

# Moving Ordnance Survey Forward - Interview with Nigel Clifford



Since the beginning of June 2015, Ordnance Survey GB has had a new CEO. GW met him in London recently. Nigel Clifford comes to the job via a career covering the NHS, e-commerce, British Telecom and other mobile players.

I met Clifford in OS's Geovation Hub in the City, a buzzy building which also houses Catapult, a body promoting future and smart cities. Tucked away at the end of a large open plan office full of enthusiastic young innovators, we had a wide-ranging discussion for over an hour that included his views on whether geospatial is special, OS's strengths and weaknesses, where it needs to go next, its international activities, big data mining and how far OS should be going in embracing that and the new data sensors, and about the 'fabric of the brand'.

## How Attractive is OS?

What had attracted him to the job? 'I'm a geographer so there's a natural affinity' and it soon became clear to him as they moved deeper in discussions about the job that he realised, 'I know you as a provider of maps but I understand now that you're a digital provider of content with a broad commercial footprint from the emergency services right the way through to helping SME's and start-ups – a fascinating blend of ingredients.'

Although he's a geographer and fellow of the RGS this is a rather general qualification. Does he feel confident in fulfilling the statutory role as advisor to government on geospatial matters? He paused. 'There is a point in your career, fairly early usually, when you realise that you can't know more than everyone reporting to you. That's been present in my career since I was 26 or 27. At the age of 32 I was put in charge of six teaching hospitals, so would I advise the Royal College of Surgeons on their practices? No, but did I know how to synchronise together a complicated set of functions, specialisms and vested interests? Yes. It's not like being the Poet Laureate where all you have to do is produce pieces of poetry, it's more of a team effort.'

## Brand?

So what had he discovered about the OS's much-vaunted brand and reputation, based perhaps too readily on the public's enthusiasm for printed Landranger maps (now with free digital access) and which account for barely 10% of OS's total sales. Was it time for a change? Does OS, like IBM or Google, have enough brand definition to continue in its present form?

'I think if you were an alien dropped into this you would find huge brand recognition which is almost universally benign. People may not be able to explain what Ordnance means but they'll probably know what survey means. That is a very, very valuable asset for us.'

Okay, so how do you think you can build on the existing strengths of OS, and what do you think those strengths are? 'One of the key strengths of OS is its employees – they're really committed to the cause. I think that is a really valuable thing. Many companies and organisations would die for the kind of commitment and engagement we've got from the team inside OS.'

'When we did our brand research last year it found a lot of positive feedback around authoritative information, part of the national fabric and trustworthy. When we spoke to international communities what comes back is more emphasis on the technology expertise, having been on the journey from analogue to digital, from small scale to very large-scale data and managing data.'

So what can be improved? 'We need to be more thoughtful about how our data is consumed, how do we make it really accessible, which is why some changes to the licensing model are coming to the fore. From a perception perspective, ensuring that we are seen as a digital content data player'. OS's thinking on this aspect is related to recruitment where they're looking to blend geography with data science. 'To be a really attractive employer I want us to be seen as a digital player in addition to the traditional cartographic role.'

## Is it Special?

So, did he think geospatial is special? 'Yes, absolutely it is. When I ran six hospitals in Glasgow one of the first things I did was to get a map of the city and put it on the wall of my office. As people came through the door they said, 'Gosh, I never thought of it like that: "So that's why people aren't going to that surgery because the M8 runs through the middle of the catchment area".'

He believes geospatial is special because of the way visualisation allows a different set of what he calls “smarts” to be deployed in someone’s head. ‘It’s no longer mathematics or algebra; it engages with a whole lot of different synapses. Secondly, geospatial is true so you can use it as a golden thread to tie together lots of different datasets; and linking different sets together enables you to make more sense of activities that are focused on a location or a single person but which are served through many different agencies.’

## Cities Get Smart

We moved on to the urban environment and the tax base of cities. ‘It’s becoming increasingly focused on having an attractive city to attract industry, commerce and people who will form a big stable tax base; it all becomes very interesting. The juxtaposing forces of migration, demography, security all contribute to urban planning and management which is underpinned by geospatial and segues into transport routing. Geospatial is an accelerator and can make a real difference.’

Clifford had been to a Citylabs session recently to hear Michael Bloomberg (ex-mayor of NY) and Boris Johnson. ‘Both of them were thoughtful about how you enact change in an urban environment without causing mayhem; how far should it be politician or citizen-led? An answer in Singapore will be different to the one in Jakarta. There will be the equivalent of 400 new cities over the next 25 years, mostly through expansion of existing ones.’

## International Dimension

Would he be continuing OS international’s role, which has been such an important aspect of his predecessor’s time at OS? ‘Yes, for a couple of reasons. The first is that the support we can provide is particularly valued by NMA’s due to the journey that we’ve been through, from military, to government to part commercial, moving from completely closed data served through 19th-century methods to digital data served by 21st century means.’

He talked about the different licence regimes, how you manage open data and its reuse, which OS now has considerable experience of. ‘Those experiences are seen as valuable. Plus our experience in running a very large database with a supply chain around Indian subcontractors for data processing of aerial imagery and our own homegrown suppliers means that a number of mapping agencies have asked us to come and have a look at them with a view to how they might improve what they do.’

## Research and Universities

We turned to research and OS’s involvement with academia. Would he continue supporting research into aspects of geospatial data at UK universities?

‘Absolutely. In the last 14 or 15 years we’ve supported over 100 PhD’s and MSc’s. The interesting movement is that it’s not just geospatial; we’re looking at data science – the conjoint twin of geospatial. Because the scale of geospatial sensor data is going to be so significant in the next decade for big data and on a scale that hasn’t been there before. The use of new techniques, the cloud, analytics is all part of it.’

Is big data mining the job of OS, surely that’s what your partners should be doing? ‘Mining, absolutely but I think the collection and ordering of it is something we’re having to take very seriously. By 2050, 100 billion sensors will be in place around the world; currently there are 7 billion.’

We turned to the policy of open data. ‘OS currently has 16 open data sets out there at the moment and they’ve proved popular with 50,000 downloads in the first month. So it’s well-received’ says Clifford. ‘The focus that we’re putting into it at the moment is to understand who’s using it and on the licence conditions. What is the purpose of open data? It’s to allow experimentation, market testing and social development, which we can encourage through licensing conditions and put in place more data-centric licensing conditions like software providers.’

‘If you become a billionaire then probably the UK taxpayer should benefit from that. There’s a tipping point where enough proven success means that a revenue stream begins to accrue so it’s only fair that the taxpayer should benefit.’ I wondered if there’s anything in the OS’s conditions that require their erstwhile partners to register their businesses in the UK. He laughed. He didn’t think so.

## Partners, Fuzziness and Abrasiveness

Next we turned to the thorny question of partner relationships and where he thought OS might be falling down in meeting the needs of users. It’s no secret that there has been quite a lot of abrasion between OS and its partners and reseller. Some of it around the fuzzy boundaries between who sells what to which and to whom. For instance, why does OS capture aerial imagery which has either already been captured by the private sector or indeed can be easily contracted out? Another moan comes over business that partners thought was there’s but suddenly is taken on by OS. One group of partners has complained formally to the European Commission.

‘I can’t speak about what happened before June (when he joined OS). We’ve set up a partner advisory council and we’re doing some research into the partner community and what they want out of us. I think the abrasion – a good phrase – is something we can address by being clear about where we’re going to play and where we are not going to play. We’ve asked our advisory council to get our products guys to do a comprehensive walk-through of our road map (the product direction of future changes). We’ve also been out on the road talking to partners and finding out about the spaces we should inhabit for the greater good; and doing that with advance warning rather than just putting stuff into the market. Inevitably there will be some partners who feel as though we shouldn’t exist. But we’re here to make the overall community as successful as we can.’

## A New Direction?

So does he have a new direction for OS? Are there other areas he feels OS needs to move into? Are there areas that OS should NOT be involved in? Has he identified the potential users of tomorrow?

'It's a good question which can be looked at from a GB or international perspective. For GB, the conversation around smart cities is becoming very interesting for new models of consumption and new ways of utilising geospatial where we can help with efficient uses of resources such as associating it with BIM, electronic vehicles and the new sensor arrays' quickly adding,, 'although it will be an OS with partner conversation to the city.'

I wondered whether there would really be a role for OS around autonomous vehicles, which require much higher accuracy levels than OS normally captures apart from the yet to be resolved issues of, if an accident is inevitable, does the vehicle run down a woman pushing a pram or drive off the road and possible down a cliff?

'At its base is simply the fabric of Britain. Such vehicles will exist within a bubble which will have to exist within a larger set of infrastructure, so understanding how that is changing is an area we would want to stay in. The broader point is that there are going to be new data sources: how do we regard those? Do we embrace them, do we reject them or stand off from them? Of course we should embrace them and bring their data into the market. Will it cause that abrasion we talked about earlier with partners? If we enter into it with – it's for the greater good for the greater number and we maintain an open dialogue with advance warning and clarity of where we're going to position ourselves, then we would hope we can find some accommodations around that.'

## Growing the Pie

So how does he plan to coordinate/collaborate/cooperate with the private sector regarding current and future mapping and geospatial issues? In a nutshell, how will he grow the pie? More open data?

'Part of that is making more data openly available. On a structural level providing more support to the advisory council. We need a good understanding of what our markets look like and then having good discussions with partners about where we're best positioned to participate in terms of the value chain, but we need the right products and the right licensing conditions.' On the latter, Clifford's predecessor once told me she wanted to get the licence down to a single side of A4. 'We're not there yet' he confirms 'but the aspiration is there'.

## Is there a Clear View out there?

Our final topic was whether government, industry, and the general public has a clear idea of the immense value of a good national mapping system in improving the country's infrastructure – the backbone of economic health and growth. If not, how was Clifford planning to raise awareness?

'I think we are somewhat spoilt in this country. I recently visited a country where nearly everyone I talked to complained that it didn't have the same level of mapping as we have. We are well served through various levels of infrastructure, mapping being one of them, but it's still important that we keep reminding policy formulators and opinion formers of the value of what we do. 'We are fortunate in that there are a number of government departments where the significance of what we do is baked into their world, like the Rural Payments Agency, MoD or COBRA . We need to showcase the value of geospatial to the public sector.'

I mentioned Sir Mark Walport's address at AGI's GeoCom 2014 when he said that 'geospatial underpins everything' he did. Clifford gave an interesting anecdote about how a government department's scientific adviser had recently visited OS and was amazed at what he saw: 'Crikey, you're nothing like what I was expecting; you are big data, you have a complex supply chain, complex delivery to a high standard'. This individual was looking at what special capabilities there were around government that could be showcased and for others to take advantage of them.

There is clearly work to be done in showcasing to the public sector what OS does for others to take advantage of. We wish Nigel Clifford well in his mission.

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