

Dyson investigates air quality Hong Kong

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Melody wore Dyson's prototype air quality backpack during her daily routine in Hong Kong over a two-day period. The backpack measures personal exposure to pollutants including PM2.5, VOCs and NO₂. Activities such as eating out at a restaurant, using hand sanitiser and visiting a local temple contributed to higher levels of pollution. This highlights how daily activities can influence personal air pollution exposure.

Pollutants identified

PM2.5
Microscopic particles smaller than 2.5 microns including smoke, bacteria and allergens.

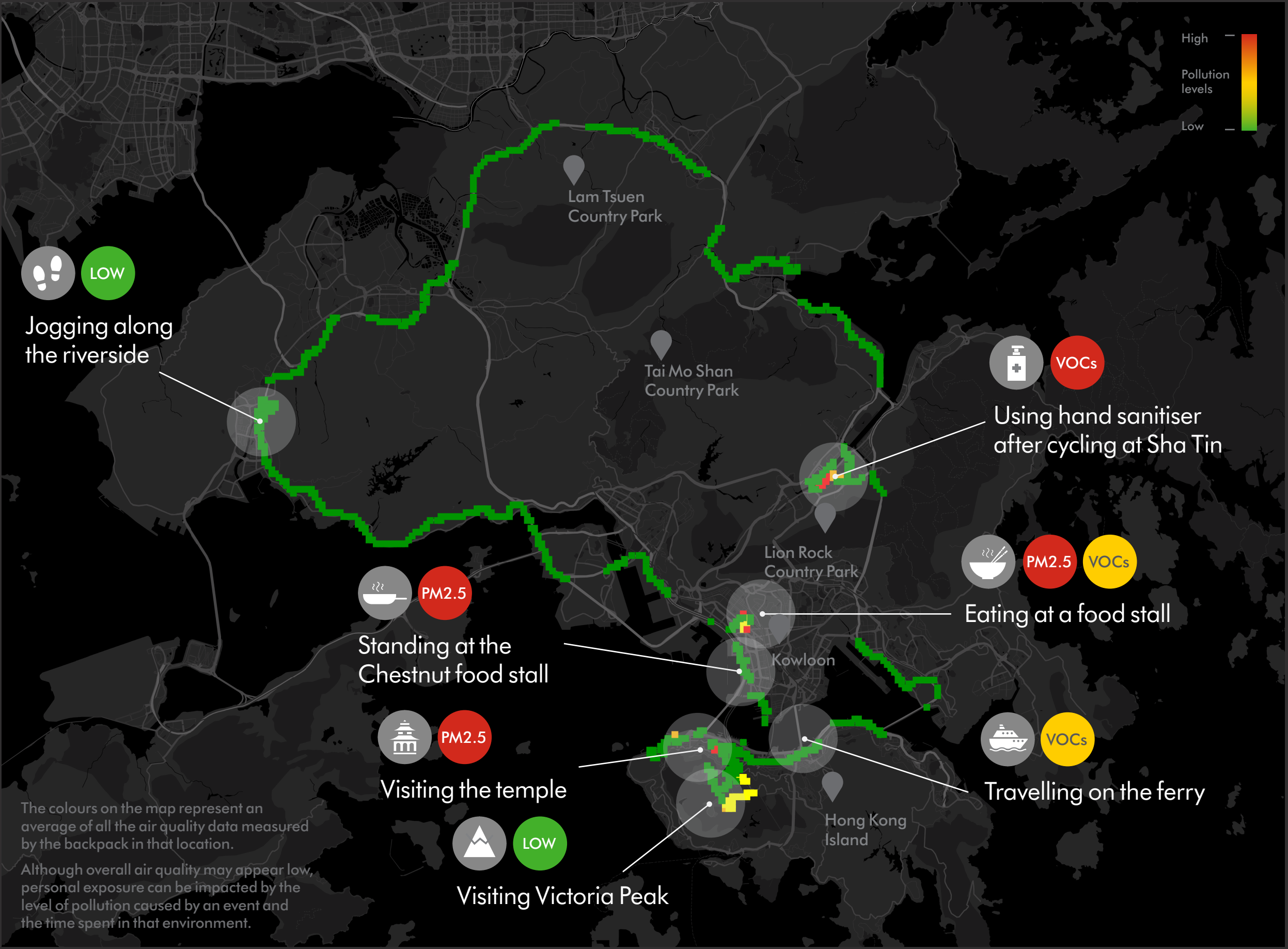
Nitrogen Dioxide (NO₂)
Potentially harmful gases, released by combustion. Sources include cigarette smoke, candles and gas stoves.

Volatile Organic Compounds (VOCs)
Gases released from a wide range of sources such as aerosol sprays and air fresheners. They include formaldehyde and benzene, household fumes and odours.

PM2.5

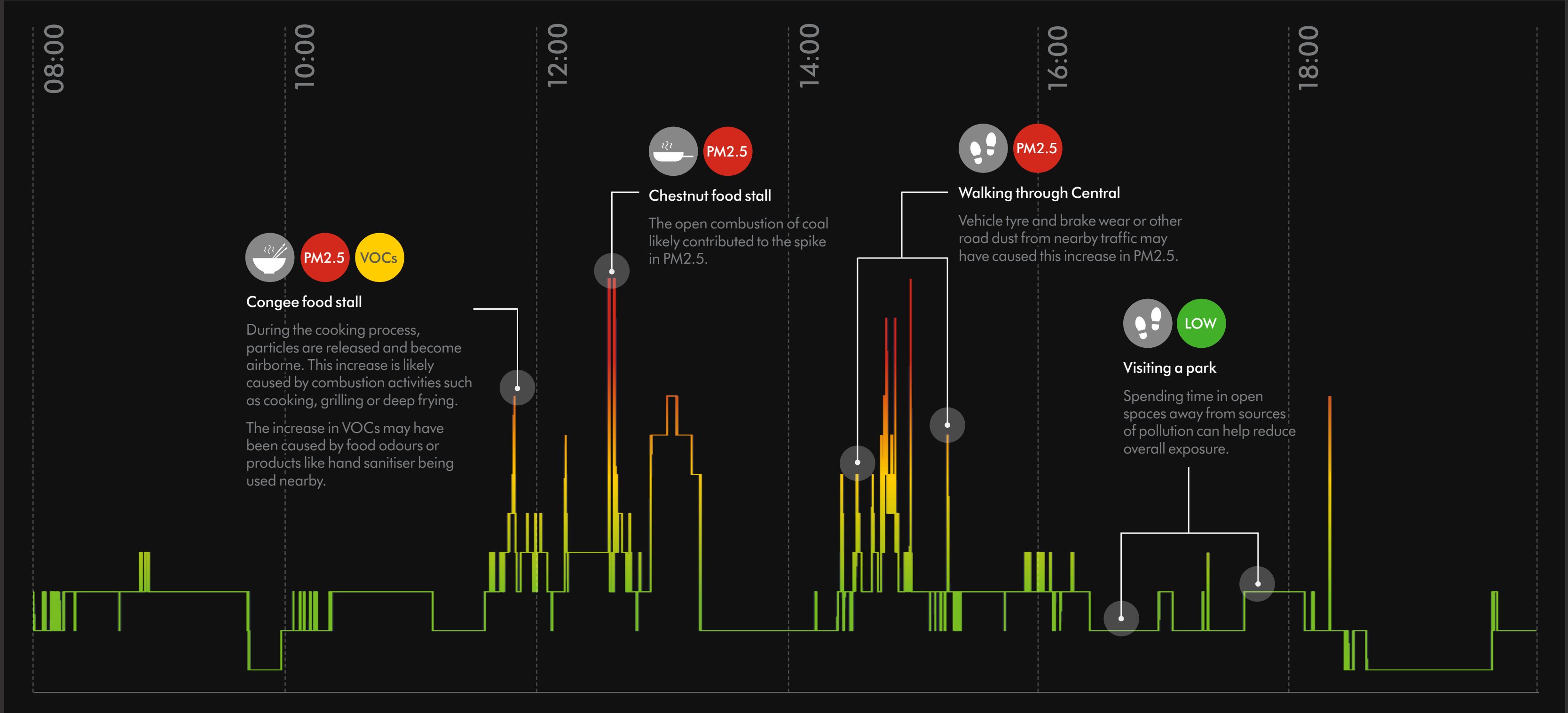
NO₂

VOCs



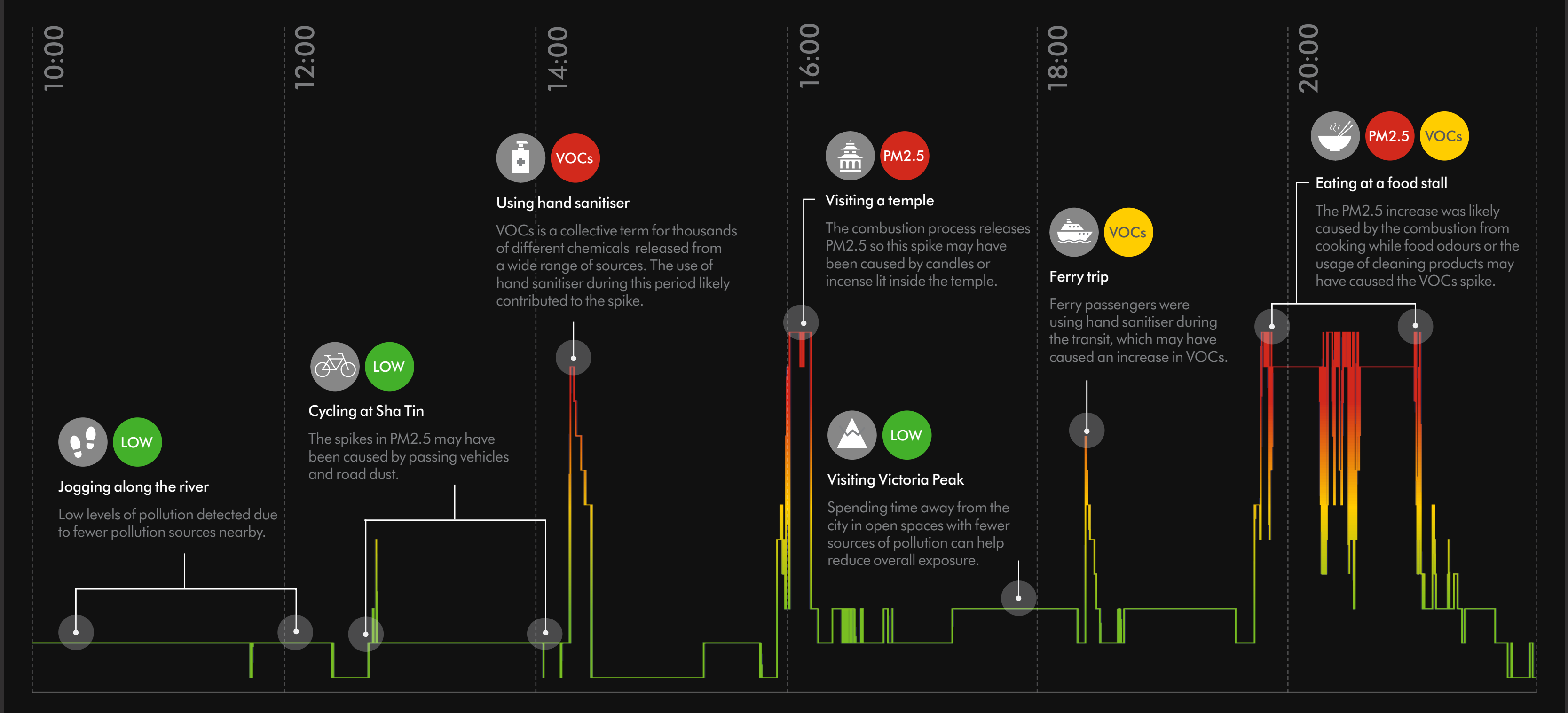
Impact of daily activities on personal exposure to air pollution

Detailed breakdown of all pollutants on day 1



Impact of daily activities on personal exposure to air pollution

Detailed breakdown of all pollutants on day 2



Top tips

What can you do?

It can be difficult to avoid air pollution in cities, as many sources are out of our control. However, there are some simple actions you can take to reduce your exposure to potential pollution sources.

Travelling



Choose quieter roads away from heavy traffic to help reduce exposure to pollutants caused by vehicles.

Spend less time in polluted environments, such as stationary traffic, to help reduce overall exposure.

Public spaces



Choose outdoor spaces away from pollution sources. Air circulation helps remove pollutants more quickly if a pollution incident occurs.

Check the air pollution forecast for areas you plan to visit to help you avoid activities that might cause increased exposure. This is particularly useful if there’s going to be a city-wide pollution event.

Industrial areas



Be aware that there are some areas prone to worse air quality due to industrial activities.

Understand how weather can play a part in pollution exposure, as wind may blow airborne pollution in different directions.

Cooking and dining



Method, length of time and what is being cooked can all affect the build-up of pollutants. Be mindful of this when trying to reduce exposure.

Try to ventilate the space where the food preparation is taking place. Minimising the amount of time spent in environments where there is a lot of combustion from food cooking can also help to reduce overall exposure.

Indoor pollution



Where possible, remove or reduce pollution sources like candles and dust indoors.

Ventilate your home when outdoor pollution is low and keep windows closed when it’s high.

Consider using an air purifier to help capture both particulate and gas pollutants in the home.