



Air₂O

Thermal Management
Innovation
an Eren Groupe Company



Thermal Management Innovation

Air₂O is a global leader in advanced thermal management solutions particularly suited to the environmental and HVAC requirements of large-scale industrial facilities, including data centers, semiconductor manufacturing, lithium ion battery production and indoor agriculture.

Our innovative, state-of-the-art solutions go beyond intelligent cooling with systems that are precisely calibrated to regulate temperature, humidity, dew point and more in mission-critical facilities. With expert design, engineering and custom build capabilities, Air₂O delivers the world's most efficient and sustainable thermal management solutions.

Air₂O is an EREN Groupe company, a multi billion organization whose mission is to support innovative technological solutions in the fields of renewable energy production, energy conservation and energy storage. Together, we deliver a unique solution for highly efficient, ecologically sound thermal management systems that can be deployed cost-effectively in the most demanding environments.

Advanced HVACD Solutions for Mission-Critical Environments



At Air₂O, we believe that sustainability is not just a responsibility, but also an opportunity to create shared value for all our stakeholders. We recognize that our operations have an impact on the environment and society. We are committed to minimizing that impact for our company and our customers. We will continue to work toward our environmental, social and governance (ESG) goals and make meaningful contributions to a more sustainable future.

Custom Engineered Design

Our team of experienced, innovative engineers design customized commercial and industrial HVACD systems tailored to your facility and its unique environmental requirements.

- Maximize performance
- Increase efficiency
- Lower operating costs
- Minimize environmental impact



INDUSTRIES SERVED

Every project we do at Air₂O is unique. Each comes with its own set of requirements, constraints and limitations. In these applications, “off the shelf” won’t do. Our engineers and skilled technicians collaborate closely with our customers to find a solution precisely suited to the facility and its environmental specifications.

Our custom internal and external air handling solutions meet customer requirements, minimize total cost of ownership, and maximize efficiency and control in a wide range of industries.



DATA CENTERS

Air₂O designs and manufactures mission-critical cooling systems for data centers, utilizing economizer, evaporative cooling technologies, immersion, chilled water and DX technologies. Our data center specialists provide comprehensive design support and use performance-predicting software to recommend the most efficient and cost-effective custom solution for any project worldwide.

Extreme Low Humidity (ELH) solutions are engineered to meet the lithium-ion battery industry’s stringent low dew point requirements, providing unparalleled environmental control precision (down to -60 F DP). Our ELH systems meticulously maintain ultra-low humidity conditions, which is crucial for preserving material integrity and optimizing battery performance. These solutions prevent water contamination and premature chemical reactions, two critical factors in ensuring optimal battery safety and efficacy.



EV BATTERY MANUFACTURERS

Air₂O has developed several technological solutions for the CEA industry, from indirect evaporative cooling for low humidity ambient criteria to energy recuperation and desiccant dehumidification for low dew point conditions. Our vast experience in environmental control for indoor agriculture and deep understanding of plants’ cultivation specifics allow our team to design the optimum HVACD system for each project. The extensive controls package with versatile programming options helps operators maintain tight trending of the set points. Integrating any fertigation control platform into an umbrella BMS is easy.



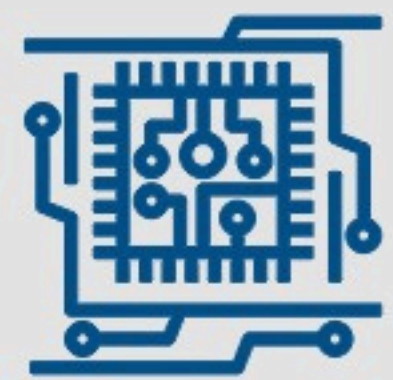
INDOOR AGRICULTURE



We Follow Best Practices

At Air₂O, we recognize that our operations have an impact on the environment and society.

-  Sustainability
-  Project On Time
-  Modern Technology
-  Custom Designs



SEMICONDUCTORS



FOOD & BEVERAGE



PHARMACEUTICAL



INDUSTRIAL



OUTDOOR COOLING



PLASTIC



**WAREHOUSING &
FULFILLMENT**



**AUTOMOTIVE
WORKSHOPS &
AIRCRAFT HANGERS**

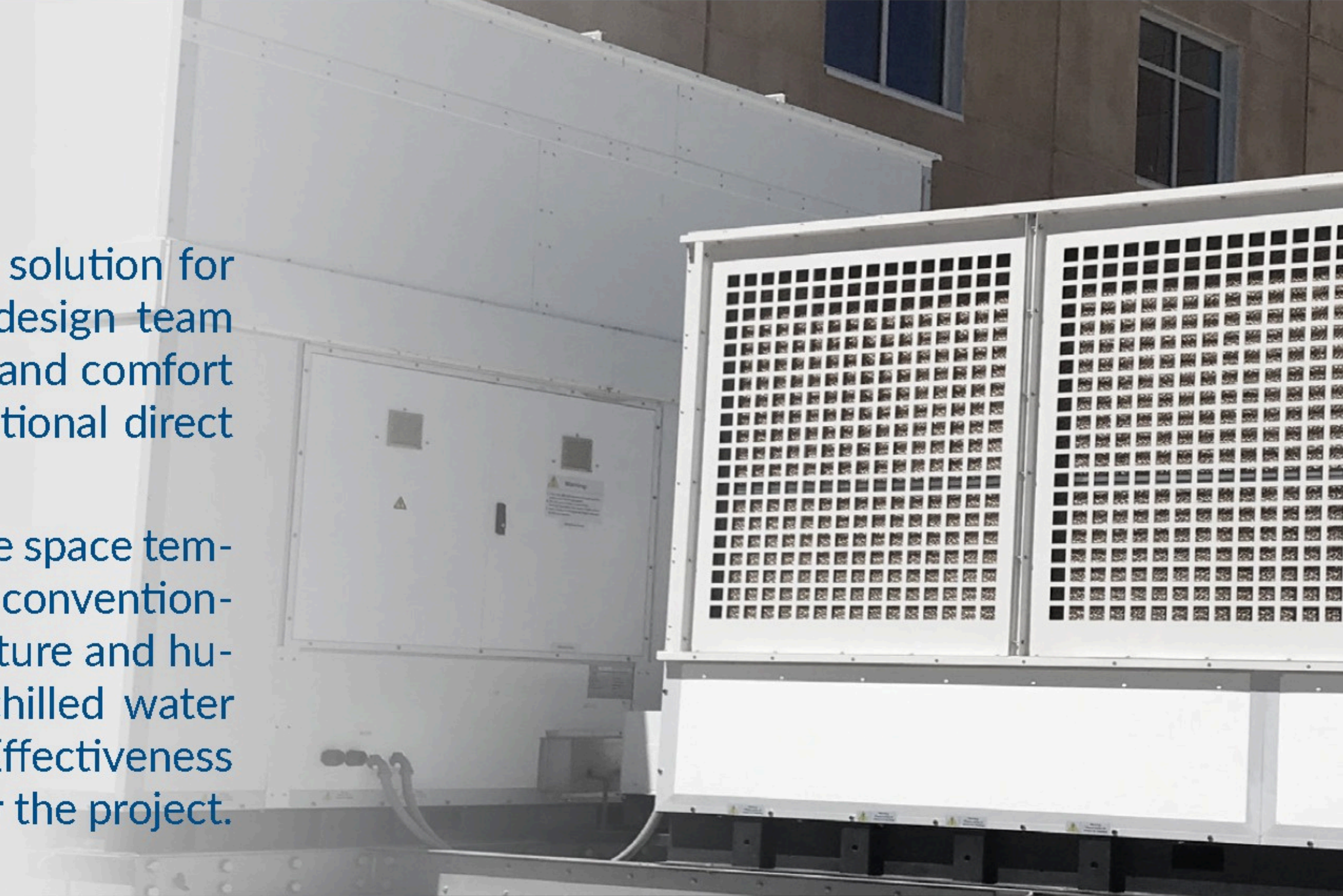


OUR CUSTOMERS

Data Center

The National Nuclear Security Administration needed a cooling solution for their new data center within existing space constraints. The design team sought an energy-efficient solution that balanced upfront costs and comfort while minimizing energy usage. Due to humidity concerns, traditional direct evaporative cooling with 100% outside air was not feasible.

Air₂O's indirect evaporative cooler with DX maintains comfortable space temperatures while consuming significantly less energy compared to conventional air conditioning systems. It effectively regulates both temperature and humidity levels without the need for a full-size compressor or chilled water system, typical in traditional setups. Achieving a Power Usage Effectiveness (PUE) of 1.16, it surpasses the energy efficiency requirements for the project.



Indoor Agriculture

Air₂O installed HVACD equipment at a cannabis cultivation facility in Northern California, a retrofit project that presented a number of challenges posed by existing units. To replace underperforming equipment, Air₂O skillfully designed rooftop systems within the requested size envelope while meeting design conditions and addressing roof load limitations.

Airport Hangar

Air₂O designed and installed eight advanced evaporative cooling technology units atop new Southwest Airlines hangars at Phoenix Sky Harbor airport. An industrial crane delivered the 24,000-pound units gently onto the roof of the hangar (image at right).



Ice Hockey Arena

Air₂O supplied two 36,000 cfm desiccant dehumidification units to the San Jose Sharks ice hockey arena to keep the ice dry while thousands of spectators watch the game. Each of the units is a fully packaged refrigeration system comprising a desiccant dehumidification wheel and direct gas fired reheating.

Air₂O is the only manufacturer of desiccant dehumidification systems in Arizona. We will continue to deliver low dew point solutions for unique facilities such as the hockey arena, and for lithium-ion battery and semiconductor manufacturing facilities as those industries grow statewide.



Outdoor Stadium

We supplied 150 hybrid air conditioning units for the FIFA World Cup 2022 in Qatar's fan zone and installed 5,000 of its custom-designed jet nozzle diffusers to distribute cool air throughout the stadiums. We also embedded 25,000 diffusers designed using 3D printers underneath the stadium's seats to maintain comfortable temperatures for spectators.

Lithium-ion Battery Facility

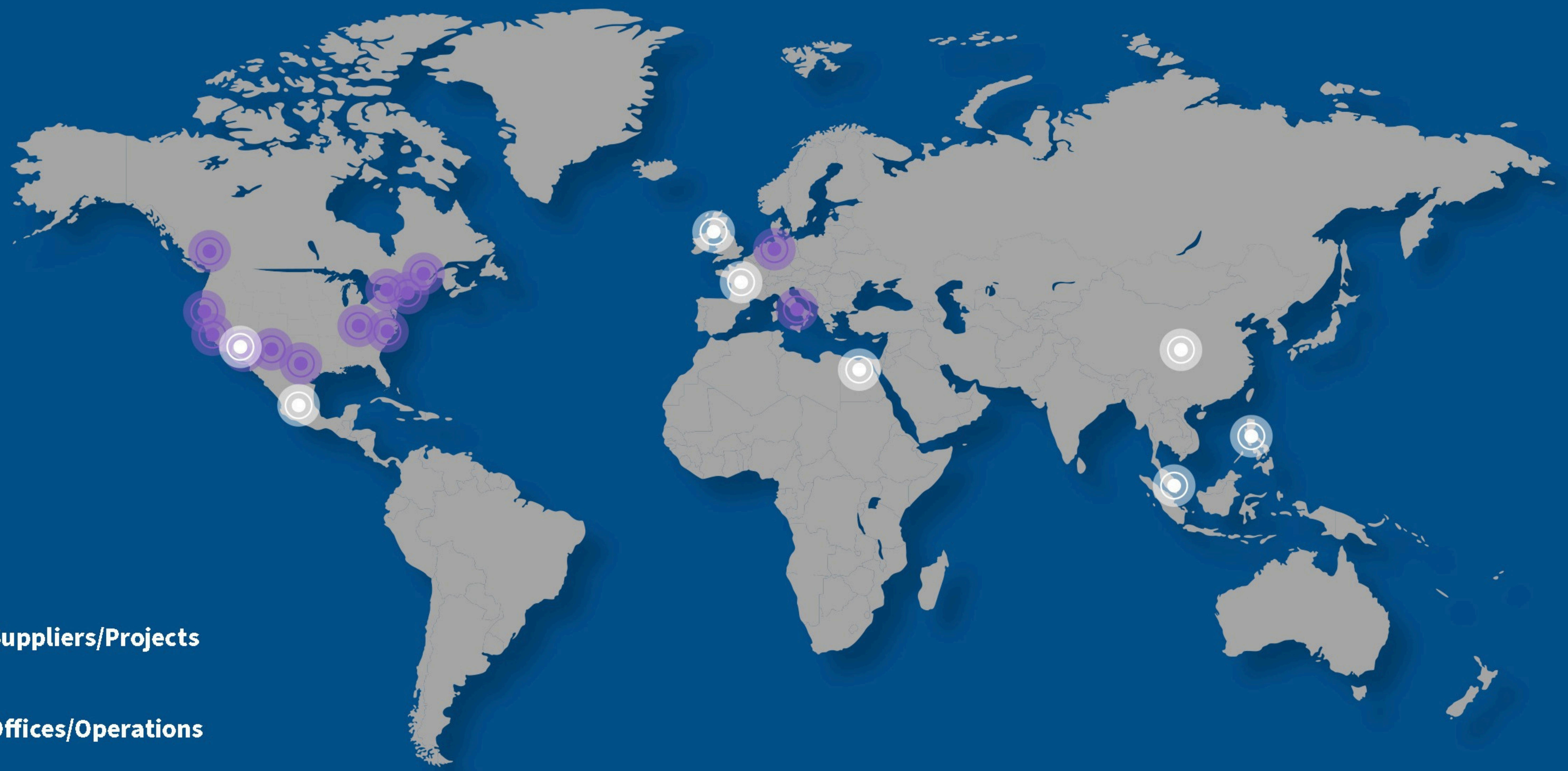
Air₂O's Extreme Low Humidity (ELH) solutions are specifically engineered to meet the lithium-ion battery industry's stringent low dew point requirements. Our ELH systems will provide unparalleled environmental control precision, achieving dew points as low as -60°F. Preserving material integrity is of utmost importance in the lithium-ion battery industry, as any water contamination or premature chemical reactions can have serious consequences on battery safety and efficacy. Our ELH solutions are designed to prevent such issues, ensuring that batteries operate at their highest level of performance.



CoLocation Data Center

Air₂O provided a high quality, cost-effective solution for a colocation data center in North America. The system, with Air₂O EcoFlow units up to 422 kW, includes waterside economizer runaround coil and economizer/DX trim.

Air₂O Operations & Supply Chain



Suppliers/Projects

Offices/Operations



Air₂O sources the highest quality components from vendors worldwide for a consistent flow of products that ensures your project is completed on time and on budget, even during supply chain disruptions.

- Faster time to completion
- Minimize risk of project disruption
- Adjust quickly as requirements change

OUR SERVICES



Comprehensive Setup and Delivery Services

Air₂O provides seamless delivery and installation of HVACD units to ensure on-time delivery.



Advanced Performance Prediction Software (DEN)

Our proprietary DEN software enables accurate forecasting of HVACD system performance, ensuring the design is efficient low-energy and sustainable.



Ongoing Maintenance Support

We offer regular maintenance services to keep your HVACD systems running optimally and extend their lifespan.



Predictive Analysis Software

Our cutting-edge software enables real-time detection of potential issues, alerting you to problems before they escalate into costly failures.



Local and Remote Monitoring

Air₂O's advanced monitoring solutions ensure consistent uptime and optimal system performance by tracking your HVACD systems on-site or remotely.



Robust Supply Chain

Our extensive network of international suppliers guarantees the availability of components, minimizing delays and disruptions.



ISO 9001 Certified

As an ISO 9001 certified design and manufacturing organization, Air₂O maintains a QMS that addresses each of the eight ISO 9001 sections.

- Scope
- Normative reference (e.g. QMS fundamentals)
- Terms and definitions
- General QMS requirements
- Management responsibility
- Resource management
- Product realization (design excluded)
- Measurement, analysis and improvement



EMPLOYEES



Mike Sullivan
CEO

CEO Mike Sullivan, a second-generation HVAC engineer, started Air₂O in 2013. Headquartered in Phoenix, Arizona, the company has grown from a few employees to more than 100. The international Air₂O team hails from 15 countries and speaks at least six languages: English, Arabic, French, German, Mandarin Chinese and Spanish.

What's our secret? Great people.

Air₂O has grown from a few employees to over 100 based in North Phoenix. The international team we have formed, are from 15 countries and speaks minimally 6 languages; English, Spanish, Mandarin, German, French, and Arabic. the profound significance of teamwork, innovation, and leadership in our journey towards excellence. Our success is not merely the result of individual brilliance, but the collective power of a cohesive team that thrives on collaboration and a commitment to innovation. Strong leadership, both at the helm and within each team, is the catalyst that propels us forward, guiding us through challenges and inspiring us to achieve new heights. Together, these elements form the cornerstone of our company culture, enabling us to deliver exceptional value to our customers and drive sustainable growth.





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Innovation**

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