

Unlocking the Potential of Water Data

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Water Sector Challenges





--- BBC Sewage hits dozens of beaches in ...



The Stack
11 water utilities join forces on Open ...

Water Industry Challenges

• Climate change

• Improve Performance

• Rebuilding trust





Dŵr Cymru Welsh Water

About Dŵr Cymru Welsh Water

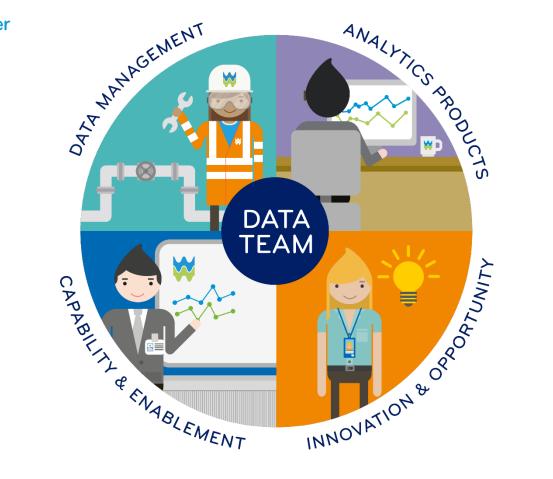




- We are the fourth largest company in Wales, with over 3,000 employees. Not for profit organisation.
- We serve over 1.4 million homes and businesses – about 3 million people – across most of Wales, Herefordshire, and parts of Deeside.
- We maintain over 26,500km of water mains, and over 30,000km of sewers.
- Our assets provide around 828 million litres of water every day to customers.



Data Team @ Dŵr Cymru Welsh Water



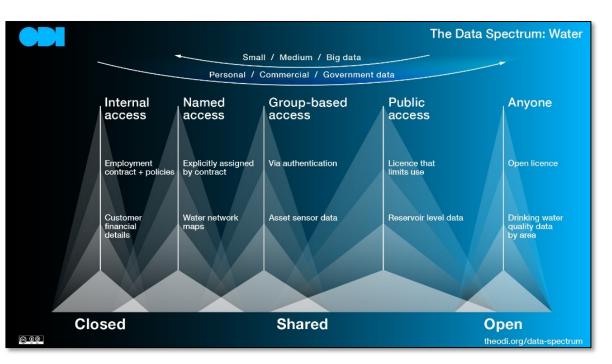


What is Open Data?

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Open data is data that anyone can access, use and share.



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Open Data Institute (ODI)

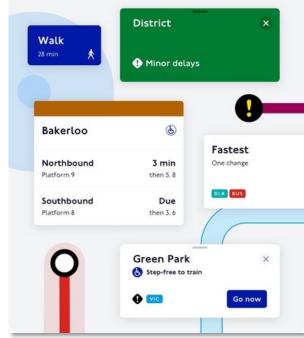
What makes data 'open' in a technical sense?

- A licence that might stipulate that those who use it must give credit or attribute to those that have published it.
- That it is easily **accessible** (e.g., via a web link).
- A **standard**, structured **format**.
- Guaranteed availability, and adequate data quality to be considered reliable.
- That it is **traceable**, allowing users to understand how it has been processed, and to determine how it can be **trusted**.





Open Data Success Story



Case Study: Transport for London (TfL)

- The local government body responsible for implementing transport strategy and managing transport services across London. Over 24 million journeys are made across London every day.
- Journey began in 2007 with embeddable widgets (for travel updates etc.).
- Now 62 separate datasets are made available. These are a mix of real-time feeds (departure boards, arrivals, traffic), fixed datasets (timetables, station locations) and transparency-oriented datasets (operational performance, remuneration).
- Over 5000 developers are registered on the TfL website, with 362 apps available powered by TfL data. The reach of apps powered by TfL data is estimated to be around 4 million people.
- In 2012, TfL quantified that the value of time saved by users of these apps was between £15m and £58m.



ΣŢŢ	Regulators / Government: Data that can fit the needs of regulatory reporting for the sector. The use of data to drive improvements in the delivery of public services within local authorities.
	Commercial bodies: Where data fits the needs of innovators and entrepreneurs, and where this data may be used to develop commercial products and services that contribute towards their financial sustainability.
	Academics: Researchers can make use of the data to obtain new insight across a number of academic disciplines related to the water sector (e.g., engineering, environmental sciences, economics).
селетее / ₩ П ₩ П	Civil society organisations and nonprofits: Utilising data in order to deliver benefits to the area of society that they represent, such as economics benefits to consumers, or social benefits to relevant communities.
	Environmental organisations: Using the data we provide to obtain information and insight in support of delivering benefits to the environment (e.g., reducing pollution, reducing energy use and carbon intensity).

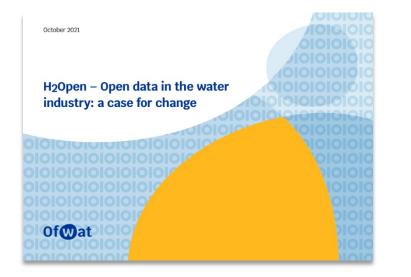




Open Data @ Dŵr Cymru Welsh Water

Regulatory Perspective









Where we are now?



We have been working alongside the Open Data Institute (ODI) to co-create and launch our first ever Open Data Strategy.

By making more of our data open, we will improve transparency with customers and the public.

We can also spark innovative thinking towards tacking some of our key business challenges, leading to improved environmental performance, and a greater service for our customers.





Open Data Delivery Plan

Dŵr Cymru Welsh Water's open data delivery plan

At Dŵr Cymru Welsh Water, we are committed to delivering open data for our community, in line with the expectations set out by Ofwat. Our delivery plan will centre on the delivery of activities and initiatives belonging to four key themes:



Open Data Culture



Collaboration & Prioritisation

of future open dataset candidates

Strategic Oversight

Activities to support the ongoing success of the open data strategy, including sponsorship, budget setting and forecasting,

Data Management & Infrastructure

Data management, governance and underpinning

architectural design and platform implementation

Organisational activities that raise open data awareness, skills and literacy, and enable discussion and consideration

and defining key performance indicators (KPIs). KPIs should

ensure outputs bear accessibility, diversity, and inclusivity in mind.

Establishing and maintaining relationships with key external stakeholders and end-users, for feedback, knowledge sharing, and prioritisation based on user needs

The delivery plan is grouped into three delivery phases: Phase One Phase Two **Phase Three**



Open Data Use Case: Storm Overflow Map



What are Storm Overflows?

Storm Overflows are an outlet from the public sewer that is designed to spill excess rainwater and sewage into the environment if sewers become inundated with rainwater.

They do this to prevent the combined mixture flooding back up into homes.

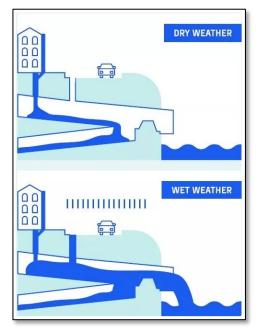
Project Aim: Develop an open 'near live' map of storm overflow discharges

Why are we developing this map?

- Regulatory requirement
- Better transparency
- Improve communication

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Storm Overflow Map



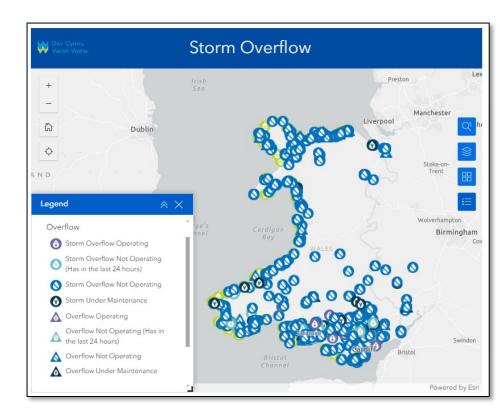
Source: https://www.water.org.uk/

Storm Overflow Map - Launch



- Beta version of the map went live in February.
- Three-month testing period ahead of its public launch in May.
- Over a hundred individuals and organisations were consulted during the design phase of the map.
- Seventy participants helped shape the design during the development.
- It is hoped that the map will help swimmers make an informed decision before entering the water.

More inland storm overflows are now being added incrementally to the map until all 2,300 of Welsh Water's assets are showing by March 2025.





Stream: Unlocking Water Data

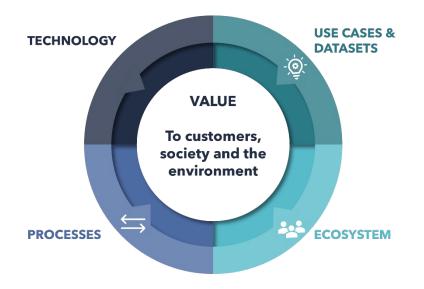
What is Stream?



"Stream's vision is to unlock the potential of water data to benefit customers, society, and the environment."

Stream is a data institution that is helping develop data sharing infrastructure for the water sector.

- Value is at the heart of what we do:
 - Purpose-led publication
 - Achieved through 4 pillars (technology, use cases & datasets, our ecosystem and processes)
- Supporting the water sector to open their data:
 - Learning by doing
 - Sharing best practices



What is Stream?



"Stream's vision is to unlock the potential of water data to benefit customers, society, and the environment."

Blueprint set out the design for a scalable open data framework **enabling innovators to use data to address key water sector challenges**, such as:

- Preventing environmental incidents;
- Reducing absolute carbon emissions associated with water extraction, use, and treatment;
- Bringing down the cost of water, particularly for the most vulnerable customers;
- Catalysing innovation and new ways of working across the sector; and
- Enabling our people to do more exciting, meaningful work

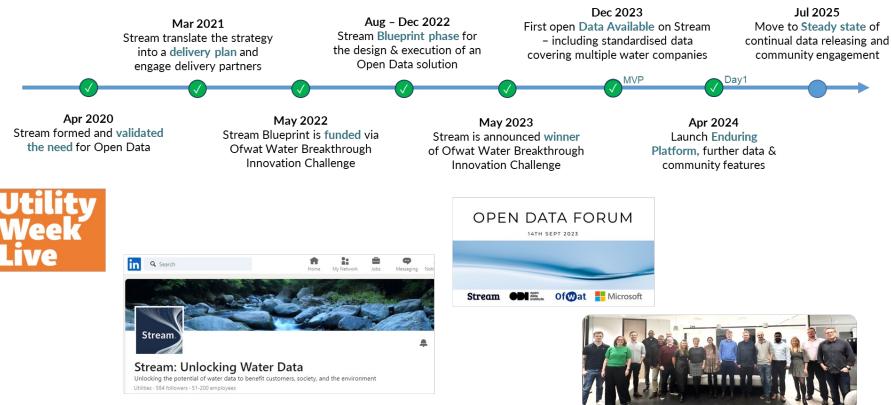
Stream Members / Partners







Stream Members / Partners





The Stream Data Platform enables the publication of data as well as allowing end users to easily search, understand and access those datasets.

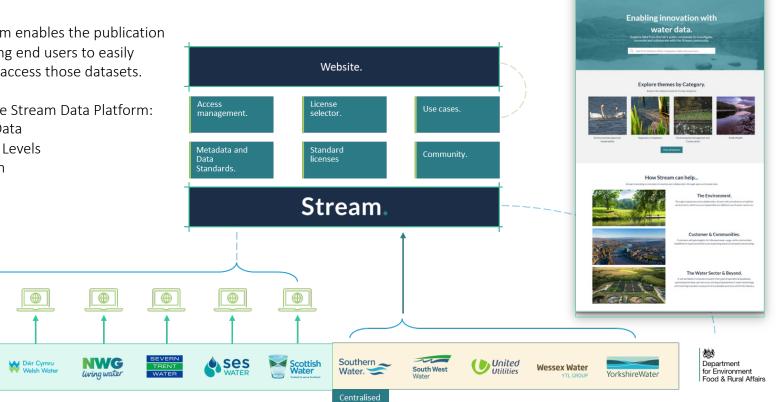
Datasets available via the Stream Data Platform:

- Leakage Nightline Data
- Raw Water Storage Levels
- Water Consumption
- Water Quality

Platform Design & Proposed Datasets

Stream, Search About Glossary Communit

Seals



Decentralised dwrcymru.com

anglianwa

love every drop



Questions?

Diolch. Any Questions?