



UCL CASA
2025



QUEEN ELIZABETH
OLYMPIC PARK

INNOVATION DISTRICT

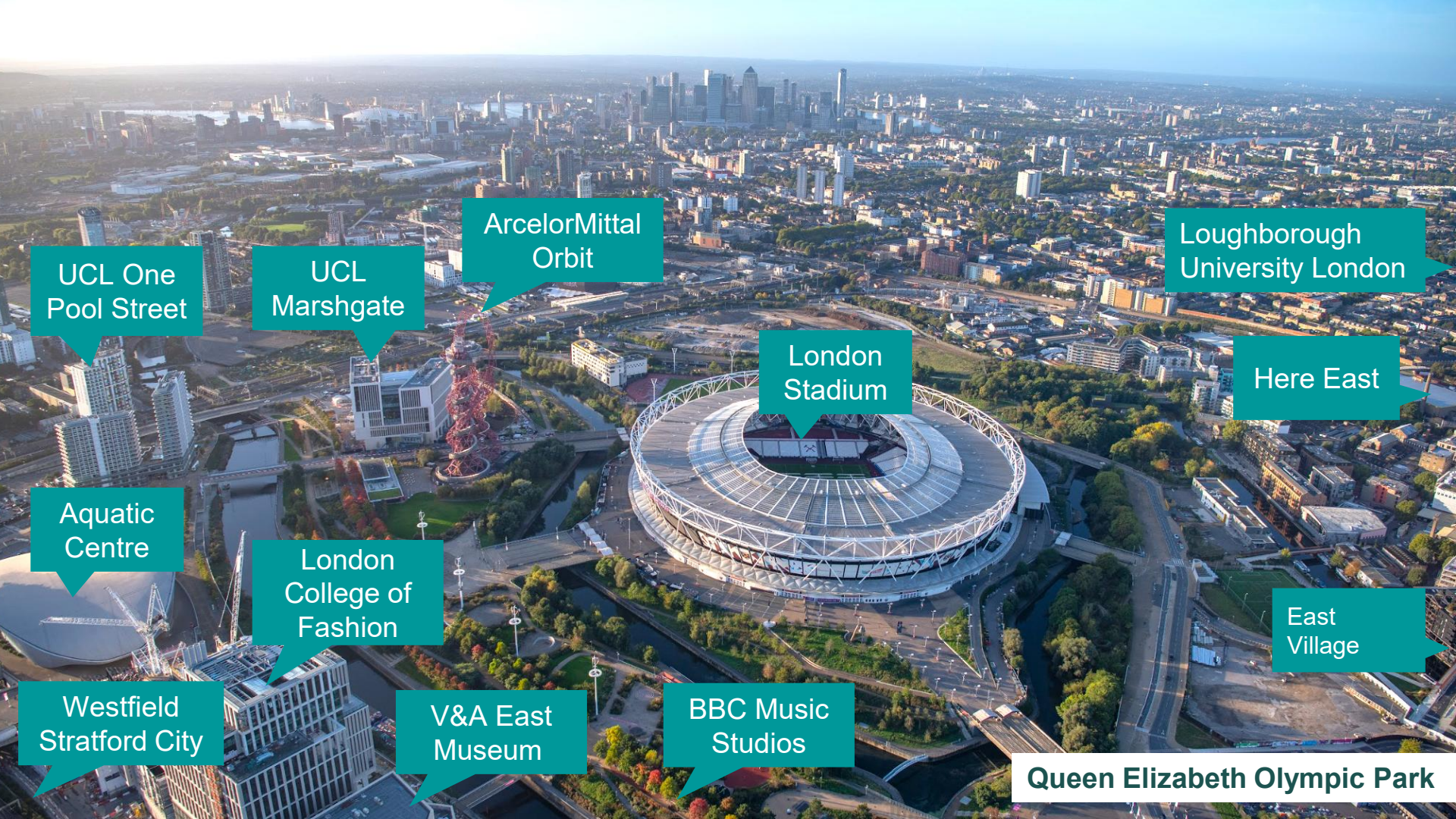
Digital Frontiers

An Open-Source
Data-as-a-Service Platform

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and Nick Turner

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Context



UCL One
Pool Street

UCL
Marshgate

ArcelorMittal
Orbit

Loughborough
University London

London
Stadium

Here East

Aquatic
Centre

London
College of
Fashion

East
Village

Westfield
Stratford City

V&A East
Museum

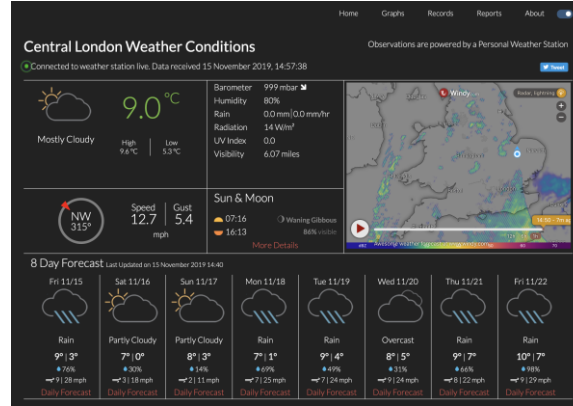
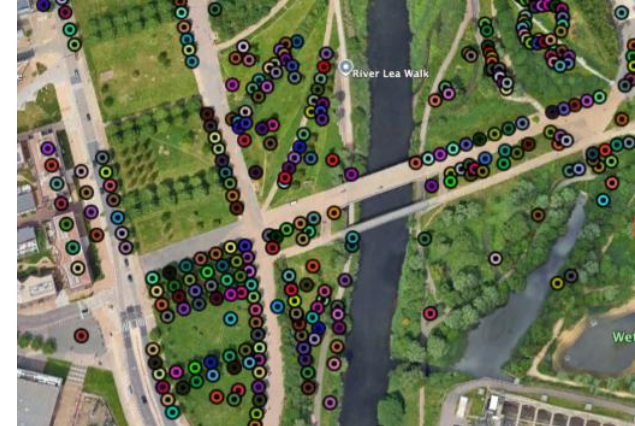
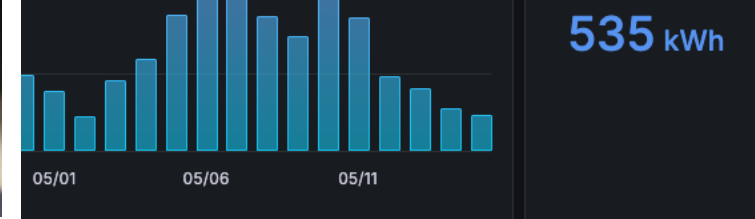
BBC Music
Studios

Queen Elizabeth Olympic Park

A living lab... a test bed

Data examples:

- Environmental sensors.
- Biodiversity records.
- Buildings power usage & solar energy.
- TfL data.

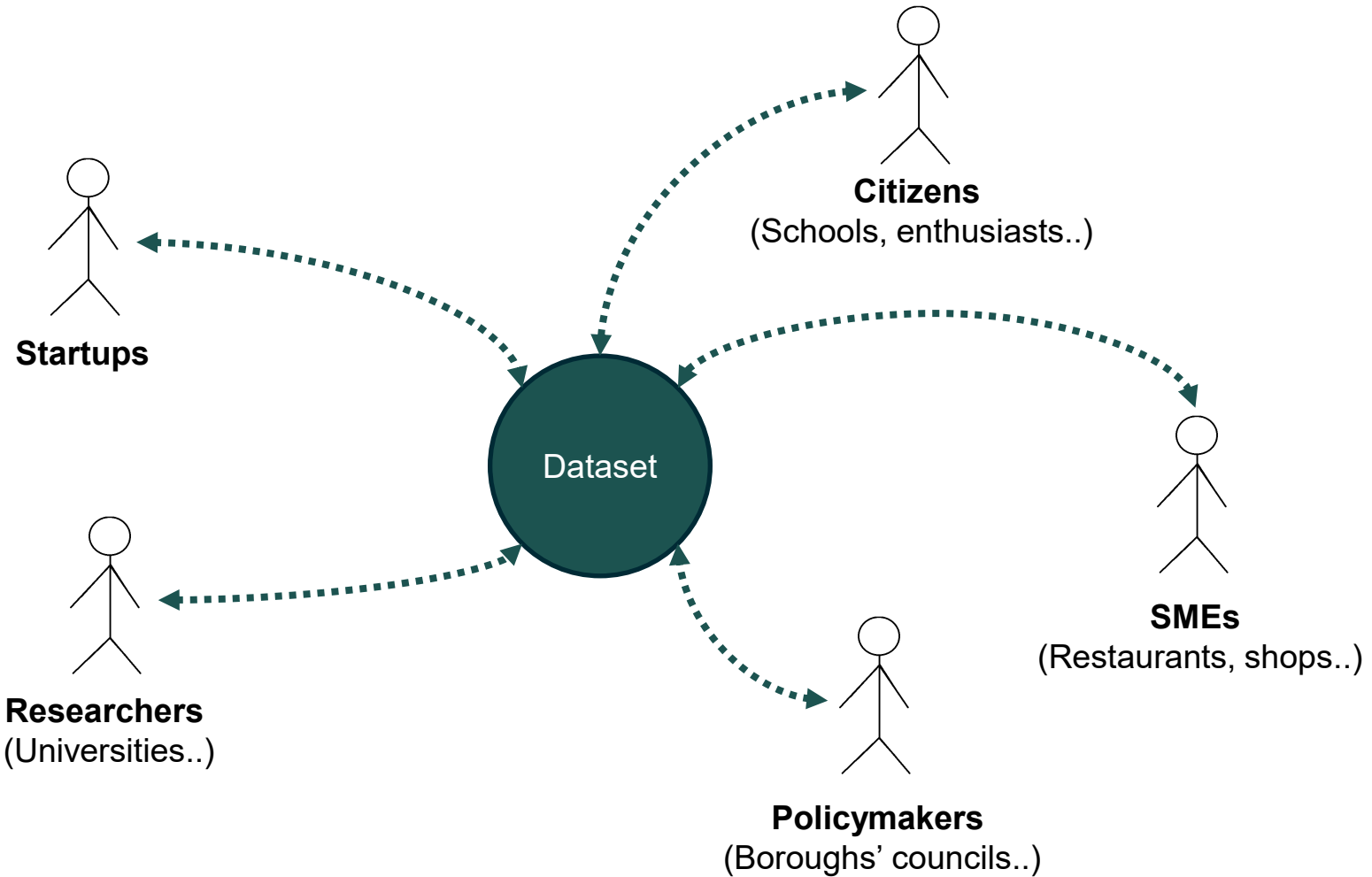


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Why this platform?

- What data is there in the Olympic Park and how use it?
- How can I contribute my live data to others?

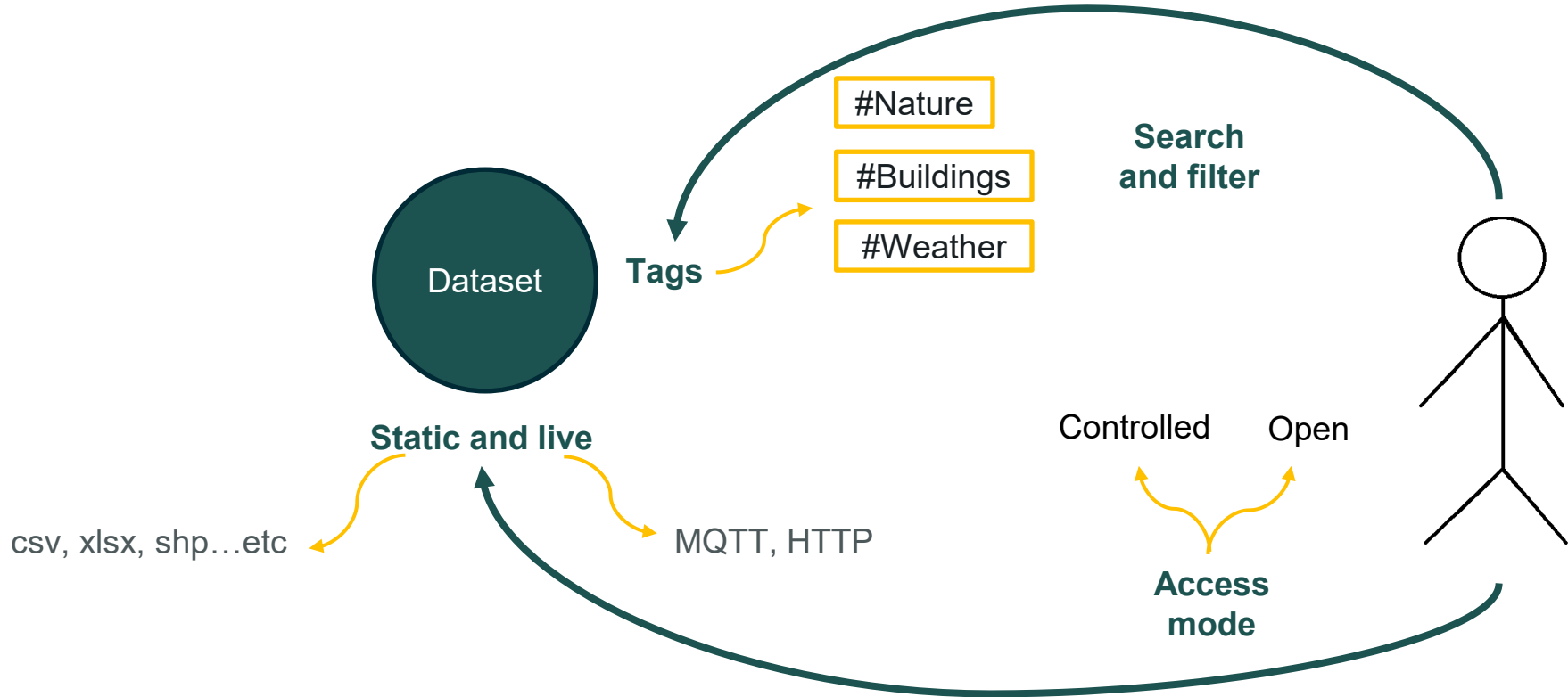




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Platform concept

At the Heart: Datasets with Metadata





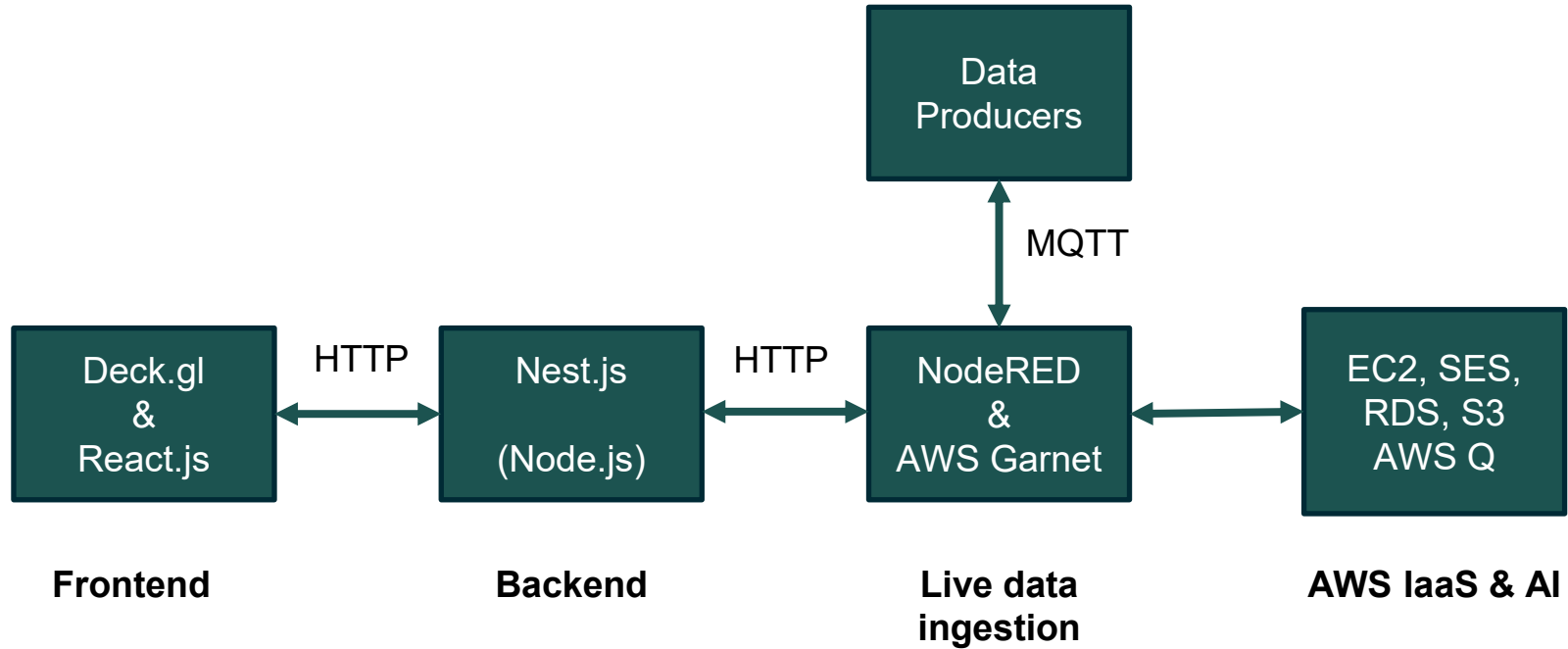
What this platform can offer?

- **Explore** datasets **visually** in the Queen Elizabeth Olympic Park.
- Each dataset is **Geo-located** including sensor locations.
- Data consumers can get **dataset details**
- Data providers can add **new datasets**

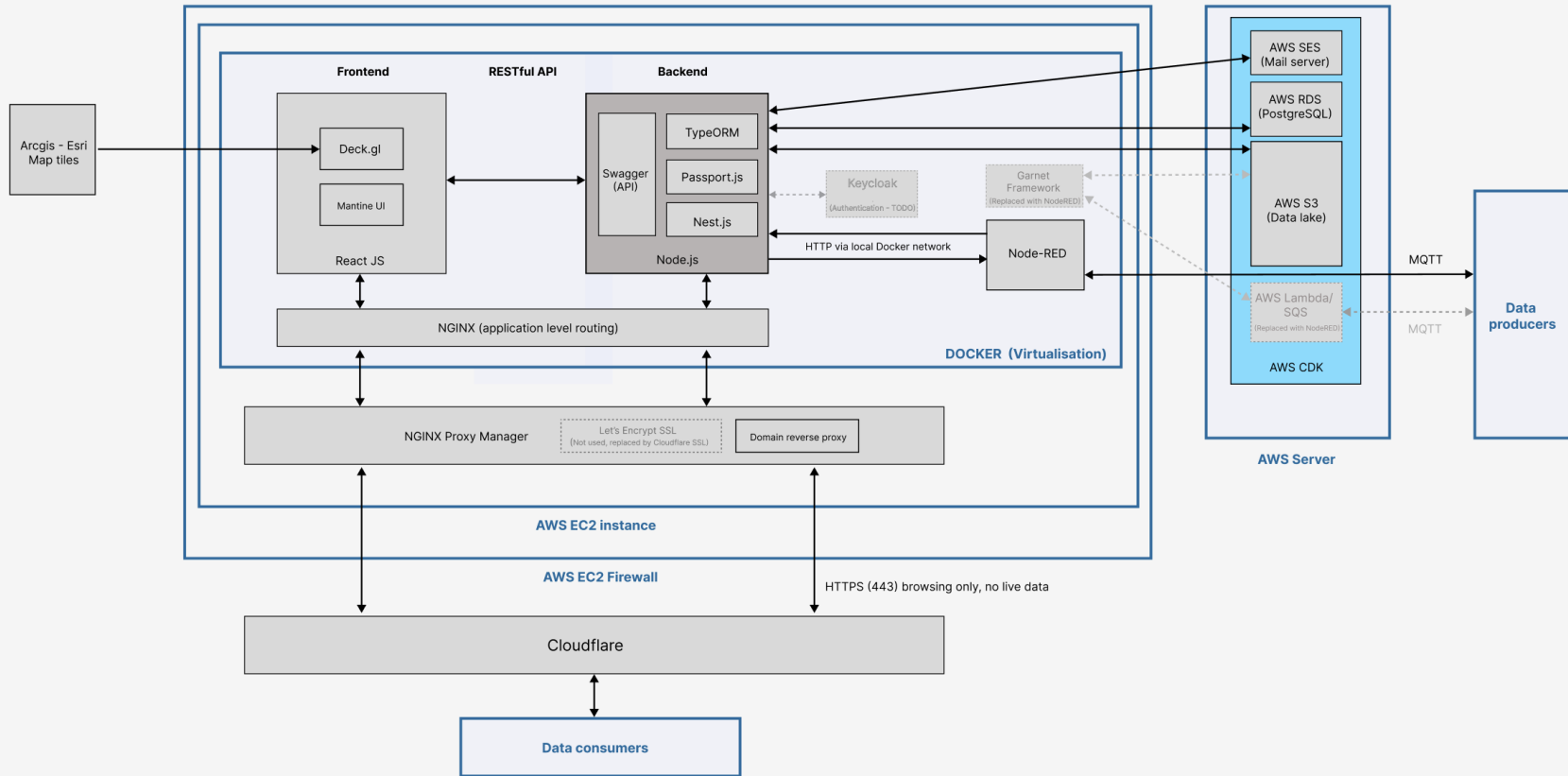
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Technical design

Architecture – simplified



Architecture – full



(Available on GitHub)

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Results

Give it a try!

digital-frontiers.co.uk

SHIFT | Digital Frontiers

HomeData menu>ShowcasesAbout


v0.3.1AdminMy itemsAdmin

Home > Data menu > Dataset

Bat activity

BATS | BUILT ENVIRONMENT | NATURE

Last updated: 2025-04-25T07:55:44.924Z



Owner: UCL

Type: open

Update Frequency: 30 minutes

Description

Bats are considered to be a good indicator species, reflecting the general health of the natural environment – so a healthy bat population suggests a healthy biodiversity in the local area. In this project we are exploring bat activity in one of the most iconic and high profile of London's regeneration areas, the Queen Elizabeth Olympic Park. We are exploring bat activity in the area around the Queen Elizabeth Olympic Park, which is a large area of land in London that has been regenerated since the 2012 Olympic Games. The area is home to a variety of wildlife, including bats, and we are using sensors to monitor their activity. This data can be used to understand the health of the local environment and to inform future planning and development.

Data for impact: Showcases

Latest showcases

Browse the latest showcases related to our datasets



SEPTEMBER 9, 2022

Mosa, a QEOP-based Startup to Enhance Bike Parking Security with Intelligent Solution

As urban environments strive for sustainability, traditional bike racks and CCTV cameras often fall short in truly promoting cycling. But you see the bigger picture. Whether you're a property manager, transport planner, or landlord, you understand the transformative potential of cycling and are eager to overcome the challenges that discourage two-wheeled transportation. Mosa shares your commitment to innovation and creating greener, more sustainable urban spaces. By integrating our intelligent, retrofit solutions, you can enhance bike parking security, encourage cycling, and make a meaningful impact on your community's future.



OCTOBER 17, 2023

Air Quality improves at Hackney School after School Streets Initiative Introduced



SEPTEMBER 9, 2022

MapMortar, Plan, track and scale your path to Net Zero



NOVEMBER 5, 2019

Shazam for bats: Internet of Things for biodiversity monitoring

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Summary and vision

So, what Digital Frontiers is about?

- ✓ Realtime data contribution
- ✓ Showcases: Data in a closed loop ecosystem
- ✓ Governance: aligning stakeholders across sectors
- ✓ Long term vision: Park → Borough → London → Other cities



github.com/syk-yaman/digital-frontiers

Digital Frontiers
is on GitHub

Do give it a star :)

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