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Sensitel StaffCaster turns IoT data into actionable retail insights

Figure 1: West Oaks Mall

CityBeam partnered with Sensitel to deploy the StaffCaster shopper analytics platform at West Oaks Mall (Ocoee, FL), a 1.08M sq ft. retail centre with 86 stores (4 anchors) and 5,500 parking spots— the project aimed to revive a struggling mall by mapping shopper behaviour and optimising operations. Sensors logged 60,000 "events" per day, totalling 2.5 million device events over four months. These rich insights translate into better traffic-flow management and leasing decisions. Ultimately, the StaffCaster deployment "improved every measurable metric" from visitor counts to dwell times, helping the mall beat its turnaround goals.

Background: A Struggling Mall in Need of Data

West Oaks Mall had long been underperforming. Opened in 1996 and sold in 2012 for US 15.9 M to Moonbeam Capital (a firm known for retail turnarounds), the centre faced high vacancies (2 of 4 anchors were empty) and waning shopper interest. Online reviews underscored the mall's challenges: one Yelp reviewer warned, "I would never recommend this mall to anyone...[it might] close down just like [the] Target". In short, management lacked the complex data needed to understand customer flows, peak visit times, and how long people stayed. The new owners (a Private Equity firm) engaged CityBeam and Sensitel to address this. Their goal was to collect key daily metrics: vehicles passing and entering the mall, new vs. repeat visitor counts, visitor loyalty (frequency of return visits), and dwell time per visit. With those inputs, the team could redesign store layouts, reallocate staff, and target marketing to the right audience segments.

Solution: StaffCaster Deployment by CityBeam and Sensitel

The installation delivered quantifiable wins. Over the first 4½ months, the StaffCaster system recorded 2.5 million total device events and identified roughly 110,000 unique visitor devices. This equates to about 60,000 events per day, capturing virtually every shopper's pass in the mall. With this data, the mall team pinpointed peak shopping hours and popular zones, enabling more innovative staffing and tenant mix decisions.
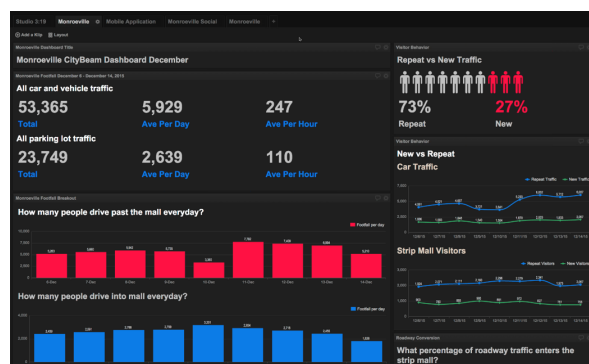
Figure 2: West Oaks Mall

The setup included setting up partner "Aruba" wireless access points at various mall locations and baselining the location resolution using the Sens RTLS engine. Key performance indicators rose across the board. Mall management reported that "every measurable metric" from total visitor counts to average dwell time and repeat-visit rate showed improvement after deploying StaffCaster. Citybeam developed a dashboard like the one above, using StaffCaster shopper traffic data. These generated insightful actions, such as keeping the shops open for longer to enable Visitor loyalty metrics to increase, indicating a growing base of repeat shoppers. Average dwell time (the time each customer spent inside) also ticked up, meaning shoppers spent longer per trip. These insights directly informed leasing and marketing: for instance, knowing which stores had the longest dwell time helped identify prime tenants to target, while observed traffic flows justified rearranging store layouts for better circulation.