NIOGN Factsheet - Open Data

What is open data?

Open data is accessible public data that people, companies, and organisations can use to launch new ventures, analyse patterns and trends, make data-driven decisions, and solve complex problems. All definitions of open data include two basic features: the data must be publicly available for anyone to use, and it must be licensed in a way that allows for its reuse. Open data should also be relatively easy to use, although there are gradations of "openness". And there's general agreement that open data should be available free of charge or at minimal cost.

The Open Data Institute

The Open Data Institute sets out 4 principles that make open data effective & legitimate:
- It can be linked to, so it can be easily shared & talked about
- It is available in a standard structured format, so that it can be easily processed
- It has guaranteed availability & consistency over time, so that others can rely on it
- It is traceable back to where it originates, so others can work out whether to trust it

Why should data be open?

Open data is: Authentic, Available, Accessible, Reusable & Redistributable. Its value lies in its application.

Open data increases public choice; it's a driver of efficiency; and it offers economic potential – better decisions and lower service costs. Open data provides the building blocks for open knowledge. Open knowledge is what open data becomes when it's useful, usable and used.

The Open Knowledge Foundation

According to the Open Knowledge Foundation, there are many kinds of open data that have potential uses and applications:
- Cultural: Data about cultural works and artifacts.
- Science: Data that is produced as part of scientific research from astronomy to zoology.
- Finance: Data such as government accounts and information on financial markets.
- Statistics: Data produced by statistical offices, e.g., the census and key socioeconomic indicators.
- Weather: The many types of information used to understand and predict the weather and climate.
- Environment: Information related to the natural environment such presence and level of pollutants
- Transport: Data such as timetables, routes, on-time statistics

Open by default

In a well-functioning, democratic society citizens need to know what their government is doing. To do that, they must be able freely to access government data and information and to share that information with other citizens. So government data should be open by default not exception.

Releasing social and commercial value

In a digital age, data is a key resource for social and commercial activities. Everything from finding your local post office to building a search engine requires access to data, much of which is created or held by government. By opening up data, government can help drive the creation of innovative business and services that deliver social and commercial value.

Participation and engagement

Much of the time citizens are only able to engage with their own governance sporadically – maybe just at an election every 4 or 5 years. By opening up data, citizens are enabled to be much more directly

informed and involved in decision-making. This is more than transparency: it's not just about knowing what is happening in the process of governance, it's about being able to contribute to it.

Data literacy
The assumption is that if government puts data online, someone somewhere will do something valuable and innovative with it. But just because data is 'open' it doesn't mean that all social groups have equal opportunity to utilise it. Data is actually only open to a very small elite. It's essential to promote data literacy.

Data literacy refers to one's level of understanding of how to find, evaluate, and use data. It's the ability to: formulate and answer questions using data as part of evidence-based thinking; use appropriate data, tools, and representations to support this thinking; interpret information from data; develop and evaluate data-based inferences and explanations; and use data to solve real problems and communicate their solutions. Data analysis is a process of inspecting, cleaning, transforming, and modeling data with the goal of discovering useful information, suggesting conclusions, and supporting decision-making.

Data sharing and usability
Open data isn't just about access, it is also about sharing and reuse – often, to understand material it needs to be analyzed and visualized and this requires that the material be open so that it can be freely used and reused. Even those who crack the technology discover that urgent findings about poverty, health, discrimination, conflict or social change are presented in prose written by and for high-level experts, rendering it impenetrable to almost everyone else. Information is trapped in PDFs and in PhDs. And there will always be a narrow market for raw policy reports. To make it more accessible, data needs to be mashed up; to make it relevant, information must be distributed in a targeted way to those most likely to be interested. And it must be written for the user: perhaps using blog posts, videos and graphics. Policy information is more usable if it's linked to corresponding actions the user can take, or if it helps stir debate.

Open data related challenges for Northern Ireland
- Ensure that government here is open by default, not exception by promoting the concept of open data across government departments and implementing the principles that make open data effective & legitimate.
- Promote data literacy.