DIGITALAIR
THE WI-FI EXPERTS

Marshalls
Case Study

Marshalls Case Study

Marshalls is one of the UK's biggest Hard Landscaping manufacturers and has been supplying superior natural stone and innovative concrete products to the Construction, Home Improvement and Landscape markets since the 1890s.

The group operates quarries and manufacturing sites throughout the UK. Each operating site is assessed on its activities on an annual basis and objectives and targets are set with the view to improve the environmental performance each year.

The Problem

Marshalls made the decision to utilise Automated Forklifts/AGV's to move the products around the site from presses to the racks to continue improving the performance of the Ramsbottom site. These forklifts require connection to a wireless network using Client Ethernet bridge devices. The Ramsbottom site had no existing wireless infrastructure.

Experience is the key element to success when installing and integrating wireless networks and with nearly 15 years' experience there isn't a lesson we haven't learnt. Our engineers are extensively trained in physical installations, working at height and Health and Safety and they have active involvement in continually improving our processes. We have performed installations across Europe in the most complex of environments

0800 310 2050 | www.digitalairwireless.com
Unit 6 New Fields Business Park, 2 Stinsford Road, Poole, BH17 0NF, UNITED KINGDOM
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from manufacturing plants, warehousing, corporate offices, high streets and shopping malls.

We utilise the best tools in the industry and our commitment to excellence within our installation procedures and safe working practices are continually reviewed. We are not embarrassed to say that we believe that our installations are truly market leading and we back that with our guarantees.

Our projects are managed by a team comprising of a Project Manager, Service Delivery Members and Installation Supervisors to ensure the smoothest delivery of your project, on time and within budget.

DigitalAir deployed their project lifecycle workflow to the project: Plan, Design, Integrate, Optimise, Maintain.

Customers following the steps within DigitalAir's LifeCycle receive the maximimum probability of success and gain the maximum return on investment from their WiFi network.

The LifeCycle comprises of five core phases; Planning, Design, Integration, Optimisation and Maintenance.

Planning Phase

For the planning of the network, initial steps were to have site meetings with the Site Foreman, IT team and representatives from

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the automation forklift company before conducting a wireless site survey. The wireless site survey surveyed both LAN and wireless. DigitalAir sent engineers to walk the site with wireless survey equipment to product accurate dots on a map to be used for the next phase of the lifecycle; Design.

For a fully redundant solution we designed cabling to run from the access point areas to different switch locations to create a redundant LAN network. For more details on how this was done or how it could be used in your warehouse, please get in touch.

The survey had to be completed over the weekend as the warehouse runs 24 hours a day during the working week. DigitalAir are more than capable of supplying engineering resource out of hours with their fully trained staff.

From the survey, a heatmap with AP locations, switch locations and cable runs was generated. It is at this stage that we are able to accurately advise how many switches and access points are to be required based upon the customers' brief." as it nicely ties the work together.

Design Phase

Once the planning stage was complete, we moved the customer into the Design phase where we conducted a design workshop between the key IT personnel at Marshalls

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and our senior engineer. In the design workshop, we covered:

- IP Subnets
- Network Switches
- Applications
- SSIDs
- Cloud Controller
- Reporting (PRTG will be installed)
- Configuration
- 802.11a/b/g/n/ac HP Procurve Client Ethernet bridge and roaming
- reporting include SCIO as well

We also worked with Marshalls' network incumbent to ensure their switches and UPS were able to accommodate our design.

The design includes hardware from CommScope Ruckus Networks T310s for the wireless APs which are outdoor Wi-Fi 5 (802.11ac) access points. These outdoor APs were chosen for the environmental capabilities of working in harsh changing environmental conditions such as temperature shifts and high humidity.

To manage Ramsbottom and other sites, the IT team requested cloud management to enable to them to monitor and manage the network remotely. All of the Ruckus equipment can be managed from the cloud - private or public or with a physical site controller. Marshalls opted for the public cloud offering.

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Integration Phase

The integration phase took place out of hours where both the IT team at Marshalls and DigitalAir installed the access points and over 200m of cabling over a weekend. The cabling was installed into a concrete structure. The switches were installed into cabinets by their incumbent before our engineers visited. The APs were pre-configured to work with the cloud controller ready for the integration, and switch configuration had been completed by the incumbent and Marshalls. Fibre was also run from the switch in Cab 1 and Cab 2. All switches, UPS and fibre was installed prior to the wireless networking installation to provide a smooth integration phase as planned during the design workshop.

During the installation, because of the way the racking was laid out, it was very difficult to reach parts of the cabling locations with the MEWPs. The narrow gap between the racking and the roof locations added complexity for our engineers, but with their experience and ingenuity, they overcame this without delay to project completion.

Optimisation Phase

Even the most precisely designed networks are subject to changing conditions that may require optimisation after the initial integration to maximise the efficiency of a WLAN. As part of our Optimisation phase, not only did we have a verification survey, we

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also provided an engineer on their launch day to ensure the smooth integration of wireless clients. We monitored the ongoing performance of the network throughout the day before signing off the project. No networ https://media.marshalls.co.uk/d_no-image_bucaqf.jpg,w_635,ar_3:2,c_fill,f_auto,q_auto,fl_lossy/la-linia-de-montfort-uni-13963.jpg k anomalies were detected this day, and all devices onboarded smoothly.

Maintenance Phase

Marshalls took out our SLA backed Service Desk entity agreement with 24/7 support. This includes Adds/Moves & Changes. We now provide ongoing support to them.

Several months later, the IT team requested more granular reporting capability. Marshalls discontinued PRTG and opted to move with Ruckus Analytics for additional reporting features and the ability to generate reports on all of their monitoring.

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