



In partnership with aeris Cleantec



## Designed & Engineered in Switzerland

Schweizer Design und Engineering Design et Ingénierie Suisse Design e Ingegneria Svizzera



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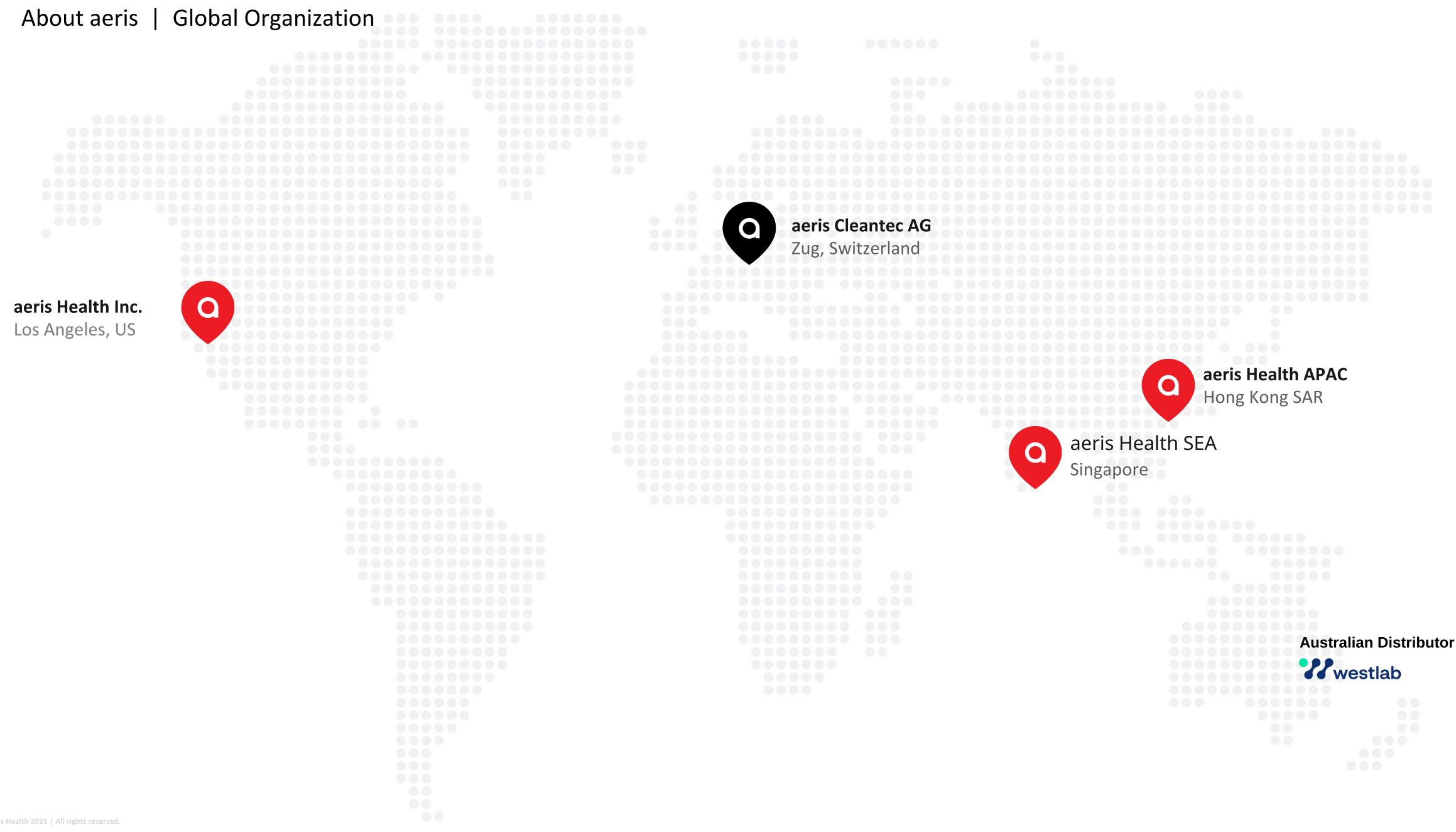


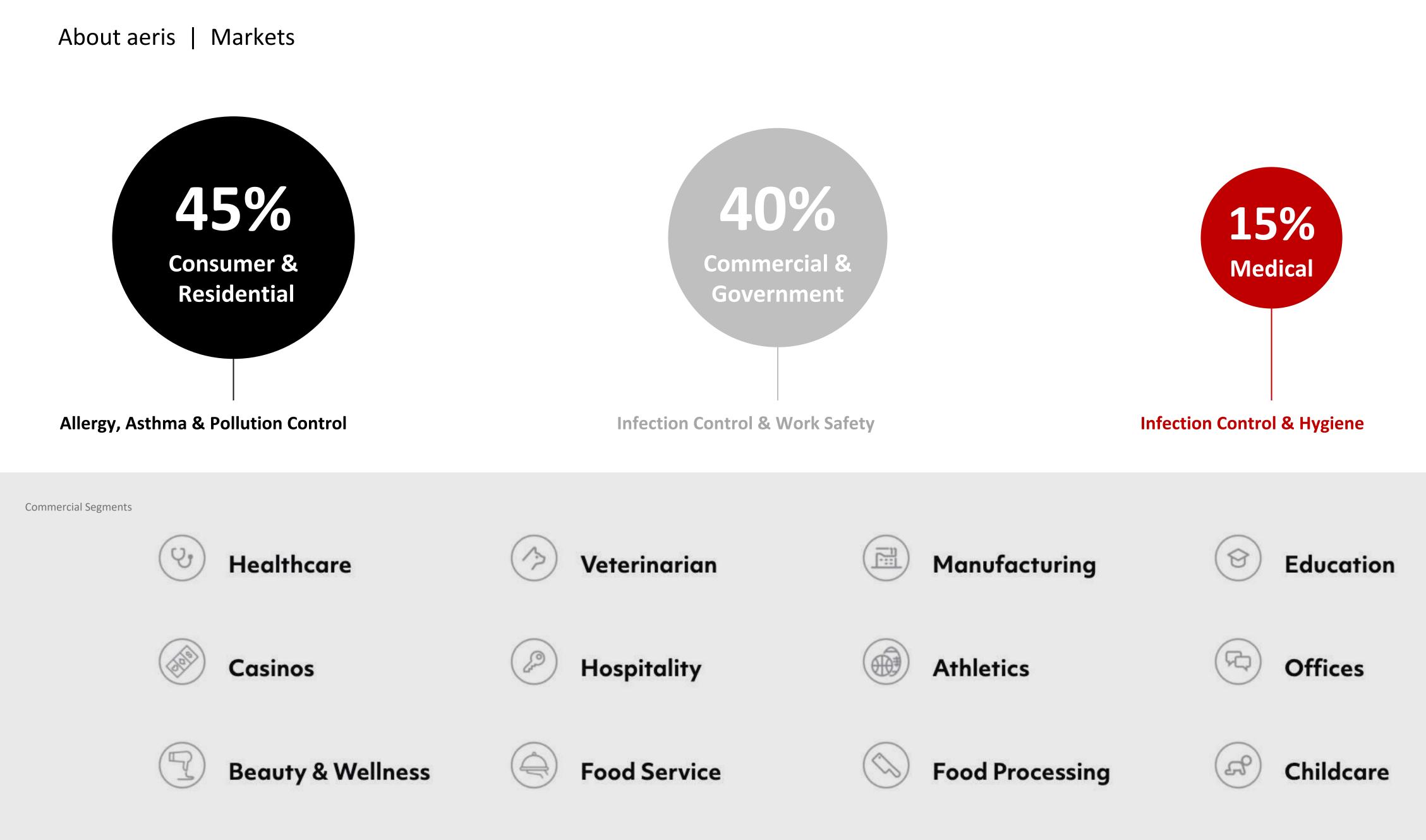
aeris came to life in 2014 in Switzerland. There, its founders dedicated themselves to researching and studying air purification systems to mitigate the adverse effects caused by extreme ambient air pollution in rapidly developing regions of this world.

The engineers Pierre Bi and Constantin Overlack graduated from MIT Boston and ETH Zurich, where they explored air quality and filtration technologies. Together with Etienne Bougeot, a highly awarded industrial designer, they re-engineered filter materials and iterated hundreds of designs to bring a system with the cleanest and most powerful airflow to market.

- Medical-grade true HEPA air purification technology
- Swiss precision design and engineering
- High-end materials and components
- Award winning industrial designs
- Connectivity and Smart Home Integration







Technology & Design

## **Top-rated filtration efficiency and fidelity**

Thanks to true and certified medical-grade filter media and adsorbents.

## No system leakage = 0 count reading at air outlet

A completely closed system with strong sealing keeps all pollutants trapped for good. All aair purifiers achieve a zero-count reading using a lab-grade particle sensor at the outlet at PM0.3.

## Anti-microbial coating inside and out

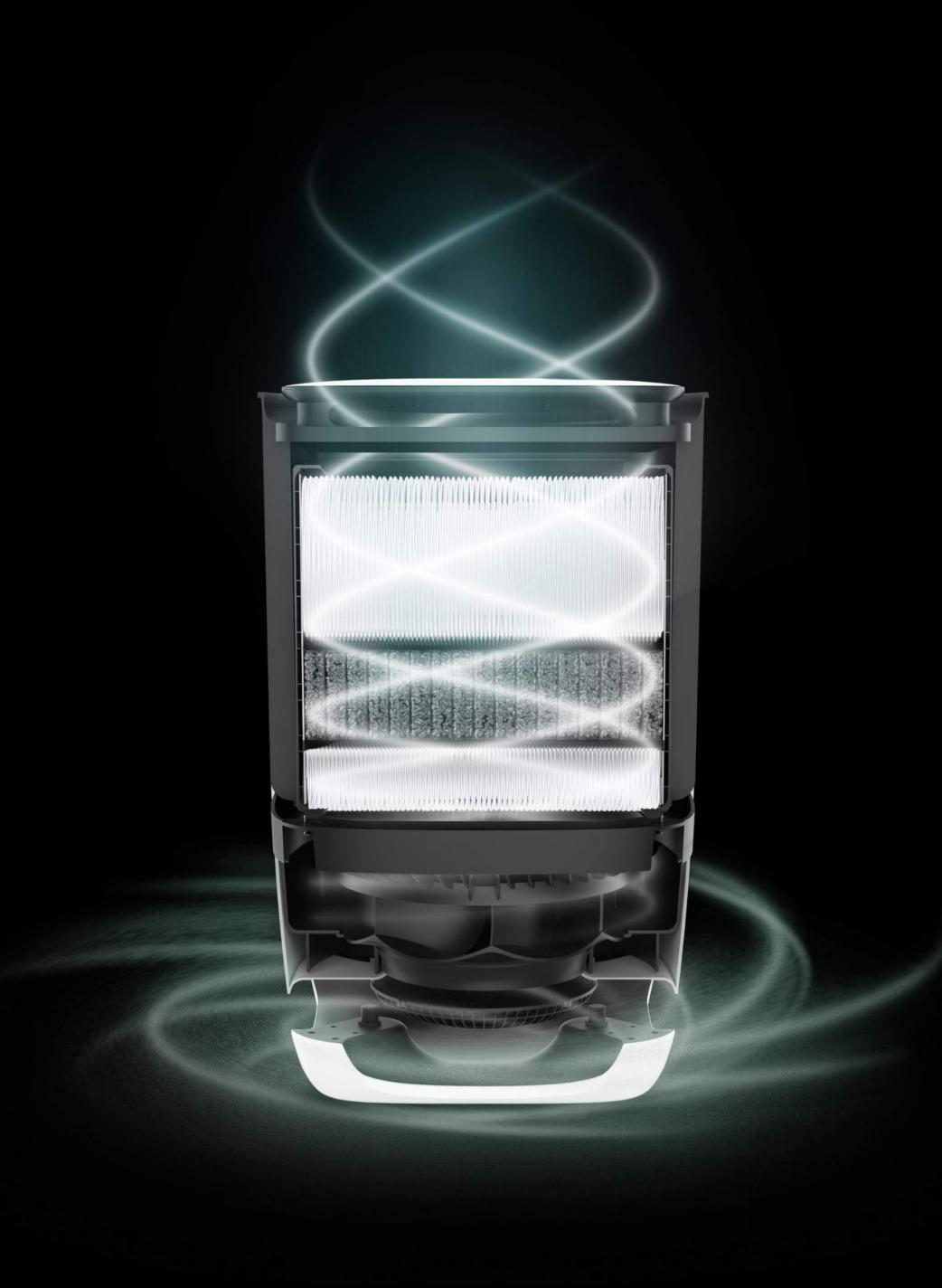
A non-toxic Zinc-Pyrithion treatment on all our filters kills trapped viruses and bacteria. The exterior housing of our purifiers is coated with silver-ions deactiving all sorts of microbes.

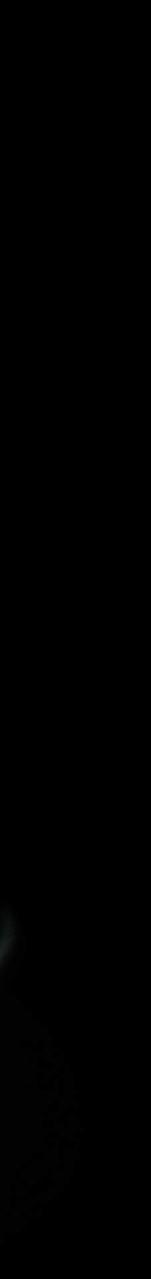
## Smart air quality monitor and AI

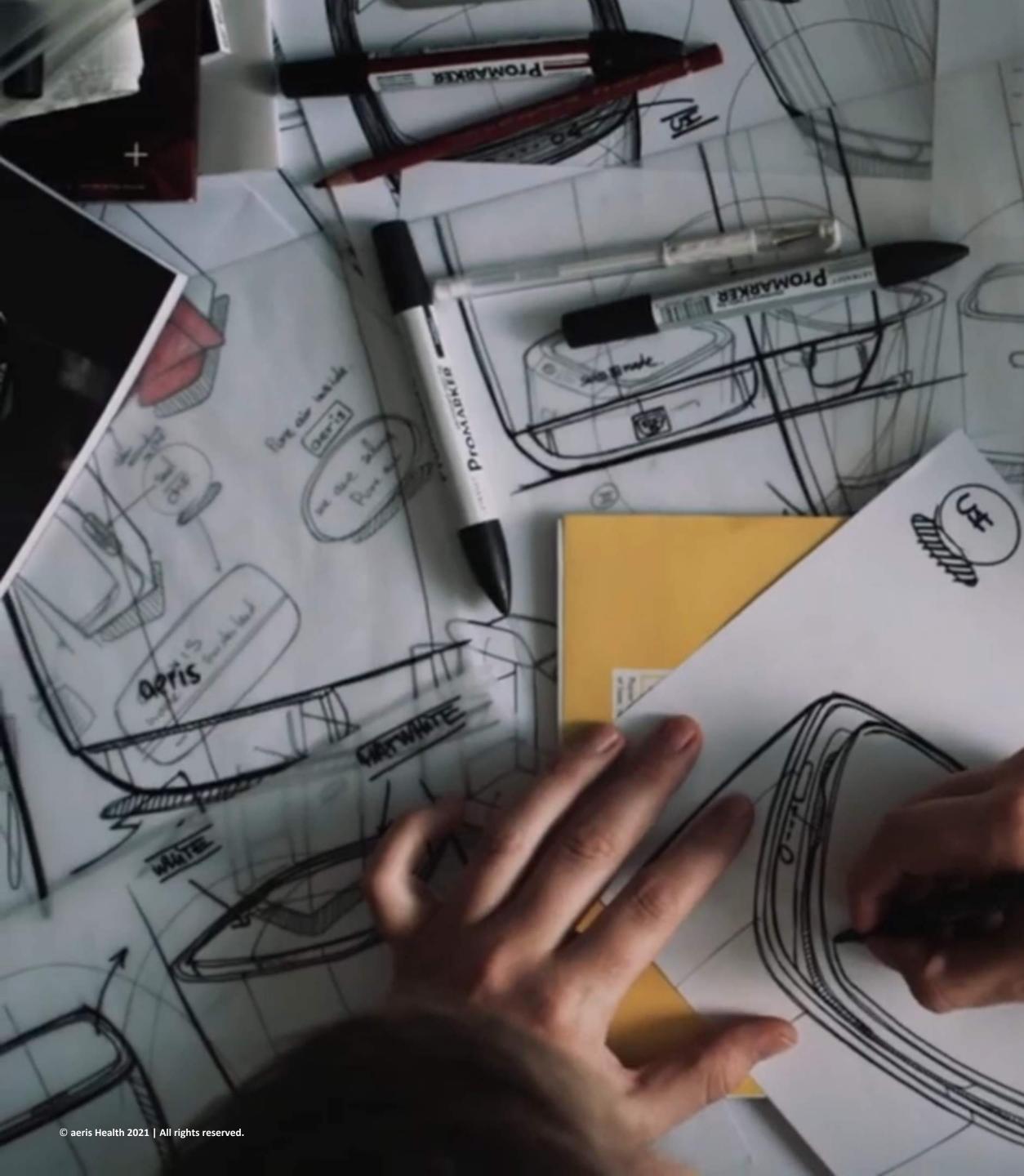
The integrated laser PM2.5 air quality sensor detects live changes in air quality and adjusts clean air delivery accordingly, thus saving energy and filter life over time.

## WiFi connectivity, app and fleet control

Single purifiers can be programmed or controlled via mobile app (iOS/Andoid). Multiple purifiers can be centrally managed via our browser-based fleet management.







## Technology & Design

## **Intelligent Swiss industrial design**

Makes filter changes a breeze, maximises clean air flow, whilst reducing wind noise

## **Powerful yet silent fan engine**

Assures adqeuate clean air flow and circulation for any environement whilst limiting noise and energy consumption to a minimum

## Long filter life of up to 12 months

Due to overengineerd filters with extra amount of media

## Zero ozone or reactive oxygen species

Use of atoxic and biologically safe air filtration technologies only, hence no O3 or ROS

# Awards & Certifications | Best In Class





## Awards & Certifications | Proven Aerosol Control

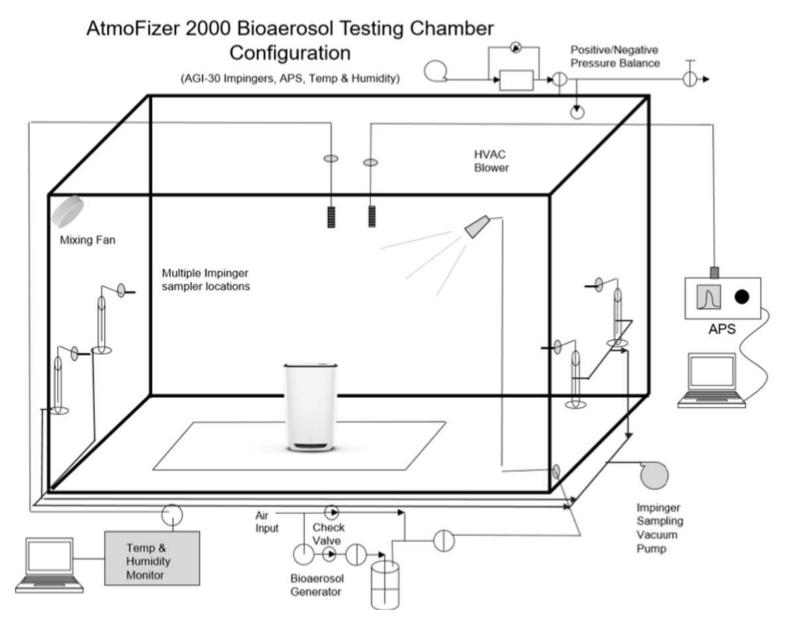
#### Background

This in vitro study characterized the efficacy of Aeris' aair Medical Pro Device at removing aerosolized microorganisms.

#### Result

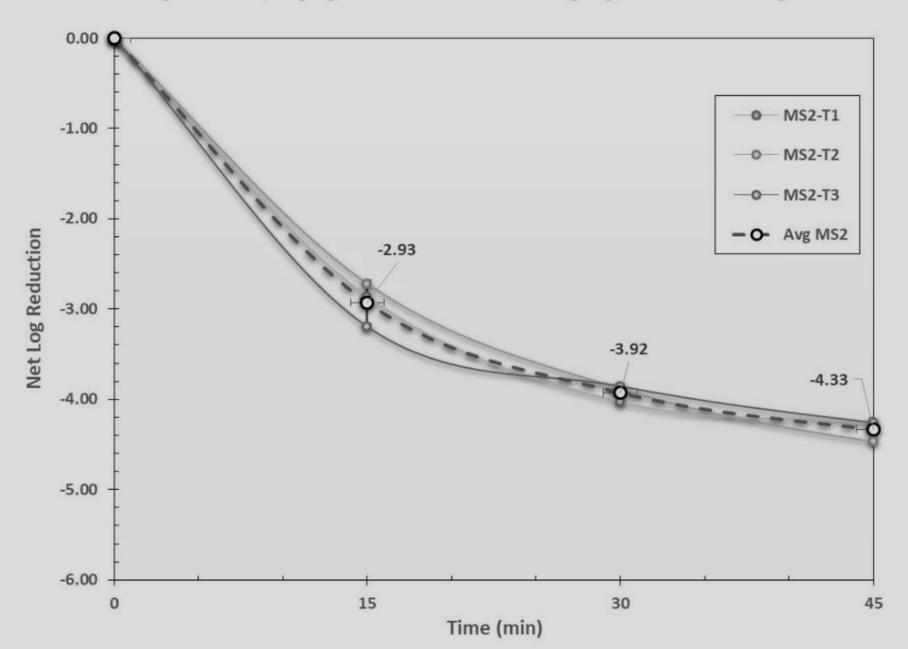
The aair Medical Pro device showed increased efficacy when tested against S. epidermidis with an average net LOG reduction of 4.24, which is equivalent to a 99.9941% reduction in 45 minutes.

The aair Medical Pro device performed similarly well reducing MS2 bacteriophage, showing an average net LOG reduction of 4.33 over the 45 minute test period, this is equivalent to a 99.9952% net reduction in viable bioaerosols.



### **MS2** Trials: Net LOG Reduction

Large Chamber, Impinger and Viable Cascade Sampling, Enumerated in Triplicate



#### aair Medical Pro MS2 Trial Summary Data

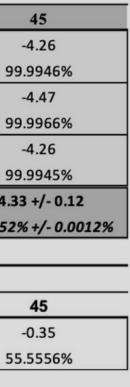
**RNA** Bacteriophage

Bioaerosol Species (description) Triel N		Trial Name	Deduction Trme	Trial Time (minutes)				
Туре	Species (description)	Trial Name	Reduction Type	15	30	45		
Viewe	MS2	M62 T1	Net Log Reduction	-2.87	-4.03	-4.26		
Virus	(RNA E. coli phage)	MS2-T1	Net % Reduction	99.8639%	99.9907%	99.9946%		
Viewe	MS2	M62 T2	Net Log Reduction	-2.72	-3.88	-4.47		
Virus	(RNA E. coli phage)	MS2-T2	Net % Reduction	99.8085%	99.9869%	99.9966%		
Viena	MS2	M62 T2	Net Log Reduction	-3.20	-3.86	-4.26		
virus	Virus (RNA E. coli phage)	MS2-T3	Net % Reduction	99.9362%	99.9861%	99.9945%		
All Trial Averages		Net Log Reduction	-2.93 +/- 0.24	-3.92 +/- 0.1	-4.33 +/- 0.12			
		Net % Reduction	99.8695% +/- 0.064%	99.9879% +/- 0.0025%	99.9952% +/- 0.002			
aair Meo	aair Medical Pro MS2 Control Summary Data							
Bioaerosol		Deduction True	Trial Time (minutes)					
Туре	Species (description)	Trial Name	Reduction Type	15	30	45		
Views	MS2	Control	Log Reduction	-0.19	-0.29	-0.35		
Virus	DNA Destadantes	Control	% Poduction		40.00000			

% Reduction

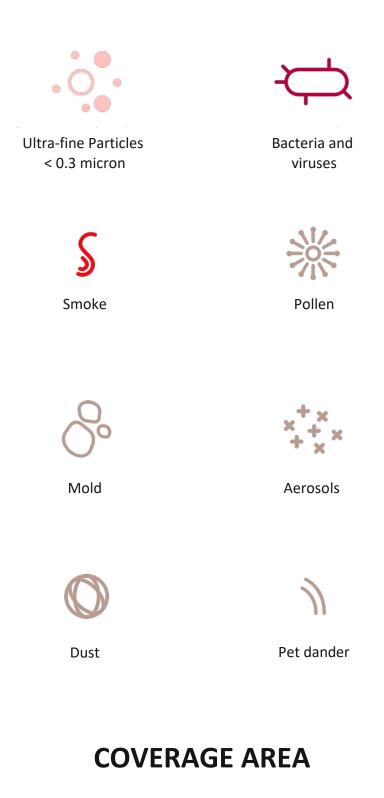
35.5556%

48.8889%



# Products & Solutions | Bestseller

### REMOVES



m <sup>2</sup>	ft²	Air Changes/h
30	350	<b>4</b> x
60	700	<b>2</b> x

Note: Assuming a ceiling height of 2.4m or 8ft and speed 5/max.



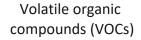
# oair lite

Minimum Advertised Price

# Products & Solutions | Bestseller

#### REMOVES







Smoke

Bacteria and viruses

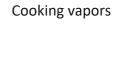


Formaldehyde





Pollen



•

• • 0

Ultra-fine particles

< 0.3 micron

 $\mathbf{i}$ 

Ozone

)





Dust

Aerosols



 $\mathcal{J}$ 

#### **COVERAGE AREA**

m²	ft²	Air Changes/h
70	750	4x
140	1500	2x

Note: Assuming a ceiling height of 2.4m or 8ft and speed 6/max.



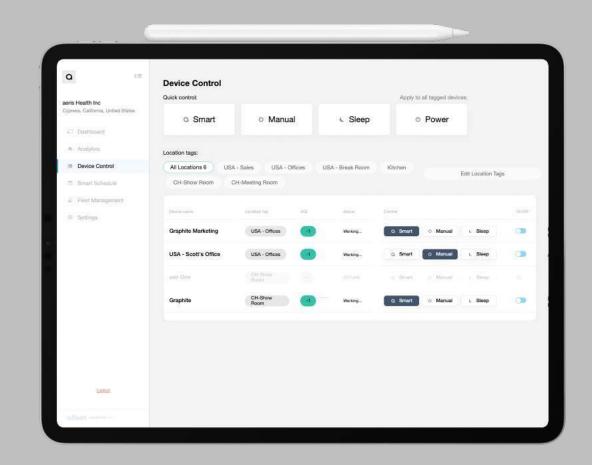


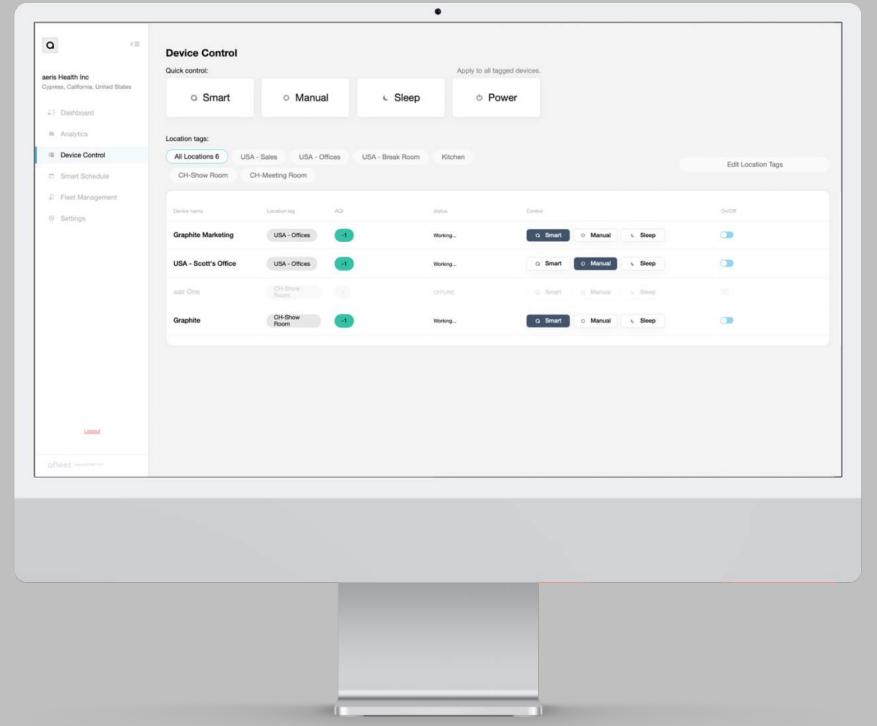
Minimum Advertised Price

# Products & Solutions | Full Stack

Series	<b>Qair</b> Compact Series		<b>Qair</b> Pro Series		<b>Qair</b> Premium Series	oair	Clinical Series
Model	oairlite	oair3in1	oairMedical	oairGas	oairOne	oairIC	oairMICU
Filter							
Filter Class	F7 Prefilter H13 Mainfilter	F7 Prefilter Active Carbon/Alumina H13 MainFilter	F9 Prefilter H14 Mainfilter	Active Carbon F9 Endfilter	F9 Prefilter H13 Mainfilter	F9 Prefilter Active Carbon/Alumina H14 MainFilter + Plasma	F9 Prefilter Active Carbon/Alumina H14 MainFilter + Plasma
Antimicrobial Filters (Zinc-Pyrithion Coating)				$\bigtriangledown$			
Airflow Max. (m3/h)	300	660	500	400	800	500	440
Antimicrobial Exterior (Silverion Coating)		n/a					
Air Quality Sensor + AI / ML (Artifical intelligence, machine learning)						$\bigcirc$	
App / aFleet Control							
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## Connectivity & Control

### **Always Connected**

Every aeris device comes with built-in WiFi that allows for seamless connectivity through the aeris mobile or Fleet app. Now you can monitor and control your indoor air quality from virtually anywhere in the world.



Group your device by location and control them simultaneously

/	-	
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1		/

Define schedules for groups or single devices



Sync up your system with digital calendars



Complete overview on remaining filter lifetime



One-click filter life reset



Notifications if a device breaks down or is removed from the network



#### **Deeper Insights**

aeris proprietary sensor technology tracks your indoor PM 2.5 and PM 10 levels and we compare these values to outdoor air quality measurements from official government AQI stations over time. Users can actively monitor the air around them and know when air purification is most needed while also keeping track of the effectiveness of their purifiers.

#### Works Around Your Schedule

aeris devices can adapt to your daily schedule — powering off when you leave and back on when you return. This special function enables your aeris device to save energy, reduce noise emissions, and even prolong the filter lifetime.



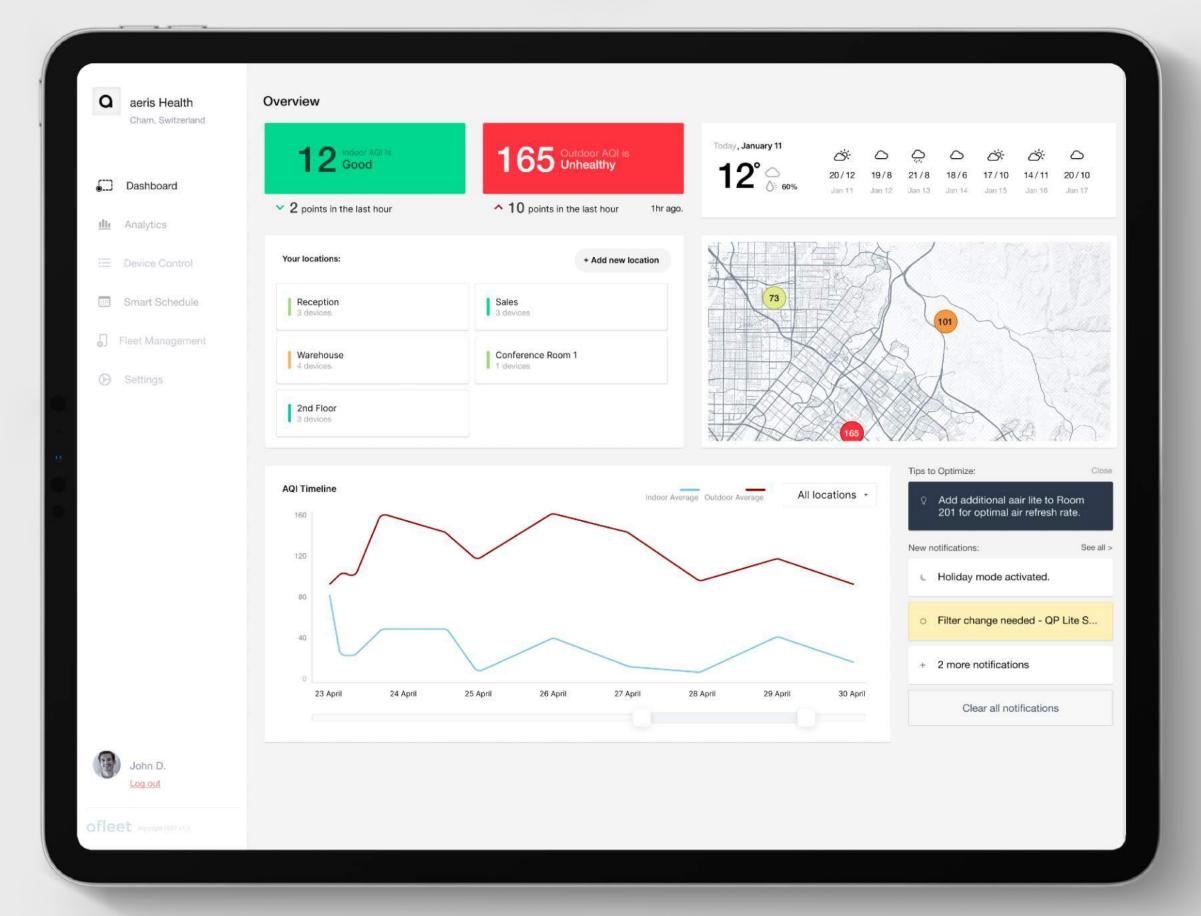
#### Your Centralized Air Purification Hub

Control your entire fleet of air purification systems in one place. With aerisFleet management, designed just for our commercial customers, your air purifiers are no longer individual systems, but a single and scalable network under your control.

#### Industrial Level Analysis

Get detailed analytics aggregated around your entire air purification system, including

- Air quality indoors vs. outdoors
- Air quality history
- Filter life status of all your purifiers

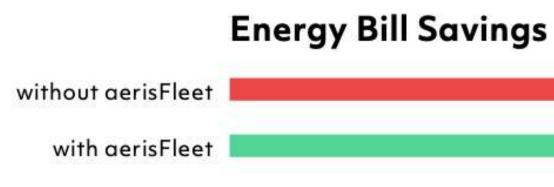


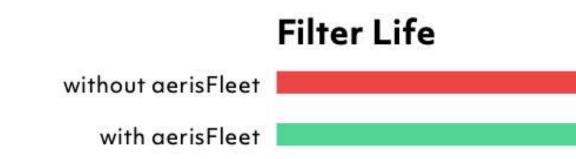
## Connectivity & Control | aerisFleet

#### A Fully Integrated System

aerisFleet supports commercial users in their business operations of a larger number of air purifiers at one or several locations.

Cost savings are achieved particularly through schedule programming the devices, which reduces electricity costs and extends filter life time.







## << 73% Cost Savings on average

Filter Life Extension on average 94% >>

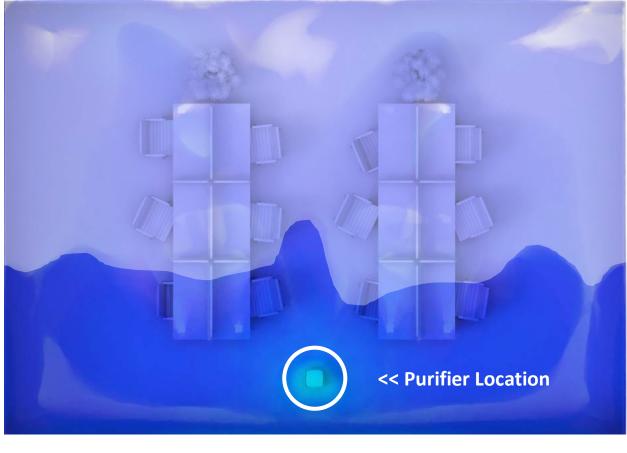
# Differentiation & VAS | Why aeris ?

	oeris ¤	<b>₽</b> IQAir	₹camfil	Blueair	M°LEKULE	dyson
Model	aair 3-in-1 Pro	Health Pro 250	City M	Classic 405	Air	Pure Cool TP04
Airflow max. (m3/h)	660	450	433	475	170	164
Filter Class	<b>H13/F7</b> (7m2 / 20 cm pleads)	H12/F8	H14/F9	not specified	Ресо	HEPA
EN 1822 certified / True HEPA		$\bigcirc$	$\bigcirc$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$
Zero Count at outlet / Sealed System		$\bigcirc$	$\bigcirc$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$
Molekularfilter	Active Carbon/Alumina (4 kg, pelletized)	Active Carbon	Active Carbon	Active Carbon	$\left( \times \right)$	Active Carbon
No Ozone (O3) or ROS		$\bigcirc$	$\bigcirc$	$\left(\times\right)$	$\left( \times \right)$	$\bigcirc$
Antimicrobial Filter Coating		$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$
Air Quality Sensor + AI / ML		$\left(\times\right)$	$(\times)$	$\left(\times\right)$	$\left(\times\right)$	$\bigcirc$
Ease of filter change		$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$
Mobile App		$\left( \times \right)$	$\left( \times \right)$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Fleet Management + WiFI		$\overline{\times}$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$

# Differentiation & VAS | Why aeris ?

	oeris "	■ IQAir	₹camfil	Blueair	M°LEKULE	dyson
					y y y y y y y y y y y y y y y y y y y	
Model	aair lite	Health Pro 100	City S	Joy S	Air mini	Pure Cool
Airflow max. (m3/h)	300	470	300	200	not specified	not specified
Filter Class	H13/F7	H12/13/F8	H14	not specified	Ресо	HEPA (Glass)
EN 1822 certified / True HEPA		$\bigcirc$	$\bigcirc$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$
Zero Count at outlet / Sealed System		$\bigcirc$	$\bigcirc$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$
Molekularfilter	$\overline{\times}$	$\left(\times\right)$	Active Carbon	Active Carbon	$\left(\times\right)$	Active Carbon
No Ozone (O3) or ROS		$\bigcirc$	$\bigcirc$	$\left(\times\right)$	$\left(\times\right)$	$\bigcirc$
Antimicrobial Filter Coating		$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$
Air Quality Sensor + AI / ML		$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$
Ease of filter change		$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$
Mobile App		$\left(\times\right)$	$\left(\times\right)$	$\left(\times\right)$	$\bigcirc$	$\left(\times\right)$
Fleet Management + WiFI		$\left(\times\right)$	$\left(\times\right)$	$\overline{\times}$	$\left(\times\right)$	$\left(\times\right)$

# **Differentiation & VAS** | Custom CFD Analysis



Top View of Space



#### Safe Aera

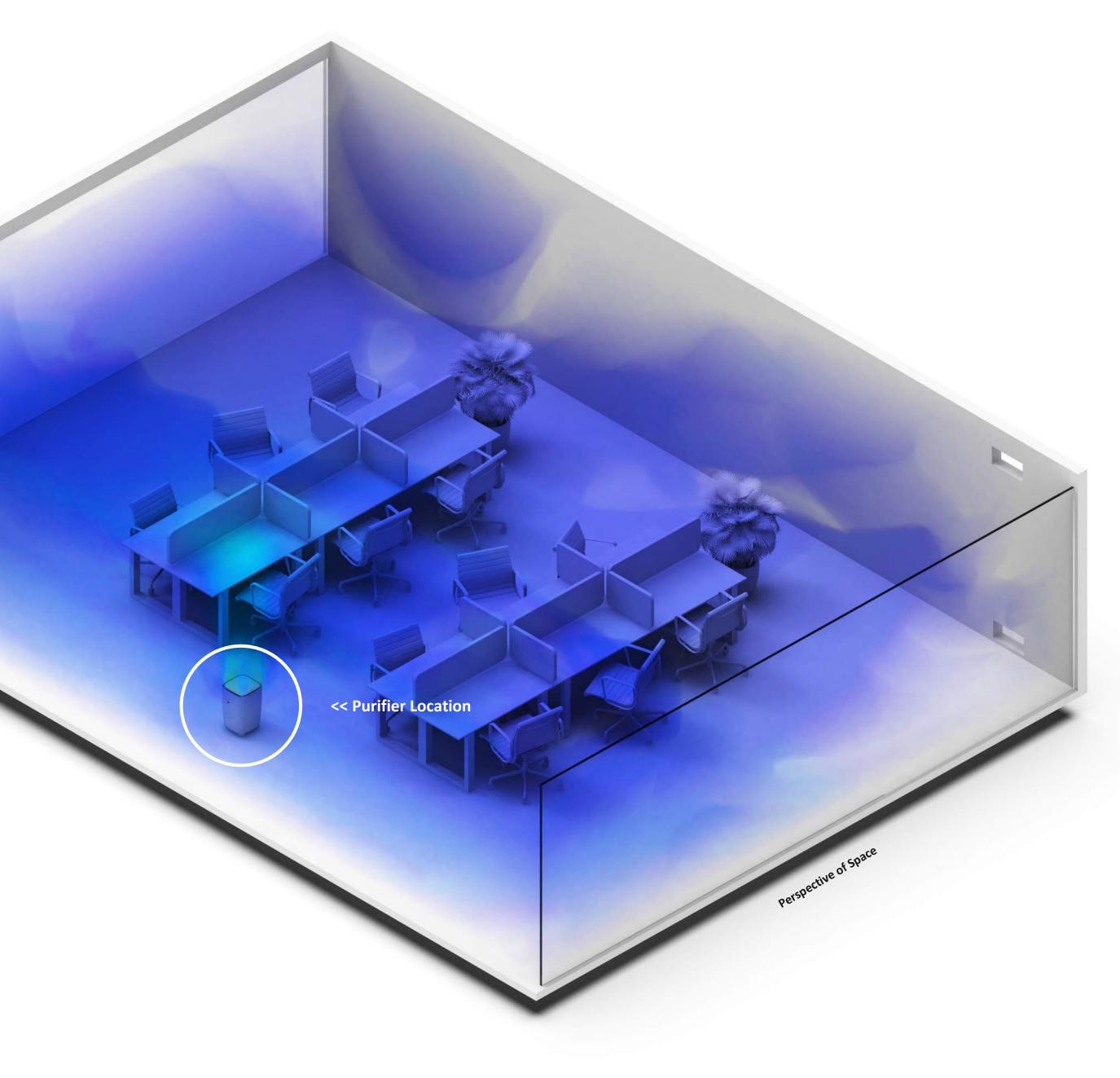
High velocity/volume of purified air = lower pathogen exposure



#### **Computational Fluid Dynamics Analysis**

aeris uses a system called Computational Fluid Dynamics (CFD) to test the effectiveness of our aair purifiers. CFD simulates the airflow in a room, which allows us to see with exact detail how well we can purify a room. The result: our purifiers are vastly more effective than other purification solutions.

While other air purifier companies provide one-size-fits-all solutions, we are committed to providing the perfect solution for your environment.





#### **Educational Sector** Use Case

#### Background

The colder season is upon us, and schools, kindergartens and universities need to keep up teaching activities.

The risk of infection indoors is already high in fall and winter, and the often dry indoor climate during these seasons favors the transmission of pathogens.

Since schools, lecture halls, and daycare centers have so far been equipped with inadequate filter solutions, we have designed a room air purification system that works intelligently, cost-effectively, and above all decentrally.

Thus, pathogens such as Covid-19, fine dusts, bacteria, etc. are removed from the room air with an efficiency of 99.95% or even 99.995%.

#### Challenges

- High indoor population density •
- Inadquate mechanical or manual ventilation possibilities
- Elevated Covid-19 contagion risk due to exemption of vaccination programs for children < 12 years

#### NEWSPAPER OF THE YEAR + JOURNALISM YOU CAN TRUST

British embassies

on security alert

worldwide after

worker caught

selling secrets

to Russia

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speaks out

EXCLUSIVE

Accuser's auni

wrong

THURSDAY 12 AUGUST 2021 Number 3344

#### FOOTBALL

65

oort-washing essi and he endgame for Qatar's power grab by Daniel Storey





**Plan to keep** schools safe from Covid-19: air purifiers

» 30 Bradford primary schools will take part in Government pilot using air purifiers and ultraviolet light to tackle Covid, cold, flu and hay fever, i learns

» Department for Education and Department of Health consider rolling out plan nationwide if £450 devices help to cut coronavirus and absence in schools

» Researchers target 'massive prize' in fight against virus in the UK

SOCIETY Hot to trot? Why alpacas are the new big thing at weddings P34

WORLD Afghan warlords save the nation from Taliban by Kim Sengupta in Kabul P4



'Cancer delays robbed my mum of time as a granny'

CULTURE Tam related to the man. I can't do anything about it John David

Washington on rebelling against his dad, Denzel P38



PUZZLES PULL-OUT P27 | IAN DUNT P19 | INSIDE LONDON'S NEW DC COMICS RESTAURANT P23 | TV & RADIO GUIDE P26 🛑 LORD'S TEST – PATCHED-UP ENGLAND STRUGGLING TO FIND FULLY FIT TEAM 🛛 🗗 CHINA'S KARAOKE CRACKDOWN 🗗 🖓

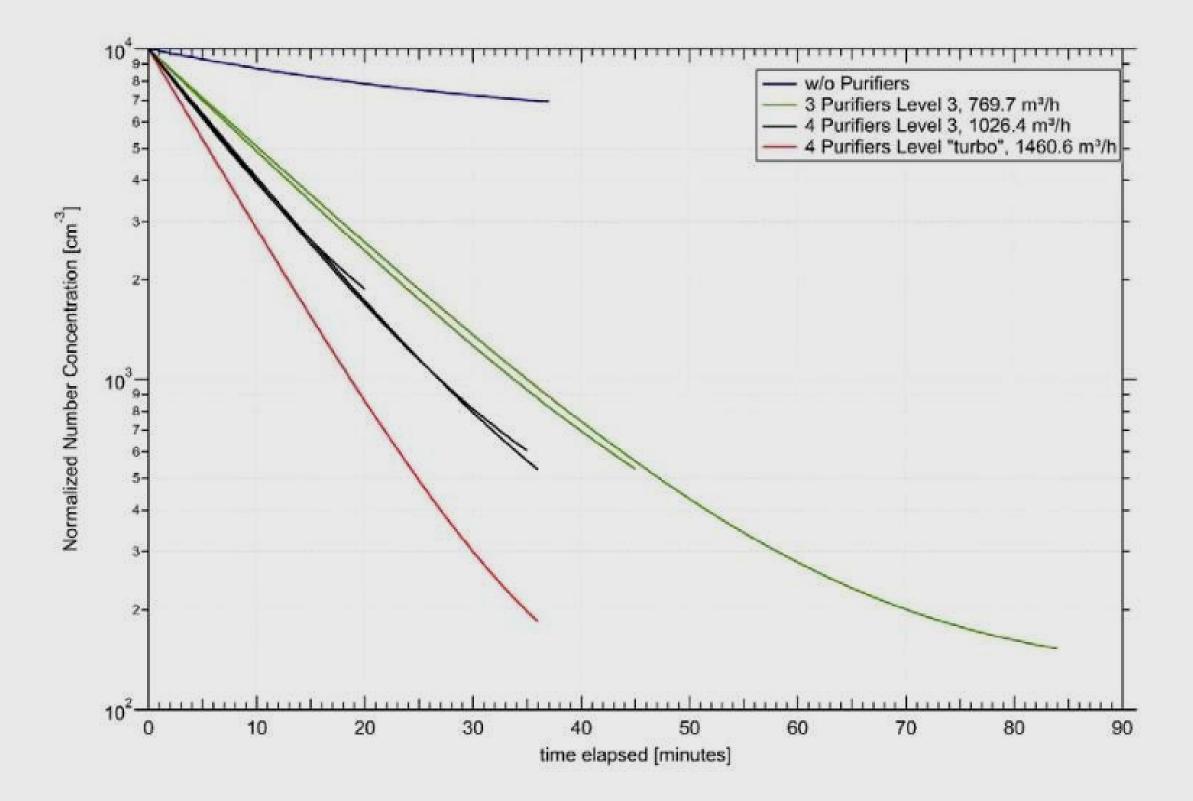




future

offood





# **Proven:** Air purifiers capable of reducing airborne transmission risks substantially.

## Use Case | Educational Sector

German Study proves effectiveness of air purifiers in classrooms "Measurements and calculation demonstrate that air purifiers represent a wellsuited measure to reduce the risks of airborne transmission of SARS-CoV-2 substantially.

Staying for two hours in a closed room with a highly infective person, we estimate that the inhaled dose is reduced by a factor of six when using air purifiers with a total air exchange rate of 5.7 h-1."

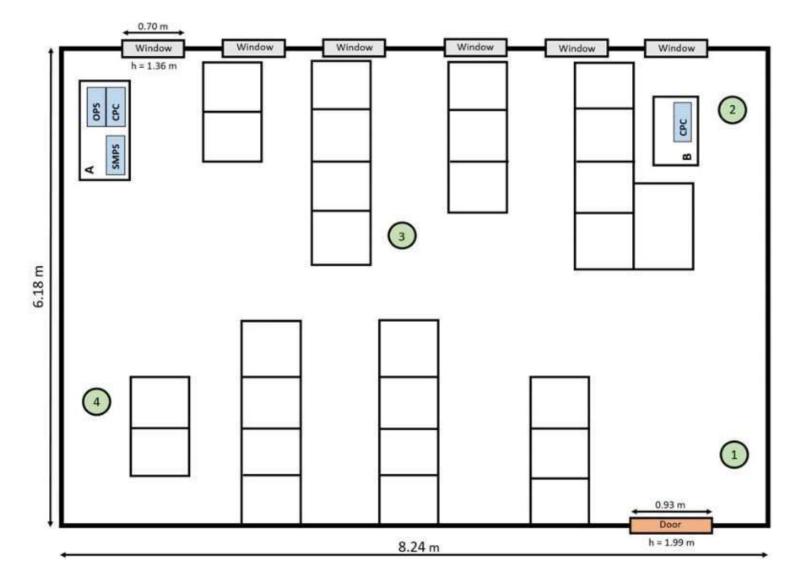
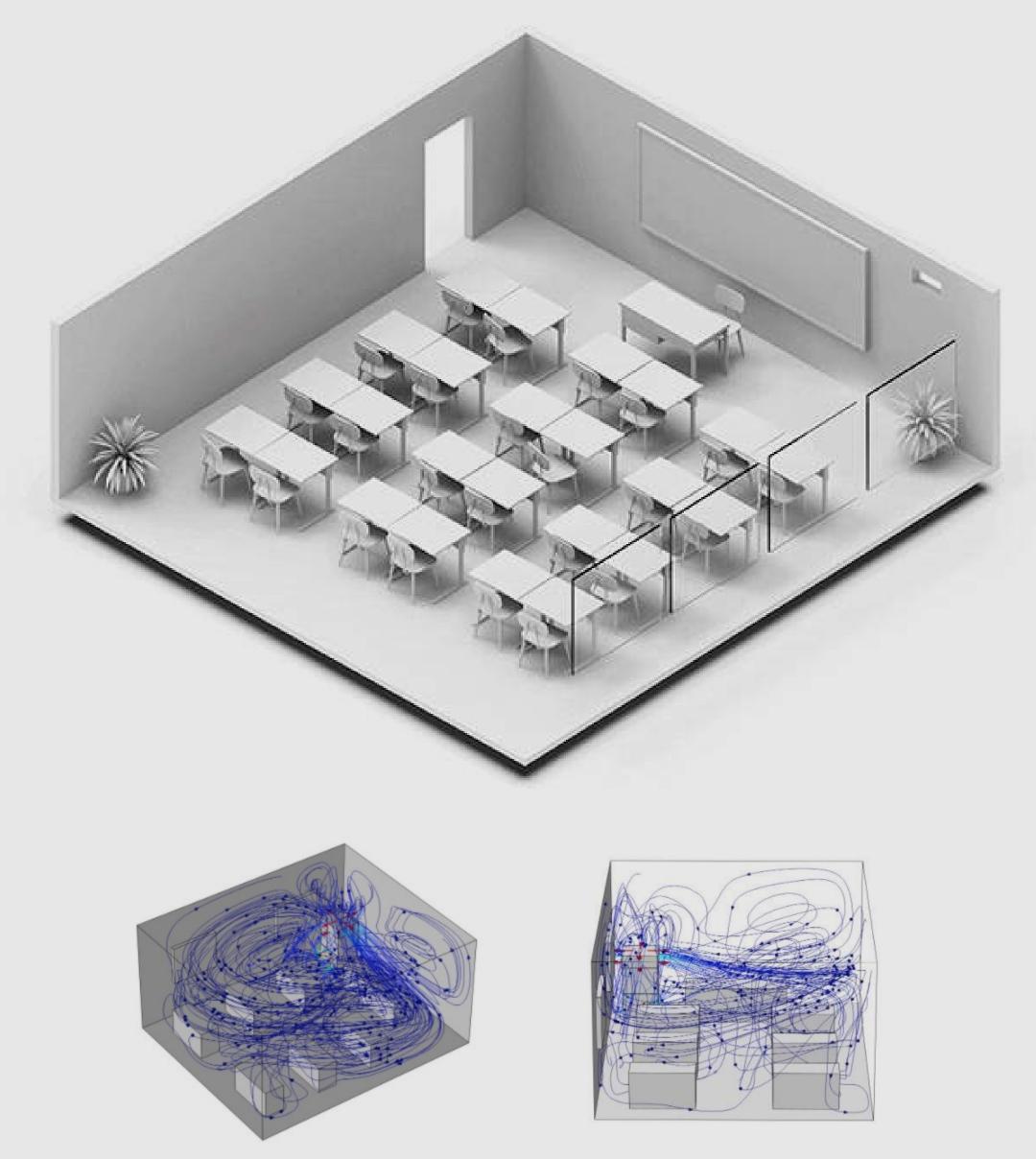
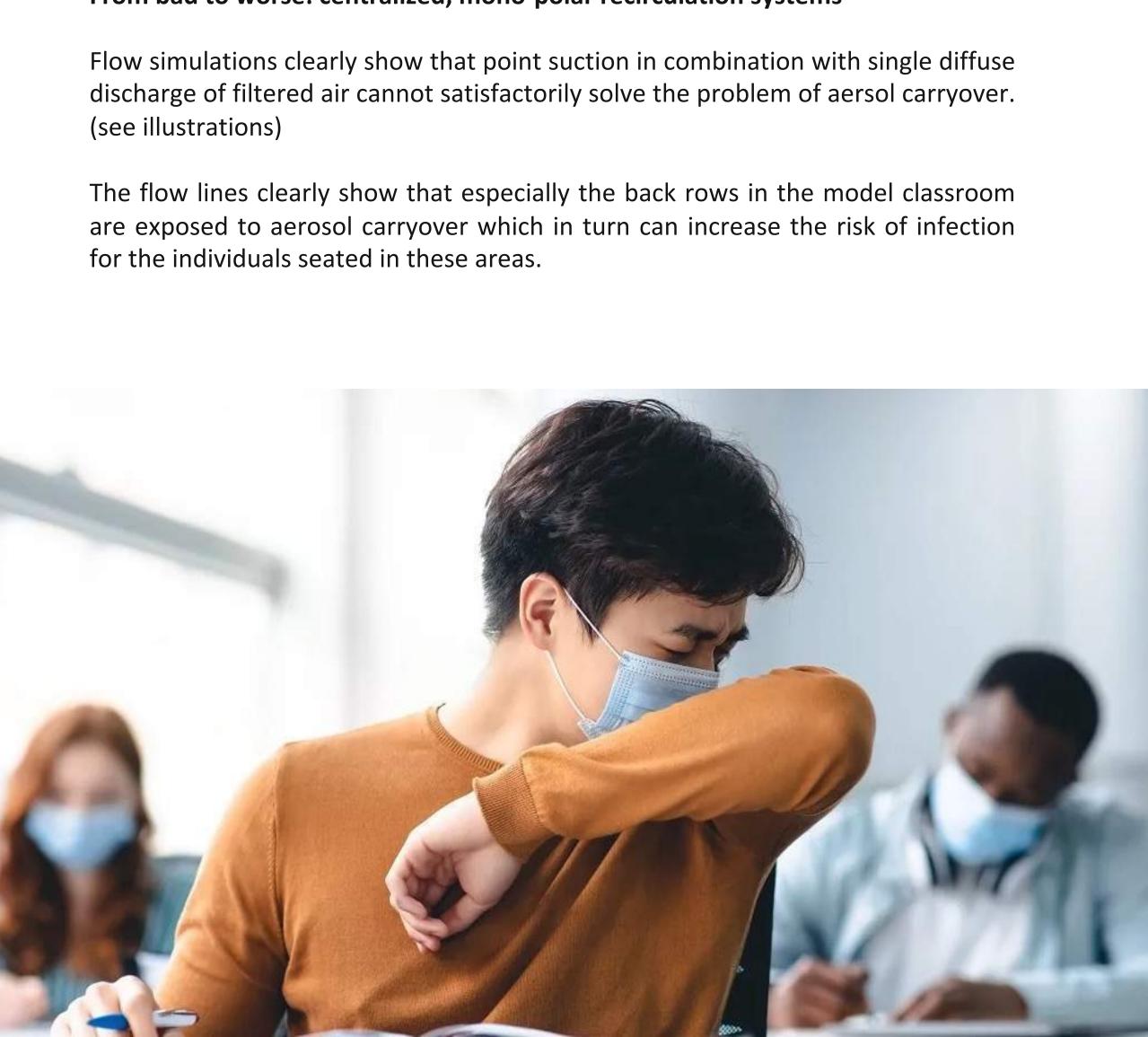


Figure 1: Sketch of the classroom indicating the position of the air purifiers (#1 to 4) and the measurement instrumentation at two locations A and B.



## Use Case | Educational Sector

#### From bad to worse: centralized, mono-polar recirculation systems



## Use Case | Educational Sector

#### Decentral, multi-polar approach

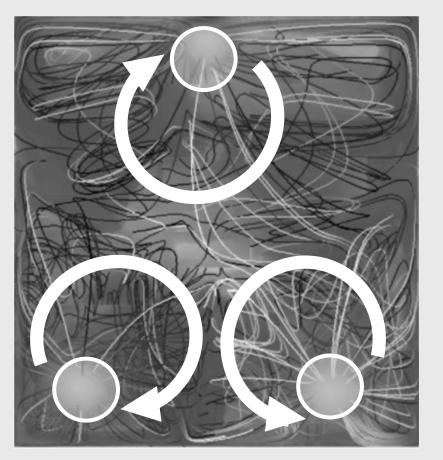
aeris relies on decentralised distribution with multiple units in a room to achieve the best possible effect while the design is efficient, affordable and safe.

The upward clean air flow of aair purifiers in combination with the diffuse 360° intake inevitably creates a "circulation roller" in rooms.

The simulation clearly shows the advantage: each table has its own circulating "clean air roller". The carry-over of infectious aerosols is drastically reduced.



Mono-polar Setup



Multi-polar Setup

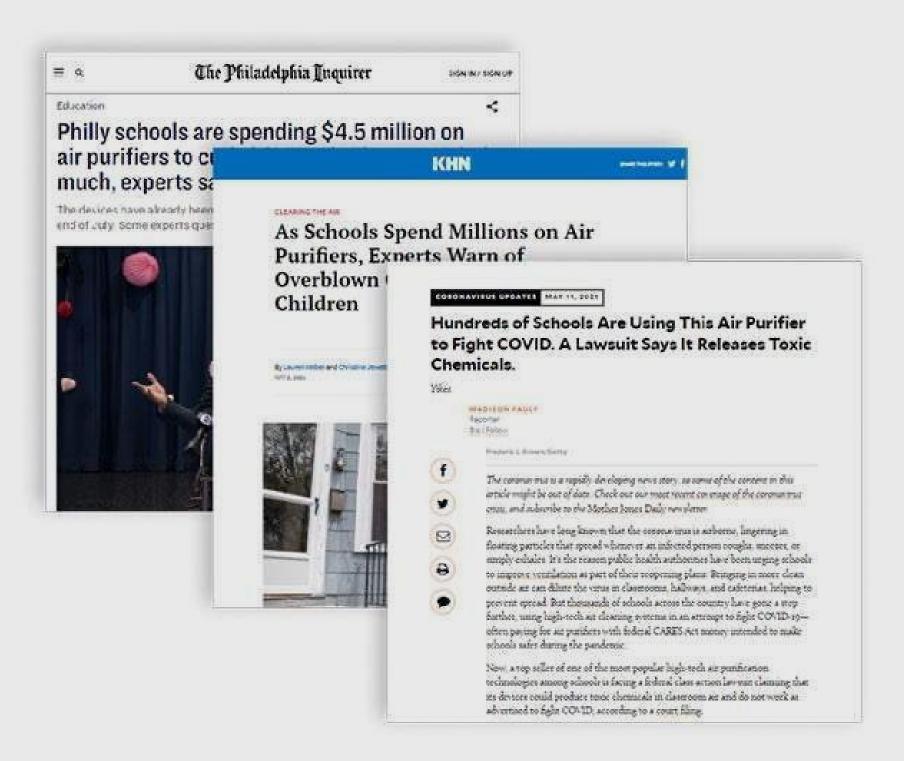
<< Purifier Location

Purifier Location >>

<< Purifier Location



#### **Educational Sector** Use Case



## The Dangers Of Low Quality Air Purifiers In Schools

#### purifier solutions Cheaper air have endangered students as return to school.

As news of lawsuits by schools due to ineffective or dangerous air purifiers spread, it has become more important than ever for those responsible for safeguarding the safety of students, staff, and more, to understand the importance of high quality air purifiers that are built to the highest standards.

#### Endangers staff and students, especially younger ones

Many air purifier technologies such as UV(C) and bipolar ionization release dangerous byproducts like ozone, which has been proven to worsen asthma symptoms and harm developing lungs. aeris aair purifiers are CARB-certified and proven not to release any dangerous by-products.

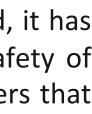
#### **Reduces chances of actual effectiveness**

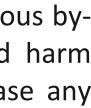
Many air purifier companies use tests that don't mimic real world settings, such as measuring air purifier effectiveness in an area the size of a shoebox.

#### **Massive investment in filter replacements**

What many air purifier companies do not mention is that their cheaper, less effective filters require that they are replaced more often. This means that schools will have to spend far more on replacement filters than they would otherwise.















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