

myBUTTERFLY – A Patient-Centered Digital Health Solution to Link Air Pollutants Concentrations with Chronic Respiratory Disease



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CONSORTIUM:



PARTNERS:



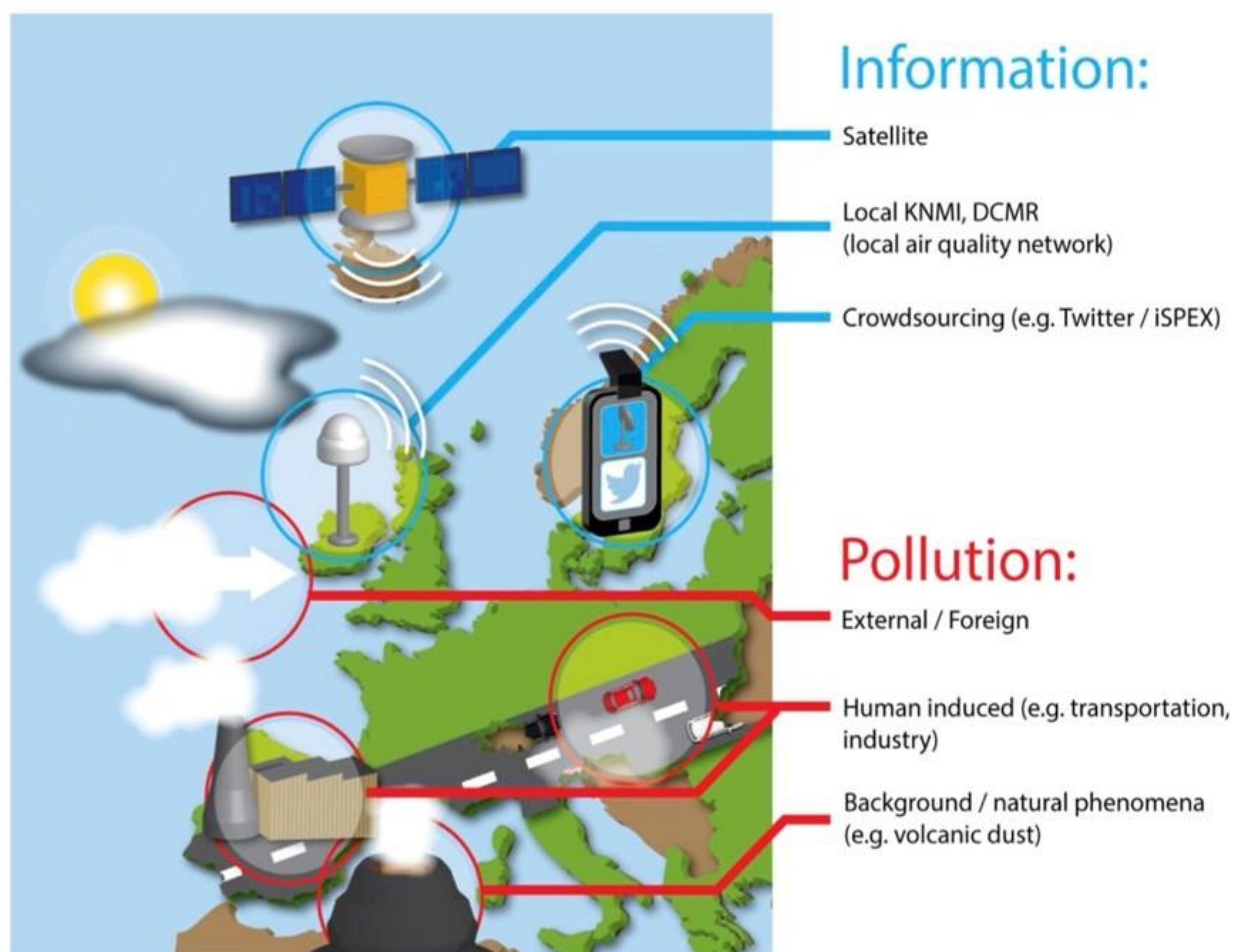
BACKGROUND:

- From smog hanging over cities to smoke inside our homes, air pollution poses a major threat to health and climate. 91% of the world's population lives in a place where air pollution exceeds WHO guideline limits and that the combined effects of outdoor and household air pollution cause about 7 million premature deaths every year [1].
- Pollutants with the strongest evidence for public health concerns include particulate matter (PM), ozone (O₃), nitrogen dioxide (NO₂) and sulphur dioxide (SO₂) [2].
- With the rising awareness of climate change and air pollution having a direct effect on the citizens' health and well-being, the need of a personalized monitoring device has become of greater interest [3].

AIM:

- Making use of climate data from satellites, static sensors and mobile devices to give an accurate picture of the personal exposome and prevent CRD. The generated information will be extended to any population at risk in the next future.

CHALLENGE:



Figures: AIR Portal Copyright

EXPECTED RESULTS:

- It is expected that participants will be able to collect real-time pollution data exposure to be linked with satellite earth observation data and mapped by a dynamic air quality model.

REFERENCES:

[1] Organisation mondiale de la santé (2018). <https://www.who.int/airpollution/en/>

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[3] Snyder EG, Watkins TH, Solomon PA, Thoma ED, Williams RW, Hagler GSW, et al. The Changing Paradigm of Air Pollution Monitoring. Environ. Sci. Technol. 2013;47:11369–77.

[4] Larkin A, Hystad P. Towards Personal Exposures: How Technology Is Changing Air Pollution and Health Research. Curr Environ Health Rep. 2017 Dec;4(4):463-471.