



[A 2016 report into data analytics](#) in local government found that big data is being increasingly applied to (for example) predicting service need, enabling deeper population level analysis, improving traffic management, improving services such as waste collection and reducing inefficiency and duplication of effort in service provision. The report identified a number of ways local government can improve their use of data analytics. These include data warehousing to enable deeper analysis and use, data sharing, creating a data-oriented culture that puts data and analysis into the decision and policymaking processes – and investing in data science skills and capacity in local government workforce.

[A 2017 report](#) from the [ESRC Business and Local Government Data Research Centre](#), however, found that these opportunities are not being taken up sufficiently. It identified three main structural barriers to the fruitful exploitation of big data by local government: data access; ethical issues; and organisational change. In addition, skills and investment in information technology are problematic.

One promising example of big data use is the London Borough of Barking & Dagenham’s [recent findings from its data science team](#) on modelling how local betting shops can influence gambling addiction. Speaking at Nesta’s [City Data Analytics](#) event – designed to showcase UK regions that are working to join up, analyse and act upon data at a city or regional scale to reform public services – the borough’s [Insight Hub manager Pye Nyunt](#) explained how the model uses a range of data - demographics, the proximity of schools and colleges to betting shops, local mental health problems, the presence of homeless shelters, food banks and payday loan shops – to identify how many vulnerable people live close to the betting shops.

The team expected gambling addiction to be scattered across Barking & Dagenham, but found it to be concentrated in three wards. It also established that the shops were clustered together to attract gamblers who had exhausted their credit for fixed odd betting terminals in one to go to another.

In addition to using the evidence in its own gambling licensing policy, Nyunt believes it could influence future legislation in a range of policy areas.

Implications for Gwent

Is Gwent using – or considering using - big data to support service provision? Does it have the right data science skills and infrastructure?

And how is it doing with respect to those three barriers to its exploitation: data access, ethical issues and organisational change?

How might the issue impact on Gwent in the future

Very uncertain Rather uncertain Reasonably clear Very clear



How might Gwent public services respond?

Watch and wait Consider response Plan and prepare Act

