



BIG DATA

FOR SOCIAL GOOD



How the mobile industry is harnessing big data to help public agencies and NGOs tackle epidemics, natural disasters and environmental impacts.

Infectious diseases, pollution, earthquakes, floods and other disasters are among the greatest challenges the world faces today. Each year, 15 million people die and millions more become seriously ill as a result of infectious diseases¹. According to the World Bank², air pollution has emerged as the fourth-leading risk factor for deaths worldwide. It is estimated that 1.8 billion people were affected by disaster in the last decade³.

Mobile operators can provide powerful and unique insights based on anonymised, aggregated network data to help solve these complex problems. Mobility data can help public health organisations to more effectively respond to epidemics or plan targeted health interventions. It can support emergency relief agencies to more accurately and efficiently direct their resources. It can help governments better understand the impact of pollution and climate change on citizens.

In 2017, through the GSMA, mobile operators across geographies have come together to accelerate and scale the business opportunity for Big Data for Social Good. The GSMA offers a unique platform to establish a common framework and best practice approaches, while respecting and protecting individuals' privacy.

In 2017, the Big Data for Social Good Initiative convened public and private organisations to accelerate the mobile industry's impact against the UN SDGs.



Task Force

20 mobile operators accounting for over **two billion** connections in more than **100 countries**.



Advisory Panel

Global thought leaders from UN agencies, international organisations and partners, providing on-the-ground insights and needs.



Common Approach

A model to share insights while protecting and respecting individuals' privacy.



Implementations

Projects by operators and partners in Brazil, India, Bangladesh, Myanmar and Thailand

1. Dye, Christopher. "After 2015: Infectious Diseases in a New Era of Health and Development." *Philosophical Transactions of the Royal Society B: Biological Sciences* 369:1645 (2014): 20130426. PMC. Web. 23 Feb. 2017. <http://rstb.royalsocietypublishing.org/content/369/1645/20130426>

2. <http://www.worldbank.org/en/news/infographic/2016/09/08/death-in-the-air-air-pollution-costs-money-and-lives>

3. http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/12/Charter_Principles_document.pdf



Case Study: Leveraging mobility data to monitor and manage air quality in Brazil

BRAZIL



São Paulo

Telefonica

LUCA
Telefonica DATA UNIT

vivo

The Challenge:

Air quality is a major concern for local governments in large urban areas, as it is a serious threat for public health. Globally, an estimated 5.5 million lives were lost in 2013 to diseases associated with outdoor and household air pollution⁴.

Air quality monitoring is currently costly for cities, as it either requires a network of fixed-point air quality and traffic sensors or extensive manual surveys.

The Solution:

The largest city in Brazil, São Paulo has a population of 12 million. Telefónica has developed a mobile Big Data solution that estimates and predicts air quality up to 48 hours in advance. It uses innovative machine-learning models that leverage aggregated, anonymised mobility data, together with data from weather, air quality and traffic sensors.

The Impact:

Telefonica's project provides a unique solution to address air quality's impact on the city and its inhabitants. Leveraging the data and insights from the operator offers a cheaper alternative to air quality monitoring and allows local government to take further preventive actions. For example, improving urban planning by guiding traffic via alternative routes or issuing early health warning advice to affected populations.

**Watch our video, learn more about the initiative and contact us for more information: gsma.com/betterfuture/bd4sg
bd4sg@gsma.com**



@gsma #BetterFuture #BD4SG