

Stadiums and Event Venues: how to transform connectivity into opportunity?

A strategic guide to connectivity in high-traffic venues



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Global connectivity: the invisible backbone of the visitor experience



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Nowadays, poor connectivity is a nuisance: it equates to a disruption in the customer experience, and can even damage brand image.

In places that welcome large numbers of people, such as stadiums, train stations, and convention centers, a seamless digital experience isn't a technological luxury, but a core visitor expectation.

It is essential to consider the term connectivity in a **broader sense**.

Why? Because in new or renovated buildings, HQE (High Environmental Quality) standards drive heavy thermal and sound insulation. Treated glazing, metal structures, and dense concrete often turn these venues into true Faraday cages for outdoor 4G and 5G networks.

As a result, WiFi is a key tool as it can compensate for mobile network outages. Thanks to WiFi Calling, supported by the most mobile operators, it ensures the continuity of essential services: enabling visitors to make and receive calls and text messages where the operator's network cannot reach without requiring heavy investment in indoor mobile antennas (DAS).

There is also a lot of talk about AI to streamline journeys, predict flows, or personalize the welcome experience... But AI only works with high-quality data. To activate these levers, you need to capture it. And for this data to be usable, it must be qualified by identifying visitors and moving beyond the anonymity of MAC addresses. **Beyond technical aspects, connectivity is also the invisible foundation of your future AI strategy.**

Delivering on this ambition requires balancing two often conflicting priorities. On one hand, the **IT department** faces the **technical challenge** of managing invisible infrastructure: ensuring systems remain secure and absorb extreme traffic spikes without failure. On the other hand, **Marketing** teams have a clear **business challenge**: drawing value from each connection while improving customer knowledge and loyalty.

Understanding challenging environments and operational risks



1

A challenging technical environment

The concept of “high density” goes beyond simple crowding. In train stations and stadiums, the architecture (metal, concrete) creates a difficult environment for radio signals. RF engineering becomes essential, requiring precise 3D propagation modeling and specific antennas for efficient coverage.



2

The nightmare of “traffic spikes”

When 50,000 people attempt to connect within a few minutes at halftime during a game, most standard solutions collapse. The risks include low bandwidth, but also complete network crash: if the network controller is overwhelmed by requests, no one can connect, blocking usage for both visitors and professionals.



3

The critical treatment of different user populations

The challenge is to ensure perfect separation between competing users on the same network:

- **The general public:** Massive bandwidth consumption.
- **Operational stakeholders (critical):** If POS terminals or ticket scanners cut out because of public traffic, business stops.
- **VIPs & Journalists:** A requirement for quality and security.



4

The corporate device deadlock

A classic event scenario: professional ultra-secure PCs (VPN, firewalls, proxies)—such as those of journalists—block connection to captive portals, posing a major risk to the image of a convention center or stadium among strategic audiences.

Is there such a thing as a platform designed for **extreme conditions?**

High-density connectivity is baked into the [Ucopia solution's](#) DNA. Proven across dozens of stadiums, airports, and hundreds of train stations worldwide, its architecture is purpose-built for high footfall environments. Thanks to advanced load balancing and high availability mechanisms, the platform can absorb sudden traffic spikes that cause lightweight cloud solutions to fail.



Ucopia's unique features include

- **Real-time visibility into the actual service level delivered to your customers:**
It is impossible to manually take measurements during an event or deploy probes that provide realistic measurements. Ucopia is the only solution capable of reporting the actual throughput from the user's device. This gives you an understanding of the visitor's experience, providing the data needed to optimize your network.
- **SSID Login:**
To address the issue of locked "corporate" PCs, we have developed an exclusive feature. Users can easily register via their mobile phone (simplified onboarding), receive a code, and use this code to connect their PC securely and immediately, bypassing the traditional captive portal restrictions.
- **Intelligent use segmentation:**
Different users require different treatments:
 - **Staff/Internal use:** Maximum security (802.1x).
 - **IoT:** Dedicated and isolated networks.
 - **VIP/Press:** Guaranteed priority bandwidth (QoS).

High footfall, high opportunity

Out of a crowd of 50,000 people, how many do you actually know? The marketing challenge is to transform anonymous MAC addresses into qualified profiles. Indeed, if we value a qualified data point, including a verified email address and visit context, at between €0.50 and €1, then millions of annual visitors, wear WiFi becomes a real profit center rather than a simple cost center.

Optimising opt-in journeys

Data collection should never be a barrier. Weblib's strength lies in the agility of its user journeys. Thanks to our exclusive consent-capture, our clients achieve opt-in rates of 70% to 80%, far surpassing the market average that often struggles to break the 20% mark.



Digital transformation goes beyond connectivity!

- **Smilein (Food and Beverage):** Provide seamless, fast, and secure table ordering and payments without downloading an app, simply via QR Code or WiFi.
- **Smart Kiosk:** Deploy interactive information or ordering kiosks, all managed through a single, centralized platform.
- **Simplified management:** Purpose-built for non-technical teams (such as Event Managers), these tools allow real-time content modification (from practical event information to future event promotion) without the need for support.

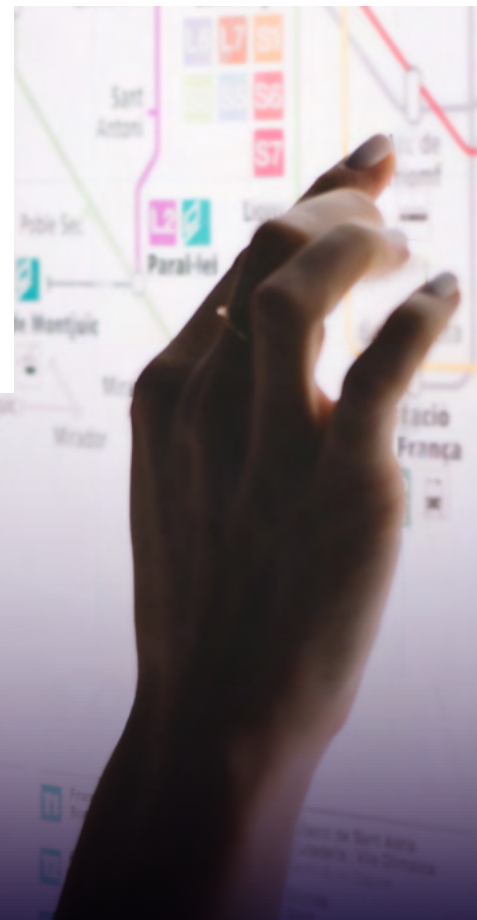
App Connect: the visitors experience's missing link

Why do venues lose touch with their visitors? Airports and shopping malls welcome millions of people, yet often lack a direct relationship with the end customer. App Connect bridges this gap creating an essential link between physical WiFi and your digital ecosystem (App, CRM, and Loyalty). The main advantage is transforming a one-off visit into an ongoing relationship.

- **Before:** Returning visitors remain anonymous MAC addresses and are forced to log in again.
- **With App Connect:** Visitors are recognized as soon as they enter the coverage area. This persistence removes all friction and offers an immediate VIP welcome (“Hello Thomas, welcome back”).

Recognizing visitors allows you to track their journey. App Connect enriches your CRM by cross-referencing connection data with real-world behavior (frequency, areas, and dwell time). This structured data fuels audience segmentation and helps predict future traffic. Once connected, the system pushes highly relevant content automatically:

- **Before (upsell):** “Doors open in 30 minutes. Get 10% off merchandise while you wait.”
- **During (experience):** “Feeling peckish at halftime? Order now and skip the queue.”
- **After (service):** “Traffic updates: disruptions on line B. Here are your alternative routes.”



Olympia London: meeting the challenge of a major venue

The context: An iconic London venue hosting everything from mainstream rock concerts to ultra-corporate trade shows. This results in massive attendance peaks and radically different audiences.

The challenge: How can a venue absorb critical technical loads while offering a personalized experience to each audience type, without having to reconfigure the network every morning?

Weblib's response:

- 1. Technical response (reliability):** Deployment of a high-density architecture guaranteeing zero crashes during intervals, even under the pressure of 10,000 simultaneous connections.
- 2. Business response (agility):** Implementation of dynamic captive portals that automatically adapt to the event: a vibrant "Festival" look and feel in the evening, or a "Business" atmosphere and services for an Accounting Fair the next day.

The result: Increased user satisfaction and a marketing database that is automatically and cleanly enriched with each event.



What Weblib offers you in addition:

- **WiFi Calling:** A reliable, seamless alternative to mobile network coverage.
- **High density:** Unique expertise in high-footfall environments.
- **Real-time throughput measurement:** The ground truth of the user experience through crowdsourced data.
- **SSID login:** Streamlined connectivity for secure corporate and VIP devices.
- **Performance Data:** Record opt-in rates (up to 80%).
- **Complete suite:** A fully integrated ecosystem of Captive Portal, App Connect, Smilein, and Smart Kiosk.

Does your current solution deliver this level of service?

Ucopia, Europe's leader in wireless connectivity

Thanks to its global network of technology partners, Ucopia enables integration with most existing systems without disrupting existing infrastructure.



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