GREEN HOUSE DATA

Built right. Just for you.

Data Center Build vs. Buy
How to Decide

Eventually, enterprise data centers reach capacity, whether that's power, space, or cooling. Every workload may not be suited to the cloud, so IT managers must decide whether to lease data center space in a colocation facility or build out a new data center in-house.

Of course we'd like you to colocate in our data centers, but the ROI, risk, and core competencies must be judged by each individual organization. Here are some considerations when deciding whether to build or buy your new data center.

PRIMARY EXPENSES OF COLOCATION VS. BUILDING A DATA CENTER*

	Colocation	Build
Initial Costs	Setup and racking fees vary by provider	Planning, design, and commisioning can be up to 25% of total cost
Building Shell	Included in rent	$200 per square foot
Building Permits & Taxes	Included in rent	Varies
Security & Fire Suppression	Included in rent	$100,000 or more depending on size
Data Center Equipment	Included in rent	$7,000 - $20,000 per kW
Cross Connects	Most providers charge $100 - $2,000 per month	$10,000 per mile to connect fiber
Power	Local commercial rate plus multiplier; or flat rate of $15 - $50 per amp per month	70% - 80% of operational expenses—the average commercial rate in the USA is $0.112 per kWh
Staff	Green House Data provides several hours per month plus 24/7 support; providers charge $100 - $250 per hour	Varies but salaries range from $35,000 for security personnel to $65,000 and up for technical employees
Annual Maintenance	Included in rent	3% - 5% of construction cost annually

Weighing a Build

Before building or colocating, you'll need to evaluate your current and future infrastructure requirements. If they are variable, cloud could be an attractive option. If you foresee the need for a fixed or steady growth, or must own your hardware for other reasons, a data center build or lease is worthwhile.

The main benefit of owning a data center is control. This includes the access, maintenance, and future improvements. That can also be a drawback—hardware refreshes are required every 3-5 years. Data center operation may not be a primary competency of your IT department, requiring additional staff or at least additional OpEx.

Building a data center requires significant upfront investment, but depending on the size and Tier rating it could have an ROI of 5 years or less. Gartner recommends leasing colocation space for Tier 2 or 3 deployments if leasing costs are $1,500 or less per month. Consider the upfront costs of building a data center:

- *planning, design, and commissioning*
- *building shell and property (or retrofitting if already owned)*
- *building permits, taxes, and construction costs*
- *mechanical equipment and infrastructure (cooling, UPSs, chillers, switches, server racks, generators, etc)*
- *new fiber circuits*
- *security and fire suppression systems*
- *power*
- *staffing*

Even beyond raw costs, you must think about the daily operation of a highly-available data center. Does your team have the experience and

A future data center floor.

qualifications to keep infrastructure available 99% or more of the year? Is someone available at all hours to tackle emergencies? What about maintaining and updating the facility and equipment? Maintenance costs can add up to as much as 5% of your initial building expenses annually.

Colocation Advantages

Even if you decide building a data center will return your investment in an acceptable time frame, colocation can still be advantageous. A company dedicated to data center design and operation can arguably run your IT equipment more efficiently (at a lower PUE) and in a more controlled environment, extending hardware life.

Remote hands services (a portion of which are included in every Green House Data colocation contract) allow you to accomplish mundane tasks like racking servers or rebooting without using the time of your IT team. With dedicated NOC staffing and the latest monitoring tools and software, threats and maintenance are all handled as part of the contract.