THE FARLEY GROUP

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White Paper

Revolutionizing Infrastructure with Air-Supported Structures in South Korea

Introduction

As South Korea advances its infrastructure and sustainability initiatives, innovative and cost-effective building solutions are in high demand. Air-supported structures provide a transformative approach to developing sports facilities, event venues, emergency shelters, and industrial spaces. With rapid deployment, superior durability, and adaptable designs, air domes offer solutions tailored to South Korea's climate conditions, urban development needs, and technological advancements.

With over 40 years of expertise, The Farley Group is a global leader in air-supported structures, providing high-quality, customizable domes that withstand extreme weather conditions. Our domes offer a 20-year warranty, ensuring long-term reliability and performance.

What are Air-Supported Structures?

Air-Supported Structures

Air-supported structures, or air domes, are lightweight, high-performance buildings upheld by maintaining a slightly higher internal air pressure. These structures are 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

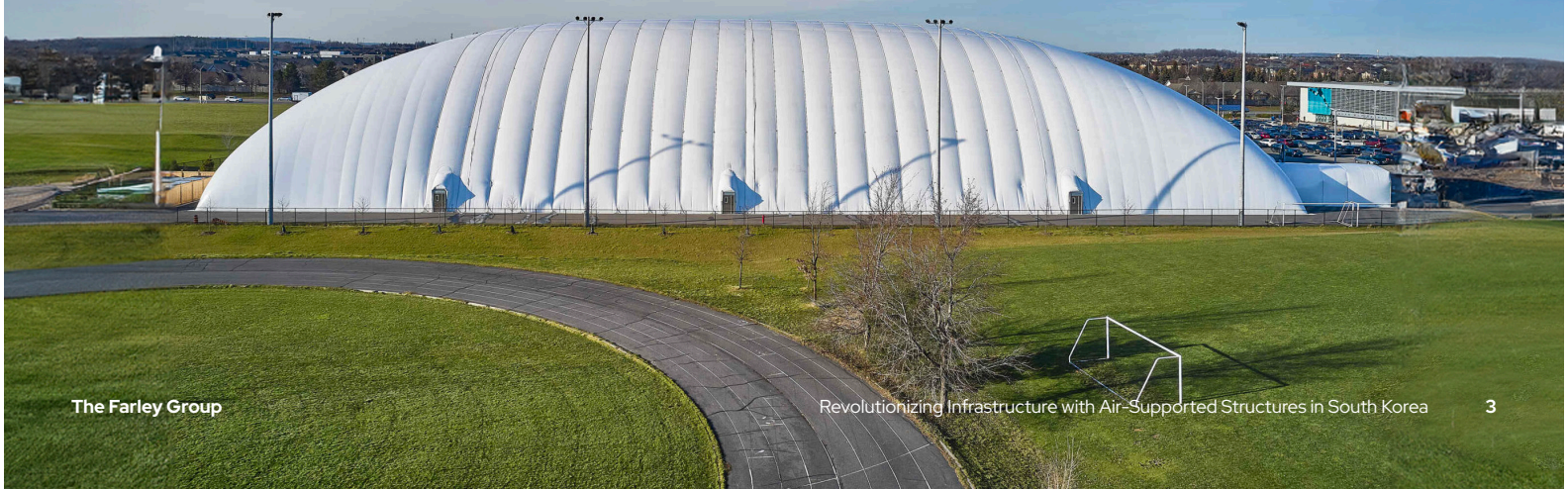
Lower initial investment and maintenance costs compared to traditional buildings.

Sustainability

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

Proven Durability

20+ years of lifespan, built to withstand high winds, humidity, and snowfall.



Applications in South Korea

South Korea's focus on technological innovation, sustainability, and urban development makes air-supported structures an ideal choice for multiple industries.

Sports Facilities

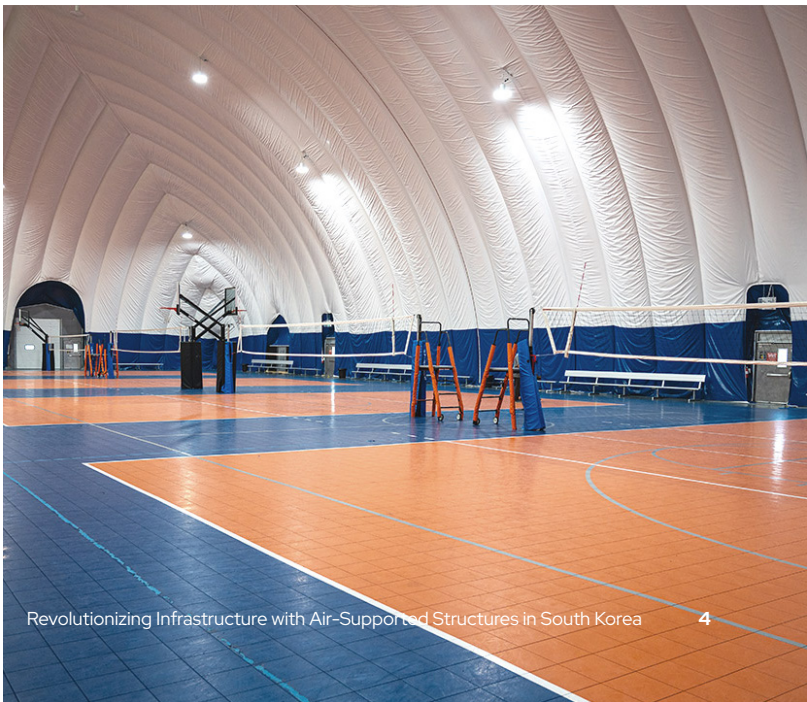
Air domes offer state-of-the-art, climate-controlled environments for sports training and competitions.

- **All-Weather Use:** Provides uninterrupted training for soccer, tennis, swimming, and more.
- **Customizable Designs:** Adaptable to different sports and facility requirements.
- **Energy-Efficient Climate Control:** Smart HVAC systems ensure stable temperatures.

Event Spaces

Flexible and scalable, air domes are ideal for hosting exhibitions, concerts, and large-scale festivals.

- **Dynamic Venues:** Adaptable for short-term or long-term use.
- **Large, Open Interiors:** Column-free spaces maximize event layouts.
- **Year-Round Comfort:** Climate control systems provide a stable environment for guests.



Emergency Shelters

Quick-to-deploy, durable shelters for disaster relief efforts.

- **Rapid Assembly:** Deployed within days for emergency response.
- **Weather Resilience:** Designed to withstand typhoons, heavy rains, and extreme cold.
- **Safe & Comfortable Environment:** Climate-controlled spaces for displaced individuals.

Industrial & Military Applications

Used for warehousing, logistics, and military training facilities.

- **Scalable Storage Solutions:** Cost-efficient, adaptable warehouse spaces.
- **Military & Defense Training:** Secure and modular training environments.
- **Energy-Saving Designs:** Features like solar panel integration and insulated membranes reduce operational costs.

Key Differentiators

Why Choose The Farley Group?

As North America's leading air dome provider and a global expert in air-supported structures, The Farley Group brings unmatched expertise to every project. With over 45 years of experience, we have successfully delivered cutting-edge solutions across North America, Europe, and Asia.

What sets us apart is our commitment to quality, innovation, and climate-adaptive designs. Our domes feature advanced insulation systems for energy efficiency, CSA-certified mechanical equipment, and custom-engineered designs optimized for South Korea's unique climate conditions, including typhoons, heavy snowfall, and monsoon seasons.

We take pride in offering comprehensive support, from customized design and seamless installation to 24/7 emergency maintenance services provided by our dedicated in-house team. Our approach is collaborative, ensuring every dome we deliver exceeds client expectations and is tailored to their specific needs.

Choosing The Farley Group means partnering with a trusted global leader in air-supported structures, delivering infrastructure solutions that drive sustainability, efficiency, and long-term value.

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 South Korea's challenging environment.
- **Energy Efficiency:** Insulated membranes reduce heating and cooling costs, supporting South Korea'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 South Korea'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 South Korea's National Goals

South Korea places a strong emphasis on sustainability, technological advancement, and infrastructure innovation. Air-supported structures support these priorities in several impactful ways:

Sustainability

Energy-efficient designs, eco-friendly materials, and smart climate control systems contribute to South Korea's green building initiatives and support efforts to reduce carbon emissions and environmental impact.

Technological Leadership

Smart monitoring systems, automated climate control, and innovative materials help position South Korea as a leader in adopting future-forward infrastructure solutions.

Community Impact

By creating versatile spaces for sports, events, culture, and education, air domes help enhance the quality of life, expand recreational access, and promote community engagement across urban and regional developments.

Benefits of Air-Supported Structures

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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.

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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 South Korea's.

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Climate Adaptability

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

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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.

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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.

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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.

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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.

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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 South Korea's Green Initiatives:** Air-supported structures align with South Korea's sustainability goals by promoting eco-friendly construction solutions that reduce energy consumption and environmental impact.

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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.

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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 South Korea's evolving infrastructure needs. Their adaptability, cost-efficiency, and sustainability make them an ideal fit for South Korea's rapid urban development, climate resilience initiatives, and growing demand for smart infrastructure. These structures provide cutting-edge solutions for sports venues, event spaces, emergency shelters, and industrial applications, 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 South Korea's infrastructure landscape and contribute to a sustainable, efficient, and technologically advanced future.

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Learn More

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

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