



**HEALTHY JOURNEY
by Embraer**

OCTOBER 2020



Hospital Operating Room

5x

Outside air changes per hour

Hospital
Operating Room

5x

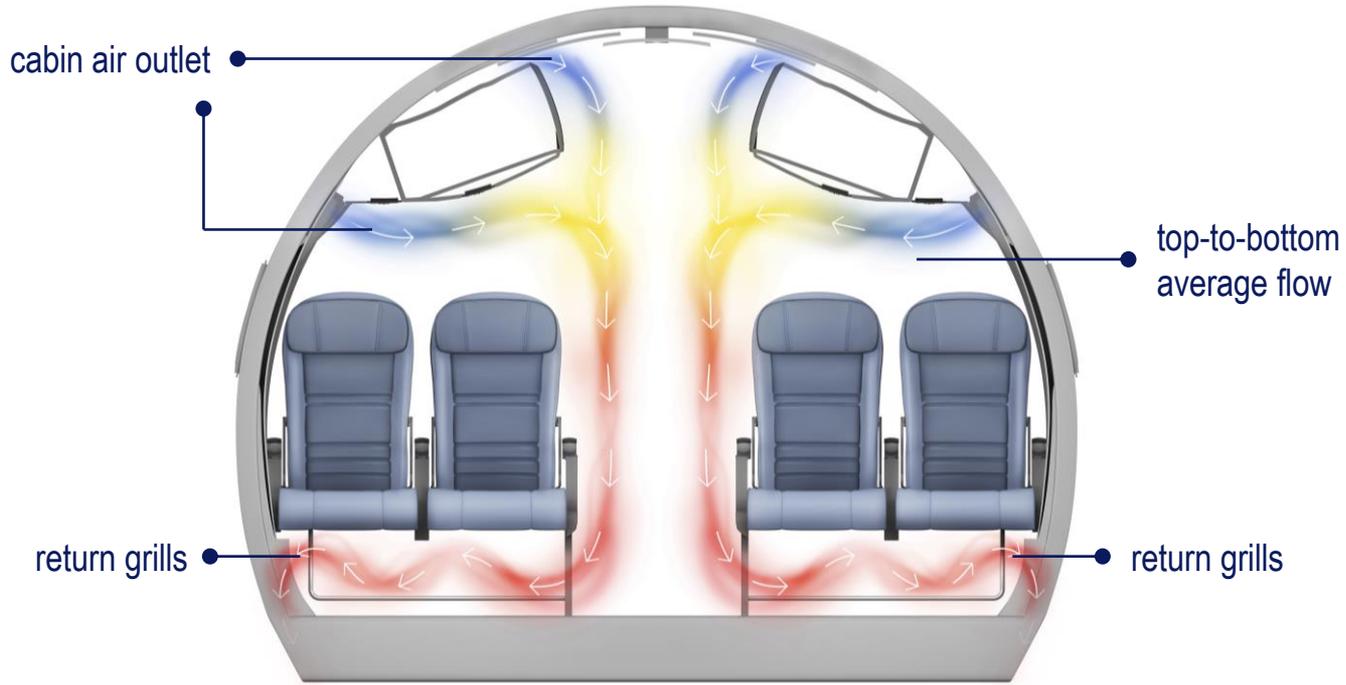
Outside air changes per hour

Aircraft Cabin

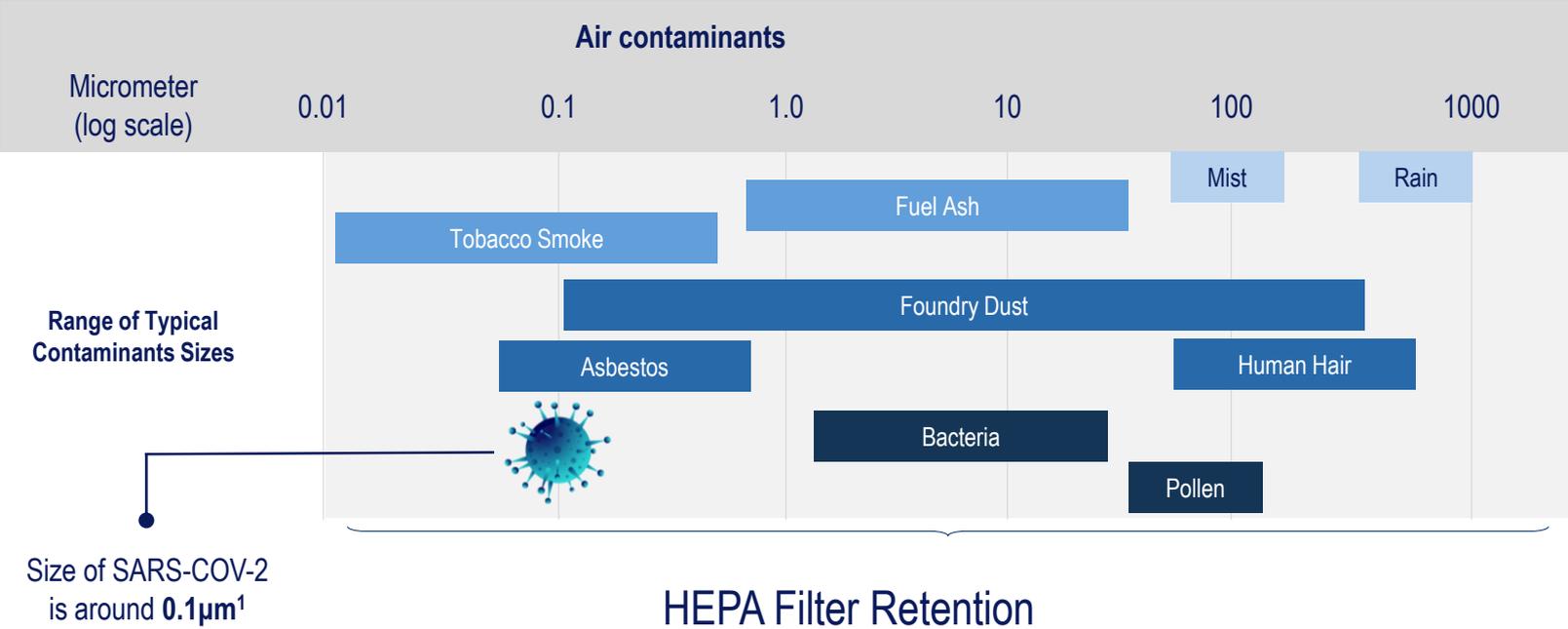
20x

Outside air changes per hour
Every 2-3 minutes the full cabin
volume of external air is injected
in the aircraft

Clean air designed to cycle from top to bottom minimizing cross-cabin flow



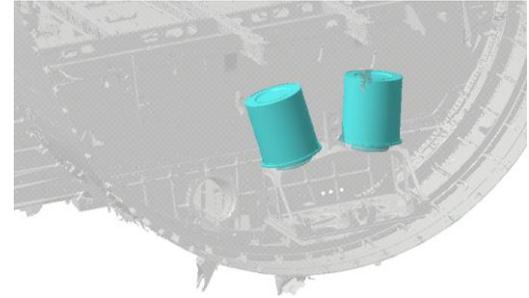
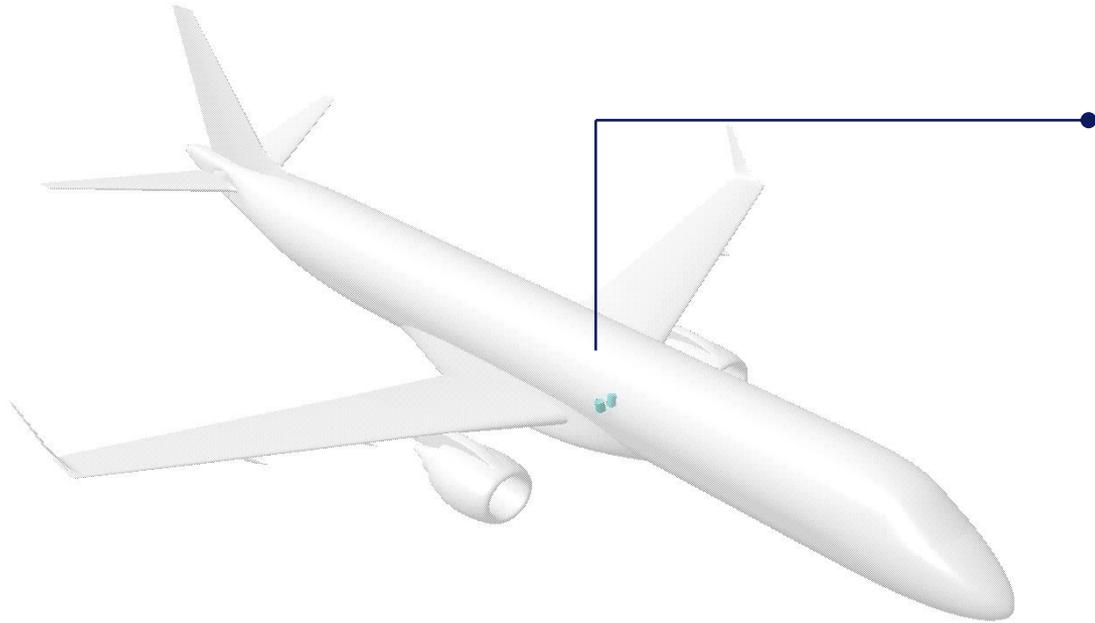
E-Jet HEPA filters capture 99.9+% of airborne contaminants bigger than 0.1 micron



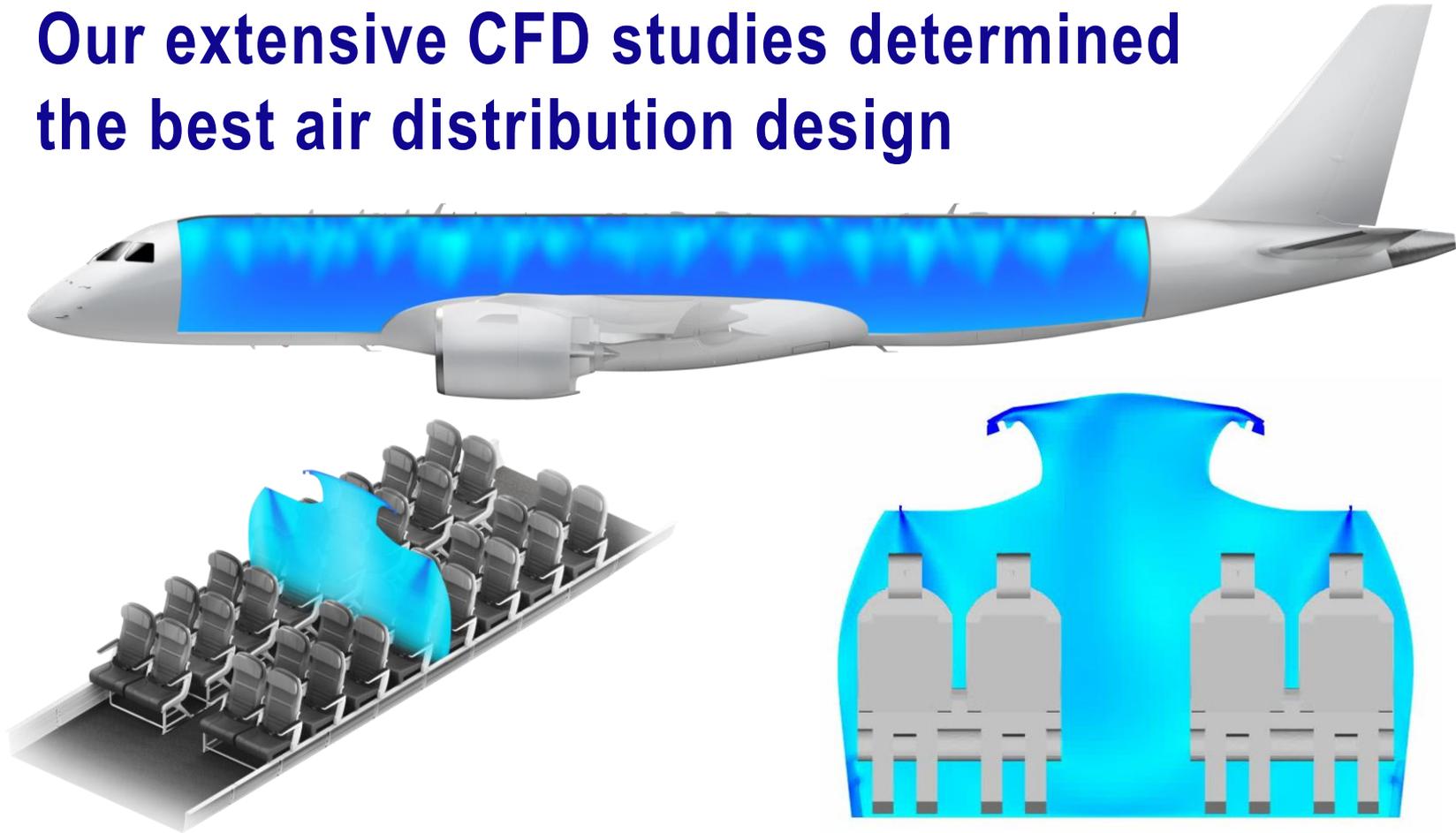
Source: SARS-CoV-2 (COVID-19) by the numbers, doi: 10.7554/eLife.57309



Filter removal and inspection follows a strict maintenance schedule



Our extensive CFD studies determined the best air distribution design



In-house testing on full-scale E-Jet mockup validated CFD results



Test data used for modeling/final cabin design

Measuring cabin air flow



Assessing air quality



State-of-the-art testing techniques and experiments developed in association with academic & scientific research institutes



Our CFD studies tracked the spread of droplets

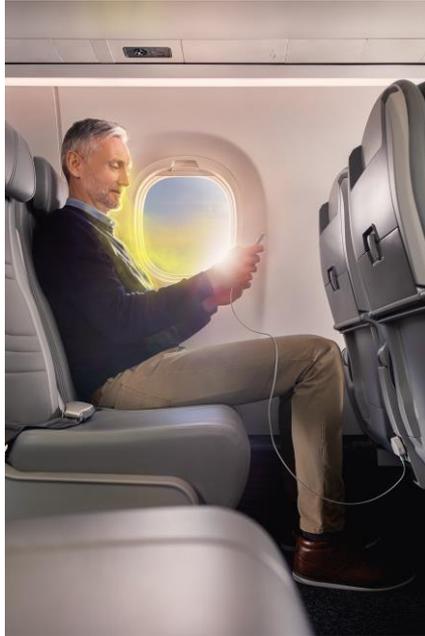


7-row CFD droplet dispersion model, 200 μg in a cough distributed in 16 droplet diameters from 0.1 μm - 200 μm

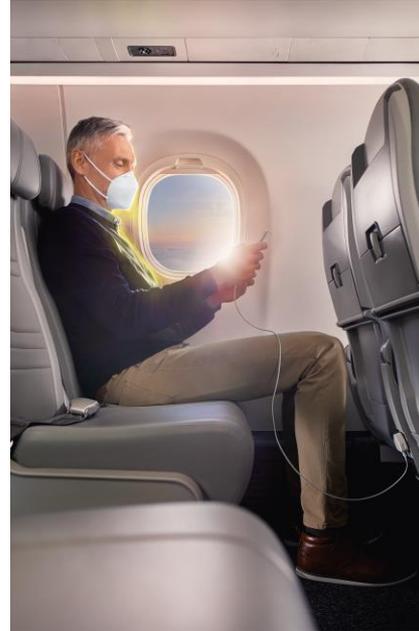


Per PAX cough mass is extremely low and reduced further with a mask

Fraction of cough mass (%) in breathing zone



0.13%
without mask



0.02%
with mask





Clean air. Disinfection procedures. Face masks. Safe flight.

**THANK
YOU**

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