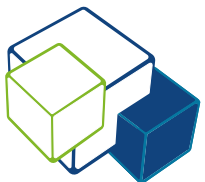




# Maintenance & Support Services

Optimised Availability

3D Modelling & CFD Survey and Audit Service Schedule



**Workspace**  
Technology Limited  
Data Centre Solutions Expertly Engineered

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



## Consult... Optimisation, Audit and Survey Services

### Data Centre Services

Workspace Technology provides data centre operators unprecedented levels of expert help 24/7, anywhere in the UK. We deliver planned preventative maintenance and emergency callout on a wide range of AC, chilled water, UPS, generator, fire suppression and associated infrastructure. In order to complement onsite maintenance services Workspace Technology provides a range of assessments, surveys, audits and services specifically designed to help improve data centre performance and reduce operation costs for our clients.

## 3D Modelling & CFD Overview

### 3D Modelling

3D Modelling offers clients the opportunity to better visualise their existing or prospective data centre investment. Workspace Technology's Data Centre Solutions team will deploy state of the art 3D modelling software in order to cost effectively generate 3D models of your data centre infrastructure. 3D Data Centre modelling helps data centre operators to visualise technology for prospective clients, investors and business managers and also helps provide supporting leverage for business propositions.

Workspace Technology's 3D Modelling engagement includes the development of efficient data centre designs, 3D visualisation, detailed rendered images and 'walk' through M-Peg movie files which provide a realistic impression that is impossible to achieve from traditional 2D drawings.



### 3D CFD Data Centre Modelling

3D predictive Computational Fluid Dynamics (CFD) is designed to help visualise data centre infrastructure and to generate thermal maps computed from design airflow patterns. The 3D CFD Data Centre Modelling service is based on Schneider Electric's industry-leading StruxureWare™ for Data Centres - Data Centre Infrastructure Management (DCIM) software suite. This software enables Workspace Technology's data centre engineers to generate interactive 3D models of existing or prospective data centre infrastructure. The technology allows our engineers to model individual rack equipment kW densities, cooling equipment and airflow arrangements. Once the data centre is accurately modelled sophisticated algorithms are capable of generating detailed predictions of data centre CFD characteristics which can easily be visualised across both horizontal and vertical axis planes throughout the entire facility.

The implementation of 3D CFD predictive modelling enables clients to develop, bench mark and verify data centre designs prior to implementation or alternatively to check on the performance of existing infrastructure.

Workspace Technology's 3D CFD Data Centre Modelling service offers a cost effective alternative to traditional labour intensive CFD techniques which have historically been expensive to deploy.



## 3D Modelling & CFD Schedule of Works

**Frequency** - Yearly (or following any major infrastructure changes)

### 3D Modelling

Item	Service Detail
1	Take measurements and photographs of existing site. When at design stage verify plans for accuracy.
2	Develop 3D Master Drawing Files.
3	Produce Report to include 3D Walk Through Mpeg Movie, and suitable stills to help visualise the data centre facility.

### 3D CFD Data Centre Modelling

Item	Service Detail
1	Take measurements and photographs of existing site. When at design stage verify plans for accuracy.
2	Verify airflow arrangements and kW rack densities from drawings or actual on site information.
3	Develop DCIM 3D Room Design Information and Enter Rack Density & Airflow Data.
4	Run CFD Analysis Function and Produce Predictive CFD Report.

## Notes on 3D Modelling Services

Site access will be required in order to take measurements of photos. Where modelling is to be completed at planning stage accurate drawings and design information will be required.



## Additional Data Centre Services

Workspace Technology offers a range of data centre audit and survey services. These services may be specified as a result of a Data Centre Audit or as part of a comprehensive Data Centre planned preventative maintenance and support package.

Service	Details
Airflow and Thermal Imaging Survey	The Airflow and Thermal Imaging Survey enables data centre manager to identify problems with cooling capacity and airflow efficiency.
Data Centre Audit Service	The Data Centre Audit will provide a comprehensive review of the existing data centre or server room facility designed to help identify both good and bad practice, help clients increase reliability, and deliver the best value by reducing total cost of ownership through reduced capital, operating and energy costs.
Data Centre Optimisation Service	The Data Centre Energy Optimisation Service will address data centre imbalances by fine tuning system settings and configuration arrangements to achieve improvements in energy efficiency and deliver maximum performance within ASHRAE recommended environmental operating range.
Electrical Thermal Imaging Survey	The detailed Electrical Thermal Imaging Survey of data centre electrical systems and equipment will help identify unseen faults on electrical systems which can cause expensive business downtime, damage, loss of data or risk from fire.
Power Quality Survey	The Power Quality Survey provide customers with a clearly laid out summary of load, power factor and harmonic data findings. When quality issues are identified the report will include recommendations to correct problems. The implementation of survey recommendations will help customers reduce energy bills and can prolong life and prevent premature failure of equipment.
Power Usage Effectiveness (PUE) Assessment	The PUE Assessment enables IT and data centre managers to accurately benchmark the Power Usage Effectiveness (PUE), Data Centre Infrastructure Efficiency (DCIE) and usage of the server room environment through direct analysis of power and energy consumption.

Further details on audit services can be found in individual audit and survey schedules.

## Notes on Service Schedule

All work mentioned in the schedule is carried out subject to Workspace Technology's Terms and Conditions of sale.

The audit schedules shown are based on a standard and will not be applicable to every installation for every item listed. Consequently each task has to be qualified by the term; 'if it is safe so to do', 'if applicable', 'if possible' and 'if appropriate'.

It is possible that your specific installation may have additional or specialised equipment not mentioned in this schedule. In that case, the specific equipment would be the subject of addenda to the main contract.

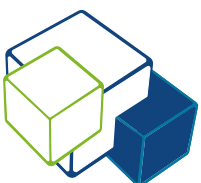
Tasks mentioned in the schedule may also be omitted if Workspace Technology's engineers or its appointed agents deem that it is unsafe to carry out that task or that it may jeopardise the security of electrical supply.



Interested in finding out more?

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