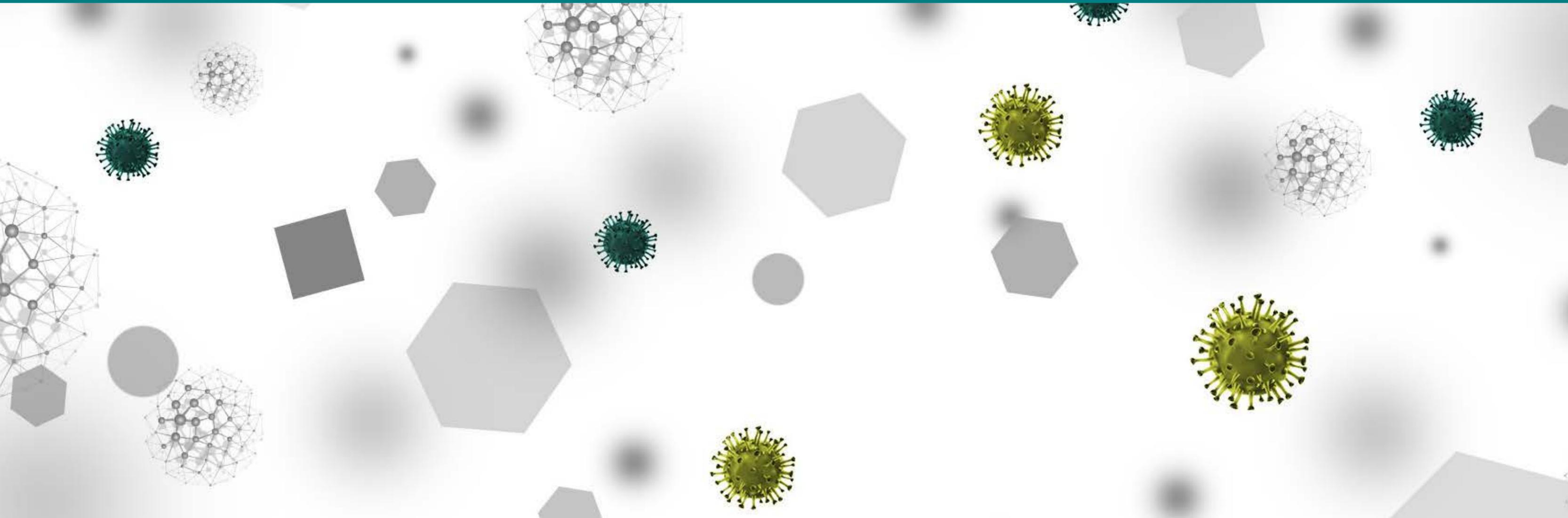


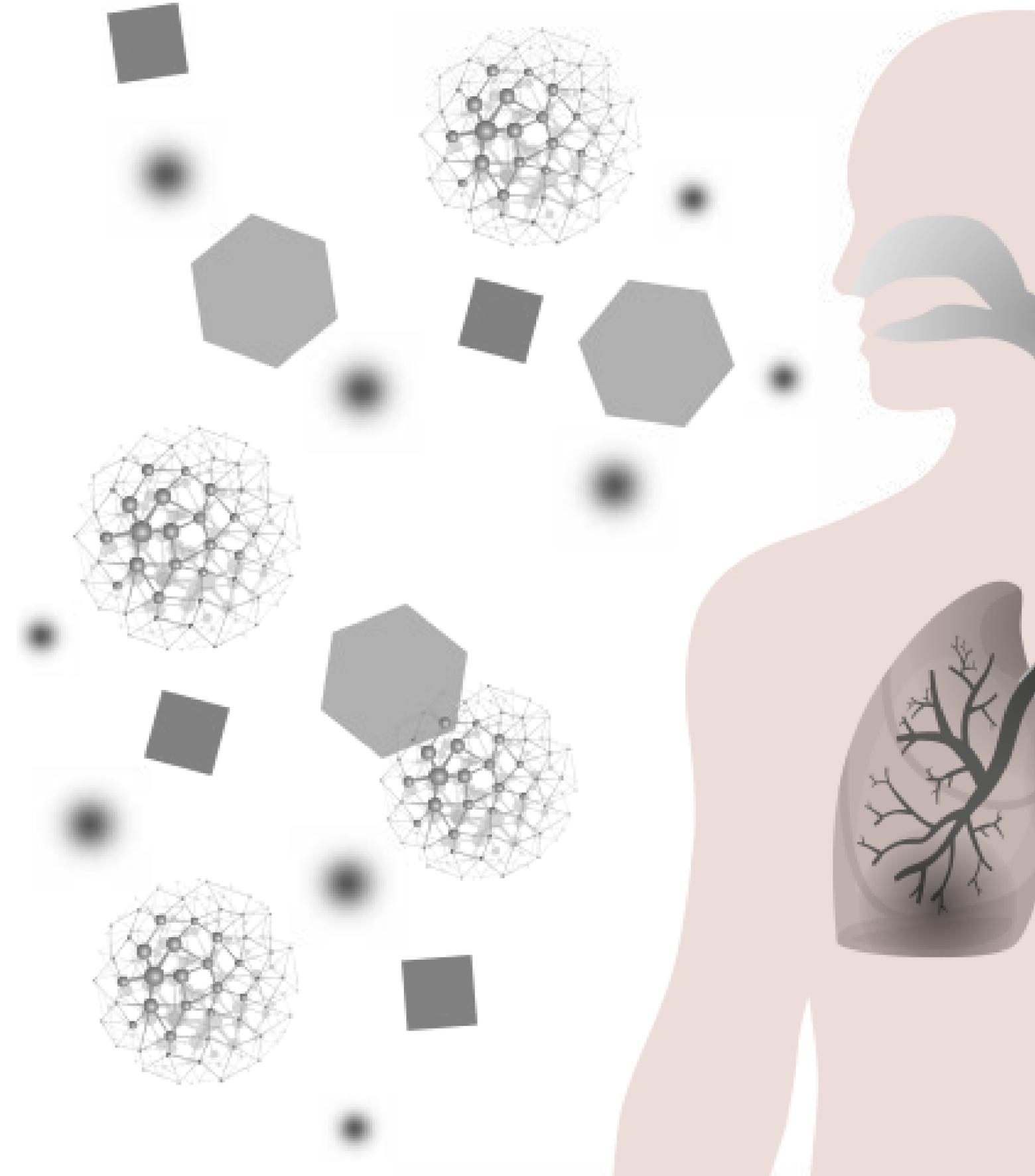
Particulate matter – a risk to health and business



The issues explained

The small particles with a big impact

Particulate matter is everywhere. Sometimes we can see it, sometimes we can't. It's made of tiny airborne particles that stay in the air for a long time – the smaller they are, the longer they stay around. The longer they remain, the more likely it is that your employees will breathe them in. And the more particles they inhale, the greater the risks.



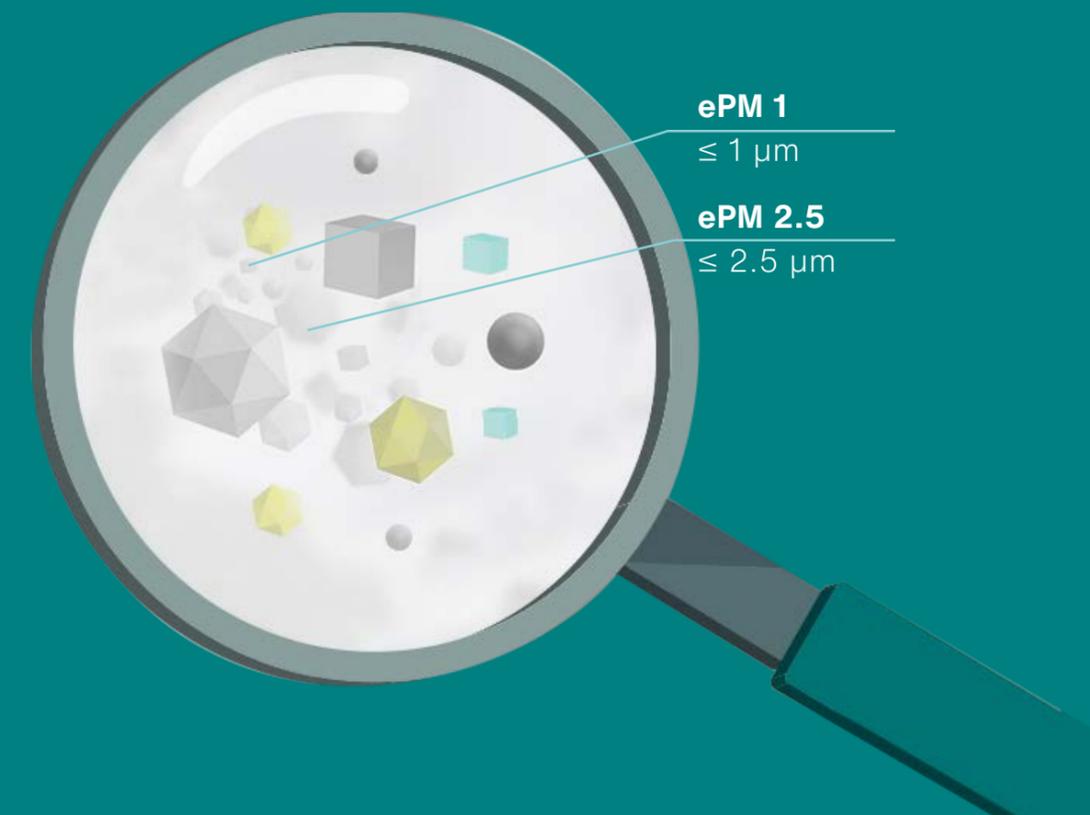
What is particulate matter ...

...and how does it put your employees at risk?

Particles that are small enough to enter the lungs are known as respirable dust. All particles up to 2.5 micrometres in diameter are potentially respirable and referred to as $PM_{2.5}$ (PM stands for 'particulate matter'). A subgroup of $PM_{2.5}$ is PM_1 – 'ultrafine' particles with a diameter of less than 1 micrometre. $PM_{2.5}$ is harmful to human health but the smaller PM_1 particles can actually cause much greater harm.

PM_1 particles are the most common type of pollutant in cities, especially in industrial regions. They are released by burning fossil fuels such as oil, diesel, gas and coal – for transport and in power stations, for example.

In a recent study in China, researchers examined the data from air quality measuring stations and found that nearly 80% of $PM_{2.5}$ consisted of the especially hazardous smaller particles of PM_1 . The study also showed a link between the amount of ultrafine particles in the air and an increase in emergency admissions to hospitals. **In short, PM_1 should never be underestimated.**



How does particulate matter harm your business?

PM₁ particulate matter has not been studied in the same detail as PM_{2.5}, but it does not make this air pollutant any less dangerous. The longer you and your team are exposed to ultrafine particulate matter, the more serious the consequences could be. Breathing in deeply – a natural process – allows harmful substances to enter the lungs more quickly and penetrate further into lung tissue.

...and this can lead to:

- **Cardiovascular and respiratory disease** – fine particles can penetrate human tissue layers that larger particles cannot reach;
- **Impaired brain function** – ultrafine particles can more easily enter the bloodstream via the lungs.

Most important of all, a high level of PM₁ in the air at your workplace can damage the health of your employees. Furthermore, this can result in more absences, less productivity and higher employee turnover – with long-term consequences for your business. The good news, however, is that there is a way to keep ultrafine dust under control and prevent it from affecting your team.



At Zehnder Clean Air Solutions, our air cleaning systems have been shown to reduce the amount particulate matter in the air by up to 90%. We tackle air pollution right at the source, filtering harmful dust particles from the air before they can be inhaled. Your business can't afford to ignore particulate matter, so contact us today to discuss clean air for your workplace.

     **#startwithcleanair**
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