

Three digital priorities for UK government

The UK government has spent a lot of money getting better at digital government and data since 2010. In some areas it has done well. Try the NHS website, renew your driving licence, renew your passport, buy a two-together digital railcard,... wasn't that good?

But there are some hard challenges that remain unfixed.

My top three digital priorities for UK government are,

- A single national open address system.
- A single national emergency broadcast system.
- A single national identity system.

Here's why.

A single national open postal address system.

This one is hard to explain. Once explained, most people agree that we need this.

In France a list of every address in the country and its postcode and the precise location of that address is available for everyone in the world to access as open data. This means that anyone and any organisation can use the data for whatever purpose they like. This is a single national open address system. You can learn more at adresse.data.gouv.fr.

In the UK the list of every address in the country and its postcode and the precise location of that address is available only to people and organisations that pay for a licence to that dataset from the Royal Mail. What people who pay for [the Postcode Address File](#) may use it for depends on what they pay and who they are working with.

The problem that this causes which you're most likely to have encountered is when you type your postcode into a website and then pick your address from a list of addresses at that postcode. If you've ever been frustrated that different companies and governments have slightly different addresses for you then you've probably been frustrated that the UK doesn't have a single national open address system.

But there are lots more reasons why this matters. I've documented in detail how [it increases the cost and reduces the quality of local government digital services](#). I've documented in detail how [it makes it much harder to know where businesses operate in the UK](#). I could easily write half a dozen more blog posts like those two. Funding for schools gets misallocated, ambulances take longer to arrive, the list goes on,...

Having a single national open address system for the UK would remove a big barrier for small and new companies wanting to do a better job than big established incumbents in many areas of business and government in the UK. From digital services, to home delivery, to economic analysis, the impact would be big. It would put everyone on a level playing field when it came to uniquely and reliably identifying where people live and work. And it would save everyone a few minutes a year searching for their property from a list of possible addresses whenever they wanted to tell an organisation where they want their parcel delivered.

A single national emergency broadcast system.

This one is easy to explain and most people agree that we need this.

Most countries have a single national emergency broadcast system powered by [the Cell Broadcast capabilities of the GSM standard for mobile phones](#). This lets a national government send a message to all mobile phones in the country, or in a specified area of the country, that is nearly guaranteed to arrive within seconds. The message appears on all phones, makes a sound even if the device is on silent, and always appears on top of everything else that's happening on the phone.

In Japan this system is used for earthquake warnings. In The Netherlands this system is designed for cases such as sending catastrophic flood warnings. Across the world these systems have been used to send messages directly from national governments to all residents explaining Covid-19 restrictions.

The UK's decision not to deploy such a system yet, following two "discovery phases" in 2013 and 2018, means that we cannot do the same. Instead the government sent plain text messages to UK-registered mobile phone numbers with Covid-19 restrictions. These took hours to arrive, had no special official marking or priority on phones, and missed many residents. Letters were sent to households with advice that was frequently not received, quickly out of date, and expensive to deliver.

Without a single national emergency broadcast system the UK government has no good instant way to communicate directly with its citizens. This is especially true where the communication needs to be sent only to specific areas. For example, today lockdown restrictions have been lifted in parts of Greater Manchester, where I live. The UK government has not been able to communicate this effectively.

A single national identity system

This one is very hard to explain. People agree or disagree very strongly depending on how the system is described.

Not having or desiring a single national identity system is an emotional and patriotic issue for many Britons. This leads to people on both sides making arguments in bad faith that waste time and effort for the other to unpick. To avoid one such confusion at the start, I don't think that people in Britain should have to carry ID cards. The Swedish personnummer system is excellent and there is no reason that having a single national identity system should require ID to be carried.

To the extent that there is a public discussion it is low in trust and we have made very limited progress on the issue as a result. The creation of public and charity funded institutions looking at the issue has done little to increase trust, and may well have eroded it further.

We first need to know where we are on identity systems. Almost everyone in the UK has multiple identity numbers. A few examples are,

- NHS Number in England and Wales.
- CHI Number in Scotland.
- Driving license number.
- Passport number.
- Unique Learner Number (ULN).
- Unique Pupil Number (UPN).
- National Insurance (NI) number.

- Blood Donor ID.
- International Bank Account Number (IBAN).

Most of these numbers are unique. Most of us have most of these numbers. Of the numbers that we have, few of us have more than one of any of them. Almost none of us have all of them. Almost no-one uses any of them for more than a few things.

Data that is linked to each number system is frequently out of date, missing, or inconsistent. The complexity of the system is such that even substantial fines do not adequately incentivise people to maintain their data across multiple systems as required by law. A lot of time and money is wasted by government as a result.

In the UK there is no reliable or widely-used method of identifying yourself to anyone else, whether an individual, a company, or a government.

If I pay a water bill I get a receipt for a water bill. I can use that receipt to prove my identity to the local council so that I can create an account to pay my council tax and I get a receipt for the council tax. If I take both of those in combination with a driving licence I can open a bank account and register a company. I can now create a business tax account with the central government. Probably.

Lots of pieces of paper and PDFs and photographs of printed PDFs with signatures on fly around the UK by email and letter. The ability to collect pieces of mail posted to an address that we claim to live at or operate a business from seems to be the primary form of proof of identity in the UK.

This system imposes very significant costs to our society. Proving our identity to open a bank account, register for benefits, rent a home, access healthcare, set up a gas account, get a loan, etc... costs time for most people. But it can prove almost impossible for people in difficult circumstances. Those without a permanent home, people who have lost their records, recent arrivals, etc... struggle in particular to prove who they are so that they can access services or assert their rights.

The [Windrush Scandal](#) is a particularly extreme example of what can happen when citizens cannot prove their identity to government. But we all experience smaller impacts all the time,

- We have a national voting register that requires individuals to register to vote but which cannot tell them if they are already registered.
- We have a sign in system for central government benefits (GDS Verify) which is different to the one for central government taxation (Government Gateway) which is different to the central government's voter registration system (zero/bespoke identity, except in Northern Ireland) which is different to local government identity systems that exist. Our details often need updating in multiple places and it is almost impossible to assemble a single view of our situation across multiple services. For example, a claimant of universal credit and an applicant for social housing has to keep their family situation up to date in two separate places or face severe penalties.
- We fail to claim benefits we are owed and pay taxes that are due because we cannot login to our governments in one way to see what is available and what is required.
- We print, sign, photograph, post, and email proof of addresses around the country to perform basic functions. For more complex verifications we pay lawyers to do the same.

Our national response to the Covid-19 pandemic has made many of the issues that lacking a single national identity system causes even more visible. People with additional risks from Covid-19 who need to self-isolate were harder to identify and contact. Companies requiring financial assistance were harder to identify and contact. Covid-19 test results were harder to send to the person who had been tested, and testing data was of lower quality because it contained so many duplicate people within it.

Administrative data published by the UK government throughout the crisis has been notably poor in part because uniquely identifying people and businesses is hard.

A common argument against a single national identity system is that every failing that could have been avoided with such a system could also have been avoided by a well-designed and well-functioning alternative. This is true. **A single national identity system is neither necessary nor sufficient to provide better public and private services, it just makes them more likely.** We should be trying to make excellence more likely.

Do current inefficiencies protect our privacy and reduce the risk of catastrophe?

Our current system is complex and confusing. But privacy through confusion is a valid tactic in theory. For example, requiring one identity for a local government housing portal and another identity for the DWP's Universal Credit service is inefficient in many ways; it takes twice as long to prove that you are a real person and then you have to enter your data twice.

Most of the time this is really annoying, you have to keep your family profile up to date in two places or risk being fined. But might it also stop government from tracking what individuals do, or much worse?

I used to think so. I don't really want someone in the UK government to know where I went to school, how old I am, my race and gender, what university I went to, what degree I studied, where I've worked, when I've been unemployed, what benefits I've claimed, and how much I've earned every year since I graduated.

But that's exactly what happens right now. My opinion on identity changed when I understood the data that the UK central government has combined across multiple identification systems to create the LEO dataset. You can read [the whole LEO methodology](#) online. Here's a small extract.

The LEO dataset links information about students, including

- personal characteristics such as sex, ethnic group and age
- education, including schools, colleges and higher education institution attended, courses taken and qualifications achieved
- employment and income
- benefits claimed

It is created by combining data from the following sources:

- the National pupil database (NPD), held by the Department for Education (DfE)
- Higher Education Statistics Agency (HESA) data on students at UK publicly funded higher education institutions and some alternative providers, held by DfE
- Individualised Learner Record data (ILR) on students at further education colleges, held by DfE
- employment data (P45 and P14), held by Her Majesty's Revenue and Customs (HMRC)
- the National Benefit Database, Labour Market System and Juvos data, held by the Department for Work and Pensions (DWP)

Since this has been possible for five years and since similar analysis exists in other areas, similar analysis must be possible in most other areas of government. So what is the lack of a single national identity system preventing central government from doing?

My feeling is that it is not really preventing big organisations, whether central government or large businesses, from doing anything. Their excesses are largely limited by law. Instead, by making it harder for local governments and smaller businesses to offer services that rely on verifying an individual's identity, it is making it inevitable that power is concentrated in their hands.

I think that a single national identity system would let us reverse that concentration of power. If we chose to disperse power, I think it would make us safer. And we'd have much better digital services too.