

Emergent  
Alliance

# RECOVER TOGETHER STRONGER

SUMMARY REPORT 2022



# FOREWORD



## Caroline Gorski

Group Director R<sup>2</sup> Data Labs,  
Rolls-Royce

The Emergent Alliance is a not-for-profit community, formed in April 2020 at the start of the COVID-19 pandemic. The primary objective was to better inform the future economic decision-making of corporations, small businesses and nation states. Here is our story.

Rolls-Royce was an early contributor to the request from the UK Government to manufacturers to support the ventilator challenge.

At the same time, a core team at R<sup>2</sup> Data Labs asked: “What can we as data scientists do that might make a difference?” They quickly formed a compelling ambition: to provide evidence from data as to where and when COVID-19 risks were peaking and reducing. This complemented the modelling work of epidemiological colleagues on the transmission of the virus, and showed where economic recovery could be promoted to lessen the recessionary impact of COVID-19.

To meet this ambition, the team would need to work in collaboration with other organisations and academic institutions.

A year later, more than 335 data citizen volunteers and 54 company members had come together. There were eight live projects. Six freemium products and services had been launched and made available to organisations across the globe.

This report pays tribute to the organisations, teams and individuals that came together to create something so impactful and meaningful in a global pandemic. It also leaves a legacy of artefacts, models and practices for the benefit of other data-sharing communities.

# ABOUT THE EMERGENT ALLIANCE

**Our vision** is to harness the power of collaborative data innovation to help the world shape a new normal, and **recover, together, stronger.**



## OUR MISSION

A not-for-profit community that exists to better inform the future economic decision-making of corporations, small businesses and nation-states. Drawing on a diverse collaboration of corporates, individuals, NGOs and Governments, the Alliance contributes expertise, data, and resources to inform decision making on regional and global economic challenges to aid societal recovery post COVID-19.

## OUR VALUES



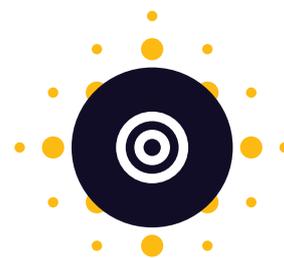
### COMMUNITY

An open community that brings together a wide range of organisations, the general public and government.



### INTEGRITY & TRUST

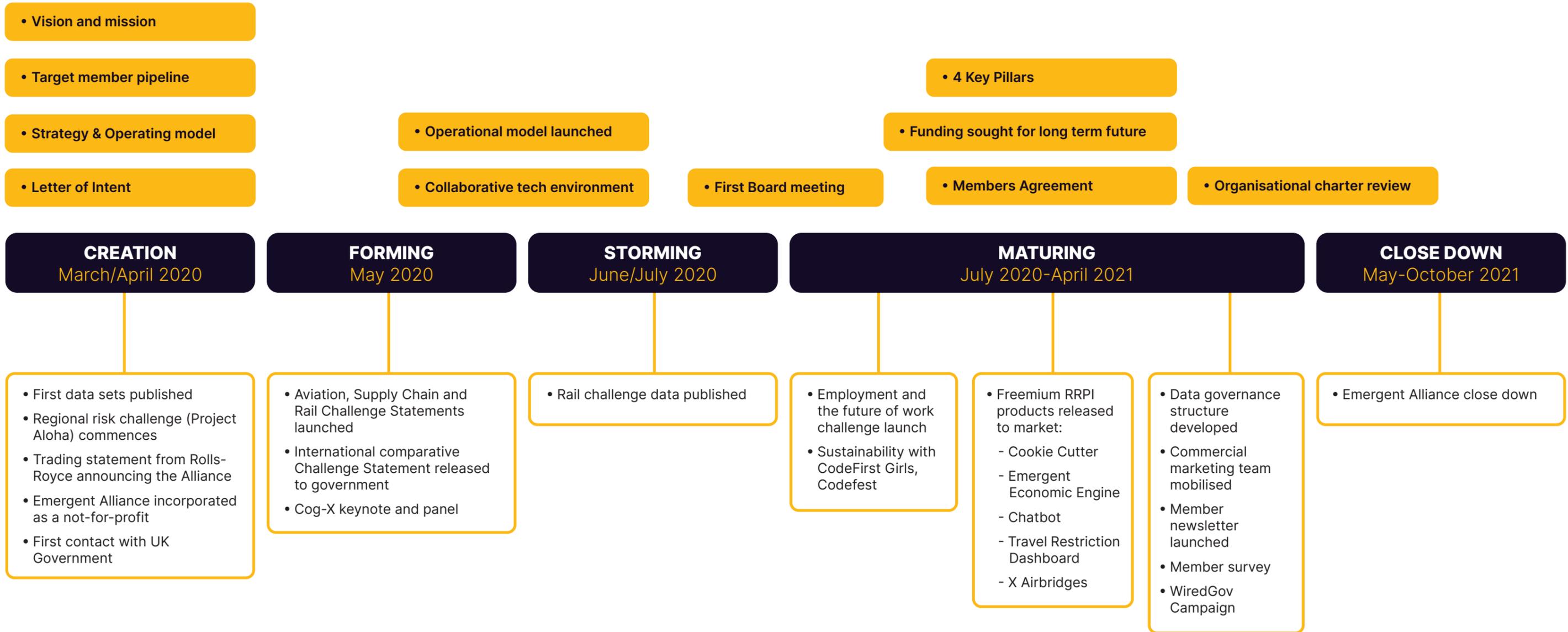
All activity is led and actioned with full transparency, in line with best practice.



### ACTION

To action and deliver on the Emergent Alliance mission and vision.

# EMERGENT ALLIANCE KEY MILESTONES



**300+**  
organisation requests  
for involvement

**60+**  
company members

**100+**  
data citizen  
volunteers

# THE CHALLENGES

Positive action was always at the forefront for the Emergent Alliance, and nothing proved it more than work undertaken across the live projects, fronted by the Challenge Statements. The Challenge Statements brought together teams of volunteers from across the globe at various stages of their professional lives.

The core areas identified all targeted modelling of economic recovery. Each started with a big 'how might we' question and invited teams to consider how they could respond to one of the Challenge areas.

The insights and outputs were designed to inform both in-sector and cross-sector decision making, helping organisations and authorities act in the best interests of citizens, providing real-life access to tools and data sets that would help inform and guide.

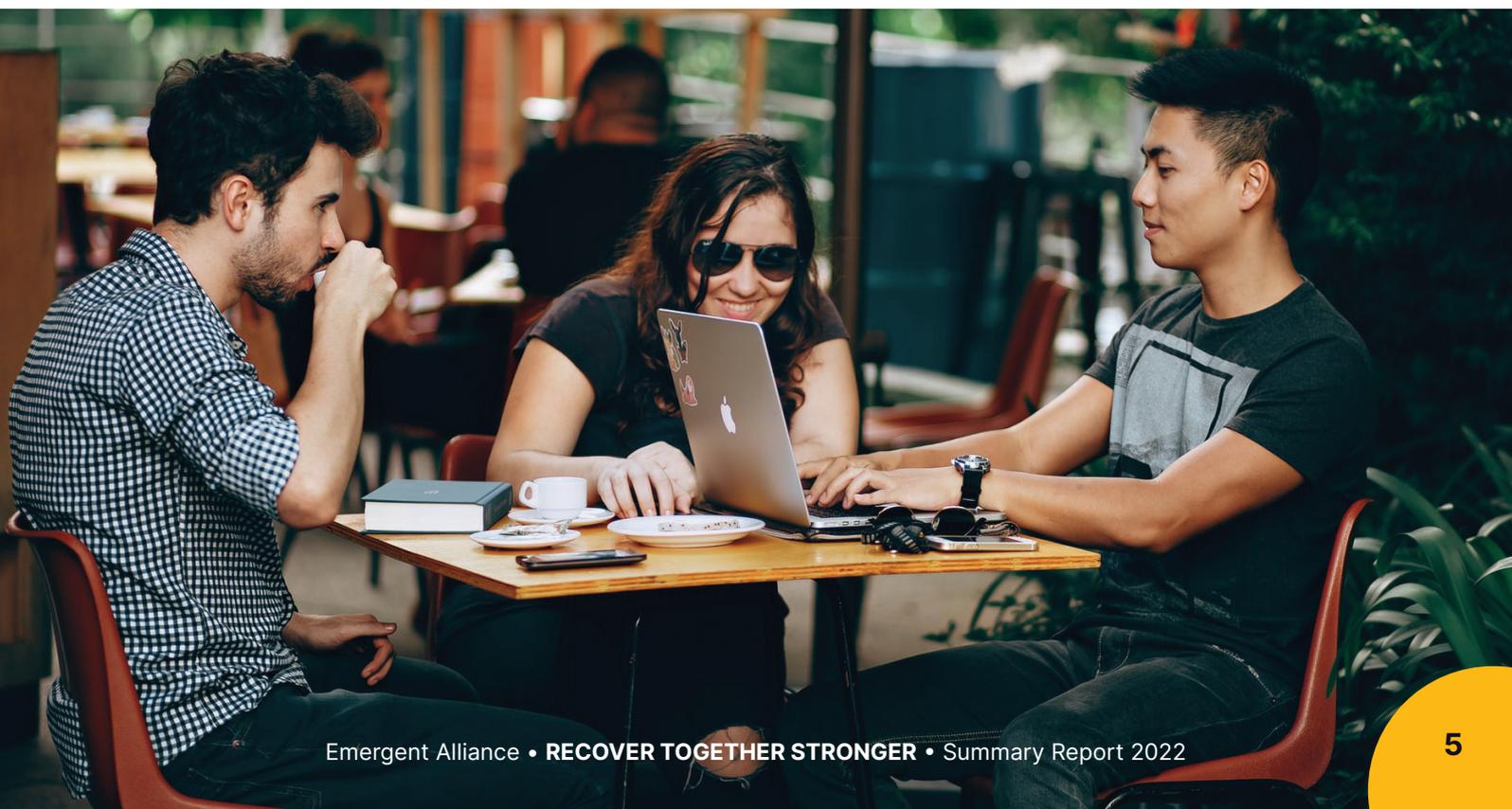
**Labour Market and How We Work**

**Demand for Goods & Services**

**Globalisation and Localisation**

**Mobility**

**Sustainability**



# CASE STUDY

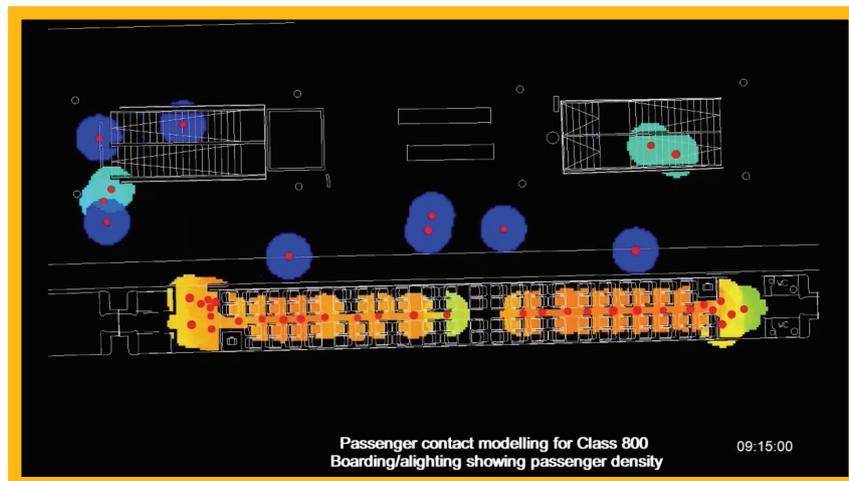
## THE RSSB RAIL CHALLENGE

Challenge Area: **Mobility**

Challenge Host: **RSSB**

### How safe is it to use public transport?

Using simulations, the team estimated person-to-person contact by modelling the impact of people getting on and off trains at stations around the country. By understanding these outcomes, they could assist the transport sector in offering safe and effective journeys where the risk of transmission of COVID-19 was reduced.



# CASE STUDY

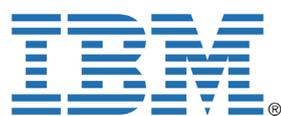
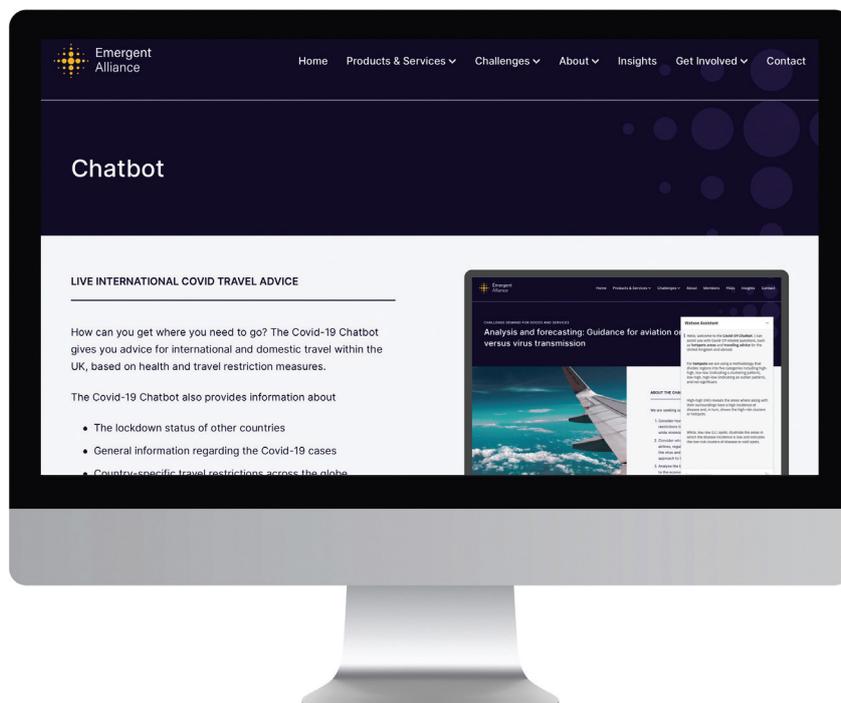
## RRPI: FORECASTING & SIMULATION

Challenge Area: **Globalisation and Localisation**

Challenge Host: **IBM and R<sup>2</sup> Data Labs**

### Where do you begin when calculating COVID risk?

The Regional Risk Pulse Index project's purpose was to help governments and local authorities determine the level of risk to health by incorporating information about population density, age of the local population, predicted COVID-19 infections, stringency index, as well as the change of behaviour and sentiment in the population. It culminated in four premium tools: the E3 economic engine, the COVID-19 Chatbot, the Cookie-Cutter and the Travel Restrictions Dashboard.



# CASE STUDY

## REGIONAL SKILLS & REDEPLOYMENT

Challenge Area: **The labour market and how we work**

Challenge Host: **REED**

### What is the COVID-19 impact on employment?

There was mounting evidence that some groups' employment would be more impacted than others because of COVID-19. The Challenge Team knew there were a number of readily available data points that, if tied together, could provide real insight into the industry, sectors and jobs that are available, and use real-time data that is tangible and effective in the process of retraining and looking for another role. They created the Job Finder Machine to match skills with recommended new roles and sectors.



# CASE STUDY

## GLOBALISATION AND LOCALISATION

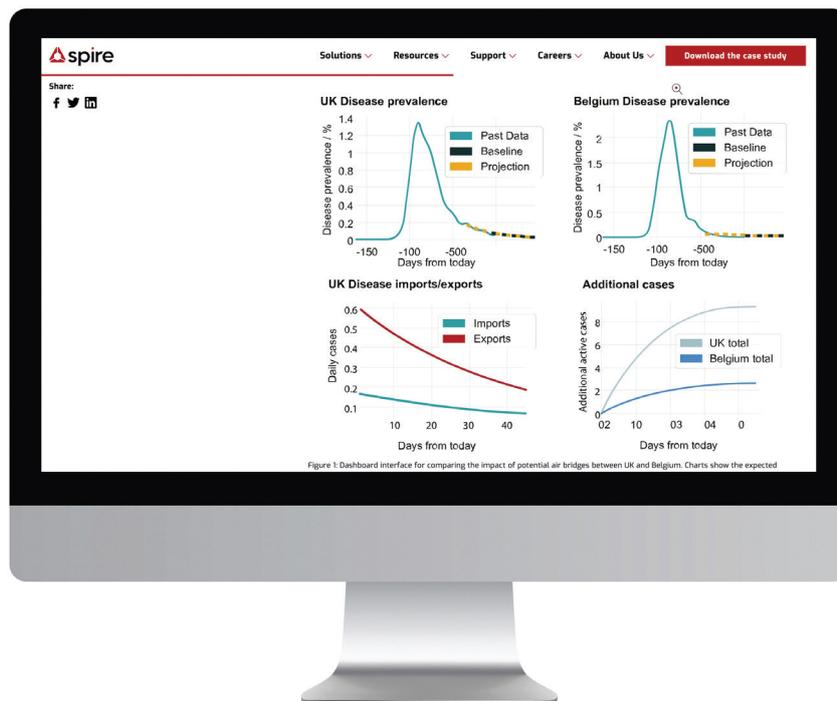
Challenge Area: **The Aviation Challenge**

Challenge Host: **SATAVIA**

### When can we fly again?

One of the earliest – and one of the longest-lasting – measures taken against the spread of COVID-19 was the implementation of international travel restrictions.

Aimed at policymakers and operational leaders in airports and airlines, the DECISIONX:AIRBRIDGE would generate accurate country-specific COVID-19 prevalence and R numbers and use the data to calculate the relative infectious risk of air travel between the UK and global destinations.



**SATAVIA**  
MAKING AVIATION SMARTER

# KEY LEARNINGS

If you can find a compelling enough reason, you can get the private sector to put aside competitive and commercial considerations and work together on a common mission. It was the key lesson observed by all involved.

Alongside patterns, models and practices, Emergent Alliance members have fed back their key learnings to help others who may look to set up data sharing communities.

## PROACTIVELY MANAGE HOW YOU FUND YOUR MISSION OVER TIME

The Emergent Alliance was established as a not-for-profit organisation without a clear funding model.

For many, the attraction at the beginning was the ‘warm glow’ that comes from involvement in an initiative so innovative and altruistic. It provided an opportunity to redirect skills and resources to allow people to contribute value to the world during the pandemic.

A key lesson learned is to tackle the thorny problem of funding in the early weeks, even if you set up as a not-for-profit organisation with a glittering membership profile and numerous volunteers.

## BE PREPARED FOR THE REALITY OF WORKING WITH NUMEROUS AND VARIED STAKEHOLDERS

From government bodies through to organisations providing pro-bono help, a key learning is the effort required to understand and manage stakeholders’ needs and expectations.

In discussions with senior members of the Cabinet Office with the potential to influence public policy, the Emergent Alliance cut a new and unconventional figure. While trusted arbiters of insight were informing decision-making through epidemiology models, the Emergent Alliance presented machine learning outputs.

While reports were viewed and interest taken in the results, the techniques weren’t recognised as those which might inform Government policy. It proved an important lesson in knowing your audience, understanding at the outset who is going to evaluate your work and by what standards and expectations.

## KEY LEARNINGS

### INSPIRING AND SUPPORTING DISPARATE COMMUNITIES IS A HUMAN CHALLENGE

Bringing together 50-60 companies across four continents - during a pandemic - to work on really big questions was an enormous human challenge.

There was no opportunity to meet face-to-face to build relationships. There were different time zones, different cultures, countries that were at different points of the COVID-19 pandemic at any one time and of course people experienced their own personal and local anxieties from the pandemic.

Clear communication and sharing successes proved to be a key area to improve upon and was supported by member organisations through a member newsletter, Town Halls, Team meetings and a member survey.

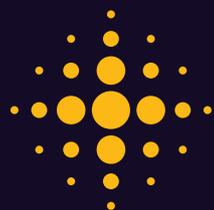
The level of effort needed on communication (made even greater by the pandemic) to engage, share and inspire was underestimated and is a key lesson learned.



# EMERGENT ALLIANCE LEGACY

It took a global pandemic to galvanise the data community to openly share data, technology, skills and insights. The opportunity for communities to continue to come together to create models and unique insights remains. The Emergent Alliance leaves a publicly-available legacy of models, practices, proformas and learnings. We hope this story inspires others to form communities for data-sharing collaborations to answer some of the big questions and challenges of the world.

To learn more about the organisations, teams and individuals that contributed to this collaboration please read the **Emergent Alliance Final Report** available on our Emergent Alliance website <https://emergentalliance.org>



Emergent  
Alliance