



# RESEARCH2REALITY

Shining a light on research & innovation.

## Stopping Global Outbreaks Before They Start

An interview with **Kamran Khan**, Entrepreneur, CEO, BlueDot, Associate Professor, University of Toronto  
**Alexander Watts**, Director of Insights, BlueDot  
**Carmen Huber**, Spatial Analyst, BlueDot

### Kamran Khan

I'm an infectious disease physician. I'm also a scientist and a professor at the University of Toronto, and the Founder and CEO of BlueDot. We're a digital health company that specializes in infectious diseases.

I spent about ten years studying global outbreaks and realized that diseases are emerging more quickly than ever before. They're spreading faster than ever before. And how can we be a little bit more anticipatory and a little bit less reactive?

### How do BlueDot solutions work?

### Alexander Watts

One of the pillars of epidemiology when it comes to data is being able to have a reporting system that is standardized across countries. A really rare disease is not only just expected to occur on a regular basis, but where it might spread to in the future.



### **Carmen Huber**

Sometimes we're looking at, for example, the extent where a mosquito that can carry a specific disease, is able to survive, and where there actually could be an outbreak versus seeing only one case in that area.

### **Kamran Khan**

We are building a global early warning system for infectious diseases and using artificial intelligence — things like natural language processing and machine learning — to process these vast amounts of data so we can pick up very rapidly news of an outbreak in different parts of the world. Maybe even before governments recognize them or have reported them.

We've then actually connected that information, which is happening again around the clock, with the entire world's airline booking systems. We can actually see where outbreaks are appearing, how people are dispersing across the planet, and now the technology to push information to those particular outbreaks. We have literally reached the point where we can spread knowledge faster than the diseases themselves. We're doing this in 12 countries today, but we've got aspirations to really be able to disseminate this knowledge to governments, to businesses, and to hospitals all across the planet.