

ORIGENAIR



Natural Air Purification



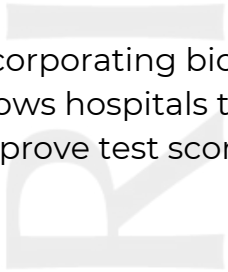
## Plant Powered Productivity

### Why designing with nature in mind makes financial sense

Biophilia, the innate human attraction to nature, has often been regarded as a luxury for property owners who want the best possible workplace for their employees, and/or want to showcase their efforts to be more environmentally responsible.

In reality, improving community well-being through biophilia positively impacts productivity and the bottom line.

Incorporating biophilia into the places where we live and work is beneficial for business as it allows hospitals to heal patients more quickly, offices to boost productivity, schools to improve test scores, and retail outlets to increase higher sales.







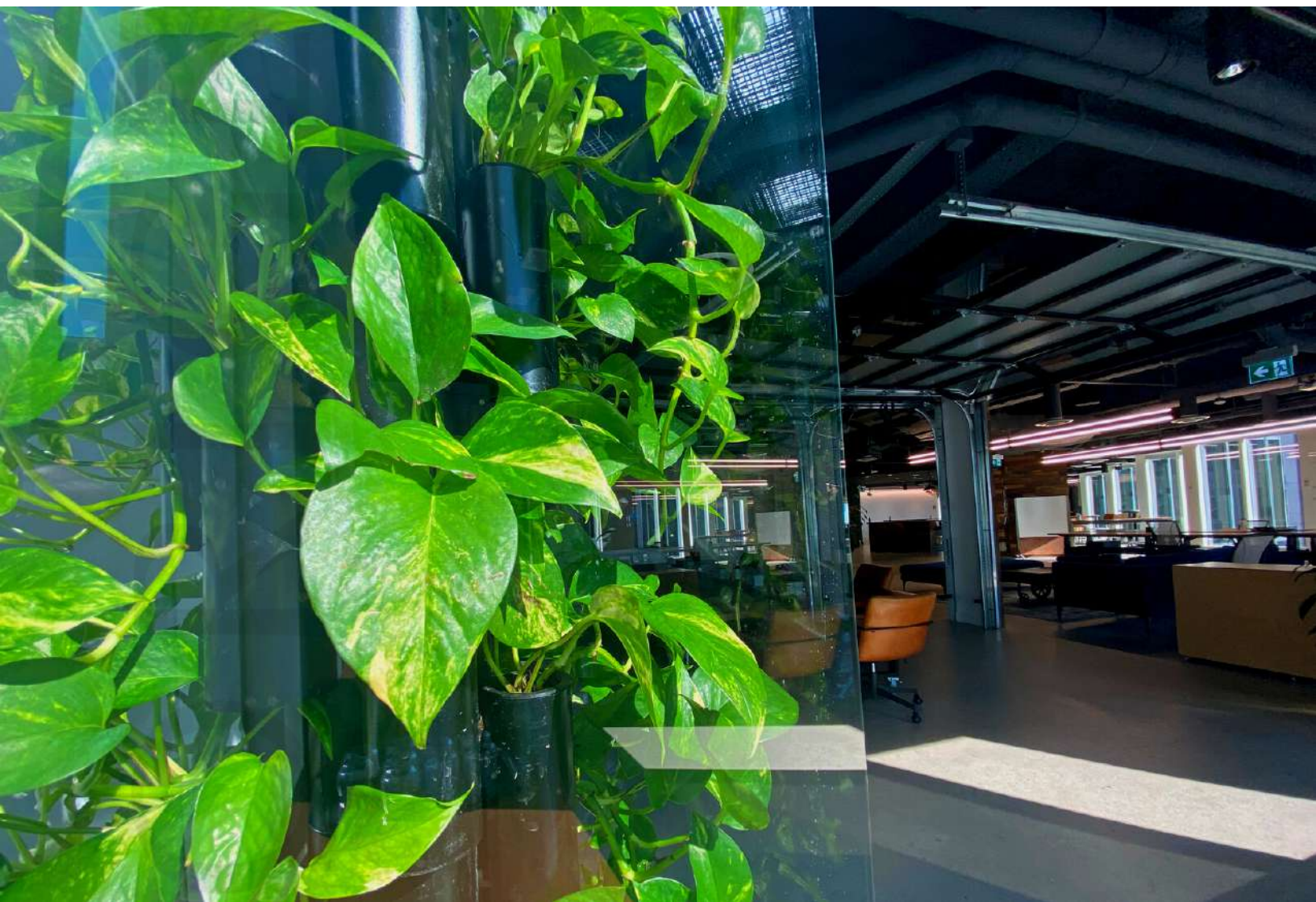
# Better Plants. Better Air.

Studies show that regular houseplants are not capable of removing man-made toxins from your indoor air spaces.

Origen Air's enhanced plant biotechnology solves this issue using the perfect combination of science, engineering and modern design.

The Origen Air Pinnacle™ delivers a multi-barrier solution for indoor air purification.

Our plant-based, sustainable solutions are intended for growth-minded companies who seek triple bottom-line returns for their people, planet and prosperity.



# Natural Air Purifier

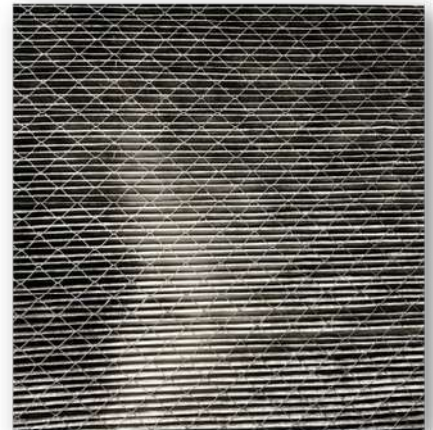
Today's HVAC systems are forced to work overtime to supply fresh air to your indoor living and working spaces.

Once that air is inside the building, it is almost impossible to remove the tiny airborne toxins and pollutants that we bring inside each day.

Origen Air removes particulate matter, CO<sub>2</sub>, VOCs, airborne viruses, and toxins, such as benzene from your shared indoor spaces using a multibarrier system proven to improve the air quality of our indoor environments.

Pictured here is our MERV-13 pre-filter after 60 days of use inside a LEED Platinum certified building.

After passing through two filters, the air moves through our enhanced plant biofilter where CO<sub>2</sub>, VOCs, and microscopic carcinogens are scrubbed out of the air naturally to protect human health and wellness.



## Size Matters



VOCs  
( $<0.001 \mu\text{m}$ )



Dust  
( $<2.5 \mu\text{m}$ )



Aerosol particles  
( $<5 \mu\text{m}$ )



Pollen, moulds  
( $10-15 \mu\text{m}$ )



Grain of Salt  
( $60 \mu\text{m}$ )

C.Bickel / Science

Tiny microscopic threats smaller than five micrometres ( $5 \mu\text{m}$ ) are the focal point of the Origen Air purifier. Removing these tiny particles prevents the transmission of contagions such as COVID-19 and influenza within shared indoor air spaces.

# Pinnacle Prefilters

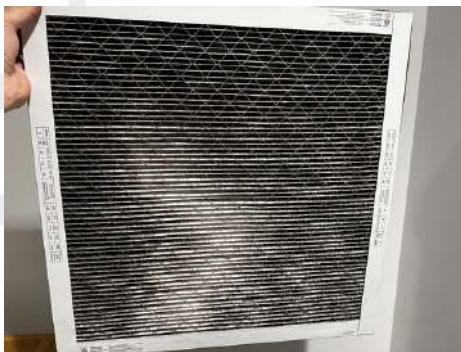
Spent pre-filters from four Pinnacle units after 60 days of operation within LEED Platinum commercial office towers. Particle filter (MERV 13) removes contaminants down to 2.5 microns. These photos are taken after 60 days of air purification.



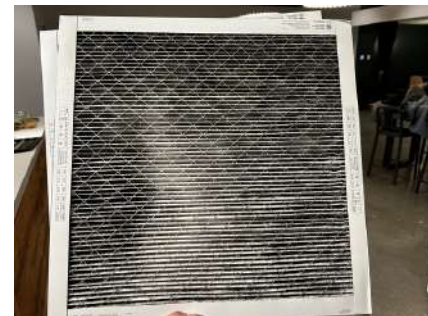
LEED Lobby 1



LEED Lobby 2



LEED Gathering Area & Café



LEED Boardroom



# Case Study



The study was conducted during a closed-door 60-minute boardroom meeting:

Room Size: 130 m<sup>2</sup> (1400 ft<sup>2</sup>)

Capacity: 28 people

Indoor Air Quality ("IAQ") Sensor was installed in the far corner of the boardroom; reading was taken during the 60 min board meeting (avg):

CO<sub>2</sub> Level: 1450 ppm

VOC Level: 1220 ppm

IAQ Sensor on Pinnacle at air outlet; reading during the meeting at the same time (avg):

CO<sub>2</sub> Level: 425 ppm

VOC Level: 275ppm

Pinnacle Performance per hour:

CO<sub>2</sub> Reduction: 71%

VOC Reduction: 78%

## CARBON DIOXIDE (CO<sub>2</sub>)

1 - During 60 minutes the Pinnacle reduced the CO<sub>2</sub> level by 1025 ppm (71%)

CO<sub>2</sub> is a naturally-occurring atmospheric gas and is typically maintained between 600 to 900 ppm. The lower the CO<sub>2</sub> levels in a space the better. WorkSafeBC recommends limits no greater than 1,000 ppm for sustained periods. Occupants are typically the main source of CO<sub>2</sub> in a space.

## VOLATILE ORGANIC COMPOUNDS (VOCs)

2 - During 60 minutes the Pinnacle reduced the VOC level by 945ppm (78%)

VOCs are gases emitted by different types of solids and liquids and are often found in household products such as paints, sprays, cosmetics, cleaning products, and furniture or carpets. The lower the VOC levels in a space, the better. Typical acceptable levels are between 0 to 800 ppb. Health impacts: Short-term effects include headaches, irritation, and fatigue/drowsiness. Long-term effects can include cancer and asthma.

## Indoor Air Purification System

### Technical Specification

# The Pinnacle™

## Air Purification System

### Device Requirements

- Operating Temperature: 15°C - 30°C
- Operating Humidity: 5% to 95%, non-condensing
- WiFi network: 802.11 b/g/n
- 120V direct connection to an outlet

### Installation Requirements

- Floor should be level and capable of supporting 300lb
- Floor must not be movable / portable in nature
- Unit not to be installed in direct sunlight
- Installation point must be secure/monitored

### Performance Specifications

- Each unit services up to 8000 cubic feet and 20 people

### Premium Dust and Particle Filtration

- MPR 1900 / MERV 13 x 2
- Premium Allergen, Bacteria & Virus Filter
- Captures microscopic particulate (bacteria & viruses)
- Captures large particulate (mold, pollen, dust, dander)

### Natural VOC Removal

- Enhanced plants metabolize (remove) VOCs

### CO<sub>2</sub> Removal and Oxygen Generation

- Plants naturally convert carbon dioxide into fresh oxygen

### Natural Humidity Balance

- Optimizes interior humidity levels (40%-60% RH)

### IoT Enabled

- Full remote monitoring and reporting including water level, filter status, fan speed, and IAQ data (Temp, CO<sub>2</sub>, TVOC, Humidity, Nitrous Oxide, Ozone, Carbon Hydroxide, Carbon Monoxide, PM 1, 2, 4, 10)

### Modular

- Multiple unit networks combine for larger facility indoor air purification solutions and environmental data



### Pinnacle Dimensions

22" x 22" base (55.8cm x 55.8cm)  
7' height (2.1m)  
300lbs (136kg)  
Water Reservoir: 6 gallons (22L)  
Operating dB: <55dB



# Clean Air as a Service

## Overview

Investing in safe and clean indoor air quality can be made as an OPEX lease agreement or a CAPEX purchase of a Pinnacle Air Purifier. <sup>TM</sup>

Our enhanced plant service team provides maintenance through a service agreement with Origen Air.

## Data-Driven Solutions

Origen Air provides industry-leading indoor air quality sensors, real-time dashboard reporting, and device performance metrics through a monthly subscription.

Environmental data sets are validated for use within ESG reports and environmental impact statements.







# Sustainability in Action

Biomimicry is a practice that learns from and mimics the strategies found in nature to solve human design challenges.

The Origen Air Pinnacle™ was designed using biomimicry to deliver a thriving natural ecosystem capable of improving indoor air quality on a commercial scale, with plants at its core.

## Negative Emissions Technology

- Removes CO<sub>2</sub> and VOCs
- Plant-based, regenerative air purification
- Sustainable Wood, Glass, and Metal construction
- Decentralized hardware distribution network



## The Path to 2030 Climate Targets

The Pinnacle aligns with 5 U.N. Sustainable Development Goals

- Good Health & Well-being
- Sustainable Cities and Communities
- Responsible Consumption and Production
- Climate Action
- Partnerships for the Goals



# Giving While Living



Co-Founders Susan Blanchet, Andrew Crawford and Mr. Wilson

As the founders of Origen Air, Susan Blanchet and Andrew Crawford believe that access to a safe, clean and sustainable environment is an inherent human right.

In 2021, the United Nations Human Rights Council echoed this statement in a breakthrough moment for global environmental justice.

To fully support this declaration, Origen Air will install a complete Pinnacle™ solution on behalf of their proactive clients who purchase or lease Pinnacle™ fleets of 10+ units for their facilities.

The Pinnacle™ unit will be donated on behalf of our clients to reputable charitable organizations such as Ronald McDonald House and Habitat for Humanity.

Please join us in providing the gift of safe clean air to those who need it most.

Sincerely,

Andrew Crawford & Susan Blanchet

Co-Founders  
Origen Air



# Meet the Founders



**Susan Blanchet**  
Co-Founder & CEO

Origen Air's lawyer turned CEO, Susan co-founded Origen Air in 2019 with a mission to purify indoor air from dangerous airborne toxins using nature-based solutions after watching her father succumb to an air-related illness in 2015.

Susan comes to Origen Air after a 14-year legal career as a civil litigator with the Province of British Columbia. Susan's negotiation skills successfully secured the global exclusive distribution rights for Origen Air's game-changing enhanced plant technology.

Susan's passionate, proactive approach to life and work has served her well in making big things happen for Origen Air.

Susan is the proud mother of three young men. She is a provincially licensed soccer coach with 15+ years of volunteering at local clubs and running an elite training academy. Her desire to help the less fortunate resulted in her raising funds to purchase land and build a school in Siem Reap, Cambodia in 2018.

Email Susan at: [susan@origenair.com](mailto:susan@origenair.com)



**Andrew Crawford**  
Co-Founder & CDO

From 2005 to 2016 Andrew lived in the Hawaiian Islands, where he raised his family and owned and operated a hospitality consultancy group, an orchid nursery and an organic farming operation, where he advocated for sustainable farming practices and organic growing procedures.

Andrew's skills in hospitality and hotel management were honed as a hotel owner and consultant working with brands such as The Four Seasons, Hilton, Starwood and Ritz Carlton.

Origen Air Systems was founded on the premise of "Living Pono"; a powerful Hawaiian term meaning, *"living with a conscious decision to do the right thing in terms of self, others, and the environment."*

With a fiery entrepreneurial spirit and a passion for disruptive innovation, Andrew has been on the front lines in the development of vertical farms, living walls, electric vehicles, water filtration, waste management and alternative energy solutions.

Email Andrew at: [andrew@origenair.com](mailto:andrew@origenair.com)