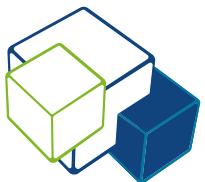# Maintenance & Support Services
Optimised Availability

Airflow & Thermal Imaging Survey Service Schedule

Workspace
Technology Limited
Data Centre Solutions Expertly Engineered

workspace-technology.com

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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.

Airflow & Thermal Imaging Survey

Workspace Technology's enhanced Airflow and Thermal Imaging Survey includes the following:
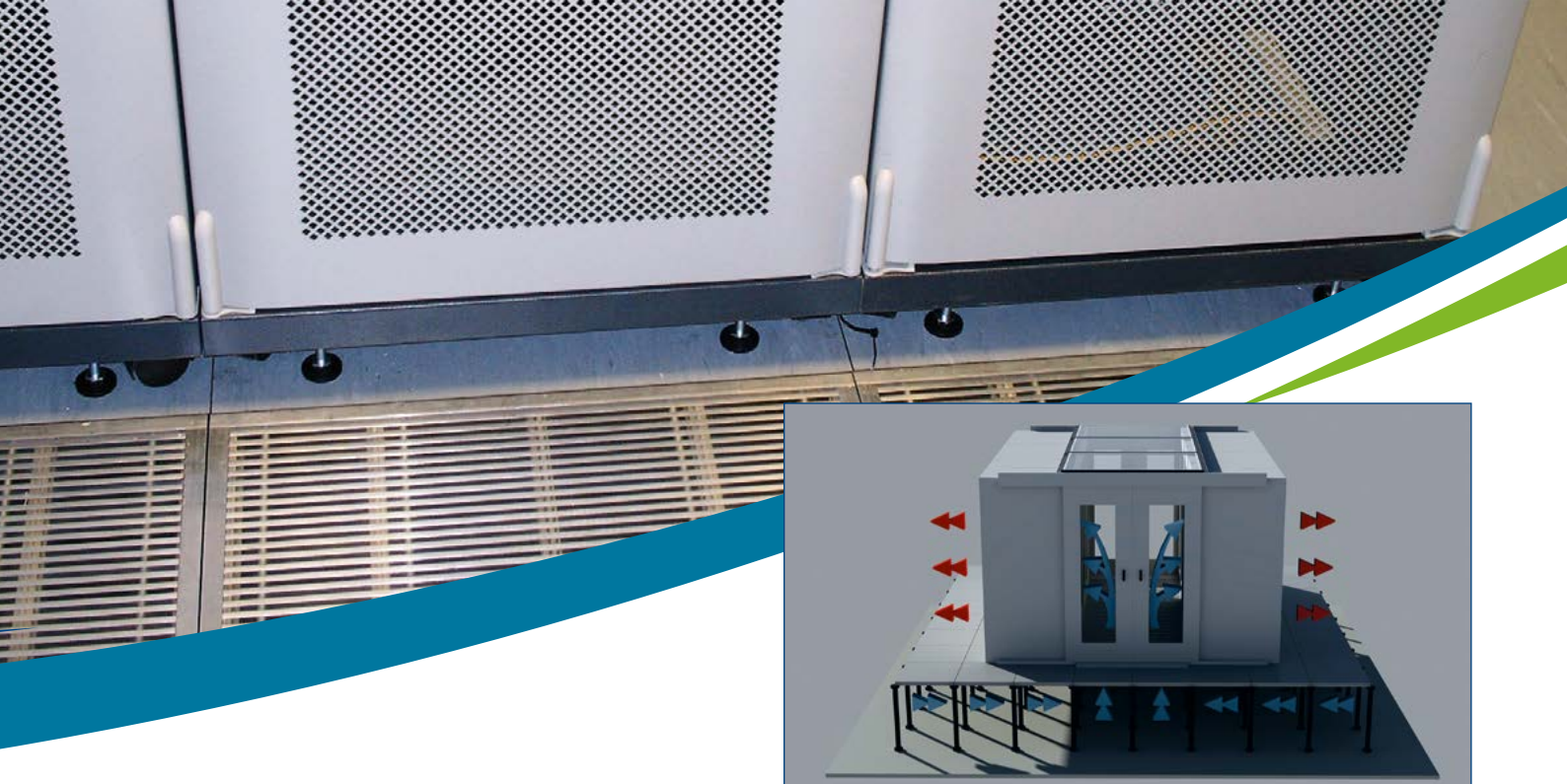
• Room assessment and creation of data centre layout plan.

• Thermal imaging photos of aisles and photographic images of individual equipment racks.

• Air velocity pressure survey (airflow through each 600x600 vented floor tile).

• Temperature and humidity check at low, medium and high levels on each equipment rack.

• Flow & return temperature and humidity check on the air conditioning units.

• Findings and recommendations report.

Thermal Imaging

Many data centre environments today are very high density; thermal imaging can identify problems before they become critical. The use of thermal photography of racks and aisles will help identify problems including hot spots, recirculation and hot and cold air mixing.

Air Velocity Pressure Survey

An understanding of air velocity will enable accurate identification of actual cold air flow rates within the cold aisles and its associated capacity throughout the room. The survey includes a full airflow meter reading of each vented floor tile, enabling mapping of the exact areas of air distribution in the data centre.

Temperature and Humidity Check

Workspace Technology will undertake a survey of a low, medium, and high level temperature and humidity readings for each equipment rack. Workspace Technology will also undertake a flow and return temperature and humidity check on the Air Conditioning air handling units.

Report Details

A detailed report will be generated which will provide:

• Assessment of the balance of air pressures and velocities from the floor plenum and observations drawn from these readings to show air starved areas.

• Thermal images showing possible heating issues in the room. Hot spots are easily identifiable giving a clear indication of poorly cooled areas.

• Recommendations to improve the efficiency of existing active kit through relocation.

• Clear advice on the optimum location for additional servers.

Benefits of Airflow and Thermal Imaging Survey

• Knowledge of where the air is being delivered in the data room will help maximise the efficiency of future installations.

• A baseline on the current airflow and how effective the current cooling is within the existing environment will help show how aisle containment and airflow management could improve the AC system efficiency, saving you money and reducing your carbon footprint.

Airflow & Room Thermal Imaging Survey Schedule of Works

Frequency - Yearly (minimum recommended frequency)

Item	Service Detail
1	Identify aisles and racks which will form part of the survey scope of work. Measure and create detailed Data Centre floor plans.
2	Undertake thermal imaging of equipment aisles and associated equipment cabinets
3	Undertake airflow survey of all raised access floor grille tiles within the survey area.
4	Measure low, medium and high level readings for all equipment rack inlet and outlet positions.
5	Produce detailed report including all readings with thermal images, detailed findings and associated recommendations.

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
3D Modelling and CFD Service	The 3D Data Centre Modelling and CFD service enable clients to visualise interactive 3D data centre models of existing or prospective data centre infrastructure.
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.
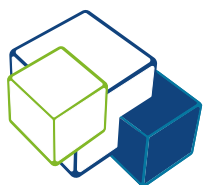
Tasks mentioned in the schedule may also be omitted if Workspace Technology's engineers or its appointed agents deem that it is unsafe to carry out that task or that it may jeopardise the security of electrical supply.

Workspace
Technology Limited
Data Centre Solutions Expertly Engineered

Reddicap Trading Estate,
The Royal Town of Sutton Coldfield, B75 7BU

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