
Internal Air Quality sensors
For healthy indoor environment
and energy saving.
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„INDOOR GENERATION“

On average we spend 80-90 % of time indoor

What is manifestation of poor indoor air quality?

Poor concentration…

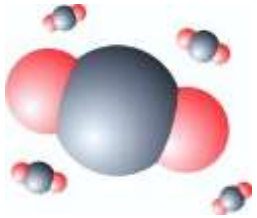
Low effectivity…

Drowsiness…

Poor sleeping quality, headache…

Typical indoor contaminants

CO_2 – Carbon Dioxide



Sources of CO_2

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PPM –
Parts Per Million

VOC – volatile organic compounds

More then 10 000 different types

Typical sources of VOC

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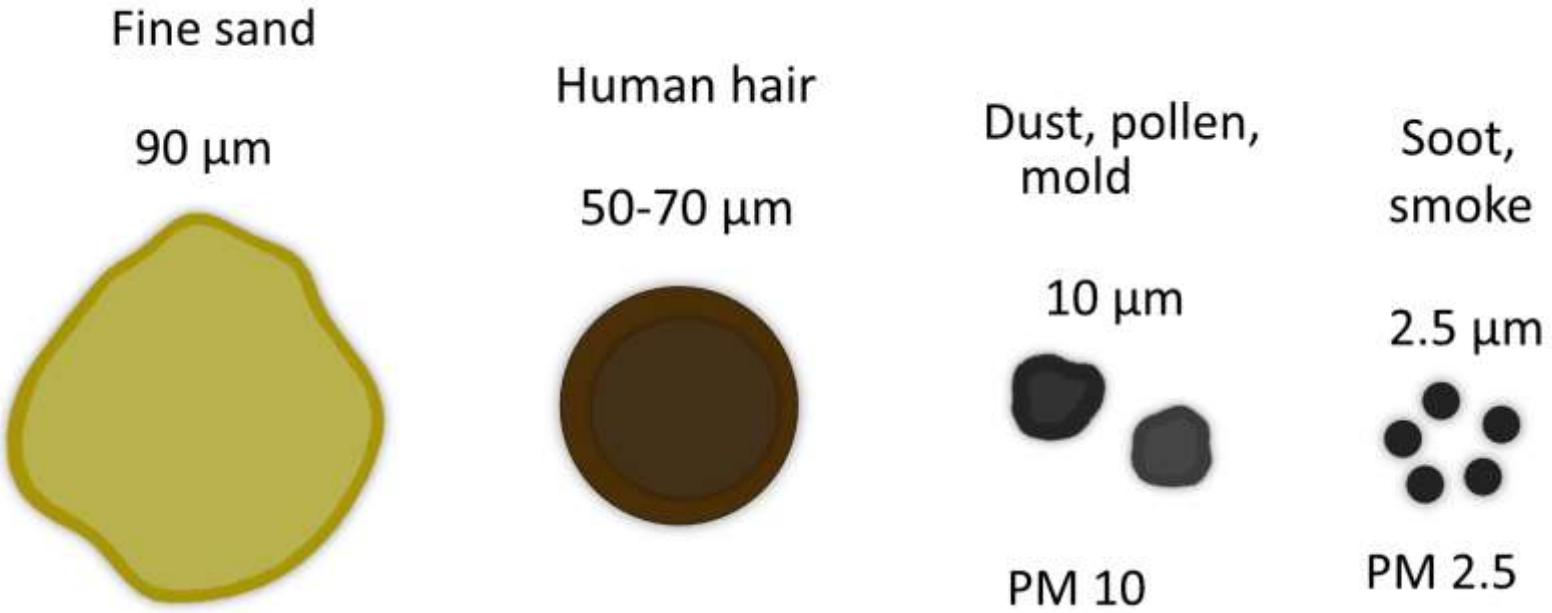
Particulate matters

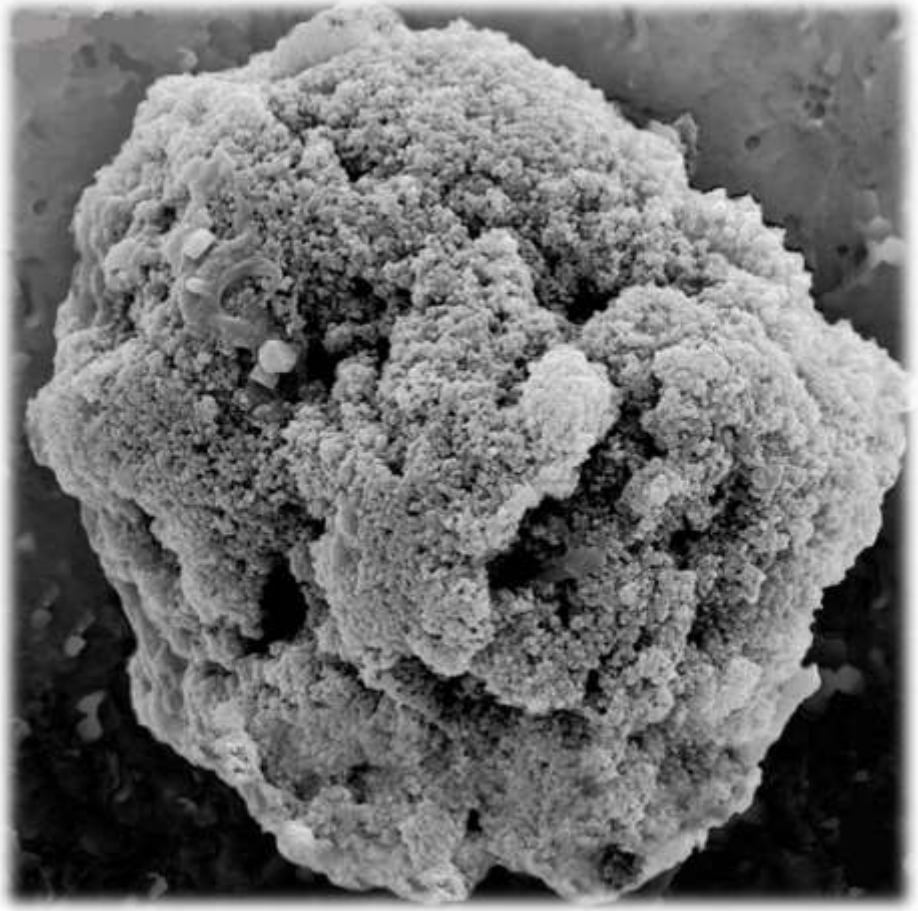
- mixture of airborne solid particles
- can be inhaled

- may cause serious health problems
- the smaller the particles are, the deeper they can penetrate through our respiratory system and into our bloodstream

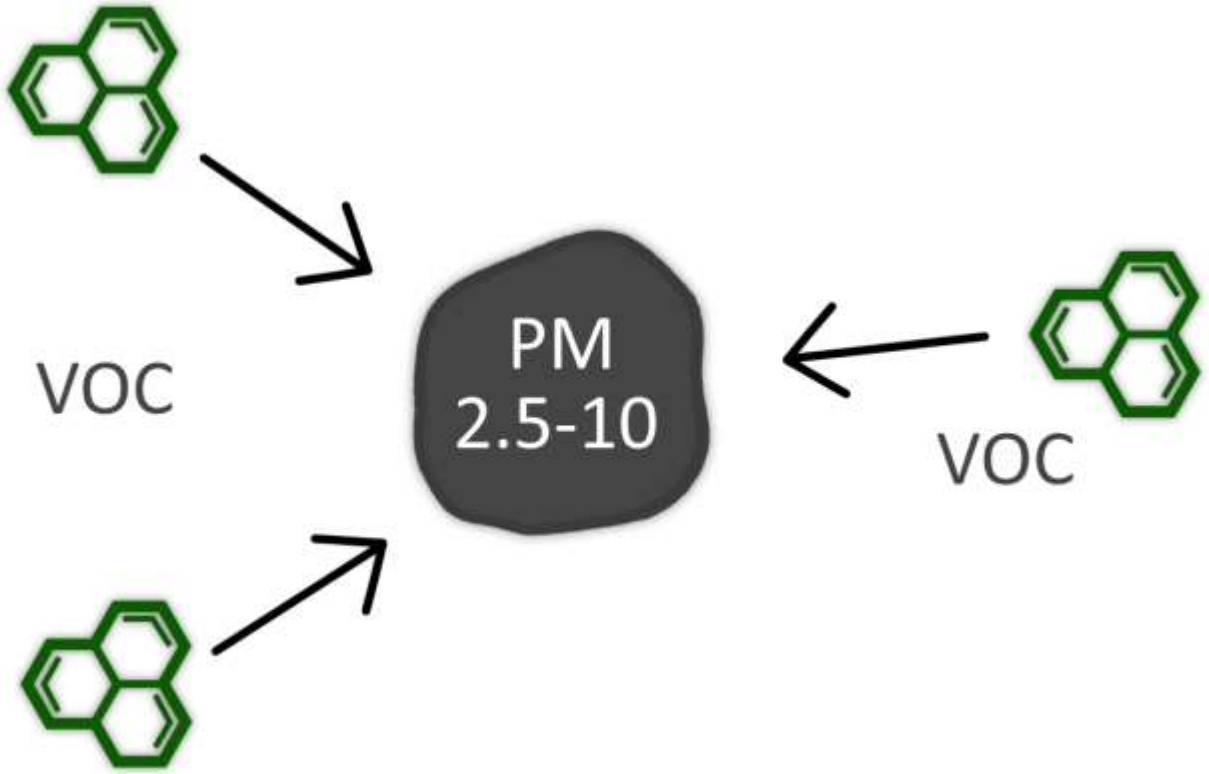

Fine sand
90 µm
Human hair
50-70 µm
Dust, pollen, mold
10 µm
PM 10
Soot, smoke
2.5 µm
PM 2.5

Magnified PM 2,5

diameter 2,5 µm



Mutual interaction of PMs and VOCs



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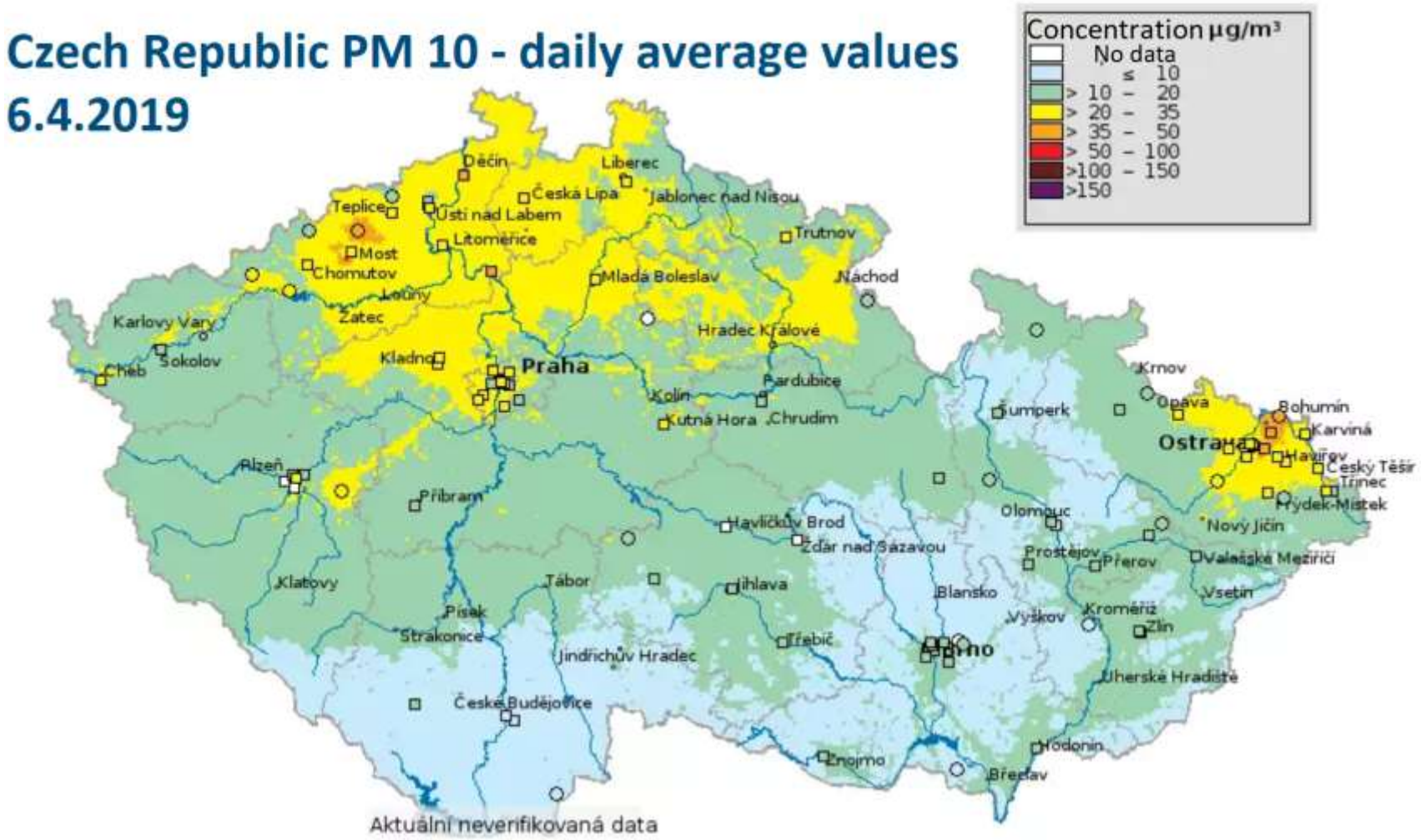
Data from Czech Hydrometeorology Institute



RH – relative humidity

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DUST SENSOR NL II – PM 2,5

- mass concentration range 0 - 1 000 µg/m^3
- size range PM 1, PM 2.5, PM 4, PM 10
- accuracy +/- 10 %
- expected lifetime > 8 years
- IQRF communication module
- 0 - 10 V ~ 0-100 µg/m^3 PM 2.5
- 0 - 10V ~ 0-100 µg/m^3 PM 10

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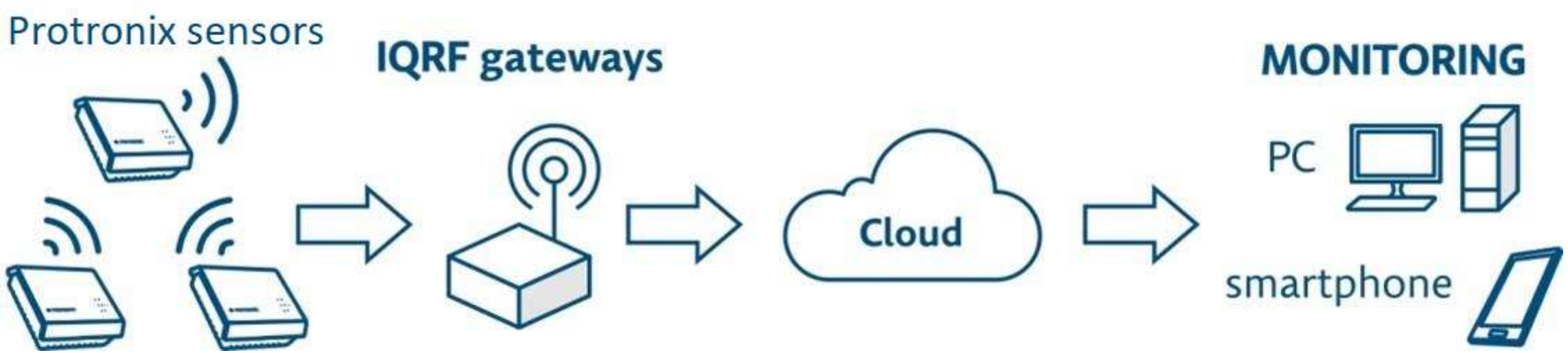
NL II – AIR

- **Combined sensor**
  - CO2 400 - 2 000 / 5 000 ppm
  - iVOC 400 - 2 000 ppm
  - RH 0 - 100 %
  - CO2 + RH + T
  - VOC + RH + T
  - SMOKE + RH + T
- 0 - 10 V / 0 - 20 mA / 4 - 20 mA
- relay
- IQRF communication module, Sigfox, GSM, RS485 - Modbus
- **minimal lifetime 10 years**

Wireless communication IQRF



Thank you for your attention.

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and energy saving.

www.careforair.eu

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