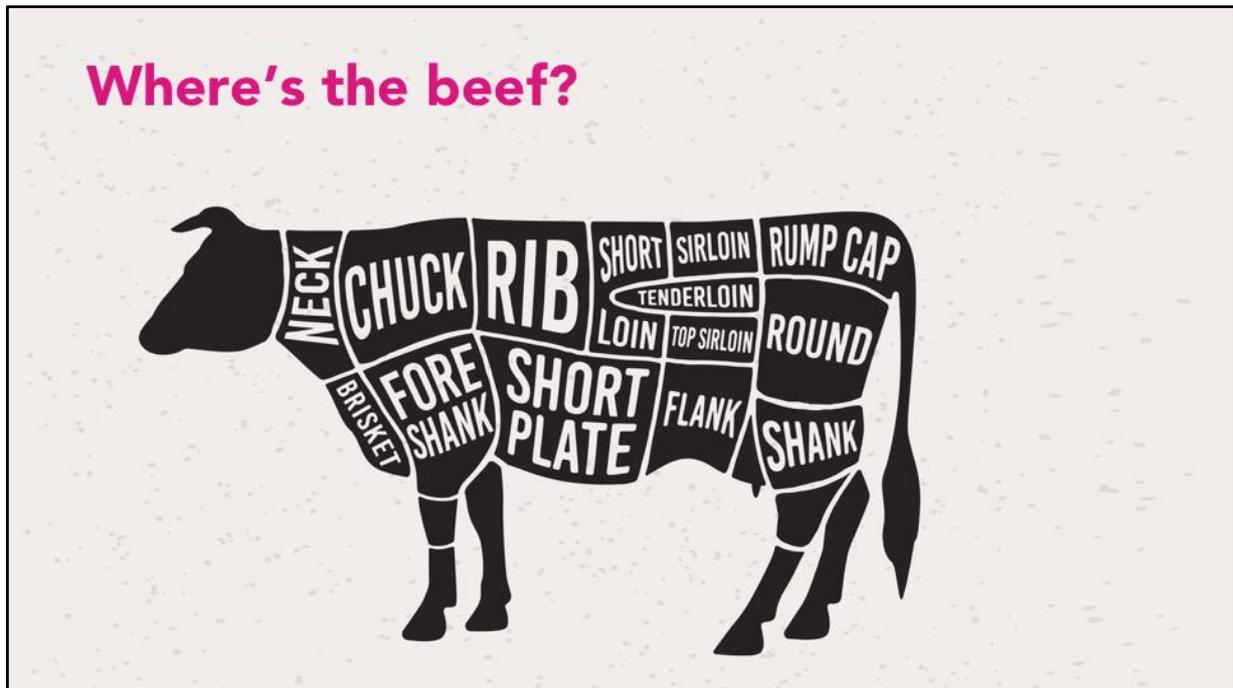
We're data purists...

We can't compromise on the quality of our data just because it might be more convenient to use data already in existence.

Instead, we need to strive to produce the best data possible.

With this, we decided not to choose the easy option.

We chose to collect the data ourselves.



Why have we rejected it? Think for a moment, if you will, about the meat farming industry...
<apologies to any vegetarians, vegans, freegans or fruitarians>

You have a prize cow. It's all fattened up and ready to be slaughtered.

To make the most of it, you want to turn it into as much of the highest value steak that you possibly can. But you also know that in the butchering process, not everything becomes steak. Some meat may fall by the wayside and onto the floor.

With these offcuts, you have two options.

1. You can bin them.
2. You can sell them onwards as mince.

The mobile operator data is effectively that mince. It's an offcut, a bye-product of some other core process that has become available by chance. For mobile operators, the steaks are the 24 month iPhone X contracts. The offshoot of these are the data generated showing where the devices connect onto the network.

As with much "big data", the mobile operator data was not designed specifically for the purpose that we want to use it for. That's not to say it's not got value for marketing purposes – it's just that it's not necessarily right for us in what we're doing right now in terms of measuring people. Upon looking at all the evidence we had, there were four core reasons why we opted against using the mobile data...



While the trendiness, volumes and speed of mobile data were certainly appealing to us, fundamentally, the accuracy that it can offer was less precise than we need.

Mobile operators use cell tower triangulation in order to locate devices on the grid. While this is effective in connecting people to their network and can be used to show that devices are near an ad, the evidence we were presented with demonstrated that it was only accurate to a distance of about 150 metres.

It's not really precise enough for our purposes.

We need to be able to determine whether people are close enough to an ad to see it and we need a solution that works equally for a huge jumbo digital screen or a paper poster stuck on a lamppost.

The mobile operator data also can't log location as frequently as we'd like as if we were checking for GPS locations every second it would kill battery life. This means that there are black spots in the data and a lack of continuous reporting, so again compromises would need to be made on the quality of our data which we were increasingly uncomfortable with.

In the end, we put evidence first and went with rigour over something a little more de rigueur.



A wise man once said “Never set out on a journey using someone else’s donkey”... While he was certainly a little odd, his words rang true in this instance.

Collecting the data ourselves means we become masters of our own destiny.

It ensures that we can remain independent.

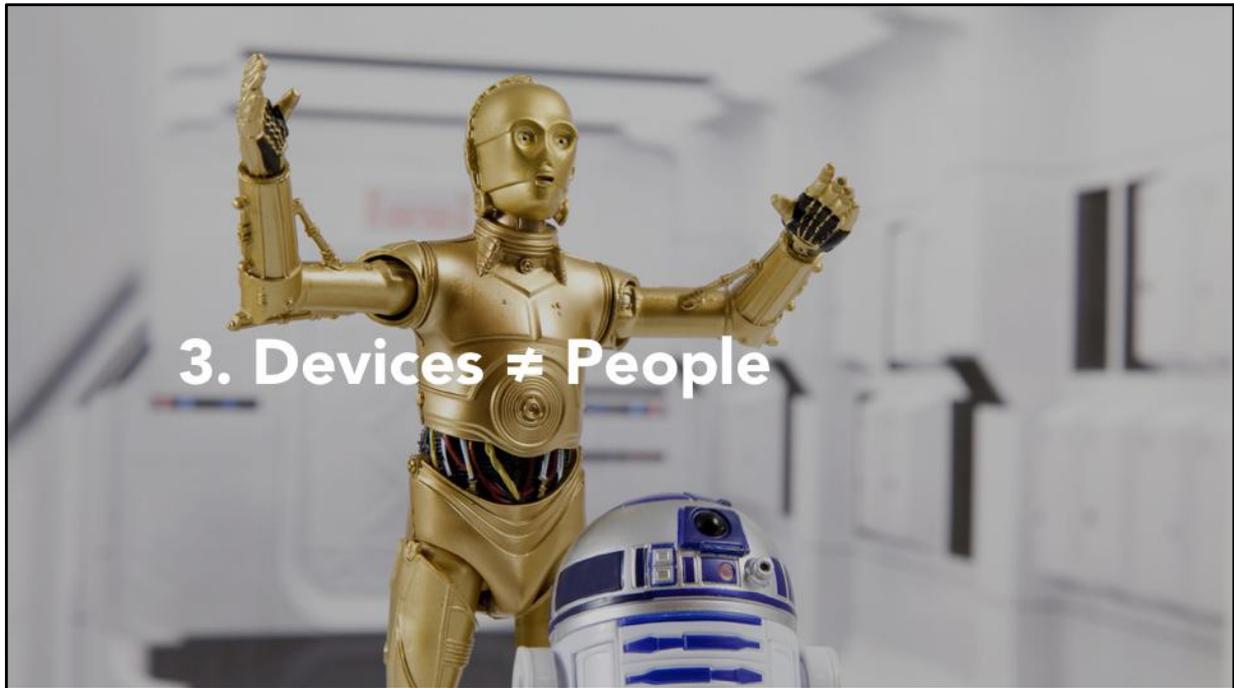
It means that we’re not as reliant on the continued availability of third party data to entirely underpin our currency - (that said, we do still make use of third party data for our Traffic Intensity Model).

Collecting the data ourselves, also ensures that we have control over the data which we produce.

It means that we can collect the exact data which we need and we can design it specifically to fit our purpose rather than bending the currency to fit the data that is already in existence.

This gives us flexibility and capacity to change things if and when we require without being beholden to the data owners and their existing data formats.

In essence we are underpinning the continuity of the data going forwards.



Ultimately, advertising is about selling stuff to people.

And as obsessed as we all are with the latest gadgets and gizmos, devices don't buy things, people buy things.

So, for us, it's important to have people at the heart of what we do.

It is vitally important that **we know exactly** who who we are speaking with.

It's also important that **they know what we are doing** too

Mobile operator data falls a little short on this as it gives a measure of where devices are not where people are, which leads to the final stumbling block...



There are issues with transparency in the mobile data.

By this I mean that there are a lot of unknown modelling processes going on behind the scenes in order to convert devices to people and to assign demographics to those people.

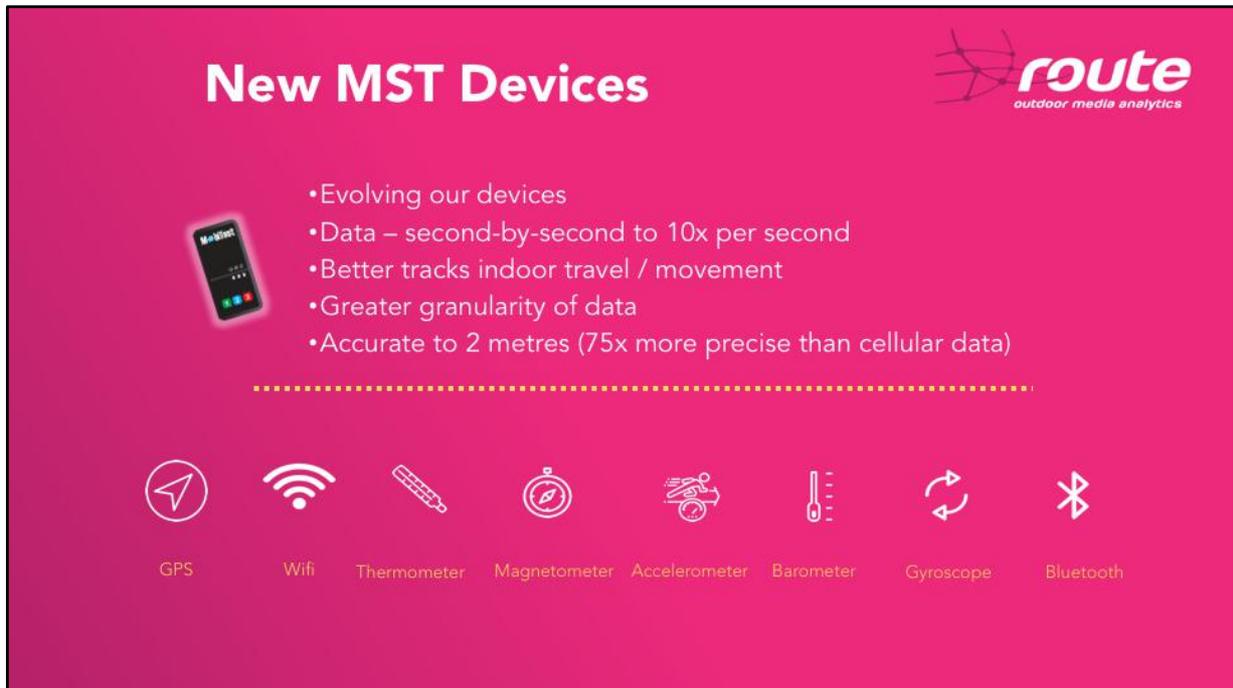
The issue is not that there is data modelling happening, but rather, the lack of transparency as to the processes that are being used.

This potentially moves us to a murky world where data quality and validity become difficult or indeed impossible to judge.

Again, in our role as a JIC and arbiters of data quality this puts us in a very uncomfortable position.

By gathering our own data, speaking to real live people, and having full clarity on the data inputs we use, we avoid any black boxes and know exactly how our audience estimates are arrived at.

Given this, the evidence for using mobile operator data just didn't stack up.



New MST Devices



- Evolving our devices
- Data – second-by-second to 10x per second
- Better tracks indoor travel / movement
- Greater granularity of data
- Accurate to 2 metres (75x more precise than cellular data)

GPS Wifi Thermometer Magnetometer Accelerometer Barometer Gyroscope Bluetooth

So what did we do instead?

We've upgraded our people meters to take advantage of Blade-runner-eque technology.

They may look like a pager from 1992, but they are packed full of the most up-to-date sensors each of which collect data on a second by second basis.

We're collecting data on where people are, when they pass bluetooth or wifi beacons. We know the direction they are facing, the speed they are travelling, when they twist and turn. We know the air temperature to tell when they are inside or out, we know the air pressure to determine their height and we collect this continuously, second by second.

These measurements enable us to locate participants no matter where they are, even when they are out of GPS range and we can pinpoint them to an accuracy of 2 metres (or 75 times more accurate than the mobile operator data in case you were counting).

This means that we can track people whether they are inside, outside, underground, overground or wombling free.

And with more data being collected, we have more scope to improve the accuracy of our models.

What this gives us...

Average time spent in Paddington
Station: **19mins 14 seconds**

% of time in Paddington spent
walking: 8%
waiting : 29%
wending : 63%

% who enter Paddington via:
road: 53%
tube: 14%
rail: 33%

Average distance walked in
Paddington: **206 metres**



71% of visits to Paddington involve switching levels

Img Credit: Paddington: The Movie (via [City-Data.com](#))

The new devices have been in the field for a year now and we are starting to reap the rewards and beginning to see the first data coming through.

The first environment to benefit from this new data will be railway stations.

Looking at the initial MST data for Paddington station we now know:

- That the average time spent in the station is 19minutes 14 seconds
- That 8% of this time is spent walking purposefully from A to B, 29% is spent waiting around (looking at the outdoor ads) and the remaining 63% wandering about or shopping (wending).
- We can also now tell that 71% of visits to the station involve switching levels, so this may be going down to the tube or up to the shopping areas.

We're now in the process of building these new data into our audience measurement calculations so as to improve the accuracy of our models.

This will first take effect in Release 28 of Route which will be published in September next year.



Summary



- Route rejected the siren call of mobile operator “big” data in favour of:
 - Going **evidence-first** and prioritising **rigour** over **de rigueur**
 - Ensuring **independence** and favouring **control** over **convenience**
 - Safeguarding **quality** by choosing **transparency** over black-box solutions
 - Putting **people** at the heart of the approach
- In essence, following **core JIC values** while still **quietly innovating**

So, to summarise,

Route rejected the siren call of mobile operator data, despite it offering huge volumes, offering quick turnaround and also being readily available (at a price).

Instead, we’re collecting our own bespoke data rather than settling for convenience

We’ve upgraded our meters that enable us to track people above and below ground, inside and out to an accuracy far greater than any other means

We’ve prioritised data quality and gone for rigour over de rigueur

And we’re favouring transparency in our method over black box solutions to ensure data validity

In short, we’re placing our JIC values at the heart of everything we do, so as to to ensure that we continue to provide accountable, transparent and objective evidence of who sees OOH ads.

Thanks.

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but some can control their
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