

White Paper

Revolutionizing Infrastructure with Air-Supported Structures in Saudi Arabia

Introduction

As Saudi Arabia accelerates toward achieving its Vision 2030 goals and prepares to host the FIFA World Cup 2034,, the Kingdom is focused on transforming its infrastructure with innovative, sustainable, and cost-effective solutions. Air-supported structures offer an advanced approach to building sports facilities, event venues, and industrial spaces, providing rapid deployment, exceptional durability, and unparalleled versatility. These domes are designed to support community engagement, economic diversification and sustainable development.

With over 40 years of expertise, The Farley Group is a global leader in air-supported structures. Known for innovative designs, cutting-edge manufacturing, and a client-centric approach, we are committed to supporting Saudi Arabia's dynamic growth and development. Our domes are built to last, featuring a 20-year warranty for proven durability and reliability.



What are Air Supported Structures?

Air-Supported Structures

Air-supported structures, also known as domes, are lightweight, versatile buildings held up by a constant, slightly higher internal air pressure. These structures use durable, insulated membranes anchored to a concrete perimeter, ensuring stability and longevity.

Key Features



Rapid Deployment

Domes can be installed and operational within weeks, enabling fast-paced project timelines.



Climate Adaptability

Engineered to perform in extreme temperatures and withstand harsh weather conditions like sandstorms.



Cost-Efficiency

Offers a budget-friendly alternative to traditional construction, with lower maintenance costs.



Sustainability

Uses energy-efficient materials and designs to reduce environmental impact.



Proven Durability

With a lifespan of 20+ years, air-supported domes ensure reliable performance even in harsh climates like Saudi Arabia's.



Applications in Saudi Arabia

Saudi Arabia's Vision 2030 emphasizes sustainable development, economic diversification, and community engagement. Air-supported structures are uniquely suited to address these objectives, providing adaptable solutions across multiple sectors.

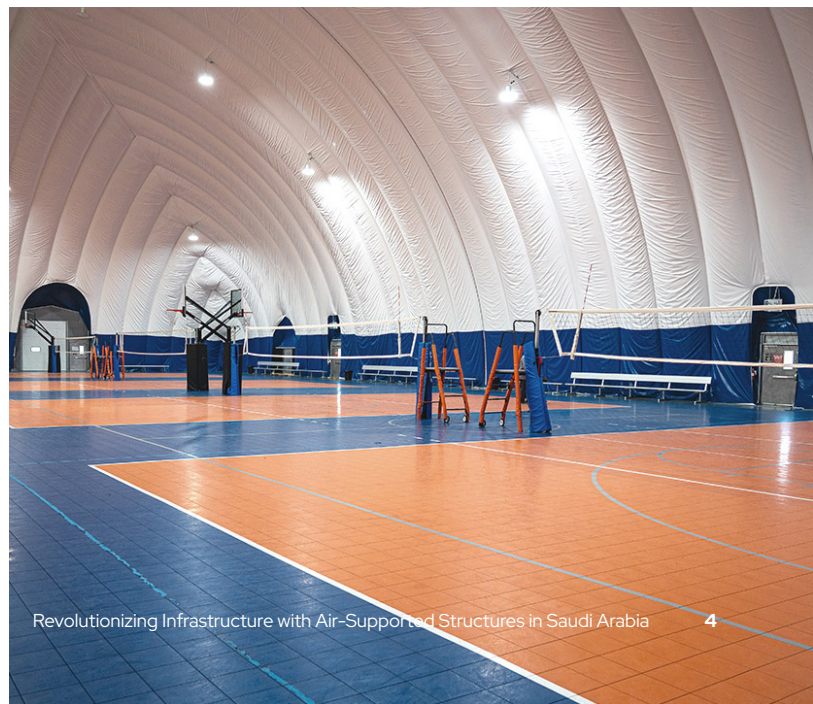
Sports Facilities

Air domes create state-of-the-art, climate-controlled environments for football, tennis, and other sports, enabling year-round activities regardless of external weather conditions. Their rapid installation and adaptability make them ideal for professional sports organizations, schools, universities, and municipal facilities looking to expand sports participation and provide versatile spaces for community use and professional events.

Event Spaces

Flexible and scalable, air domes are perfect for hosting exhibitions, cultural festivals, and large-scale entertainment events. Their customizable designs allow for temporary or permanent installations, ensuring they can adapt to projects' dynamic needs while offering guests comfort and functionality year-round.

- **Dynamic Venues:** Ideal for large-scale exhibitions, cultural festivals, and entertainment events.
- **Scalable Solutions:** Adaptable designs allow for temporary or permanent use, meeting the unique needs of tourism-focused developments like Qiddiya and the Red Sea Project.
- **Year-Round Comfort:** Climate control ensures a comfortable environment for guests and participants.



Industrial and Logistics

Engineered for efficiency, air domes offer scalable warehousing and logistics solutions that are cost-effective and sustainable. With advanced insulation and climate control, they ensure energy savings while protecting goods and equipment from extreme weather, making them a perfect fit for Saudi Arabia's industrial and economic expansion.

- **Unobstructed Space Utilization:** Air domes eliminate the need for pillars or columns, maximizing usable space and allowing seamless maneuverability for heavy equipment in warehouses and factories.
- **Climate-Resilient Warehousing:** Protect goods and equipment from extreme weather conditions.
- **Scalable Facilities:** Rapidly expand or relocate warehouses to meet evolving industrial demands.
- **Energy-Efficient Design:** Reduce operational costs through insulation and advanced climate control systems.
- **Versatile Use:** From football stadiums to tennis courts, air-supported domes create world-class, climate-controlled environments for sports.
- **Rapid Installation:** Quickly establish venues for recreational activities or high-profile international events.
- **Community Integration:** Enable local communities to access modern athletic facilities, supporting Vision 2030's focus on increasing sports participation.



Key Differentiators

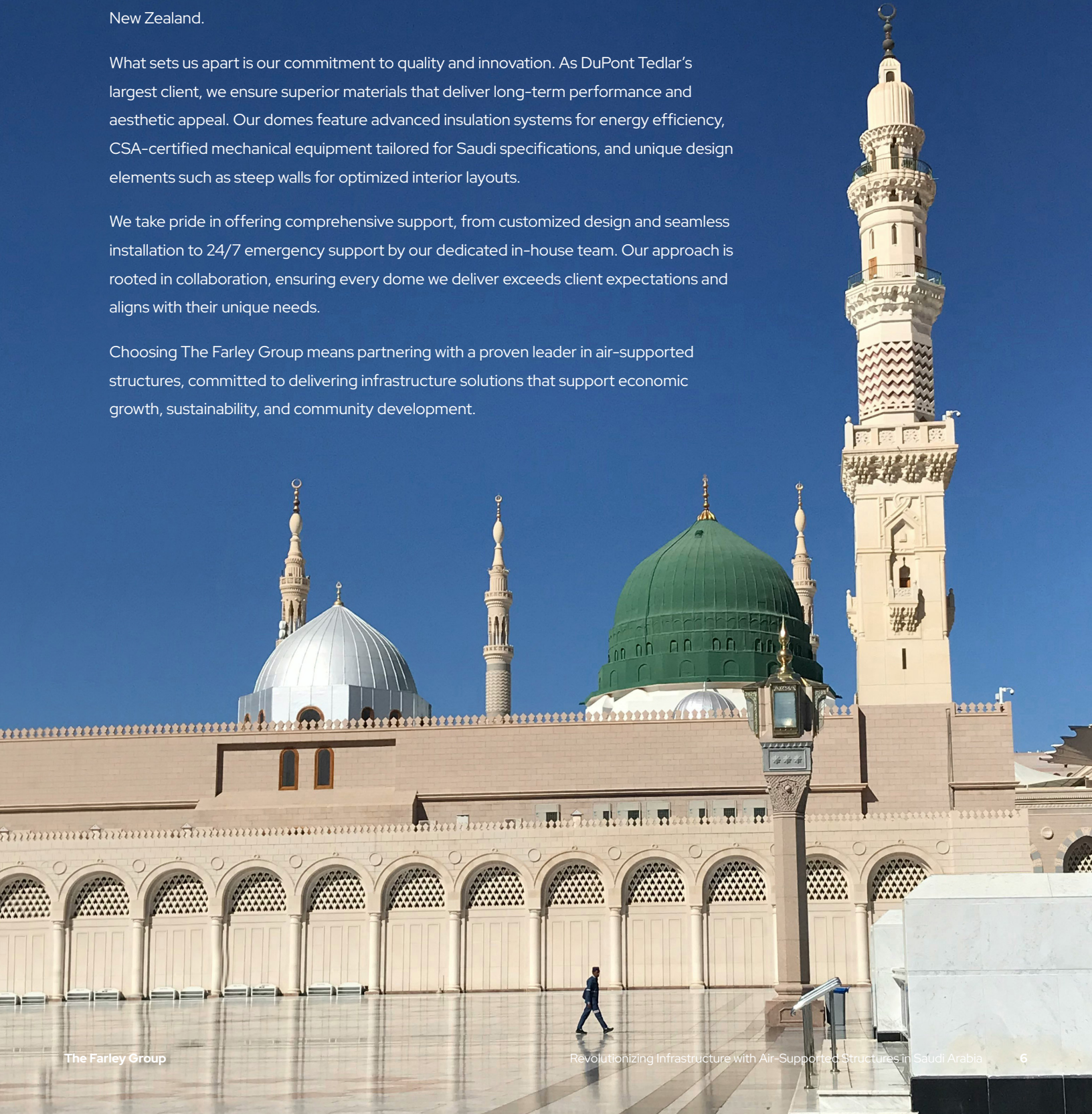
Why Choose The Farley Group?

As North America's leading air dome provider and the only one in Canada, The Farley Group brings unmatched expertise to every project. With over 40 years of experience, we have successfully delivered innovative solutions across North America, Europe, and New Zealand.

What sets us apart is our commitment to quality and innovation. As DuPont Tedlar's largest client, we ensure superior materials that deliver long-term performance and aesthetic appeal. Our domes feature advanced insulation systems for energy efficiency, CSA-certified mechanical equipment tailored for Saudi specifications, and unique design elements such as steep walls for optimized interior layouts.

We take pride in offering comprehensive support, from customized design and seamless installation to 24/7 emergency support by our dedicated in-house team. Our approach is rooted in collaboration, ensuring every dome we deliver exceeds client expectations and aligns with their unique needs.

Choosing The Farley Group means partnering with a proven leader in air-supported structures, committed to delivering infrastructure solutions that support economic growth, sustainability, and community development.





Comprehensive Expertise

- **Custom Design:** Our engineering team works with clients to create tailored solutions, ensuring structures meet specific functional and aesthetic requirements.
- **Precision Manufacturing:** Utilizing state-of-the-art technology, we produce durable membranes and components that deliver long-lasting performance.
- **Efficient Installation:** Our experienced technicians guarantee seamless and timely installations, minimizing disruptions to your schedule.
- **Maintenance Services:** From regular inspections to 24/7 emergency support, we ensure your dome remains in top condition.

Innovative Solutions

- **Advanced Climate Control:** Systems designed for extreme conditions, ensuring energy efficiency and comfort in Saudi Arabia's challenging environment.
- **Energy Efficiency:** Insulated membranes reduce heating and cooling costs, supporting Saudi Arabia's sustainability goals.
- **Relocatable Designs:** Domes can be repurposed or relocated, providing flexibility for changing project needs.
- **Proven Durability:** With a lifespan of over 20+ years and a 20-year warranty, air-supported domes offer exceptional reliability. Advanced materials like DuPont Tedlar ensure the domes maintain their appearance and performance even in challenging climates such as Saudi Arabia's, making them a long-term solution for modern infrastructure needs.



Proven Track Record

- **Global Installations:** From North America to Asia, our domes serve diverse purposes, from sports facilities to logistics hubs.
- **High-Profile Projects:** The Farley Group has an extensive portfolio of large-scale, high-quality air-supported structures, showcasing our expertise in designing and constructing innovative sports and recreational facilities. Notable projects include The Velodrome, a state-of-the-art cycling facility; the British Columbia Coastal Domes, a series of three durable structures built to withstand diverse coastal conditions; the Red Clay Tennis Court Dome, an indoor facility designed to provide an optimal year-round playing environment; and the Woodbridge Sports Dome, a premier multi-sport facility.



Client-Centric Approach

- **Collaboration:** We work closely with clients at every stage to ensure project goals are met.
- **Dedicated Project Team:** Each project is assigned a dedicated project manager and a specialized team to ensure seamless execution, clear communication, and alignment with client goals.
- **Transparent Communication - The Farley Group Way:** We prioritize clear, honest, and proactive communication through regular updates and open dialogue, fostering trust and ensuring alignment with client expectations at every stage of the project.
- **Responsive Support:** Our dedicated team provides ongoing assistance and 24/7 emergency support, ensuring customer satisfaction and uninterrupted operations.

How Air-Supported Structures Align with Vision 2030

Saudi Arabia's Vision 2030 emphasizes sustainable growth, innovation, and infrastructure development. Air-supported structures support these goals in several ways:

Sustainability

Energy-efficient designs and durable materials contribute to the Kingdom's green initiatives, such as the Saudi Green Initiative.

Economic Diversification

Scalable and cost-effective structures drive growth in non-oil sectors like sports, tourism, and logistics.

Community Impact

Providing versatile spaces for sports, culture, and education enhances quality of life and community engagement.

Benefits of Air-Supported Structures

1

Rapid Deployment

- ✓ **Shorter Construction Timelines:** Air-supported structures can be operational within weeks, compared to months or years for traditional buildings. This speed is crucial for projects requiring immediate infrastructure solutions.
- ✓ **Minimal Disruption:** The lightweight nature of the materials and efficient installation methods reduce on-site disruption, making them ideal for urban and high-traffic areas.

2

Cost-Efficiency

- ✓ **Lower Initial Investment:** Air-supported domes cost significantly less to construct than traditional brick-and-mortar buildings, making them a budget-friendly option.
- ✓ **Reduced Maintenance Costs:** Durable materials and advanced membrane technologies minimize the need for frequent repairs, lowering long-term expenses.
- ✓ **Energy Savings:** Insulated designs help maintain indoor temperatures, reducing heating and cooling costs, especially in extreme climates like Saudi Arabia's.



3

Climate Adaptability

- ✓ **Withstand Extreme Conditions:** Engineered to perform in high temperatures, sandstorms, and heavy rainfall, air-supported structures are built to endure Saudi Arabia's unique environment.
- ✓ **Controlled Indoor Environment:** Advanced HVAC systems create comfortable indoor conditions for sports, logistics, or events, regardless of outdoor weather.

4

Sustainability

- ✓ **Energy Efficiency:** The insulated membranes reduce energy consumption for heating and cooling, supporting green building initiatives.
- ✓ **Eco-Friendly Materials:** Many components are recyclable, aligning with sustainability goals.
- ✓ **Relocatable and Reusable:** Structures can be dismantled and reassembled in different locations, minimizing waste and extending the life cycle of the building.



5

Adaptability and Versatility

- ✓ **Customizable Designs:** Air-supported structures can be tailored to specific uses, from sports facilities and industrial warehouses to exhibition spaces and logistics hubs.
- ✓ **Seasonal and Permanent Options:** Domes can be used seasonally or permanently, offering flexibility based on project requirements.
- ✓ **Multi-Purpose Spaces:** A single structure can accommodate diverse activities, such as sports during the day and community events in the evening.

6

Scalability

- ✓ **Expandable Sizes:** Domes can be scaled up or down depending on changing needs, making them a future-proof investment.
- ✓ **Modular Design:** Additional segments can be added to accommodate growth, ensuring that the structure evolves with its users.



7

Improved Community Impact

- ✓ **Accessible Spaces:** Affordable and quick to deploy, air-supported structures make modern facilities accessible to more communities.
- ✓ **Promoting Physical Activity:** By providing year-round, climate-controlled spaces, they encourage increased participation in sports and recreational activities.
- ✓ **Versatile Event Venues:** Ideal for hosting cultural festivals, exhibitions, and entertainment events, domes enhance community engagement.

8

Low Environmental Impact

- ✓ **Small Footprint:** Lightweight construction materials and minimal site preparation reduce environmental disruption.
- ✓ **Reduced Carbon Emissions:** Energy-efficient designs and materials contribute to lower greenhouse gas emissions during construction and operation.
- ✓ **Support for Vision 2030's Green Initiatives:** Air-supported structures align with Saudi Arabia's goals to reduce its environmental impact through innovative building solutions.



9

Proven Durability

- ✓ **Long Lifespan:** Advanced materials and engineering extend the lifespan of air-supported structures, often exceeding 20-25 years with proper maintenance.
- ✓ **Resilient in Harsh Conditions:** From intense UV exposure to high winds, air domes are designed to maintain integrity and functionality in extreme environments.

10

Advanced Technology Integration

- ✓ **Energy Management Systems:** Optimize energy use, further reducing operational costs and environmental impact.
- ✓ **Custom HVAC Solutions:** Tailored climate control systems ensure optimal indoor conditions for users.



The Farley Group Way

Air Domes represent a transformative solution for Saudi Arabia's infrastructure needs. Their adaptability, cost-efficiency, and sustainability make them an ideal fit for the Kingdom's Vision 2030 goals and the preparations for the FIFA World Cup 2034. These structures provide world-class solutions for sports venues, event spaces, and industrial facilities, ensuring rapid deployment and long-term durability.

The Farley Group's unmatched expertise, innovative designs, and commitment to client success ensure that your project will exceed expectations. Partner with us to redefine what's possible in infrastructure and contribute to Saudi Arabia's global sporting legacy.





Learn More

For more information on air-supported structures and how they can enhance your project, contact The Farley Group today.

sales@thefarleygroup.com