



Data Centre Design & Services

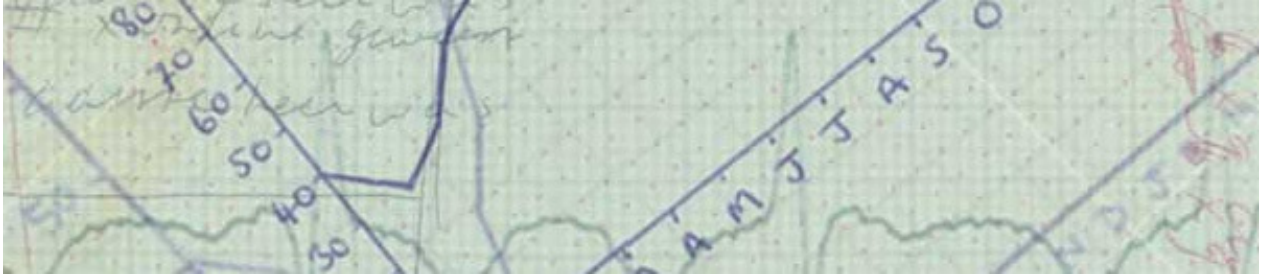
[\[design\]](#) [\[strategy\]](#) [\[location\]](#) [\[build\]](#) [\[fit-out\]](#) [\[management\]](#)

No one knows what type of technology will be used in 5-10 years time so the data centre must be designed to be as flexible as possible to cater for changes in equipment dimensions, power, cooling and cabling requirements.

- The power and cooling systems must be modular and fully resilient so they can be expanded or modified to meet unforeseen demands.
- The M&E systems must be capable of being partially shut down for maintenance without impacting the running of the data centre.
- Growth must also be factored into the design.
- Current operational problems should be designed out
- Adjacency requirements MUST be factored in.
- A new data centre should improve efficiency and cost effectiveness. To factor this in, your data centre design team will work closely with your IT department to understand the inter-relations between the various groups.

Our data centre designs are always modular and as flexible as possible because no-one can predict what the future will bring. Staff interviews play a strong part of our design process to ensure we create a design that meets the unique requirements of your business.

Find out more AIT's Data Centre Design Services, call us on 0845 017 7017, or [contact us](#).



Data Centre Strategy

Know your current environment. This may sound ridiculous, but very few companies have accurate records of the location of all equipment and what it is used for?

What problems do you have that should be designed out in a new facility

- How are you going to use your new data centre to support the business?
- What level of resilience is required?
- What other buildings / companies / networks will it be connected to?
- How many data centres do you require?
- Where will the Network Operations Centre (NOC) or Operations Bridge be sited? How many NOC's do you need?
- Will staff be permanently based there?
- How will the data centre be managed?
- Is the proposed site accessible to staff on a day to day basis?
- How often will there be deliveries?

AIT can provide strategic consultancy to help you create a cohesive strategy that compliments your business and meets your IT requirements.

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Data Centre Location

Will you be building in an existing building or a new purpose built one? Both have unique challenges.

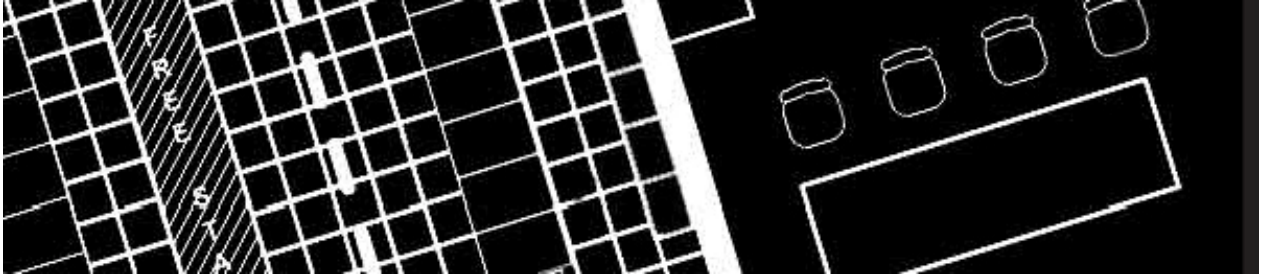
The location must be secure from direct and indirect threats and risks.

- You may not be a terrorist target, but your neighbours might.
- Do your neighbours store or handle toxic or explosive substances. (This can include welding cylinders) Will an exclusion zone set up by the emergency services shut down your facility or cause long term evacuation?
- You may not be in a flood plain, but the building or site you are looking at may have a large bore water main running close by. A ruptured water main can cause more damage than a bomb blast.
- Does the location pose a risk, or perceived risk to out of hour's workers?
- Are there any HR issues associated with the chosen location?

If you are looking at existing buildings, how can you be sure they will not become a liability once you build your data centre. (One company can only half fill server racks in their data centre because assumptions were made about the building)

AIT can provide consultancy to assist in the selection of suitable locations, whether they are existing buildings or green/brown field sites (See details of our building survey service).

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Data Centre Build

Once the data centre and M&E services have been designed we will work closely with the architects, structural engineers, quantity surveyors, town planners, fire officer etc.

We attend site regularly during construction and meet with all contractors to ensure the designs are not compromised during the construction phase. We will also be available when not onsite to answer any questions immediately.

Site attendance increases during the latter stages of construction and we perform an ongoing process of snagging to reduce delays at the end of the construction phase.

AIT have found that working closely with the construction teams prevents many problems arising and where onsite issues do occur, we can find a solution quickly and effectively.

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Data Centre Fit-Out

Once the construction and snagging is completed, AIT can project manage the technical fit out of the data centre and entire building.

- Manage the installation of structured cabling and server cabinets
- Install network switches, SAN, LAN, WAN equipment
- Ensure labeling and documentation is complete and meets customer's standards. Installation of all equipment and patching required to make the data centre live and ready to receive your servers or mainframes.

Migration/Consolidation

Our specialists can audit your systems to identify efficiency and cost improvements as well as the best methodology to migrate/relocate your systems into the new data centre. We can provide project management and technical expertise to compliment your existing staff.

- Identify all systems to be moved
- Review all systems and hardware platforms to identify consolidation options and cost savings
- Review software licences to identify cost savings
- Evaluate control and management software to standardise tasks and reduce cost.
- Create migration methodology, including DR/BCP strategy
- Creation of backout plans
- Test plans and testing criteria
- Management of consolidation and migration

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Data Centre Management

Your company can spend anything from £20 million to £100 million building a data centre, but without proper management it will rapidly fill up and become inefficient. Your new data centre may even become a liability as opposed to the asset it should be.

A properly managed data centre will be efficient, cost effective and secure. Resilience is improved and technical staff can focus on technical issues without having to perform repetitive manual tasks.

This can include any or all of the following:

- Installation and tailoring of data centre management software
- Creation of SLA's
- Creation and implementation of management processes
- Use and creation of method statements and risk assessments
- Setting up forums to discuss issues and resolutions
- Creation of a Data Centre Management team
- Use of power and temperature monitoring tools
- Standardisation of key infrastructure equipment

AIT can provide consultancy and training to create a management team who will ensure your data centre investment stays efficient and cost effective, maximising its return on investment.

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