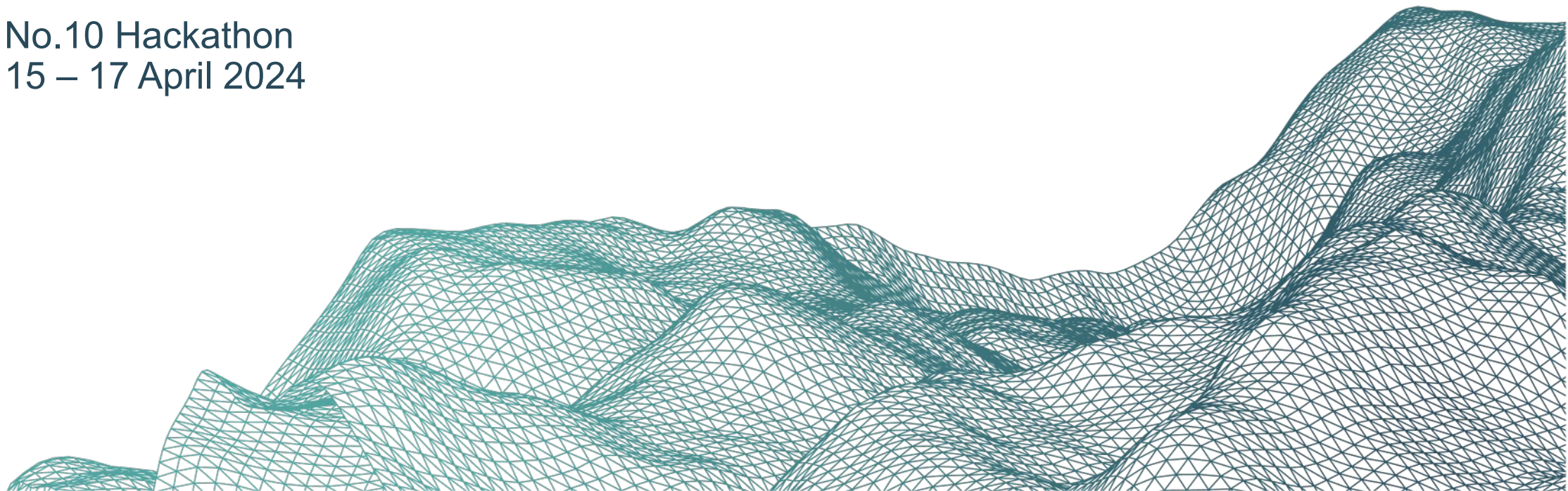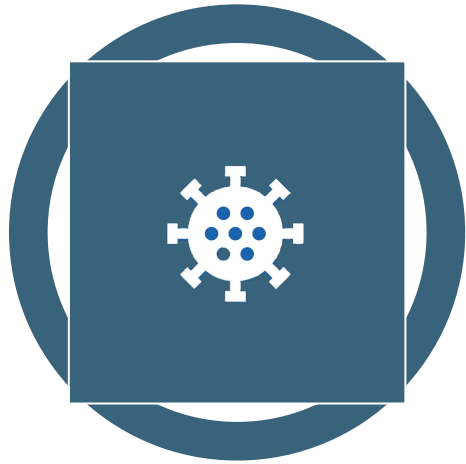National
Situation
Centre

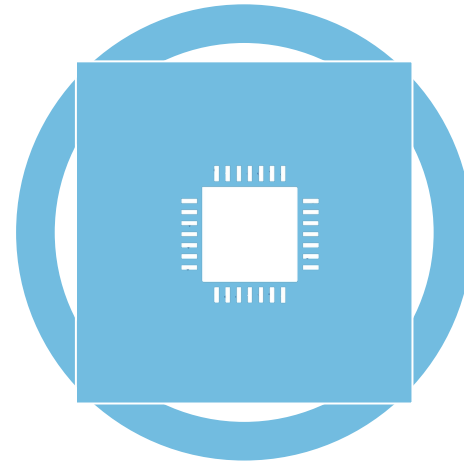# Biothreats Radar

No.10 Hackathon
15 – 17 April 2024

Origins & Mandate - COVID-19, Data Driven-Decision Making

PM commission & COVID-19 lessons learnt.

National security & civil contingencies risks.

Cloud computing capability & data visualisation.

Intersection of risk & unique perspectives.

Background

- The Biological Security Strategy was refreshed in June 2023.

- One outcome for the Cabinet Office is to develop a real-time a **Biothreats Radar (BTR)**; a tool to detect and monitor emerging biological threats to the UK.

- The BTR will be a **cross-HMG dashboard bringing together data, expert analysis and commentary on emerging biothreats from all partners** in the Health and National Security space. This will ensure that Seniors such as the Lead Minister, wider Ministers, Officials have a single, central place to monitor biosecurity threats to the UK and track signals and trends.

- This should encompass emerging biothreats, both domestic and international, and be able to monitor their spread and progress in the UK and beyond.

Data acquisition

- The aim is to have multiple data sources feeding into the BTR. This ensures **transparency** to decision makers, increasing **informed, evidence-driven decision making**.
- Data sources include, but are not limited to:
  - Direct data feeds from data providers
  - Private and public Application Programming Interface's (API's)
  - Downloadable CSV's
  - Data visualisation's with no data downloads (e.g. QGIS maps)
  - Webpages & PDF's
- However, identifying all these various data sources is **time consuming**, and useful, reliable sources may be missed or overlooked by analysts.

Problem Statement

"Can AI help the BTR to identify and provide commentary on open source biodata, to help the Prime Minister make informed decisions on emerging biothreats?"

While the BTR will collate all forms of biological data (human, animal and plant health and environmental data), this exercise will focus on **human biodata** and **complementary data**.

Complementary data refers to refers to **non-biodata** that could inform policy as to the **wider impact** of a biothreat, such as transport, education, migration and/or economic data.

How can you help?

- Use open-source data to gather information on **specific UK Notifiable Diseases** (see next slide for examples), as if they were an emerging current biothreat.
- Gather data from various source organisations and identify if they are telling the **same data story**, or if there are **contradictions**.
  - P.S. here we're not talking about specific figures being exact, but whether **trends** are the same!
- Summarise the information in a **short one-page** style briefing note, with high level-graphs and any commentary that may be useful to inform decision making.
  - Commentary can include **context**, **cautions** of the data use, or **expert opinion** derived from publications produced by the organisation in relation to that data.

Think outside the box!
(DISEASES SUBJECT TO CHANGE)

What demographics does this disease typically affect? (e.g. age, sex, ethnicity)

What type of complementary data can we get on this?

What do we know about how this is transmitted?

What travel would/could this affect?

Measles   Cholera

Yellow Fever

Group A streptococcal disease

Mumps   Leprosy

Monkey pox

Rabies

Scarlet Fever

Based on this, what occupations/trades will be affected?

E.g. health care workers, border staff, supermarkets?