# Project Results Summary: AIOLOS

AIOLOS
Artificial Intelligence ToOLs for Outbreak Detection and responSe

## What results were achieved?

The spread of respiratory diseases poses a challenge for public health, the economy, and society. The COVID-19 pandemic has shown the importance of reliable data, real-time monitoring systems, and suitable modelling and forecasting systems to react quickly and effectively in crisis situations. In the German-French project AIOLOS (Artificial Intelligence TooLs for Outbreak Detection and ResponSe), six companies and research institutions are working together to develop a real-time data platform and AI-supported models for combating respiratory diseases. For this purpose, different, previously inaccessible data sources were integrated and used for predictions and modelling, such as social media trends, medical diagnoses, prescriptions, sales of medications, mobility data, or viral load in wastewater.

*"Pathogens causing respiratory diseases do not stop at national borders. With the German-French project AIOLOS, we had the opportunity to integrate data from various sources and countries, and use it to develop AI models to predict the course of infections and be better prepared for new epidemics. The binational approach of the project has highlighted how the data situation differs in both countries and has emphasised the need for cross-border solutions for risk prevention."*

***Professor Dr Aimo Kannt**,*
*Head of Research Division Drug Discovery*

Supported by:

Federal Ministry for Economic Affairs and Energy

on the basis of a decision by the German Bundestag

Programm begleitung

DLR Projektträger

## What is the benefit for the industry?

In close collaboration with associated partners and data providers, AIOLOS has developed an integrated data platform with automated real-time updates and intuitive dashboard visualization. It allows for the early detection of new outbreaks of respiratory diseases (ALERT), the tracking and prediction of their outbreaks (MONITOR), as well as the creation of scenarios for the effectiveness of response measures (DECIDE). AIOLOS maintains close contact with partners such as HERA or WHO to integrate the platform into future, sustainable solutions for pandemic preparedness.

## What are further plans after the project ends?

The insights gained in the area of AI model development will be adopted in further research and development projects. We plan to further develop and utilise the project results in cooperation with the consortium partners. Additionally, we aim to achieve economic viability in collaboration with international organizations such as HERA or WHO as part of their pandemic preparedness programmes. It is expected that parts of the prediction tool will become available for use by various stakeholders.

## 5 Partners

**Germany:**
Fraunhofer Institute for Translational Medicine and Pharmacology ITMP
Fraunhofer Institute for Algorithms and Scientific Computings SCAI
Umlaut Consulting GmbH
CompuGroup Medical Deutschland AG

**France:**
Sanofi Pasteur (french consortium leader),
Quinten Health

## Duration

March 2022 – May 2024

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