DATA CENTER SOLUTIONS
THE LEADING FULL-SERVICE DATA CENTER PROVIDER GLOBALLY
Downtime isn’t an option, especially when you have a business to run. It takes strategic insight to align your real estate needs with your IT requirements, so a technology failure won’t affect your business or bottom line.

CBRE Data Center Solutions (DCS) is the leading provider of full-spectrum life cycle services to data center owners, occupiers, and investors, including consulting, advisory and transaction services, project management, and integrated data center operations.
Consulting

Our tools and resources enable our clients to make the best combined real estate and technology decisions.

Advisory & Transaction Services

We provide our clients with the analysis, market intelligence, and execution/procurement capabilities.

Project Management

We represent our clients to ensure the most complex projects are delivered on time, and well below budget.

Integrated DC Operations

We perform operations, maintenance, and IT services through our globally consistent risk management processes.
CBRE DATA CENTER SOLUTIONS

ADVISORY & TRANSACTION SERVICES

Since 1994, the DCS Advisory & Transaction Services group has advised a broad range of clients – some of the highest credit, most risk-averse and technologically advanced organizations worldwide – on their IT/data center strategy and the acquisition and disposition of technical real estate.

CAPABILITIES AND SERVICES

Our broad range of services and capabilities allows us to approach data center requirements holistically – by merging real estate and IT needs, we’re able to create the most economical, efficient and reliable solutions for your business.

Services

» Market research and analysis
» Global, national and local market infrastructure analysis
» Colocation, cloud and managed services negotiation and analysis
» Telecom, interconnectivity & carrier hotels
» Modular, enterprise, powered-shell, retrofit, ground-up and greenfield projects
» Financial modeling

» Transaction management
» Service Level Agreement ("SLA") negotiation
» Contract structuring, negotiation and analysis
» Fiber and connectivity analysis
» Sale leaseback or partial leaseback
» Power capacity and cost analysis

Based on best practices learned from our FORTUNE 500 clients, our approach removes uncertainty while maximizing flexibility and mitigating risk. As the world’s largest data center real estate practice, CBRE is able to provide the strategies, insights and end-to-end services needed to optimize your data center solution, from inception all the way through disposition.
CBRE Data Center Solutions was engaged to perform strategy, transaction management and facilities management services for a 7.7 MSF global portfolio which included a large data center and technical facility footprint.

The client had grown through acquisition and required a strategic plan by which to effectively manage their real estate portfolio including the assets of those companies they acquired.

The challenge was to drive aggressive savings targets by renewing below existing rents, by exiting facilities where presence was not necessary and by increasing efficiency in regional locations.

CBRE was successful in executing on an aggressive disposition plan for sublease and sale of existing locations. CBRE also negotiated aggressive agreements across their portfolio including access agreements, ILAs and POPs to major telecommunications hubs. CBRE found additional savings and flexibility by consolidating technical facilities in major markets like San Francisco, Chicago, Dallas and London.

The company, facing aging data center infrastructure and increasing power capacity demands, engaged a third party IT consulting firm to develop a data center transformation study and project plan. When completed, the plan called for the company to build a ground-up:

- 136,000 SF data center on 20 acres, delivering 4.5 MW of IT load initially with potential growth to over 9 MW.
- The Greenfield project was projected to cost between $200 Million - $230 Million and be completed in 3 years.
- Given capital constraints, the company engaged CBRE, which then compiled a survey of the potential solutions which included: build-to-suits, modifying existing buildings and leasing wholesale data center colocation space.
- CBRE was able to achieve both a short term and long term solution with a wholesale colocation provider by securing a ten (10) year lease with several fixed option periods and expansion rights.
- The company was able to achieve $130 Million in upfront costs with this solution.
DCS Integrated Data Center Operations maintains the mission critical engineering and infrastructure facilities that are essential for business continuity, particularly where system or process failure would have a major impact on revenue and reputation.

**CAPABILITIES AND SERVICES**

Research has consistently demonstrated that up to 90% of preventable failures relate to human error or process failure. In response, CBRE developed our Critical Engineering Risk Management (CERM™) operational approach to data centers.

This integrated system of robust and tested processes and tools have been proved to reduce human factor related risk by up to 80%. Effective CERM™ is an approach to critical engineering and risk management that is built on the twin foundations of Right Culture and Right Behavior that support the five pillars of CERM™.

**Services**

DC360 is our integrated offering of single source facility management services that encompasses data center design, delivery, operation and maintenance.

DC360 provides the opportunity to increase resiliency and efficiency, reduce costs, and build on the CERM “One Team, One Culture” philosophy. DC360 is modular to provide the flexibility to choose the optimal mix of offerings for any data center. DC360 services include:

- Mechanical and electrical
- Facilities management
- IT services and smart hands
- Insights and facility management consulting
- Project delivery
- Energy and sustainability
CASE STUDY 1  CONSISTENT OPERATIONS AND TRAINING

Challenge:
The client required a more efficient and cost effective way of managing its facilities maintenance across its portfolio. The existing on-site team was reactive and relied on external contractors in order to complete tasks and to effectively respond to any issues. This led to long response times and unnecessary spending.

Solution:
On being awarded the contract, DCS Integrated Data Center Operations engaged its specialist vendors to provide extensive training for the on-site team. This now means the majority of planned and preventative maintenance can be carried out by the on-site team without the need for vendor support.

Results:
» An up-skilled workforce
» Significant reduction in assistance required from external vendors
» More proactive risk management
» Global standard operational consistency

CASE STUDY 2  DECREASE RISK, INCREASING EFFICIENCIES

Client Background:
The client operates several of the largest global enterprise data centers, where maintaining 100% uptime is crucial.

Challenge:
Due to a fluctuation of energy costs and the advances in server load capacity, the client was seeking a consistent approach to drive a new global energy and innovation program. The client also recognized that high staff attrition and human behavior was leading to a direct impact on the risk profile of its facilities.

Solution:
DCS Integrated Data Center Operations created intermediate leadership positions and clear career paths for all employees, resulting in a dramatic increase in site resilience. Additionally, our DC360 solution allowed the team to facilitate multi-disciplined cross team collaborative energy projects.

Results:
» Reduced risk profile as a result of staff retention
» Globally consistent staff training and development strategy
» Reduction in up to 20% operating costs through combining IT and engineering services
DCS Project Management delivers complex technical projects with fast-track timetables, while ensuring the least amount of risk is incurred and maximum performance gained. We provide our clients with comprehensive technical advice to the highest professional standards, founded on innovation and sustainability.

$1.4B
Project Management Contract Value in 2017

65+
Data Center Projects Completed in 2017

300
Data Center Project Managers

3,000+
CBRE Project Managers

CAPABILITIES AND SERVICES
We approach each project individually, serving as the owner’s representative to add early insight during strategic planning, and then coordinating design and construction activities. Our standard data center project management offering is detailed below – other services are available too as we recognize that every project is unique.

Services
» Project planning
» Scheduling
» Procurement and contract administration
» Budgeting and procurement
» Construction administration
» Commissioning management
» Project closeout
» Value engineering
» Development planning
» Utility services planning & coordination
» Project governance and control
» Risk management and quality assurance
» LEED and energy efficiency

We add the greatest amount of value to our customers when we are engaged at the conception of an idea for new space or contraction or renovation. DCS Project Management is able to deliver significant value to its clients by leveraging the experience and best practices we’ve built through working with some of the most technologically advanced and efficient organizations in the world.
CASE STUDY 1  ANTIMICIPATING AND MONITORING RISK MITIGATION

Client Background:
The client selected DCS Project Management to construct their new 182,000 SF Tier III data center within an existing 400,000 SF warehouse.

Challenge:
» Meet the requirements of a high-profile corporation
» Maintain tight expenditure controls over a $150M budget while absorbing an additional $3M worth of mid-project added scope
» Meet an extremely tight timeline and project deadlines

Solution:
» Leveraged the GKN CE/F to provide best in class design and practice guidelines
» Negotiated a lump-sum agreement with the GC and negotiated all change orders
» Negotiated and pre-purchased critical equipment to meet critical path events

Results:
DCS PJM provided a savings of $7.5M on the pre-purchased equipment and an additional $2.5M on change orders and value engineering, resulting in a total of $10M net savings to the overall project budget while creating a new state-of-the-art Tier III data center.

CASE STUDY 2  DECREASING RISK, INCREASING EFFICIENCIES

Client Background:
The company engaged DCS PJM to assist with strategic planning and development management for their Colorado headquarters. In addition to the four-story office building, DCS PJM managed the build out of a 50,000 SF Tier IV data center for the client and a 70,000 SF Tier III data center for a strategic partner.

Challenge:
» Fast track schedule
» Coordination of both user IT/Telco equipment and staff
» Infrastructure equipment delivery and coordination
» Project reporting/communications with local and regional client management

Solution:
» Created a temporary NOC to allow for unimpeded construction
» Pre-purchase of critical equipment
» Virtual project reporting tools

Results:
250,000 SF campus was built on time and to budget.
DCS Consulting helps clients better understand the strategic ramifications and costs of data center decisions across the organization, and is dedicated to advising clients from diverse verticals and geographies across the full spectrum of data center projects.

CAPABILITIES AND SERVICES

Our data center consulting services are diverse, ranging from capacity planning driven by business requirements mapping to physical deployments within the IT stack, through implementation of specific solutions, such as cloud, managed services, disaster recovery, high availability, colocation, greenfield builds, etc.

Services

» Strategic planning
» TCO analysis (CAPEX/OPEX)
» Options analysis and strategic needs analysis
» Consolidation and disposition
» Business case development
» Capacity planning
» Solution acquisition network architecture and procurement
» Data center operations and audit
» Data center design/construction management

By drawing on our extensive experience, we’re able to incorporate best practices from industry peers into your IT strategy, a critical component to ensuring you’re optimizing your architecture according to industry trends and creating a robust and efficient infrastructure.

With the platform of CBRE’s DCS organization as a backbone, we retain the ability to execute on data center and IT strategies derived from our consulting assignments – allowing us to procure the appropriate colocation, managed services, cloud, network or hybrid IT service – a unique ability that ensures an actionable and consistent approach to your data center and IT optimization efforts.
CASE STUDY 1  PORTFOLIO OPTIMIZATION

Challenge:
› Client owned and operated three data centers
› Client’s new architecture demanded two in-region data centers for active/active business continuity reasons and out-of-region for disaster recoverability
› Growth demands showed 500kW of required capacity in the primary and secondary data centers

Solution - Needs Assessment:
› With large M&As in process, high growth needs to be met with sufficient redundant facility requirements
› Client felt they would need capacity to meet the M&A growth but saw through technology optimization and increased automation, that they didn’t require as much capacity as initially thought
› CBRE ran financial scenarios and found an $8M savings on a preferred colocation solution

Results:
› Acquiring 150kW of colocation Space for their primary data center in 2016
› Acquiring 150kW of colocation in 2017 for the secondary data center to achieve active/active configurations
› Utilizing an existing owned asset out of region for their DR site

HIGHLIGHTS

Client  Confidential federal financial services company
Scope  Strategic consulting; Advisory & transaction services
Size  500 kW
Savings  $8M, 40% savings (10 year TCO)

CASE STUDY 2  RIGHT SIZING IT REQUIREMENTS

Challenge:
› Client’s existing primary data center was out of cooling capacity

Client’s IT Organization Needs Assessment:
› New 62,000 SF build-to-suit data center environment
› 1,100 kW over 12,000 SF of raised floor with a $40 - $80M capital cost

CBRE DSC - Needs Assessment:
› 271kW over 2,300 SF with a $4.8 - $26.3M NPV cost depending on chosen alternative
› Contrast to initial target of 1,100 kW and 12,000 SF of raised floor
› 75% lower kW and 81% lower SF than April, 2013 project parameters
› Deploy a new active/active HA IT architecture in new secondary data center

Results
› $40 - $59M lower capital cost projections for secondary data center than April, 2013
› $40M retrofit cost avoidance for existing primary data center

HIGHLIGHTS

Client  Confidential Fortune 500 financial company
Scope  Strategic consulting; Facility management; Advisory & transaction services
Size  Greenfield enterprise secondary data center
Savings  $40–59M in identified savings