

# The United Kingdom Cabinet Office

The UK Cabinet Office demonstrates a vision to guide vaccine confidence communications with data-driven insights. Localized visibility into hesitant communities and the narratives that influence them guide communications strategies and tactics.

## BACKGROUND

Vaccine efficacy and safety has been a topic of enormous focus worldwide given the Covid-19 pandemic and subsequent vaccine rollout. Three years into the pandemic, the global anti-vaccine movement continues to present challenges. It's not new however, before the Covid pandemic began, the World Health Organization (WHO) identified vaccine hesitancy — defined as “the reluctance or refusal to vaccinate despite available vaccines” — as one of the top 10 global health threats.

The UK Cabinet Office, together with WHO, is working to build vaccine confidence and address misinformation, as a key deliverable of the UK's presidency of the G7 Summit. The UK Cabinet Office engaged Syntasa to build a Global Vaccine Confidence Platform, hosted on Google Cloud Platform. The platform allows stakeholders around the world to better understand vaccine hesitancy and collaborate more effectively.

## CHALLENGES

There are several core challenges the UK Cabinet Office and WHO seek to address with the Global Vaccine Confidence Platform. While many institutions (including governments and the public and private sector) have useful data and insights into vaccine hesitancy and misinformation, this information is often difficult if not impossible for other stakeholders to access. They may not know it exists, or may not be able to access it easily or consistently.

The same is true for content and programs developed to promote vaccine confidence. Many countries have mounted successful campaigns to address vaccine hesitancy, but the dissemination of learnings from one country to another has often been too slow to make an impact when it matters most. The Cabinet Office recognizes the need for a dedicated network of delivery partners, as well as a more deliberate use of technology, to maximize cross-border collaboration in the fight against vaccine hesitancy and misinformation.



### Enable Access and Collaboration Among Communicators Worldwide

Build the digital infrastructure that

- Unifies insights, content, and capabilities
- Enables the collaboration of international, national, and local partners
- Promotes global vaccine confidence

## /// Case Study

### SOLUTION

Syntasa worked with the UK Cabinet Office to build the Global Vaccine Confidence Platform to enable partners to collaborate to promote vaccine confidence around the world. Syntasa was able to create a Minimally Viable Product (MVP) in just six weeks' time.

The platform enables stakeholders across governments and the public and private sector to gain valuable insight on real-time citizen sentiment toward vaccines across more than 110 countries. This digital infrastructure can be used by governments, donors, the WHO, the World Bank, UNICEF, other NGOs, pharmaceutical companies, technology companies, and other private sector organizations.

One of the core challenges driving vaccine hesitancy is misinformation and disinformation about the vaccine. Public willingness to accept vaccines also fluctuates depending on a variety of external factors. Deeper insight into these false narratives and these varying levels of willingness across time and geographical areas is key to tackling the challenge of vaccine hesitancy, and ultimately increasing vaccination rates worldwide.

The platform charts these statistics and insights, providing an easily accessible way for stakeholders to understand not only various communities' current attitudes toward vaccines — including their risks and benefits, safety, effectiveness, and importance — but also how these views are changing over time.

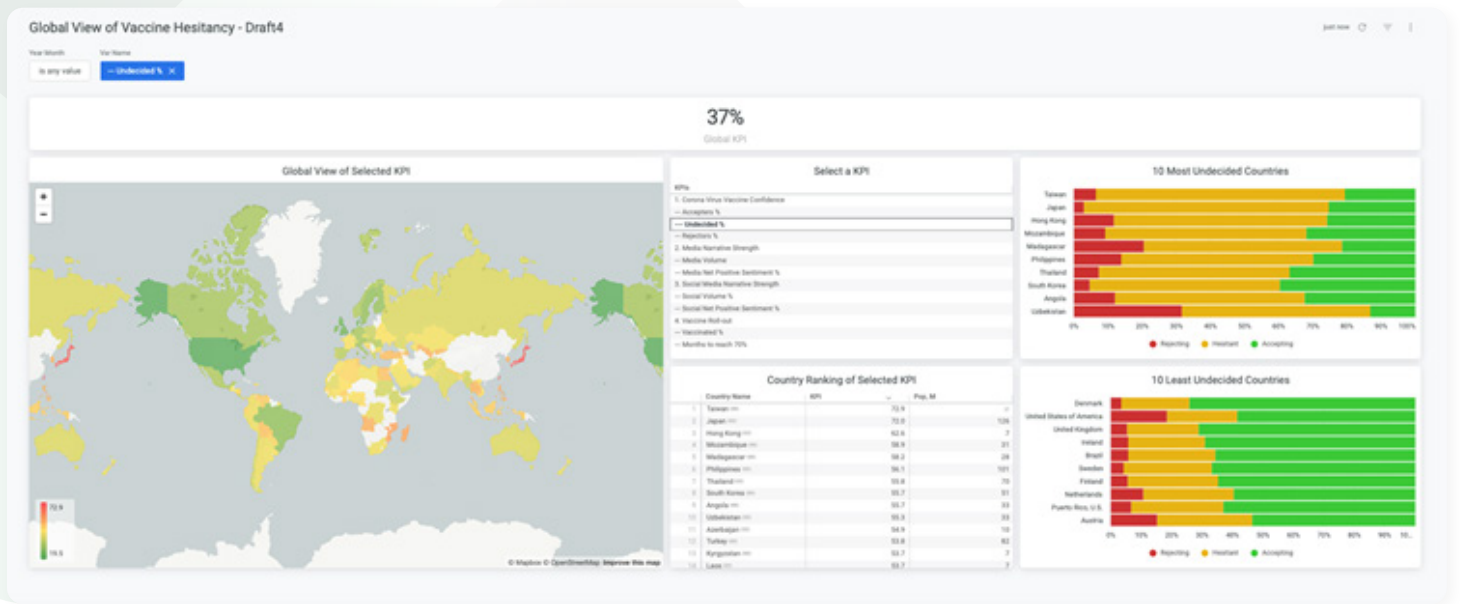
### The platform pulls from myriad data sets related to vaccine misinformation, disinformation, and hesitancy.

#### Sources include:

- **Google Covid-19 Open Data:** An open source data set containing information related to global vaccinations, epidemiology, hospitalizations, and demographics
- **Google Health Trends:** Health-related search data from Google
- **CovidCast:** Research studies conducted on Facebook by Carnegie Mellon University tracking and forecasting the spread of Covid-19
- **Covid-19 World Symptom survey:** Developed in partnership with Facebook and academic institutions, this survey asks Facebook users to report on symptoms, social distancing behavior, mental health issues, and financial constraints related to the pandemic.
- **Signal AI Covid-19 data:** Information from an AI engine trained to pull coronavirus-related information from across the web
- **Twitter data:** Syntasa applied topic modeling to identify emerging themes related to vaccine hesitancy in conversations from around the globe.
- **Brandwatch:** Digital consumer intelligence tool used to analyze Covid-19 related comments to posts from Facebook pages of news organizations around the globe

The Global Vaccine Confidence Platform is hosted on Google Cloud Platform, and uses Looker, Google's business intelligence and analytics tool, to provide easily accessible dashboards with key insights from the data. For example, the top-level global dashboard in the platform MVP shows "undecided" populations — that is, those who neither accept nor reject the Covid-19 vaccine — across various countries, and enables users to see how these populations differ across geographical areas. Users can also zoom into country-level dashboards to see metrics organized by age, gender, ethnicity, and other categories. The platform also takes into account social media and media activity across the world to analyze how various narratives around vaccines impact vaccination rates.

## /// Case Study



Syntasa leveraged tools like BigTable, BigQuery, and Google Cloud's Natural Language API to identify prevailing opinions, assess the magnitude of sentiment, and allow for updates as perception changed in various geographies or in certain demographics. The platform ultimately provides an up-to-date global view of vaccine hesitancy to allow stakeholders to prioritize their support for the cohorts who need it most and/or who are most likely to be receptive to their efforts.

In addition to a central global platform, the fully developed version of the platform will also include separate national instances, to make it possible for local stakeholders to share proprietary data securely — enabling granular insights for local initiatives and increasing impact.

### LOOKING FORWARD

Sentiment analysis, performed on a global scale with global data sets, enables stakeholders to use insights to prioritize and direct communication and intervention efforts around the world. This approach will be key to continuing to combat vaccine hesitancy, but it also has important applications for other priorities. A similar platform would be instrumental to help address global issues such as climate change, democracy, or transportation. Like vaccine hesitancy, these challenges are insurmountable without collaboration across geographical and institutional borders, and there is a huge opportunity to use technology to facilitate these partnerships.

**“Our vision is to build the digital infrastructure, with the World Health Organisation, to enable the collaboration of international, national and local partners, including in vulnerable countries to promote vaccine confidence.”**

— Gerald Mullally, Director, Government Communication Service International



### BEHIND THE SCENES

Get a peek behind the scenes of a sentiment analytics project — using digital behavior to gain insights into the global view of COVID vaccine confidence.

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