The Next Chapter for Ordnance Survey - Interview with Nigel Clifford

Since June last year Ordnance Survey GB has had a new CEO. GIS Professional met him in London recently at the Geovation Hub, of which more anon. Nigel Clifford comes to the job via a career covering the NHS, e-commerce, British Telecom and other mobile players. He has a degree in geography from Cambridge and is a Fellow of the Royal Geographical Society.

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 of which more anon. Tucked away at the end of a large open plan office full of young innovators, we had a wide-ranging discussion 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 mass data sensors and how far OS should be going with this, and about the 'fabric of the brand'.

But first, we discussed a situation that had arisen only a few days earlier around the launch of 77m's Matrix website which offers large-scale national mapping derived mainly from open data sources like Land Registry polygons, Valuation Office data, OS's UPRN's and background aerial imagery. OS is clearly not happy about this development but 77m's Philip Highland is confident they've covered every legal angle. Clifford was tight-lipped about this after first feigning ignorance. He did, however, confirm that OS data is still Crown Copyright administered through the National Archives. An issue to watch.

A Fascinating Blend

We began by talking about what had attracted him to the position. 'I'm a geographer so there's a natural affinity'. In discussions about the job it became clear to him, 'ah, 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 to be heading up OS. 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 too easily on the public's enthusiasm for printed Landranger maps (now with free digital access) but 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? There are several areas. 'One of the key strengths of the OS is its employees – they're really committed to the cause. 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 technical expertise, having been on the journey from analogue to digital, from small-scale to very large-scale data and managing data.'

So what is to be improved upon? '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. From a perception perspective, ensuring that we are seen as a digital content data player'. OS's thinking on this is related to recruitment where they are 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.’

He gave an example from the NHS. ‘One of the things we’ve been looking at recently is bed-blocking and A&E, clearly an area which I experienced having worked through several winters in Scotland. So we sewed together social care data, waiting time data, beds blocked or extended stays in hospital and geography, so you can begin to look at commissioning areas, social work areas and where they might work more closely together.’

We discussed the app Esri showed at their user conference earlier this year. The app tracked individual journeys inside a hospital to discover the best location for regularly visited services such as the pharmacy. He was enthusiastic. ‘That sort of micro-planning becomes so important when you’re trying to reduce waiting times for a prescription (and costs). It all contributes to the patient experience and that’s what is so interesting about being able to make those connections. Geospatial enables people to make smarter decisions.’

The Geospatial Accelerator

We moved on to the urban environment and the tax base of cities. ‘It’s becoming increasingly focused on attracting 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 the Citylabs session recently with 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 the expansion of existing ones.’

International Dimension

Next we turned to OS’s international role and relationships with other NMA’s. 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 that 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.’

Is there really an international market for this? So far OS International’s only client has been the Bahraini NMA. ‘We’ve done some research that shows that our brand recognition is high, respect for capabilities is high so we think there’s a marketplace out there.’ He is hopeful others will follow.

Research and a Conjoint Twin

We turned to OS’s involvement with academia. Would support continue for 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, and analytics are all part of it.’

I queried whether big data mining is 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; we currently have 7 billion.’

We turned to the policy of open data which may yet be the source of dispute with 77m. OS currently has 16 open datasets out there at the moment, ‘so it’s well received. 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 didn’t think so.

Reporting and Oversight

He reports to Anna Soubry, minister of state for small business, industry and enterprise. Clifford is very pleased with the board he reports to and the relationship into BIS (Department of Business Innovation and Skills) and the Shareholder Executive (ShEx), where board member Ron Craig also sits on the OS board. ‘He is someone who understands our business as well as the Whitehall machinery’, says Clifford.

OS is run by an Executive Board that in addition to Clifford, includes Neil Ackroyd, Katie Powell and Andrew Loveless. Nonexecutive members include Anne Jessopp, director of business services at the Royal Mint, Stephen Lake, formerly with Reuters and QinetiQ, Jaques Cadranel from Which?, Mike Carr former chief science officer for BT and Rob Margetts CBE as chair.

Partners, Fuzziness and Abrasiveness

We turned to the thorny question of partner relationships and where he thought OS might be falling down in meeting the needs of today’s users. ‘We’re living in a world where people are more and more used to being able to buy whatever they want when they want it, in whatever form they want. We’re still playing catch-up on that but we are catching up. We’re very much driven by what the customer wants’. He told me about a recent conference of OS surveyors in Wales which he had addressed and where the focus had very much been on this. ‘We’re also doing some research with both large and small customers as well as our partners to understand what customers and end users need.’

It’s no secret that there has been quite a lot of abrasion between OS and its partners and resellers. 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 walkthrough of our roadmap (the product direction of changes and improvements over the next 18 months or so). 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 an 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.’ He quickly adds, ‘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 issues like, if an accident is inevitable, does the vehicle run down a woman pushing a pram who is not paying attention or drive off the road into harm’s way?

‘At its base is simply the fabric of Britain. While such vehicles will exist within a bubble it will have to exist within a larger set of infrastructure, so understanding how that is changing is an area we want to stay in. The broader point is that there are going to be new data sources: how do we regard them – embrace, reject 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/ 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 have 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.’ Turning to 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. Nearly everyone I talked in a country I visited recently 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’re looking at doing a series of “a day in the life of...” to illustrate this.’

An interesting idea. ‘It would be about how you get up in the morning, switch on the light from electricity that comes to you in a trench

positioned by OS data. You catch the school bus which has been routed through data provided by OS, your internet shopping arrives using a UPRN provided by OS or a partner, etc. So how do you make this come alive and hold it up to the public?'

He explained. '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, and COBRA. We need to showcase the value of geospatial to the public sector.'

I mentioned Sir Mark Walport's address last year at AGI's GeoCom 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'.

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

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