propvr

PRODUCT WHITEPAPER

PROPVR SPATIAL OS

Spatial Table

Interactive tangible display with smart object recognition for real estate sales

Physical Tags + digital intelligence + dual-display architecture — touch, explore, experience.

OBJECT RECOGNITION | DUAL-DISPLAY | REAL-TIME 3D | TANGIBLE TAGS

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01 WHITEPAPER

Contents

01 EXECUTIVE SUMMARY

Where physical meets digital — the dual-display table

The sales gallery has long faced a fundamental tension: how to present complex, data-rich projects in a way that is both intuitive and engaging. Touchscreens display on flat screens. Scale models give tactile context but no data. Brochures and tablets deliver detail without spatial understanding. None bridges physical and digital.

Spatial Table is PROPVR's interactive tangible display that merges physical interaction with digital intelligence. A dual-display system purpose-built for real estate: a **horizontal tabletop** showing 2D unit plans and masterplan layouts, paired with a **vertical wall display** that renders photoreal 3D interiors in real time. Connected by smart object-recognition **Tags** — physical markers that visitors place on the tabletop to trigger corresponding 3D visualisations on the wall.

The interaction is intuitive and tactile. Pick up a Tag, place it on a unit in the floor plan, and the wall display comes alive with a full 3D walkthrough of that unit's interior. Move the Tag — the view switches. Place multiple Tags — compare units side by side. The physical act creates a tangible connection between buyer and property that a touchscreen tap cannot replicate.

> ***"The table shows the plan. The Tag selects the unit. The wall shows the experience. Spatial Table turns every sales conversation into an interactive, immersive journey through the project."***
>
> THE SPATIAL TABLE THESIS

02 THE PROBLEM

Flat screens in a three-dimensional world

Developers invest heavily in sales galleries and experience centres. Yet the tools available force a choice between physical and digital — with no way to combine both seamlessly.

TOUCHSCREENS

Touchscreens are passive

Standard kiosks display 2D plans on flat screens. Swipe and tap is the same interaction as a tablet or website. No tactile engagement, no physicality, no spatial context. The screen is a window, not an experience — and in a gallery competing for attention, it blends into the background.

SCALE MODELS

Scale models are static

Physical scale models give the three-dimensional presence that screens lack. But they cannot show interiors, cannot display data, cannot update when units are sold, and cannot respond to interaction. Beautiful but passive. Expensive but limited.

DISCONNECT

No bridge plan — experience

The disconnect between the 2D plan (where the buyer selects a unit) and the 3D experience (where the buyer visualises the interior). Agents switch to a separate system — another screen, VR headset, or brochure — breaking the flow and often losing the buyer's attention.

GROUPS

Group presentations are hard

A single touchscreen creates a bottleneck — only one person interacts while others watch. No collaborative way for multiple visitors to explore the project simultaneously, discuss options, or compare units together around a shared surface.

SAME TOOLS

No differentiation

In competitive markets across UAE, Saudi Arabia, and India, every developer has the same gallery with the same screens, brochures, and renders. No experiential differentiation — nothing that makes one visit more memorable than another.

RESULT

The forced trade-off

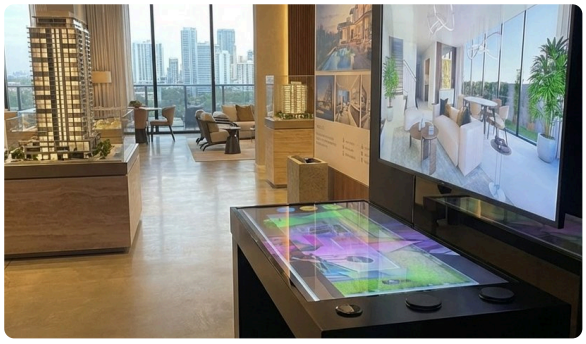
Developers settle for either passive screens that display data without engagement, or physical models that provide presence without intelligence. The ideal — a tool that combines physical interaction with digital depth — has not been available until now.

03 THE SOLUTION

Spatial Table — dual-display + smart Tags

A dual-display tangible interaction system that bridges physical and digital. Combines the intuitive physicality of a tabletop with the visual power of real-time 3D, connected by smart object-recognition Tags that make the interaction seamless and unforgettable.

TANGIBLE INTERACTION — TAG ON A CITY MASTERPLAN



DUAL-DISPLAY INSTALL — PREMIUM DEVELOPER GALLERY

THE DUAL-DISPLAY ARCHITECTURE

TABLE · HORIZONTAL

The selection surface

A large-format interactive tabletop showing 2D masterplans, floor plans, site layouts, and unit maps. Where visitors explore the project layout and choose areas of interest.

WALL · VERTICAL

The experience surface

A wall-mounted or free-standing large screen rendering photoreal 3D interiors, walkthroughs, and visualisations in real time. Brings the selected unit to life. Synced with the table in milliseconds.

SMART OBJECT-RECOGNITION TAGS

The defining innovation. Physical Tags — tangible objects that visitors place on the tabletop to trigger digital responses. Identified by position, orientation, and identity:

ACTION	RESPONSE ON THE WALL DISPLAY
Place a Tag on a unit	Wall shows 3D interior of that unit
Move the Tag to a different unit	Wall transitions seamlessly to the new unit
Place multiple Tags	Wall enters comparison mode — side-by-side 3D views
Rotate a Tag	Rotate the 3D view or switch between day / night
Remove the Tag	Wall returns to overview or ambient mode

No menus. No buttons. No learning curve. Pick up an object, place it on the plan, and the 3D experience responds. A child can place a Tag and see the apartment come alive. A CEO can explore the masterplan without touching a screen.

04 JOURNEY

The visitor experience — 7 steps

INTERACTIVE ZONE — TABLE SELECTION, WALL EXPERIENCE IN SYNC

STEP	WHAT HAPPENS
1. Approach	The visitor approaches the Spatial Table. The horizontal tabletop shows the project masterplan or site layout in an interactive 2D view. The wall display shows an ambient project overview or branded intro.
2. Select Tag	The visitor picks up a Tag from the Tag tray. Each Tag may represent a different function — unit exploration, amenity view, comparison mode, neighbourhood tour.
3. Place on Plan	The visitor places the Tag on any unit in the 2D floor plan on the tabletop. The object-recognition system detects position and identity instantly.
4. Experience in 3D	The wall display immediately transitions to a photoreal 3D walkthrough of the selected unit's interior — living room, bedrooms, kitchen, balcony views — rendered in real time by Unreal Engine.
5. Explore more	Move the Tag to a different unit. The wall transitions seamlessly to the new unit. No loading screens, no menu navigation — just move the Tag.
6. View data	The table display simultaneously shows unit details — floor plan, area, pricing, availability, specifications — around the placed Tag, updated in real time from the CMS.
7. Capture lead	Interested visitors register directly on the table. Lead data — units explored, time spent, preferences — flows into the developer's CRM.

Tag detection is instantaneous. Response time between placing a Tag and triggering the 3D visualisation is **under 200 milliseconds**. Tags are lightweight, durable, customisable per project — branded with project logos, numbered to represent unit types, or colour-coded by function.

05 CAPABILITIES

Key features & capabilities

SYNC

Dual-display synchronisation

Table and wall operate as one. Every Tag placement, every touch is reflected on the wall display within milliseconds. The sync layer handles transitions, animations, and data updates seamlessly.

<200MS

Object recognition

Proprietary Tag recognition detects placement, position, rotation, and removal with sub-200ms latency. Multiple Tags active simultaneously enable comparison views and multi-user interaction.

PHOTOREAL

Real-time 3D interiors

Unreal Engine renders photoreal interior walkthroughs in real time on the wall. Dynamic lighting, materials, furniture, window views — matches or exceeds pre-rendered marketing video quality, but interactive.

TOUCH

Interactive 2D masterplan

The tabletop is fully interactive — touch, pinch, zoom, pan, in addition to Tags. Unit outlines, building clusters, amenity locations. Colour-coded availability (available, reserved, sold) updates in real time.

COMPARE

Multi-Tag comparison mode

Place two or more Tags on different units. The wall enters comparison mode — side-by-side 3D views, specification comparisons, pricing differences. Moves the conversation from exploration to decision.

LIVE DATA

Live data integration

Connects to Spatial OS CMS. Pricing, availability, floor plans, specs, and promotional offers update in real time. Always current — no stale brochures, no outdated sheets.

CRM

Lead capture & CRM

Integrated lead capture within the table interface. Tag interactions — units explored, dwell time, comparisons made — captured automatically and pushed to CRM with full engagement profile.

BRANDED

Branded presentation flow

Structured presentation mode: branded intro on both displays, guided masterplan tour, Tag-driven exploration, comparison and decision, lead capture close. Consistent delivery regardless of agent.

PORTFOLIO

Multi-project support

A single installation hosts multiple projects. Switch projects via the table — each loads its own masterplan, units, 3D interiors, and Tag set. Ideal for developers with multiple active projects.

06 ARCHITECTURE

Technical architecture

SOFTWARE STACK

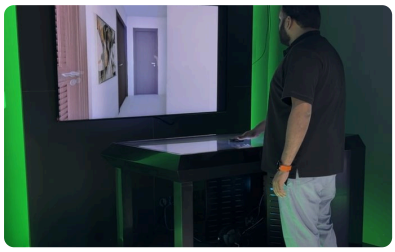
COMPONENT	DETAILS
Rendering engine	Unreal Engine (latest stable) for real-time 3D on wall display
Table application	PROPVR Spatial Table App — 2D interactive masterplan with Tag tracking
Object recognition	Proprietary marker-based recognition with sub-200ms detection
Platform	PROPVR Spatial OS — shared data pipeline across all Spatial products
Synchronisation	Real-time dual-display sync layer (table ↔ wall)
Data layer	Real-time CMS sync for pricing, availability, floor plans, specifications
Analytics	Tag placement tracking, unit interest heatmaps, dwell time, comparison patterns
CRM integration	Native integration with major CRM platforms

HARDWARE SPECIFICATIONS

SPECIFICATION	DETAILS
Table display	43" to 55" horizontal touchscreen (capacitive multi-touch + Tag recognition)
Wall display	55" to 200" 4K display (wall-mounted or floor-standing)
Compute	High-performance media PC with dedicated GPU (NVIDIA RTX 4070+)
Tag set	Custom-branded physical Tags (10–20 per installation, replaceable)
Tag detection	Marker-based optical recognition, sub-200ms, multi-Tag simultaneous
Connectivity	Wi-Fi / Ethernet for CMS sync; HDMI/DP between table and wall
Audio	Integrated speakers in wall display or external sound system
Installation	Table: custom furniture housing; Wall: standard VESA mount

07 USE CASES

Where Spatial Table earns its keep



EXPERIENCE CENTRE · AMBIENT

BRANDED ZONE · CINEMATIC

PREMIUM GALLERY · DAYLIGHT SETTING

GALLERY

Real estate sales galleries

The primary deployment. Replaces or complements the traditional touchscreen kiosk and scale model. Visitors gather around the table, place Tags on units of interest, and experience 3D interiors on the wall. Collaborative — families and groups explore together.

EXPERIENCE

Flagship experience centres

For premium developments and giga projects, Spatial Table is the centrepiece of the experience centre. Multiple tables can be deployed for different phases or neighbourhoods. The tangible interaction creates a memorable, premium brand experience.

BOARDROOM

Boardroom & investor

Transforms the boardroom into a project exploration space for investors, government, and sovereign-wealth funds. Stakeholders place Tags on areas of interest and see detailed 3D visualisations instantly — far more engaging than slide decks or video loops.

SMART CITY

Urban planning showcases

City authorities and master developers present smart-city masterplans to public stakeholders. Tags represent districts, infrastructure zones, or phases — place a Tag, see the planned 3D environment. Buildings, streets, parks, transit. Tangible at any expertise level.

EXHIBITIONS

Property exhibitions & events

A high-impact booth experience. The tangible interaction draws visitors in — placing a physical Tag and seeing the 3D response is inherently engaging and shareable. Exhibition visitors spend significantly more time at a Spatial Table booth.

MUSEUMS

Museums & cultural centres

Beyond real estate — deployable in museums, visitor centres, and cultural exhibitions. Tags can represent historical periods, architectural styles, or geographic regions; place a Tag and the wall shows the corresponding 3D environment or historical reconstruction.

08 COMPARISON

Traditional gallery tools vs Spatial Table

Side-by-side: where the disconnect between plan and experience disappears, and where group collaboration replaces single-user bottlenecks.

CAPABILITY	TRADITIONAL GALLERY TOOLS	PROPVR SPATIAL TABLE
Plan exploration	Flat screen or printed plan	**Interactive 2D tabletop with touch & Tags**
Interior visualisation	Separate screen or VR headset	**Real-time 3D on wall display, triggered by Tag**
Interaction method	Swipe / tap on glass	**Physical Tags + touch — tangible, intuitive**
Plan-to-3D connection	Manual switch between systems	**Instant — place Tag, see 3D**
Group experience	Single-user bottleneck	**Multiple visitors around the table simultaneously**
Engagement factor	Standard — same as every gallery	**Memorable — tactile, physical, shareable**
Data updates	Manual content refresh	**Real-time CMS sync — pricing, availability, plans**
Analytics	None	**Tag placement tracking, unit interest, dwell time**
Ecosystem	Standalone screen	**Part of Spatial OS — shared content across 9 products**

09 ROI

Engagement & business impact

METRIC	TRADITIONAL GALLERY	WITH SPATIAL TABLE
Average visitor dwell time	8–12 minutes	**20–35 minutes**
Units explored per visit	2–3 (agent-guided)	**5–8 (self-driven + agent)**
Group engagement	1 person interacts; others wait	**Full group participates around the table**
Visitor recall (next day)	Moderate — standard experience	**High — memorable tangible interaction**
Social sharing	Rare	**Frequent — visitors photograph the Tag interaction**
Return visit rate	Standard	**Higher — visitors bring family/friends to see the table**

BUSINESS IMPACT

CONVERSION

Conversion uplift

Visitors who use Spatial Table show higher conversion from enquiry to booking — driven by deeper engagement and better project understanding.

EFFICIENCY

Sales efficiency

The dual-display system enables faster, more intuitive unit exploration — less time on screen navigation, more in productive conversation.

DATA

Data-driven follow-up

Tag interaction data gives the sales team precise engagement profiles — which units explored, how long, what comparisons made.

BRAND

Brand differentiation

A distinctive gallery experience that sets the developer apart from competitors using standard touchscreen kiosks.

PORTFOLIO

Multi-project leverage

A single installation serves all active projects — switch between projects on the same hardware.

REUSE

Content efficiency

3D assets shared across the Spatial OS ecosystem — content created for Spatial Table powers Holo, Cave, Lens, and others.

10 ECOSYSTEM

Part of the Spatial OS ecosystem

One of nine products within the PROPVR Spatial OS platform. All share the same Unreal Engine core, project data pipeline, and CMS — content created once is deployed everywhere.

PRODUCT	DESCRIPTION	KEY FEATURE
Spatial Table	Interactive tangible tabletop with object recognition	Dual-display Tag-driven exploration
Spatial Holo	Interactive 3D holographic model viewer	Holographic display (Cube & Vista)
Spatial Agent	AI-powered avatar assistant inside the holobox	Conversational AI for project Q&A
Spatial Touch	Touchscreen kiosk, table, and wall display	Interactive masterplan exploration
Spatial Cave	Complete immersive LED/projection room	360° branded environments
Spatial Tour	VR headset station for interior walkthroughs	First-person immersive experience
Spatial Lens	AR tablet viewer for real estate 3D models	AR scale-model replacement
Spatial Drive	Immersive buggy ride simulation	Community drive-through experience
Spatial Map	Projection mapping for physical scale models	Augmented physical models

"The 3D interior that appears on the wall when a visitor places a Tag is the same 3D interior available in the immersive room, the AR tablet, and the VR headset. Build once, deploy everywhere."

11 IMPLEMENTATION

5–7 weeks from assessment to go-live

PROPVR manages the complete implementation — hardware, software, content, and integration. The client does not need to engage additional vendors. Projects already on Spatial OS deploy faster by reusing existing 3D assets.

01 WEEKS 1 – 2
Gallery assessment & design

Site visit to assess gallery layout, table placement, wall display mounting, power and network, lighting. Output: installation design with hardware specs, furniture layout, and content scope.

02 WEEKS 2 – 5
Content creation

2D masterplan and floor plan assets for the table. Photoreal 3D interiors built in Unreal Engine for the wall. Tag configuration designed — Tag types, functions, and branding. All content optimised for real-time rendering and dual-display sync.

03 WEEKS 4 – 6
Hardware installation

Table display installed in custom furniture housing. Wall display mounted and calibrated. Compute hardware installed and connected. Tag recognition calibrated for the specific table surface and lighting environment.

04 WEEKS 5 – 7
Application & go-live

App configured with project branding, unit database, Tag mappings, presentation flow, CMS integration, CRM connection, and analytics. Staff training on presentation and Tag interaction. Full testing and go-live with on-site support.

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CONTACT US

Place the Tag. See the experience.

Whether you are building a new sales gallery, upgrading an existing experience centre, preparing for a property exhibition, or creating an interactive boardroom for investor presentations — PROPVR delivers the complete dual-display tangible interaction solution from one partner.

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