



DIGITALAIR

THE WI-FI EXPERTS



**ROYAL NORFOLK
AGRICULTURAL
ASSOCIATION**

Case Study



Royal Norfolk Agricultural Association Case Study



The Royal Norfolk Agricultural Association (RNAA) is a registered charity, founded in 1847 to promote the image, understanding and prosperity of agriculture and the countryside, primarily through its hosting of the Royal Norfolk Show, the county's annual two-day agricultural show.

The Problem

The RNAA holds many events throughout the year at the Royal Norfolk Showground and wanted to provide a stable wireless service to their guests and exhibitors.

With limited infrastructure in place, to provide wireless access for corporate connectivity on a day to day basis as well as guest access, they needed a completely

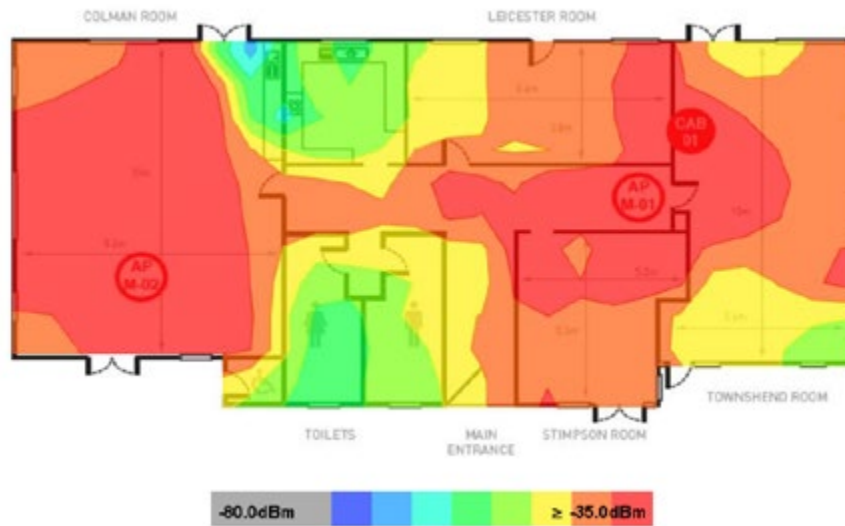
new system. The shows they conduct require connectivity for both wired and wireless devices, that need to be controlled and on-boarded in a secure and simple to manage way. The areas in which wireless coverage is required for the shows is predominantly in the main arena which can have footfall of up to fifty thousand (50,000) people per day.

From an RF perspective this could cause a number of issues with interference, channel planning and capacity.

The Solution

The first stage was to conduct a Wireless RF survey to plan a physical network design, which DigitalAir call their "Plan Phase".

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This provided physical access point locations, detailed information on the mounting of the access points as well as annotated photos. The required cable runs for each and the relevant health and safety information for completing their installation, which was later provided in a Risk Assessment and Method Statement. 2.4 GHz & 5 GHz heatmaps of the prospective coverage and all-important

spectrum analysis was also provide.

This information was then compiled into a survey report document allowing for analysis of the results.

Moving into the “Design Phase”, DigitalAir provided a low-level design document which detailed the necessary information for the integration of the new network with RNAAs existing infrastructure. This encompassed how DigitalAir were going to configure both the WLAN and the guest onboarding solution, as well as aspects of the LAN in order to integrate the system seamlessly. The LLD provided to the customer a network diagram, all of the significant configuration to be applied and the ability to sign off on the design prior to integration.

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Event footfalls were provided at the point of the survey and network design to highlight the RNAA's capacity requirements for their deployment. Using this information, DigitalAir calculated the adoption rates and Network Capacity requirements.

The recommended solution was based on the Ruckus high capacity access point models which were R710, R510 and the T301n, with the Ruckus T301n access points being deployed to the Arena.

By using these robust high-end APs and making use of the Ruckus T301n's internal 30-degree sector antennas to create small contention areas this will minimise co-channel interference from neighbouring APs

and give a managed area of RF for devices to connect to.

The network is on a cloud-based architecture which is hosted, configured and deployed by DigitalAir Wireless. DigitalAir as part of the integration LifeCycle phase installed the network using their working at height solutions. DigitalAir are working at height trained, PASMA and IPAF certified. All mounting sundries and accessories for the access points & network switches.

The network was commissioned to the standard of the pre-approved LLD.

As part of the optimisation lifecycle phase, a post installation verification survey of

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the network was completed, to ensure the network performed as expected. This allowed DigitalAir to provide the RNAA with a 100% coverage guarantee.

has exceeded the coverage and capacity expectations whilst the guest platform has remained flexible to the demands of each show.

RNAA have the benefit of a DigitalAir 24/7/365 service desk contract as part of the maintenance LifeCycle phase. This includes pro-active remote monitoring with next business day advanced replacement of hardware, as well as all of the other added values of DigitalAir's professional service desk team.

The outcome

The network has now been utilised for a number of RNAA's high profile shows with great success. The Ruckus Networks system