



Pets

Case Study



About

Pets was founded in 1991 by Anthony Preston and is the UK's leading Petcare Provider, providing a one-stop-shop for all of your pet care needs. Pets now have in excess of 450 stores in the UK as well as a vast online retail operation.

Pets were planning on building a new, state-of-the-art distribution centre in Stafford to fulfil their online orders and replenish stock for their stores.

As part of this ambitious project, Pets partnered with Sudlows to deliver two new comms rooms, Audio Visual solutions, Active Network, and Security solutions.

Comms Rooms

The Brief

As part of the new Distribution Centre project, Pets required Primary and Secondary Comms Rooms. With sustainability in mind, Pets were looking to deliver an energy efficient solution, whilst also having resiliency in operations. In addition to this, they required fire and gas detection and suppression systems. They also needed a solution that allowed for future expansion.



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The Project

Pets engaged with Sudlows and began the design stage around 12 months prior to commencement on site, this allowed all aspects of the planning to be considered, discussed, and finally agreed as a signed off design.

This took place over several workshops at Sudlows' offices as well as via Teams calls throughout the design period.

A client Sharepoint site was set up to allow collaborative working and for various documents to be uploaded by the Sudlows Design Team for review by Pets' stakeholders.

Once the IT load and dimensions for both the Primary and Secondary rooms had been agreed, Sudlows then completed the full mechanical and electrical design for both rooms.

Space for future expansion was taken into consideration with hot aisle containment being installed to accommodate the request for an additional two racks to be installed in the future.

Sudlows appointed a Senior Project Manager and a Site Manager who were permanently based on site to manage and oversee the works being delivered by Sudlows. Regular reviews were undertaken, and site progress meetings were held to ensure the works were being delivered to programme.

Working with Sudlows' Connectivity Team, the work within the comms rooms was co-ordinated and managed by our dedicated Project Manager, who was allocated to the project and who oversaw the complete Sudlows package, providing continuity and an overall ownership of the full works.

At design stage, the customer had already carried out space planning and allocated areas for the Primary and Secondary rooms. Unfortunately, both rooms were too small to accommodate the IT and cooling equipment, mainly driven by the architects' layouts and constraints around the circulation areas.

Working with the customers' wider Design Team, Sudlows redesigned the plans to ensure that the rooms would provide adequate space for working and accessing IT equipment, as well as being functional as comms rooms.

Sudlows used Riello rack mounted UPS units with 1 hour autonomy to both rooms.

2No. Vertiv In-Row coolers were installed to the Primary Room with 2No. Mitsubishi Electric wall mounted units being installed to serve the Secondary Room.

Dataracks IT cabinets were installed to both rooms with Raritan intelligent PDUs complete with environmental monitoring connected to the cooling, UPS systems, and leak detection, together with temperature sensors to the inlet and outlet of the racks. In the event of a fault with any of the monitored equipment, an alert is automatically sent to key stakeholders to allow the issue to be escalated and actioned accordingly.

All M&E systems were installed to provide A&B resilient infrastructure.



Conclusion

Whilst this project had its challenges, the project went well and to programme. By managing the works throughout, Sudlows managed to ensure there was continuity and delivered an exceptional, sustainable, and adaptable facility for Pets.

With Sudlows designing, building and delivering the full technical requirements for Pets, it allowed us to fully co-ordinate and capture all aspects of the customers' requirements to provide a seamless project. Sudlows' internal team worked together to provide efficiencies in delivering the works, and future proofed the Primary Room to allow for future expansion.

Audio Visual

The Brief

Pets were keen to engage with a partner with established credentials in the design and deployment of audio visual solutions in large-scale distribution facilities. The organisation wanted to deploy a robust yet cost effective public address and background music system across the estate, for the safety and comfort of their staff, along with high-quality audio visual solutions in a range of meeting rooms, training rooms, and auditoriums within the office spaces.

All meeting room spaces were to be Microsoft Teams enabled and ease of use of all systems was a key consideration. Pets also required a video wall within their site operations centre capable of linking a number of different sources and providing easy access to that content for their Operational Teams.

Pets also required the solution to be low maintenance from an organisational perspective, and required Sudlows to provide a support offering over three years that provided support and response times suitable for a critical business facility.

The Project

The overall solution to support the audio visual requirements for this 800,000sq ft facility includes a public address and background music system comprising of a central digital signal processor, connected across fibre cabling to networked amplifiers supporting the speaker channels out in the field.

A range of speaker types were installed to best support the audio need in each type of space, including internal and external environments. The system is able to receive paging calls from paging stations located at specific locations around site as well as the organisations' wired and wireless IP phones thanks to an audio bridge between the two solutions.

The warehouse and external areas are zoned appropriately so that announcements may be made to a single zone and/or all zones, and the external zones are time clocked so that external paging may not be performed during unsociable hours.

A media player offers a local music source and IP radio for background music and the system is integrated with the fire alarm system.



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Across the corporate offices, Microsoft Teams Rooms are provided with interactive screens, thus offering maximum functionality for each room space. These meeting spaces include a number of small 4-to-6-person meeting spaces, mid-sized 8-to-12 person meeting spaces and a large board room. All in-room hardware for Microsoft Teams video conferencing is based on the Logitech family of products and includes the required speakers and camera for each room type, along with tabletop controller and a meeting room booking panel for each room.

In addition to the meeting room spaces, a training room has also been provided that includes interactive screens, microphones, audio uplift and room controls. This is a divisible room that can be two 12 person rooms or one 24 person room. An auditorium style training space has also been provided including screen, microphones, audio uplift, and room controls.

In addition to these requirements, a number of screens have also been provisioned for various digital signage applications around the facility, as well as a 4 x 2 screen video wall with wall control processor to provide a focal point for the Operations Team, providing access to content from various systems and applications used around the distribution centre.



A summary of the services and hardware provided include;

- Client Workshops.
- Full High-Level Design.
- Full Low-Level Design.
- DSP and Amplifiers.
- 109no Internal Speakers.
- 30no External Speakers.
- 3no Small Microsoft Teams Rooms.
- 3no Medium Microsoft Teams Rooms.
- 1no Microsoft Teams equipped Boardroom.
- 1no Divisible 24 person training space.
- 1no Auditorium.
- Digital Signage Solution.
- 4 x 2 Videowall.
- Three year reactive and proactive maintenance package.

In addition to the audio visual solutions, Sudlows also designed and installed all the supporting infrastructure, both active and passive, upon which the audio visual solution resides.

Conclusion

Sudlows delivered on the customer's brief by designing and deploying a high quality and feature rich commercial audio visual solution including interactive screens, room booking, and video conferencing facilities in-line with the business' IT requirements. Colleague safety and engagement has been enhanced by introducing a fully functional public address and background music system across the distribution centre, as well as via digital signage across various locations including colleague welfare areas.

Business operations are improved via access to multiple applications and video sources via a flexible and adaptable video wall solution and peace of mind across the whole solution is provided via a three-year support wrap.

Network

The Brief

Pets required a reliable, easy to manage, yet highly resilient network topology that could support the range of systems, users, and applications that were to be deployed in the distribution centre.

The design of the wireless component of the network was a critical piece of the solution as it had to cater for a range of devices and applications such as voice picking, but also be adaptable enough to cater for changes in the RF environment such as attenuation as stock profiles changed around the distribution centre.

Pets also required the solution to be low maintenance from an organisational perspective and required Sudlows to provide a support offering over three years that provided support and response times suitable for a critical business facility.

The Project

The overall solution to support the full network infrastructure for this 800,000sq ft complex includes a range of access switches, distribution switches, security gateways and internal and external wireless access points.

All network infrastructure is fully resilient with incoming services being presented in both the Primary and Secondary Equipment Rooms with a fully diverse fibre backbone topology providing links to 28 other cabinet locations spread across the site.

Wireless access points are split between different switches so that even in the event of a switch failure, a suitable wireless signal would still exist in any given area. All networking products deployed are from Juniper and full cloud management and visibility is provided via the MIST portal with appropriate services for wired and wireless assurance as well as MARVIS virtual network assistant.

Sudlows continue to support the network across the required three-year support term including reactive needs and proactive maintenance such as firmware upgrades and annual wireless health check surveys.



A summary of the services and hardware provided include:

- Client Workshops.
- Full High-Level Design.
- Full Low-Level Design.
- Predictive and On-Site wireless surveys.
- 2no high performance security gateways.
- 2no high performance 48 port fibre switches.
- 80no access switches.
- 2no MIST edge appliances (visitor Wi-Fi concentrator).
- 237no wireless access points.
- Various antenna types of wireless access points.
- Full deployment, testing and transition support.
- Three year reactive and proactive maintenance package.

In addition to the active networking hardware, Sudlows also designed and deployed all the passive infrastructure including full comms room design and build for the Primary and Secondary Comms Rooms and all edge cabinets, fibre cabling and Category 6a structured cabling outlets.



Conclusion

Sudlows delivered on the client's brief by designing and deploying a high quality, fully resilient network architecture that comfortably meets the business' current and planned demands within the distribution centre.

Working closely with Pets, a collaborative approach was taken to ensure that all the business' needs were fully catered for and that this collaborative approach continues throughout the three-year support and maintenance contract being delivered by Sudlows.

Security

The Brief

Pets wished to deploy a robust, easy to use and cost-effective range of security solutions including electronic access control and video surveillance systems across the distribution facility.

The solutions were required to support a number of different use cases across the site. A number of different operational stakeholders required use of the security solutions and to support this, 3no. security management stations were provisioned around the site as well as a 4 x 2 video wall within the on-site Pets operational command centre.

Pets also required the solution to be low maintenance from an organisational perspective and required Sudlows to provide a support offering over three years that provided support and response times suitable for a critical business facility.

The Project

The overall solution to support the security and health and safety requirements for this 800,000sq ft complex includes an electronic access control solution that provides secure access points both within the building itself and around the perimeter.

A number of access controlled doors are provided within the building, managing the access of colleagues and visitors alike around circulatory spaces and more secure locations, such as the communication rooms.

Site perimeter access is well catered for with access control afforded to vehicular entrances and exits, power pedestrian gates, and turnstiles. The access control solution is designed with disability awareness in mind. As well as managing access on the site across a full range of time schedules, as expected for a 24/7 operation, access can also be managed by user groups. The access control solution also includes 5no video intercoms and a robust integration with the fire solution as well as offering fire role call and 3no muster points to be utilised in the event of a fire.

As well as the electronic access control, a site-wide video surveillance system has also been designed and deployed to further enhance site security, support colleague welfare and health and safety, and also support the business' loss prevention aims.

As this is a sizeable site with numerous different types of space layouts within it, a detailed design process was undertaken to ensure that the right type and resolution of cameras have been deployed to offer the right mix of system performance vs cost of deployment.

In order to meet the design brief, bullet cameras, turret cameras, multi sensor and fisheye cameras have all been used to great effect in the right setting. VSS coverage across site includes coverage of all warehousing and picking areas, offices, and external coverage around the site.

Storage is provided via 6no NVRs which are RAID configured for resiliency and the whole solution is managed via a VSS management server providing ease of management and the ability to remotely monitor system health and provide alerts. 3no security management stations have been provided across the site which provide operational stakeholders access to manage and monitor both the access control and video surveillance systems and a 4x2 video wall has also been installed in the site's operational command centre which provides a window into the site security performance.

Both solutions are supported by a three-year service wrap including 24/7/365 support incorporating service spares for rapid fault resolution and both preventative maintenance visits and reactive site support.



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A summary of the services and hardware provided include:

- Client Workshops.
- Full High-Level and Low-Level Design.
- 32no access controlled internal doors.
- 4no access controlled powered pedestrian gates.
- 5no access controlled turnstiles.
- 2no access controlled vehicle barriers.
- 5no video intercoms.
- 240no internal cameras.
- 67no external cameras.
- VSS (CCTV) and Access Control Management Servers.
- 6no VSS (CCTV) NVRs configured for RAID.
- 3no Muster Points.
- 3no security management PCs.
- 4 x 2 video wall.
- Three-year reactive and proactive maintenance package.

In addition to the security solutions, Sudlows also designed and installed all the supporting infrastructure, both active and passive, upon which the security solution resides.



Conclusion

Sudlows delivered on the customers' brief by designing and deploying a high-quality and feature-rich video surveillance solution and electronic access control solution. This allowed them to encompass all system components and management stations to support operational stakeholder use of the systems.

The solutions deployed improve the business' security across the site, providing secure access for vehicles and pedestrians as well as the management of site visitors and colleagues. A range of camera models have been used to provide full coverage of the site supporting the business' loss prevention efforts, and health and safety on-site is boosted naturally by the presence of such systems, and the muster point and fire role call facilities provisioned as part of the security solutions.

Pets are also provided with peace-of-mind across the whole solution with a three-year support wrap in place covering preventive and reactive support, as well as a number of support spares.

Testimonial

Phil Guy, Senior Project Manager at Pets, commented:

"Sudlows' experience in delivering numerous services within distribution centres made them an obvious choice to partner with on this ambitious project.

"The fact that they could deliver the comms rooms, cabling, network, audio visual, and security as well as a post-project maintenance package has been a transformative experience.

"The services and solutions delivered by Sudlows will not only ensure the smooth operation of the distribution centre, but also improve colleague collaboration and safety."



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