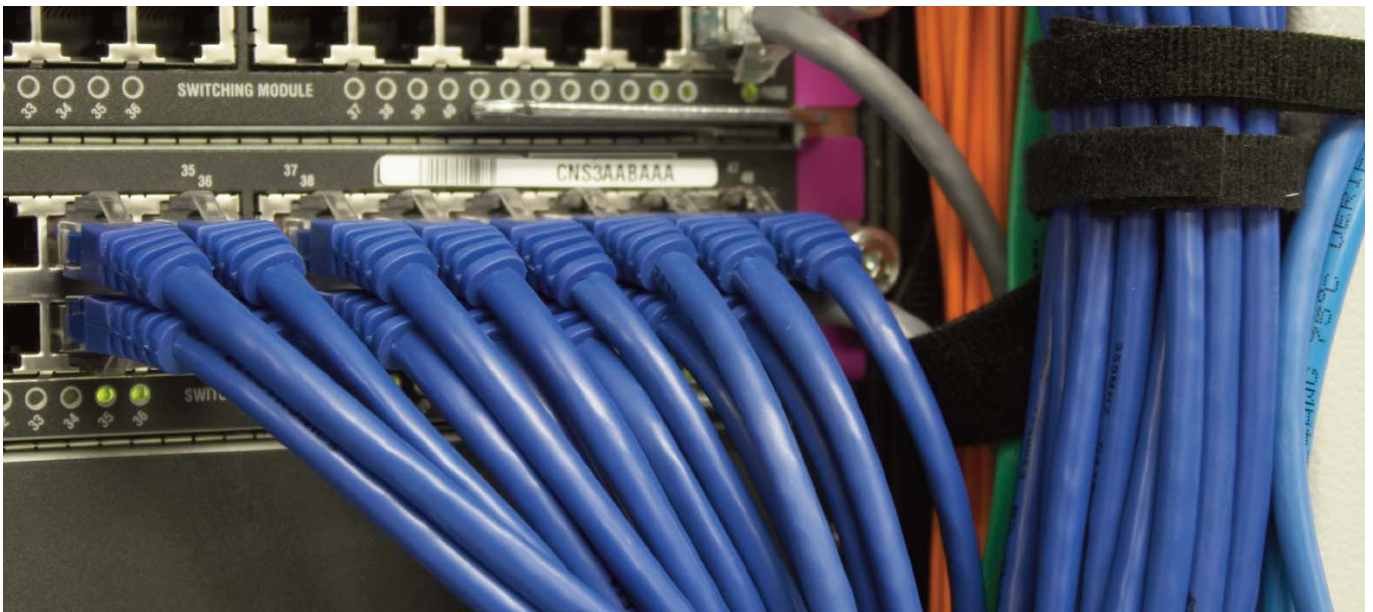
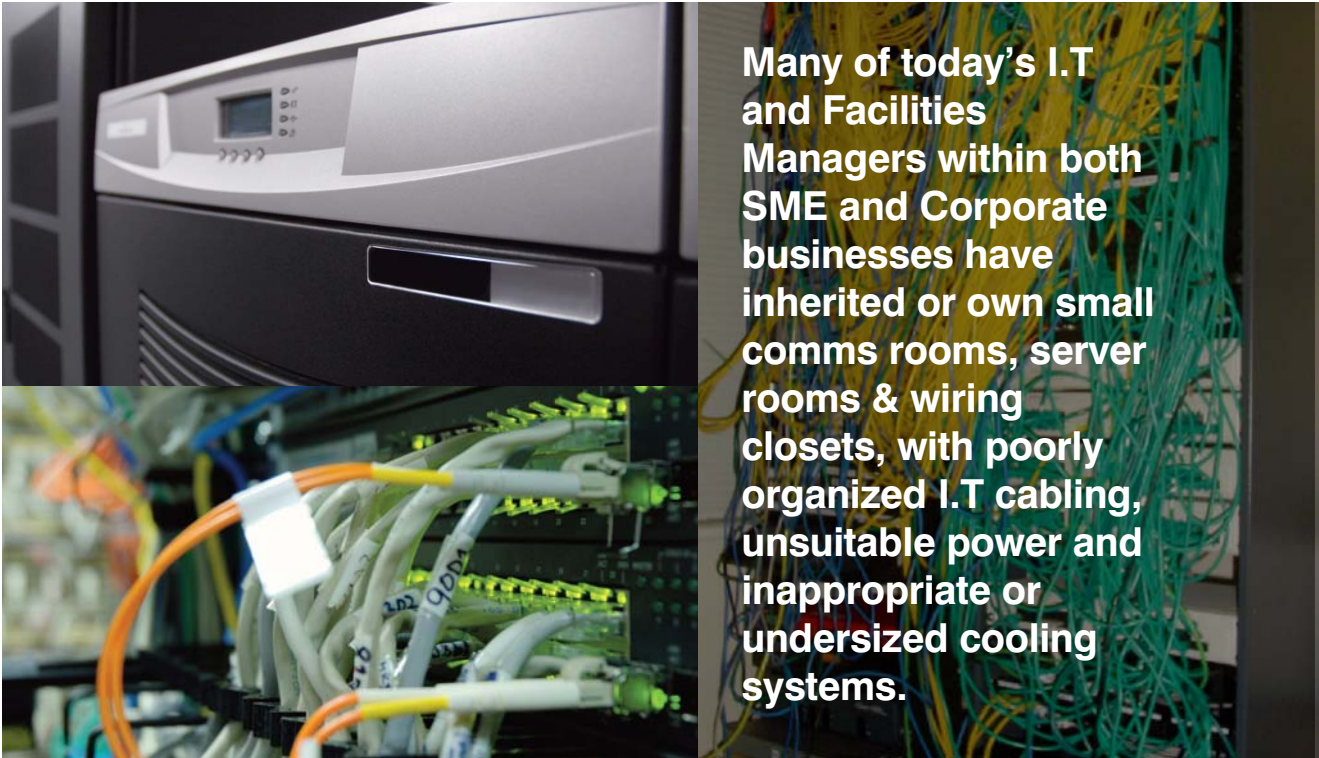


**Data Centre Solutions...energy efficient by design**



## **Micro Data Centre**

Small Server Room,  
Wiring Closet and  
Communications Room,  
Infrastructure Solutions.



**Many of today's I.T and Facilities Managers within both SME and Corporate businesses have inherited or own small comms rooms, server rooms & wiring closets, with poorly organized I.T cabling, unsuitable power and inappropriate or undersized cooling systems.**

## **Micro Data Centre**

### **Small Server Room, Wiring Closet and Communications Room, Infrastructure Solutions.**

Very often neglected small server room, comms room and wiring closet environments are typically located in unused office space, meeting rooms or even cupboards. They have typically developed from an initial deployment of a single equipment cabinet, and as additional equipment and services evolve the rooms become cluttered, with poor I.T cabling, unsuitable power and inappropriate or undersized cooling systems.

In today's expanding I.T deployments there are even greater pressures on power and cooling due to the introduction of high density computing, blade servers and power hungry PoE IP switches.

The criticality of computing and network functions performed in these environments is no less important than those functions performed in larger corporate data centres. Such "Micro" Data Centres house critical core I.T functions essential to the operation of both SME and

corporate business enterprises.

Workspace Technology's "Micro" Data Centre Solutions address the fundamental power, cooling, wiring, security and environmental monitoring requirements of such facilities. We work with clients to help renovate, relocate and provide new build server room, comms room and wiring closet solutions and apply the same "best practice" design principles that are common place in large corporate data centres but for small rooms housing 1 to 10 equipment racks.

"We believe that organisations with smaller IT infrastructures should have the same access to specialist Data Centre Design professionals as corporate organisations. We want IT managers of such organisations to be proud their Micro data centre and not embarrassed by it"

Roy Griffiths, Sales and Technical Manager, Workspace Technology Ltd.





## Design Principles

Workspace Technology's experienced design consultants will review your existing server room environment to analyse the current issues, we will identify and obtain a clear understanding of your commercial, strategic and technical business drivers. We will then provide objective and practical advice and make recommendations to ensure appropriate and realistic solutions can be achieved within available budgets.

## Space Planning & Construction

Space planning is crucial in Micro Data Centre environments. Unlike larger data centre's it is even more important to implement a well designed layout which ensures suitable service clearance, airflow and cable access. Workspace Technology's data centre experts will review the available space, current and future I.T deployments to ensure effective layouts are achieved.

Workspace Technology will undertake all construction works required to renovate, expand or create a new Micro Data Centre space. Our Interior Solutions team is experienced in all aspects of construction works within the critical environment including partitioning and walling systems, ceiling grids, raised access floors, building works and finishes.

## Wiring & Rack Infrastructure

Very often the Micro Data Centre supports a combination of structured cabling and core network switch's routers and servers. Overloaded cabling racks make system additions difficult to implement and very often cabling impedes access and airflow to critical equipment.

Workspace Technology are experts in structured cabling solutions and are able to re-build, relocate, or extend existing cable infrastructure. We offer a range of rack technologies including enclosed rack systems and open frames where there is restricted access or cable management requirements. We will rebuild environments to support full cable management, improved rack layouts, clear labelling schemes and well managed patching with colour coded right length flyleads.



## Power

Power within legacy server room, comms room and wiring closet environments is very often undersized, with limited resilience. Typical organic growth leads to a disorganised power infrastructure, power is often fed from multiple distribution boards with limited or no technical wiring diagrams. Such infrastructures can be difficult to manage, impossible to cable trace and can lead to unforeseen or catastrophic downtime.

UPS solutions are typically purchased on an adhoc basis and lead to multiple small rack mount installations which offer less resilience, are less efficient, costly to maintain properly and difficult to manage.

Workspace Technology's design team will implement a cohesive electrical infrastructure, scalable as required. The design would consolidate all critical IT supplies into a single or dual electrical distribution board configuration and fed from a common UPS solution which is manageable, intelligent, resilient and cost effective to service and maintain.

## Cooling

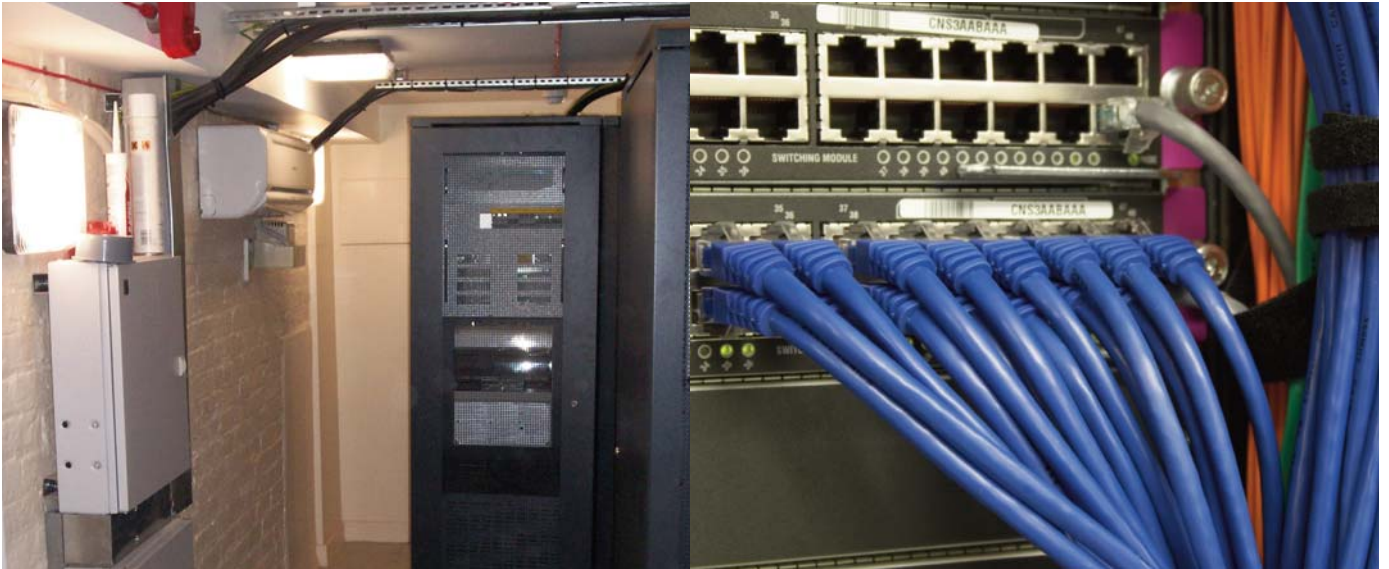
Cooling systems within small server rooms are often installed prior to the deployment of the computer room and therefore there has been little or no analysis of location, design or airflow. More often than not little consideration is given to the amount of available cooling and how this corresponds with actual cooling requirements of the facility, leading to instances of over cooling or moreover under cooling.

A Workspace Technology design consultant will work with each client in understanding cooling requirements as part of the Micro Data Centre design and will recommend a solution which will be suitable for the current use and also flexible enough to support any future scalability or growth.

As part of the cooling portfolio of products there are a number of CRAC (computer room air conditioning) as well as 'comfort' cooling units to suit each application, design and budget. 'Comfort' cooling unit selection will be based on suitability to be used within a critical data centre environment and consideration will be given to airflow management and Net Sensible cooling duty to ensure the design is as efficient and well managed as possible.

Facilities with lower IT loads are a great enabler to harness new and ultra high efficiency cooling and ventilation products such as 'evaporative' systems like Workspace Technology's own FreeCool products which utilise external ambient air as the cooling medium.

Principles such as Hot and Cold Aisle and 'air separation' can be as easily deployed within a Micro Data Centre as they can in any typical Data Centre but such considerations must be considered at design stage. A facility with a defined Airflow will be easier to manage, provide more consistent cooling patterns and will be significantly more efficient.



## Environmental & Security

Environmental monitoring and protection is often a forgotten element to a small computer room or wiring closet. Whether not considered at all, or removed from the design due to budget constraints, such facilities can be subject to environmental conditions which can lead to damage to the IT layer, poor performance or even catastrophic failure.

It is important that any critical facility is monitored, even for basic environmental conditions, such conditions must be visible and notifiable outside of the facility to eliminate or alert potentially damaging or dangerous scenarios from arising.

At Workspace Technology our portfolio of environmental solutions include metering systems, environmental monitoring, security and IP camera solutions and fire detection and suppression systems. Our Data Centre consultants will work with the client to understand which solution best satisfies technical requirements as well as commercial considerations.

Remember Insurance Companies can insist that Environmental Monitoring or Fire Suppression be installed within critical facilities including small computer rooms and wiring closets. Not having such systems installed and regularly maintained could invalidate any future insurance claim you may need to make.

## Unifying the Design

At Workspace Technology we want you to unify the design of your small computer rooms and wiring closets. You would expect this of a large Data Centre facility so why not for your 'Micro Data Centre' facility.

No longer do you need to 'design as you go', be your own Data centre design expert or adopt a 'sticking plaster' approach just because you have a smaller facility.

At Workspace Technology we work with industry leading and 'best of breed' manufacturers such as APC to ensure whatever the facility size or whatever budget you have, we can ensure you implement a 'best practice' designed Micro Data Centre facility worthy of the critical IT architecture it supports.

The deployment of this facility will be Project Managed by specialist Data Centre Project Teams and backed by a unified Data Centre Service and Maintenance schedule complete with SLA driven response times to faults and incidents.

Call Workspace Technology today and discuss how your small comms room, computer room or wiring closet facilities can benefit from our expertise.

## About Workspace Technology

Workspace Technology's Data Centre Solutions division provide expert data centre, communications and server room solutions and services for public sector and corporate clients across the UK.

Workspace Technology is proud to be an approved "Endorser" for the European Commissions "Code of Conduct for Data Centre Efficiency" Workspace Technology is committed to help clients reduce their carbon footprint through the deployment of "Best Practice" energy efficient technology and design, for new and existing data centre environments.

Further details of Workspace Technology's products and services can be found at [www.workspace-technology.com](http://www.workspace-technology.com).



Approved "Endorser" EU "Code of Conduct on Data Centre Efficiency"



APC Elite Partner  
Data Centre Certified



Workspace Technology's "Commitment to help clients reduce their carbon footprint through the deployment of energy efficient technology and design".



Technology House, 8 Emmanuel Court,  
Reddicroft Sutton Coldfield,  
West Midlands B73 6AZ

**Tel : 0121 354 4894**

Fax: 0121 354 6447

email : [sales@workspace-technology.com](mailto:sales@workspace-technology.com)

**[www.workspace-technology.com](http://www.workspace-technology.com)**

Creating an effective workspace environment