



ORIGEN  
NATURE EMPOWERED  
AIR

- ▶ It is Origen Air's mission to remove 1 Billion metric tons of toxins from the air we breathe and empower 10 million enhanced plants by 2030.
- ▶ Origen Air's vision is to restore and protect our most important resource, the air we breathe, by becoming the largest genetically modified biofiltration company in the world.





- ▶ Worldwide, more than 80 percent of people living in urban areas breathe air that exceeds pollution limits (WHO).
- ▶ Indoor Air is filled with microscopic toxins known as Volatile Organic Compounds ("Toxins")
- ▶ These Toxins can cause serious damage to the lungs, liver, kidneys, and nervous system.







- ▶ We **MUST** protect our most essential resource – **the air we breathe.**
- ▶ By 2030, 60 per cent of the global population will live in cities.
- ▶ These urban dwellers spend 90% of their time inside perfectly sealed buildings.





# OUR VALUE PROPOSITION

Origen Air is the only clean tech company with genetically modified plants engineered to remove toxins and restore indoor air quality (“IAQ”) for improved human health, productivity, and energy efficiency.

# ORIGEN AIR POSITIONING STATEMENT

- ▶ **FOR:** Building owners, operators, and architects.
- ▶ **WHO:** Are at risk of exposing tenants to health issues, reduced productivity, skyrocketing energy costs, and lawsuits.
- ▶ **Origen Air is:** An air purification company
- ▶ **That:** Removes microscopic toxins from indoor air spaces.
- ▶ **Unlike:** Traditional air filter technologies
- ▶ **Our Product:** Uses genetically modified plants to remove microscopic toxins with zero waste.
- ▶ **Because of our:** Patent pending genetically modified plant technologies.

# TECHNOLOGY

- ▶ Origen Air holds a co-exclusive license to commercially distribute *Enhanced Plants* from UW.
- ▶ Our patented plants are the product of 15+ years of research at the University of Washington. The *Enhanced Plants* efficacy increases as they absorb toxins, producing optimal air with zero waste.
- ▶ Origen Air's *Enhanced Plants* have been scientifically proven to remove VOCs at rapid rates of absorption through peer reviewed published studies from the University of Washington.
- ▶ In performing these tests, the *Enhanced Plants* went head to head with regular plants to prove empirically that the unmodified versions of the same plant were unable to remove any of the dangerous toxins from the indoor air.
- ▶ With this test completed and published, we are confident in our competitive *Enhanced Plant* advantage.



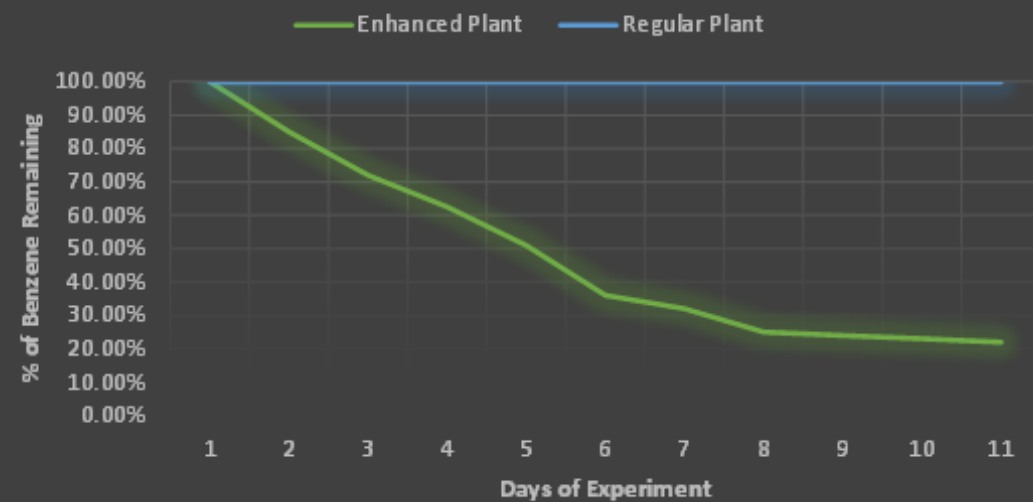
# SCIENCE



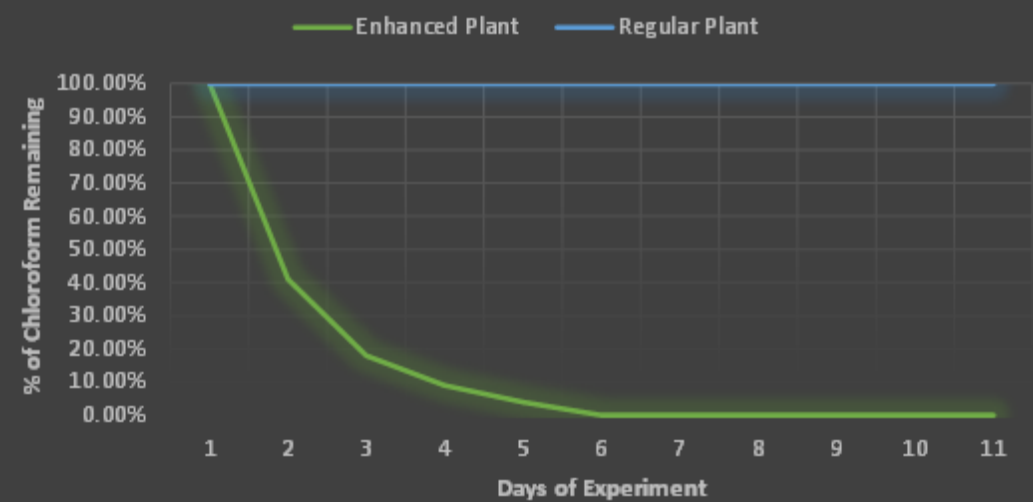
- ▶ All mammals have an enzyme in their livers known as 2E1 that can break down toxins.
- ▶ The enzyme takes an oxygen atom from the air, bonds it to the pollutant molecule and detoxifies it.
- ▶ Origen Air's *Enhanced Plants*, contain the 2E1 enzyme and are scientifically proven to remove the Toxins.



### VOC Removal - Benzene



### VOC Removal - Chloroform



# UW Creators of the *Enhanced Plants*



**Dr. Stuart Strand**  
Civil Engineer  
UW

B.Sc. and M.S. from Ohio State University. Ph.D. in Environmental Engineering from Pennsylvania State University. Research Professor, active emeritus, Civil and Environmental Engineering, College of Engineering, University of Washington.

Dr. Strand has extensive experience in the field of phytoremediation, including natural remediation by plants. For the last 20 years his focus has been on the genetic modification of plants to enable them to remove and degrade organic pollutants from air, soil and water.



**Dr. Long Zhang**  
Civil Engineer  
UW

Ph.D. Botany Department of molecular and developmental biology  
Institute of Botany, Chinese Academy of Sciences  
Master Northeast Agriculture University (China)  
Bachelor Northeast Agriculture University (China)

Dr. Zhang's recent work has focused on engineering plants to remove pollutants from the air, especially the modification of houseplants to remove indoor air pollutants, such as benzene, chloroform, formaldehyde and acrolein. Strand's research also includes modification of plants to remove and degrade the important greenhouse gases methane and nitrous oxide.



- ▶ **Prototype A: Free-standing biophilic design 10sqft:**
- ▶ Design, research, development and manufacture began with SALT in October 2019. Designed for smaller spaces and maximum aesthetic effect; the plants are displayed in a public space. Indoor air is pulled in through the top where the *Enhanced Plants* metabolize the Toxins and fresh, oxygenated air is pumped out the bottom of the unit into the surrounding indoor air.
- ▶ **Prototype A Completion Target: August 2020.**





- ▶ **Prototype B: Free-standing biophilic design prototype 150sqft:**
- ▶ Design, research, development and manufacture began with SALT in October 2019. Designed for larger spaces and maximum aesthetic effect; the plants are displayed in a public space. Indoor air is pulled in through the top where the *Enhanced Plants* metabolize the Toxins and fresh, oxygenated air is pumped out the bottom of the unit into the surrounding indoor air.
- ▶ **Prototype B Completion Target: May 2021.**







- ▶ **Prototype C HVAC integrated air filter prototype:**
- ▶ Designed to directly integrate with existing and new HVAC Systems intercepting air prior to its return to the central air handling unit, cleaning it, and returning 60-80% of the air to the building. Will lower the need for outdoor air to be brought into the building and heated/cooled to room temperature. This efficiency gain represents potential cost reductions of up to 40% through lowering the load on the HVAC system.

**Prototype C Completion Target:  
December 2020.**





- ▶ Origen Air Systems will be running an IAQ operating system utilizing A.I. sensor technologies.
- ▶ In measuring and monitoring critical performance metrics within the unit, our service department and our clients will have real-time data regarding the health and performance of our system from any smart device.



# FOUNDING TEAM



**Susan Blanchet**  
Founder & CEO

Ms. Susan Blanchet has a law degree (2002) and a double major honours degree in Psychology and Environmental Studies with a minor in History (1997) from the University of Victoria. From 2005 to 2019, she worked as legal counsel for the BC Ministry of Attorney General appearing in front of the BC Provincial, Supreme, Court of Appeal and the Supreme Court of Canada. Ms. Blanchet ran successful arbitrations, mediations, examinations, and trials. In her role as senior counsel, she led large legal teams utilizing a skillset on par to that of a CEO. Her legal expertise covers contract, tax, environmental, land, and personal injury law. Susan has a complex skillset including leadership, organizational skills, analytical thinking, strategic planning, time management, the ability to work under pressure, communication abilities, legal, writing and supervisory skills.



**Andrew Crawford**  
Founder & COO

Mr. Andrew J. Crawford has a Bachelor of Economics (2000). He ran family hotels and revenue properties from 2000 to 2005. He then spent 11 years living in the Hawaiian Islands where he owned and operated an orchid nursery and a hospitality consultancy group, working with such brands as The Four Seasons, Hilton, Starwood, and Ritz Carlton. He has a strong knowledge of botany, irrigation systems, and the wholesale/retail plant industry. In 2016, Mr. Crawford returned to his birthplace of Victoria, BC where he worked directly with indigenous communities as their Economic Development CEO. In 2017 he started BestCoast Management an alternative energy and living wall company. The idea of finding a plant that could actually clean toxins out of the air arose during this time and, upon reading of the 15+ years of R&D at the University of Washington it became Origen Air Systems Ltd.



# FOUNDING TEAM



**James Crawford**  
CFO

BA, Economics, University of Victoria, 1968;  
Chartered Professional Accountant designation  
1972; Fellowship of Chartered Professional  
Accountants election 2008.

1979 to 2015- Founding and senior partner of  
CPCM, CPAs, (formerly Crawford Patterson  
Campbell McNeil) in Victoria, BC. For 36 years.

His area of practice include servicing  
high tech firms full accounting needs,  
specifically including SR & ED claims, financing,  
business management, succession planning,  
construction, general contractors, sub-trades,  
retail and wholesale, mostly owner-managed.



**John O'Brien**  
Advisory Board

Mr. John O'Brien is a senior strategist, marketing,  
sales and operational expert having successfully  
advised privately owned business principals in a  
wide variety of industries. As Vice Chairman of a  
Florida family office he advises and provides  
operational oversight of a portfolio of direct  
investments. Mr. O'Brien's corporate career has  
included a significant record of executive  
leadership and achievement as a General  
Manager, Vice President and President with major  
corporations such as General Electric, Rockwell  
International, Whirlpool Corporation and as CEO  
of Walker Bay Boats. He is an Accredited  
Executive Associate of the Institute for  
Independent Business.





**Peter Holgate**  
**Advisory Board**

25 years as a “zero-to-one” serial entrepreneur. Founded six ventures and co-created over \$200 million in enterprise value in verticals as diverse as urban mining, industrial gas distribution, outsourced services and property development. CEO of Ronin8 Technologies, Peter helped raise over \$11M in pre-revenue venture capital to build a closed-loop system that extracts gold from waste electronics using sound waves underwater. Earned respected awards for Ronin8, including: BC Technology Impact Award (2016), Recycling Council of BC Innovation Award (2015), Innovation Award of the Year (2015). Holds several undergraduate degrees, an MBA from Simon Fraser University, and Strategic Negotiations for Long Term Dealmaking at Harvard.



**Tara Dobbs**  
**Advisory Board**

An experienced entrepreneur and sought after expert on building high performing, strengths-based workplace cultures. Ms. Dobbs left her successful career in the financial services industry to run her father’s multi-million-dollar disaster restoration business for eight years. Coaches high-level individuals and businesses seeking to create high-performing cultures based on the CliftonStrengths Platform. Founder of ElevenTen Consulting. She has B.A. from UBC, is a former member of the Entrepreneurs Organization (EO), is a Certified Strength Coach and a CoreClarity Facilitator.

# SALES AND SERVICE

- ▶ Origen sales will be divided into three segments:
- ▶ Direct sales
- ▶ Influencer sales & support through architects and designers
- ▶ Channel Sales through office furniture and facility management companies
- ▶ It is expected all operations will remain in house for the next 2-3 years using our own sales force and showrooms.
- ▶ As we cross the threshold to full commercialization, it will be imperative to create a scalable partner strategy.
- ▶ We recognize the tremendous revenue opportunities associated with the properly executed partner sales and service business plan.



# Service Business Model

- ▶ Origen Air will provide *Nature as a Service* for customers who want to place real nature and fresh air into indoor air spaces.
- ▶ For a monthly fee, clients will enjoy the *ORIGEN OPTIMIZED* solution ensuring flawless, carefree operation and maintenance of their air filtration systems.







# Market Size

- ▶ Origen Air will position its products and services to disrupt four distinct markets:
- ▶ Interior Landscaping Market: **\$9 billion** (UCLA 2016)
- ▶ Indoor Air Purification Market: **\$29 billion** (Teschi Research 2016)
- ▶ Workplace Wellness Market: **\$48 billion** (Global Wellness Institute 2017)
- ▶ Office Furniture Market: **\$50 billion** (TechNavio 2017)





# Market – Competitors

Competitor Name	Strengths	Weaknesses
	Direct Integration, Capital, Scientists, Mechanical	Sorbent Effluent, Capital Outlay, Large Footprint
	Biophilic Design, Live Plants, Air Quality Meter, Hydroponic	Regular Plants, Cost, Size, Not HVAC Integrated, Europe Based
	20 years experience, HEPA and Activated Carbon Tech, Plug & Play, Easy maintenance	Does not address humidity, not aesthetically pleasing, loud bulky design.
	Commercial Ionization Filter Services. Large scale projects.	Ionized Air is not normal for humans to breathe, it can damage the lungs. Ozone can be created through ionization. Human health risks associated with Ozone



- ▶ Interior Landscaping Market: (\$9 billion)
- ▶ Biophilia is defined as a desire to reconnect with nature. As humans, we thrive in environments that help us feel that connection.
- ▶ Companies at the vanguard of workplace design such as Apple, Google and Amazon are investing heavily in Biophilic Design elements.
- ▶ These principles are shown to improve worker concentration, engagement and cognitive ability but also to attract and retain staff in the “war for talent”.



- ▶ Indoor Air Purification: (\$29 billion)
- ▶ Traditional indoor air purifiers are diverse and fragmented.
- ▶ The industry leading technology is HEPA (High Efficiency Particulate Air). These devices range in price from \$200 to \$10,000 depending on the functional features on board.
- ▶ Professional grade devices, typically cost upwards of five thousand dollars.
- ▶ HEPA Filters must be changed at regular intervals costing on average \$200-\$1000/year depending on the device.
- ▶ Spent filters are thrown in a landfill. Alternative forms of mechanical air filtration include sorbent filters and ionization filters.



- ▶ Workplace Wellness Market (\$48 Billion)
- ▶ The Centre for Disease Control estimates workplace illnesses linked to indoor air cost the US over \$225 billion per year in absenteeism, decreased worker satisfaction, and lost productivity.
- ▶ ASHRAE Air Quality regulations for 2020 will invoke new standards focused on the wellbeing of building occupants.
- ▶ These regulations combined with readily available IAQ meters will drive demand for an Origen Optimized system to be included with any office space design.





- ▶ Office Furniture Market: (\$50 billion)
- ▶ In much the same way that all offices had to have filtered water systems in the 1980's, open concept offices in the 2000's, and required standing desks in the 2010's, in the 2020's the interior design office furniture market is all about nature and combining plants and technology.



## ► WHERE DOES ORIGEN AIR FIT?

- The market opportunity within the interior landscaping segment for Origen Air is to replace passive, functionally useless, pieces of décor with active, aesthetically stunning, living natural air filters with proven indoor air cleaning efficiency and humidity control.
- Our units are allergy friendly, cloud-connected, remotely monitored and fully automated solutions that are serviced and supported by our maintenance partners. Origen Air will provide real-time assessments of clients' IAQ and contaminant levels their active filters are processing per hour.



## ▶ WHERE DOES ORIGEN AIR FIT?

- ▶ Our solution naturally restores indoor air quality, producing fresh clean air, just as nature intended.
- ▶ Our devices are consistently in operation, quietly cleaning the indoor air, balancing the relative humidity, all while growing into a lush green beautiful display of dense green foliage for the enjoyment of all in the office.
- ▶ While most air filters hide in the corner and create a monotonous droning sound, our system will become a focal point of vibrant décor and fresh clean indoor air production.

# BUSINESS STRATEGY IMPLEMENTATION

- ▶ Origen Air is a precommercial company with a scalable health technology that will leverage patent pending *Enhanced Plant Technology* as their primary competitive advantage.
- ▶ Our products will be automated and remotely controlled by our proprietary operating system and artificial intelligence technologies.
- ▶ Origen Air will develop, lease and service our technology in-house and through channel partners.
- ▶ Origen Air offers a combination of physical products (hardware), technology / OS software and on- site services.
- ▶ The “*Origen Optimized*” package will include multiple air filter units with a monthly fee for Origen software and our Origen maintenance program.
- ▶ Origen Air mimics the business model of successful elevator sales and maintenance companies such as Otis, Kone and Thyssen-Krupp. This will create an initial opportunity for positive cash flow on new contracts. As the numbers and share of units in service increase, the profitability of the venture will rise through recurring revenue for years to come.



# TIMELINE

