OmniDome: All-Weather Family Parks

Deep Innovation Report

Executive Summary

A strategic concept for climate-controlled indoor biomes in the BCP area, creating safe, year-round spaces for family recreation and green leisure.

Explores key user personas, local-fit opportunities, cross-sector partnerships, operational risks, and an immediate low-cost pilot project.

The Better Everyday

What if a rainy November afternoon in Poole felt like a perfect spring morning, allowing families to cycle, play, and connect without checking the weather forecast?

- The OmniDome reimagines park recreation by creating a covered, climate-controlled biome featuring indoor trails, real-grass meadows, and responsive natural micro-climates. Inspired by the participant's sketch of a family enjoying an outdoor walk and bike ride under a stormy sky, it offers a year-round, weather-proof haven for physical activity and leisure.
- In 2030, a family in Boscombe walks into the dome on a cold, blustery Tuesday evening to find a warm, softly lit landscape of real trees and winding bicycle paths. Children ride their bikes along the indoor trail while parents sit on the grass without the need for heavy winter coats, damp umbrellas, or mud-covered boots. The constant wind and rain of the coastal winter no longer dictate whether local residents can enjoy green spaces together.
- This concept addresses the fundamental human need for reliable, health-promoting recreation and unstructured play throughout the darker, colder months. Currently, residents rely on cramped indoor soft-play centres or expensive commercial leisure venues, which offer little connection to nature and quickly become repetitive. These existing workarounds isolate families indoors and fail to support the active, outdoor lifestyle that BCP's natural environment promises during the summer.
- By proving that natural spaces can be successfully integrated into indoor civic life, the dome could change what people expect from local leisure centres and library buildings. Future public spaces might be designed with indoor green courtyards, biophilic architecture, and circadian lighting as standard features. This shift would transform community infrastructure from purely functional rooms into vibrant, health-giving environments that combat seasonal affective disorder.

Who It Could Matter To

Creating a reliable sanctuary from the coastal elements transforms how different generations use and enjoy public spaces throughout the year.

The Time-Poor Parent

- A working parent living in a flat in Lansdowne with two young children and no private garden.
- They need a safe, stress-free space for their children to burn off energy after school on a wet winter weekday.
- They benefit from a secure, clean environment where their children can ride bikes safely while they supervise from a comfortable seating area.

The Isolated Senior

- A retired resident in Christchurch who lives alone and struggles with mobility and cold weather.
- They want to maintain their daily walking habit and socialise without the risk of slipping on icy paths or getting caught in heavy downpours.
- They gain a flat, warm, and highly accessible pathway where they can walk confidently and meet friends for tea in a bright, uplifting setting.

The Creative Tech Freelancer

- A digital designer based in Southbourne who works remotely and experiences seasonal isolation.
- They need a fresh, inspiring place to work away from their home desk during the dark winter months.
- They find a peaceful workspace surrounded by real plants, benefiting from the simulated sunlight to boost their productivity and mental well-being.

What This Could Change for BCP

By defying the seasonal limitations of the coastal weather, this space could anchor a healthier, more consistent year-round lifestyle for residents.

- The concept directly aligns with BCP's coastal setting and the council's ambition for inclusive, sustainable regeneration that supports year-round economic growth. While the region is famous for its outdoor summer lifestyle, the dome would ensure that this active, nature-focused identity remains alive even during the wet winter months. It builds on the local commitment to health, well-being, and active travel by providing a continuous, uninterrupted space for physical activity.
- Establishing this facility would create a new hub for year-round community activity, reducing seasonal depression and physical inactivity among residents of all ages. Local GP surgeries could prescribe active sessions in the dome, improving physical and mental health outcomes across the community. This would relieve winter pressure on local health services by keeping vulnerable populations active and socially connected.
- The presence of a major year-round amenity could encourage independent local cafes, cycle hire businesses, and wellness practitioners to set up nearby, creating a resilient micro-economy. Over time, this could make the surrounding neighbourhood a highly desirable area for young families and creative professionals looking to relocate to BCP. It could also act as a model for sustainable indoor-outdoor architecture, inspiring local property developers to adopt biophilic designs.
- The project would require significant energy to maintain its climate-controlled environment, raising questions about carbon footprint and sustainability. Decision-makers would need to balance the high capital and operating costs against the public health benefits, potentially requiring entrance fees that could exclude lower-income families. To address this, a tiered pricing structure or free community hours would be essential to ensure the space remains genuinely inclusive.

Who Must Connect

Bringing an indoor park to life requires combining public health goals with private sector operational expertise and sustainable engineering.

- A commercial leisure operator, such as a national health and fitness brand, would lead the day-to-day management of the facility. They would partner with local landscape architects and horticultural specialists from Bournemouth University to ensure the indoor ecosystems remain healthy and sustainable. This partnership combines commercial operational efficiency with local academic expertise in biodiversity and plant care.
- Local family networks, cycling groups, and accessibility advocates would form a co-design panel to shape the park's layout, path design, and play equipment. They would meet regularly during the planning phase to test prototypes of the play spaces and suggest programming for different age groups. This direct involvement ensures the dome meets the practical, everyday needs of BCP's diverse communities.
- BCP Council would need to provide a suitable site, potentially an underutilised brownfield plot or a redundant retail unit in a town centre, through a long-term lease. The council's planning and economic development teams would work with the operator to fast-track permissions, recognizing the project's contribution to town centre regeneration. This arrangement turns a vacant liability into a valuable community asset that drives footfall.
- Funding would come from a mixture of corporate wellness partnerships, membership fees for premium access, and public health grants tied to preventative healthcare. A dedicated facilities management team would be hired to maintain the planting, pathway safety, and climate control systems over the long term. This hybrid funding model reduces reliance on municipal budgets while ensuring high-quality, continuous maintenance of the environment.
- The missing link is the relationship between the local NHS integrated care board and commercial leisure developers, which has no established framework for co-funding preventative health infrastructure. To bridge this gap, the Silicon South network could facilitate an initial matchmaking workshop to explore shared health outcomes and financial models. The NHS board would need to make the first move by defining the specific health metrics they are willing to fund.

Why This Fails

Unrealistic operating models, high energy costs, or poor user experience could turn a visionary biome into an empty, expensive liability.

- **Prohibitive utility costs** can undermine the financial model if the energy required to heat and light the biome during winter exceeds all ticket revenues. If renewable energy sources are unavailable or insufficient, the high overheads will force ticket prices to rise, alienating the families who need the space most. The early warning sign would be a sudden reduction in the dome's daily operating hours or a scaling back of the heated zones during the first autumn season.
- **Horticultural neglect** occurs if the leisure operator lacks the specialist expertise or budget to maintain real grass, trees, and plants under indoor conditions. Without continuous care, the vegetation will wither, turning an inspiring biophilic sanctuary into an unappealing, dusty warehouse. You would first notice this through yellowing grass patches, wilting leaves on the main trees, and a rising volume of visitor complaints about air quality.
- **Winter bottlenecking** can destroy the user experience if the dome becomes unsafely overcrowded during rainy weekends while remaining completely empty during sunny summer days. If the space feels chaotic, noisy, and stressful rather than peaceful, families will stop visiting, and vulnerable users will feel excluded. The earliest warning sign would be a sharp drop in repeat bookings and negative online reviews highlighting long queues at the entrance.

One Experiment to Start

Testing the core human desire for indoor-outdoor play does not require building a massive dome; it starts with a temporary, highly targeted intervention.

- The most important uncertainty is whether families will actually pay for or travel to an indoor simulated park when they could choose traditional indoor play areas or stay at home. If people do not value the biophilic, active-play elements over standard commercial entertainment, then the massive capital investment required for a permanent biome is unjustified.
- A fortnight-long winter pilot could be hosted inside a vacant, well-lit retail unit in Bournemouth town centre during November. The space would be outfitted with real turf rolls, potted birch trees, natural scent diffusers, warm lighting, and a short, winding wooden balance track for children's balance bikes. Local families would be invited to book one-hour play slots for a small fee, experiencing a miniature version of the sensory and physical environment.
- Keep going if parents actively book repeat slots within the fortnight, report a measurable improvement in their mood, and express a willingness to pay for a larger-scale version. Stop or rethink if families visit once but find the environment uninspiring, or if children quickly lose interest in the natural play elements and demand digital screens. This test would teach you whether the sensory combination of real plants and physical play holds genuine, repeatable value.
- **Next step:** A local community trust or leisure operator could draft a simple, one-page agreement with BCP Council's asset management team within the next 90 days to secure temporary access to a vacant retail space for this winter pilot.