

Cell-Stack

by [Weaver Labs](#)

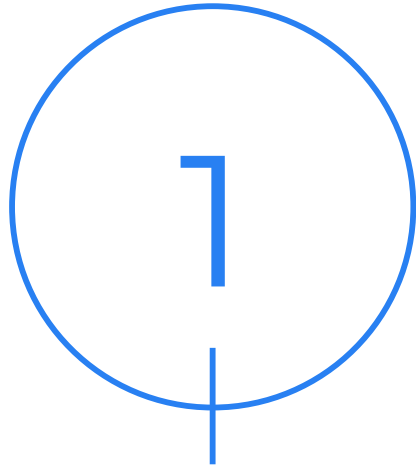
Smart Stadiums: Connectivity, Safety & Resilience



Welcome to the *Digital Venue*

The Connectivity Crisis

Modern sports grounds face a critical failure point: legacy digital infrastructure is not built for the modern fan or the safety-critical operator.



Infrastructure Fragility

Reliance on patchwork Wi-Fi and congested cellular networks that collapse at 30k+ users.



Lack of Ownership

Ground operators are dependent on external MNOs with no control over coverage or signal priority.



Operational Blind Spots

Fragmented systems prevent a "Single Version of Truth" for crowd management.

The Opportunity: Monetising Engagement



The Digital Edge

By owning the infrastructure, stadiums become "Digital Service Providers." We offer 20+ pre-integrated B2B and B2C applications ready for deployment at the edge cloud.



Frictionless Onboarding

Fans bypass congestion instantly using an eSIM via QR code scan. No login portals, no lag, just instant, high-performance connectivity.



New Revenue Streams

Monetize through VIP hospitality bundles, branded digital sponsorship, freemium access tiers, or premium "Per-App" micro-transactions.

The Link: Connectivity is Safety

The revenue generated from fan engagement funds the mission-critical infrastructure required for safety and security.

- **Network Slicing:** We logically isolate critical operations (CCTV, Stewards) from fan traffic to ensure 100% uptime.
- **Emergency Resilience:** Guaranteed bandwidth for localised broadcasting and autonomous safety alerts.
- **Regulatory Alignment:** Providing the digital backbone for Martyn's Law (Terrorism Act 2025) compliance.

Data Gathering & Crowd Intelligence

Insight to Action

Every fan connection is a data point. Our platform transforms anonymous network signaling into real-time operational intelligence.

- **Live Heatmaps:** Identify bottlenecks 15 minutes before they become dangerous.
- **Queue Optimisation:** Dynamically route fans to less crowded exits or concessions via their devices.
- **Resource Deployment:** Send stewards to precisely where density is peaking based on real-time flow data.



Project ARANa

STADIUM●MK

What is Stadium MK Challenge?

Poor connectivity and weak digital infrastructure that prevents the integration of revolutionary tech such as AI, making it difficult to collect fan data or deliver the personalised experiences needed to attract a wider audience.

What did the Stadium receive?

A private 5G network and custom app providing high-bandwidth, low-latency connectivity. This enabled Nokia and Madevo-powered AI integrations (as well as others) that revolutionised the fan experience.

What integrations did we deliver?

Multi-angle live streaming to watch the game from every corner and perspective of the pitch.

AI-powered match insights with real-time performance analytics and predictions.

3D Stadium navigation that gives routes and estimated times.

Player Tracker with live player movement and speed.

AI assistant to ask questions and get real-time answers (line-ups, predictions, head-to-head, stats).



Weaver Labs



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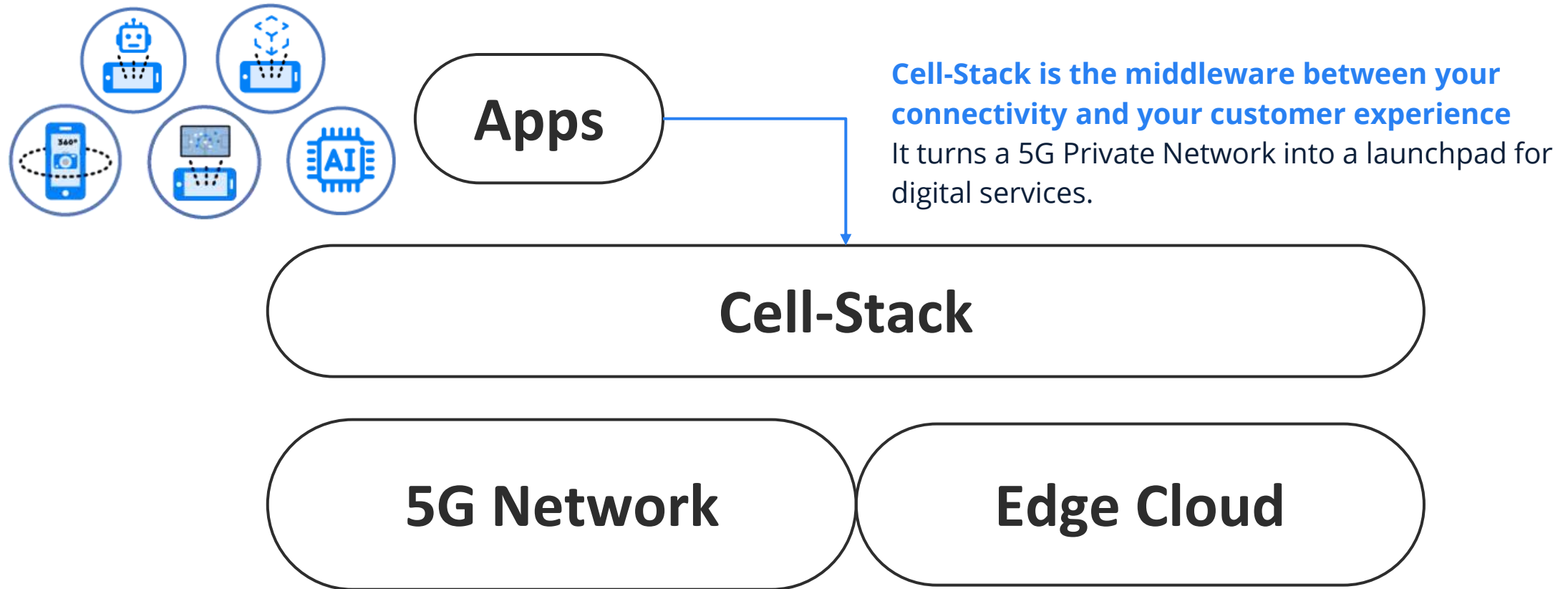
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Cell-Stack: A New Layer

Cell-Stack is like having an 5G Network with AWS running in your Stadium



Cybersecurity & Infrastructure Sovereignty

Zero-Trust Edge Autonomy

Modern stadiums are "Hardened Soft Targets." Cyber resilience must be baked into the network architecture.

- **Edge Continuity:** The network stays live locally even if the cloud backhaul is severed.
- **Device Authentication:** Every sensor and smartphone is verified before accessing the network layer.
- **Sovereignty:** You own the data. You own the signal. You own the security posture.

A White Paper for

Technology and Finance
Executives in the Sports &
Entertainment Industry



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