

END2END Services Limited

*Company and Business
Portfolio*

Information Brief

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1 END2END Services – The Background

END2END specialise in the design, build and support of Data Centres/Computer Rooms and provide services and products for all stages of the Data Centre life cycle. As part of that specialisation, we have developed a 'Best Practices' approach that ensures that all deliverables are 'fit for purpose' and 'cost effective'. This approach has gained us a respect within the industry for excellence and a no compromising attitude to quality - so much so, that we are now defining 'Best Practices' guidelines for organisations, such as the NHS and Middlesex University.

We are a unique organisation with a mixture of IT and M&E (Mechanical and Electrical) skills. This is a clear differentiator in the marketplace, which enables us to provide holistic services and solutions that encompass and integrate both disciplines effectively – essential as both IT and M&E disciplines continue to evolve (and not necessarily to each other's benefit). Our approach is structured to ensure that we understand fully a customer's requirements, so that any deliverables match the actual business need.

The remainder of the document sets out:

- The Data Centre Life Cycle and END2END's Business Portfolio
- END2END Offerings – including features benefits and prices (where applicable)

We pride ourselves on our ability to develop cost-effective and professional solutions for our customers and have a successful record for the design, implementation and support of Data Centres.

2 The Data Centre Life Cycle and END2END's Portfolio

Diagram 1 summarises the key 'Lines of Business' and related Offerings and how they fit into the Data Centre Life Cycle.

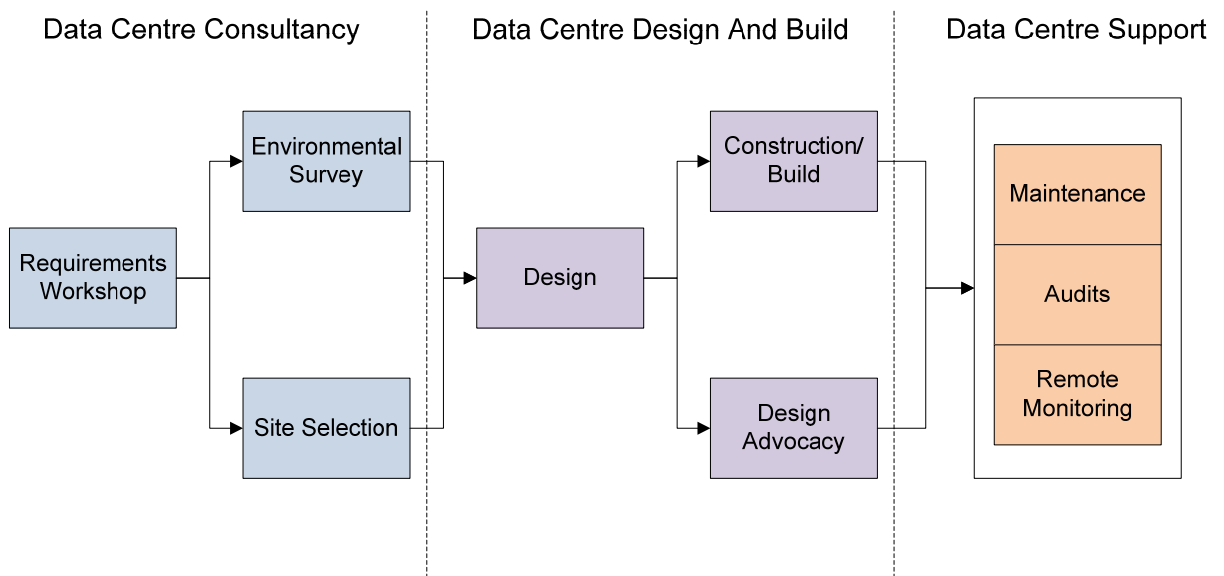


Diagram 1 – END2END Offerings

Note: END2END also specialise in Data Centre Environmental Monitoring and remote Server Management Solutions, which can be built into any solution as part of the Life Cycle or delivered separately as a standalone offering.

For more information visit our website at <http://www.end2endservices.co.uk/>. This also contains a Learning Zone, which provides a wealth of common sense and technical information to help companies with their decision making processes.

3 Description of END2END's Data Centre Offerings

Line of Business	Offering	Description	Features/Benefits
Data Centre Consultancy	Requirements Workshop	<ul style="list-style-type: none"> <input type="checkbox"/> A 1 day Workshop for up to 12 people <input type="checkbox"/> Provides top-level knowledge on key Data Centre structures and components <input type="checkbox"/> Reviews the client's Business, Operational, IT and M&E requirements factors that will influence Data Centre activities <input type="checkbox"/> Provides a Detailed Report with key outline information required for planning and budgeting Data Centre builds and refurbishments, including timescales, pricing and outline Data Centre layouts – all tailored to match the customer's requirements 	<ul style="list-style-type: none"> <input type="checkbox"/> Provides professional advice and knowledge to senior managers and IT/Facilities personnel <input type="checkbox"/> Provides sound 'Best Practices' information <input type="checkbox"/> Lowers TCO (by adopting correct strategies up-front) <input type="checkbox"/> Prevents costly mistakes <input type="checkbox"/> Provides Senior Management with information to create/modify Business Plans
	Environmental Survey	<ul style="list-style-type: none"> <input type="checkbox"/> A 1 day Survey of the Site reviewing existing Data Centre/Computer Room facilities <input type="checkbox"/> Reviews all aspects of the room against 'Best Practices' within the Data Centre arena <input type="checkbox"/> Provides a Report with a component by component breakdown of the room indicating any operational and Health & Safety issues <input type="checkbox"/> Provides recommendations for improvement and budgetary costings for each – highlighting quick wins and longer term potential strategies 	<ul style="list-style-type: none"> <input type="checkbox"/> Allows IT/Facility Managers to understand the 'health' of their facility – based on a standard Risk Assessment strategy <input type="checkbox"/> Provides costed recommendations for improvements that can be evaluated on a cost/benefits basis <input type="checkbox"/> Provides a sound basis for understanding the facility's part in any possible future plans
	Site Selection Survey	<ul style="list-style-type: none"> <input type="checkbox"/> A 1 day location review <input type="checkbox"/> Reviews locations and assesses their suitability for housing a Data Centre against known business requirements <input type="checkbox"/> Provides a report with a 'standard' marking system to evaluate the location's suitability – including risks, benefits and outline profile of what could be achieved 	<ul style="list-style-type: none"> <input type="checkbox"/> Allows for organisations to quickly assess locations (ruling in or out) to assist in the planning process <input type="checkbox"/> Where surveys of multiple locations are required these are marked both standalone and as a comparative assessment

Line of Business	Offering	Description	Features/Benefits
Data Centre Design and Build	Design	<ul style="list-style-type: none"> <input type="checkbox"/> A detailed Design of the new Data Centre Facility including specification of: <ul style="list-style-type: none"> ⇒ Physical Space (floors, walls, ceilings etc) ⇒ Supporting Technologies (electrical distribution, UPS, A/C, generator, fire system, security access etc) ⇒ Workplace Environment (decoration, furniture, branding etc) ⇒ Technology Infrastructure (racking, data cabling, monitoring and management technologies etc) <input type="checkbox"/> Design also provides: <ul style="list-style-type: none"> ⇒ Full CAD layouts of the Data Centre ⇒ Defined Test and Training Plan Requirements 	<ul style="list-style-type: none"> <input type="checkbox"/> A comprehensive single central document that provides multiple functions: <ul style="list-style-type: none"> ⇒ It can be included in any prescribed Tender/ITT exercise, providing a comprehensive specification with a defined structure for easy marking of responses ⇒ It provides information required for any planning/approval processes required ⇒ It provides the main scoping and design document for the Construction of the Data Centre (both for the customer and the sub-contractors) ⇒ It can be updated during the life cycle of the project to provide the final 'as-is' documentation
	Construction (Build/Refurbishment)	<ul style="list-style-type: none"> <input type="checkbox"/> A complete Data Centre Build Service to deliver the full specification defined with the Design Phase <input type="checkbox"/> A comprehensive Project Management structure based on PRINCE2, ensuring that Change/Risk Management and Customer Communication are handled effectively <input type="checkbox"/> Practical Site Management to ensure correct implementation of the Programme of Works, as well as adherence to H&S and CDM 2007 regulations <input type="checkbox"/> Quality Assurance at all stages of the project to ensure delivery to Design <input type="checkbox"/> Training of Customer on all components to understand operation 	<ul style="list-style-type: none"> <input type="checkbox"/> A fixed price Build Contract based on the detailed Design specification developed during the Design Phase <input type="checkbox"/> Built using 'best of breed' components (END2END are not allied to any particular manufacturer) <input type="checkbox"/> Provides a single interface for the customer, providing both managerial and technical excellence <input type="checkbox"/> The solution and delivery ensures compliance with all statutory and legislative requirements <input type="checkbox"/> Provides a tangible Test and Acceptance process for the customer to 'sign off' the project as complete
	Design Advocacy	<ul style="list-style-type: none"> <input type="checkbox"/> A Quality Assurance service for customers with an END2END Design, who prefer to contract with other agencies for the Construction Phase 	<ul style="list-style-type: none"> <input type="checkbox"/> Reviews the Build work at key Project Stages to ensure compliance with the Design <input type="checkbox"/> Provides 'just-in-time' reports to the customer on any non-compliance

Line of Business	Offering	Description	Features/Benefits
Data Centre Support	Call Handling	<ul style="list-style-type: none"> <input type="checkbox"/> One single Point of Contact for all Support calls <input type="checkbox"/> Logging and Management of all calls until fix provided to customer's satisfaction <input type="checkbox"/> Problem Isolation and assignment to appropriate resolver team <input type="checkbox"/> Technical and Managerial Escalation processes 	<ul style="list-style-type: none"> <input type="checkbox"/> Only one number to call for any Data Centre issues <input type="checkbox"/> UK-based Call Centre staffed 24 hours a day, 365 days a year <input type="checkbox"/> Data Centre specialists 24 x 7 to handle any technical escalations
	Environmental Maintenance	<ul style="list-style-type: none"> <input type="checkbox"/> A Maintenance Contract for all Data Centre environmental components (e.g. A/C, UPS, Generator, Fire System, Security Access, etc.) <input type="checkbox"/> Response/cover determined by customer <input type="checkbox"/> Includes preventative maintenance visits and proactive Trend Analysis 	<ul style="list-style-type: none"> <input type="checkbox"/> Only one Contract to administer <input type="checkbox"/> Includes Call Handling as standard <input type="checkbox"/> Only Data Centre aware personnel are utilised <input type="checkbox"/> Regular Reports are issued <input type="checkbox"/> Call Status Logs are held on END2END website (per customer account)
	Remote Monitoring	<ul style="list-style-type: none"> <input type="checkbox"/> Automatic alerting of Data Centre environmental issues to END2END's Call Centre for processing * <input type="checkbox"/> Provides an 'instant**' alert, so that the Call Centre can begin processing the alert immediately <input type="checkbox"/> Notes: <ul style="list-style-type: none"> ⇒ * - Requires a Monitoring Infrastructure to be installed in the Data Centre (see Data Centre Monitoring and Management below) ⇒ ** - Depends on the connection type allowed by the customer 	<ul style="list-style-type: none"> <input type="checkbox"/> Protects availability and reduces downtime <input type="checkbox"/> Reduces the need for customer staff to be monitoring 24 hours a day <input type="checkbox"/> Peace of mind/ability to meet SLA's <input type="checkbox"/> Potential reduction in Maintenance charges by reducing call outs
	Audits	<ul style="list-style-type: none"> <input type="checkbox"/> A regular service to inspect the Data Centre meets 'Best Practices' from a functional, operational and health and safety viewpoint <input type="checkbox"/> Provides a full report on the findings 	<ul style="list-style-type: none"> <input type="checkbox"/> Identifies any issues and provides recommendations for improvement <input type="checkbox"/> Ensures that the Data Centre is operating both safely and at optimum efficiency

Line of Business	Offering	Description	Features/Benefits
Data Centre Monitoring and Management	Environmental Monitoring/ Management Infrastructure	<ul style="list-style-type: none"> <input type="checkbox"/> Enablement package to install a Monitoring Infrastructure within the customer's Data Centre <input type="checkbox"/> Can include enablement of: <ul style="list-style-type: none"> ⇒ UPS's ⇒ A/C's ⇒ Generators ⇒ Fire Systems ⇒ Electrical Distribution Boards ⇒ Rack PDU's <input type="checkbox"/> All data/alerts can be sent/retrieved by any SNMP-compliant Monitoring Station or by END2END's Praetorian Application (see below) 	<ul style="list-style-type: none"> <input type="checkbox"/> Provides instant alerts to ensure high availability/reduced downtime <input type="checkbox"/> Provides peace of mind and ability to meet SLA's <input type="checkbox"/> Provides capacity planning information for the Data Centre (e.g. current power loads) to ensure optimal operation of Data Centre <input type="checkbox"/> Provides monitoring of power consumption (as part of any green initiative) <input type="checkbox"/> Assists in reducing maintenance charges by ensuring detailed information available for engineers preventing unnecessary call outs and visits without the correct parts
	InSight Environmental Monitoring Application	<ul style="list-style-type: none"> <input type="checkbox"/> Enterprise Application for Data Centre monitoring providing: <ul style="list-style-type: none"> ⇒ Simple to understand floor plan layouts for easy maintenance operation ⇒ Monitoring and alerting of all Data Centre issues. Alerts provided as both text and visual icons on the Floor Plan layout ⇒ Set thresholds for key Data Centre parameters (e.g. UPS loads, Rack power consumption, etc.) ⇒ Detailed information on each monitored device to assist engineers with comprehensive problem analysis ⇒ Logging of key Data Centre capacity planning information ⇒ Reports and graphs on key Data Centre factors 	<ul style="list-style-type: none"> <input type="checkbox"/> Provides a single application for full monitoring of the Data Centre <input type="checkbox"/> Alerts can be emailed/sent to relevant personnel (e.g. OOH) <input type="checkbox"/> Web-enabled so all information can be viewed from any secure remote locations <input type="checkbox"/> Provides easy to access information for understanding Data Centre running costs and capacities as part of operational planning