MIDCO BUSINESS

OUTSOURCING TO A DATA CENTER

Is Now the Time for My Business?

We live in an ever-evolving digital world, where we've grown increasingly accustomed to having our files, images and documents at our fingertips.

As a result, most of the processes once done by hand – from recordkeeping to banking – are now being powered by data-driven applications and programs designed to keep us moving faster to meet new expectations.

Our data-driven digital world is growing exponentially. **By the year 2020, there will be as many digital bits as there are stars in the universe.**[1] Data that we create and copy every day is doubling in size every two years – and will reach an estimated 44 zettabytes in the next few years.[1] To put it into perspective, that number has 21 zeros!

While the majority of the data is created by activities completed by people, **businesses are actually the ones responsible for keeping 85% of all data created safe** – including information like email addresses, account details, social security numbers and location stamps.[1]

Add in the applications many companies use to function on a regular basis and, all of a sudden, we're talking about running and storing a lot of critical information.

Businesses today face a growing need for secure, environmentally protected data servers and equipment, without compromising network speed. That's where data centers come in.

1 The Digital Universe of Opportunities: Rich Data and the Increasing Value of the Internet of Things, Q22014

Did You Know?

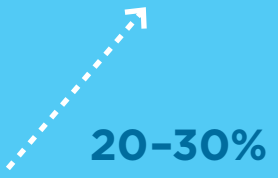
73B kWh

Data centers in the U.S. are projected to consume 73 billion kilowatts per hour (kWh) in 2020, increasing from 70 billion kWh in 2014.[2]

$1 TRILLION

Gartner recently stated that more than $1 trillion in IT spending will be directly or indirectly affected by the shift to cloud during the next five years.[2]

Cisco's Cloud Index report indicates that by 2020, the total global installed data storage capacity in cloud data centers will account for 88% share of total storage capacity, up from 64.9% in 2015.[2]



20–30%

A recent survey from the Association for Computer Operations Management (AFCOM) found that data center managers nationwide predicted data storage needs would increase by 20-30% in the next year.[2]

2 AFCOM-State of the Data Center Report, Q12018

The Benefits of a Data Center

As a business owner or manager, you have computer systems, servers and other IT equipment that keep your business humming every day. This equipment works as hard as you do – and is critical to the wellbeing of your business.

Data centers ensure that equipment like yours is protected and performing at its best, and you don't have to build your own data center to reap the benefits. Outsourcing partners provide you with a space to house your equipment within a facility, with an additional commitment to keep it safe and sound.

Depending on what your business needs and goals are, data centers can provide a wide variety of benefits – here are just a few.

Stable, Highly Available Power

While you might run 8 to 5 – data centers don't punch a time clock. There is a constant, steady stream of power flowing in and out of the data center system 24/7/365. Data centers are ready to withstand neighborhood power outages and even natural disasters through a redundant supply of energy via alternate power sources (such as diesel power generators). Equipped for the worst, data centers never quit.

Environmental Controls

Your business was built to provide you and your customers with a comfortable environment, but the ebbs and flows of the HVAC system don't spell success for technical equipment. Your IT equipment pumps out heat day in and day out – meaning that it doesn't function at its highest potential when the average HVAC is heating your professional space for Midwest winters and working overtime during the summer.

A proper environment isn't one that opens the door to dust, insects and other foreign elements, either. Data centers are built to keep your equipment comfortable, and the environment is monitored 24/7, with systems in place to trap outside elements. This can ultimately prolong the lifespan of your equipment, saving you money down the road.

Security

Can you guarantee to your employees and customers that their information is safe? What would happen if your equipment was destroyed or even hacked?

According to a 2017 study from the Pew Research Center, a nonpartisan social science research institute, roughly half of Americans (49%) feel that their personal information is less secure than it was five years ago, with the percentage increasing to 58% for Americans age 50 and older.[3] As our online activity increases, so does doubt that our information is safe.

Data centers provide peace of mind for your business – and ultimately, your customers. Built with layers of security, outsourcing in a data center can provide you with 24/7 monitoring and

3 Pew Research Center: Americans and Cybersecurity, Q12017

a dedicated team of professionals checking the system every day. Plus, you can choose to keep your access equipment under lock and key in a caged space or even a private suite.

Lower Facility and Equipment Costs

In April 2018, Google announced it would invest an additional $1.8 billion in its Oregon data center. Since 2006, the company spent $10.5 billion on data center facilities, including the recent decision to build a $600-million center in Tennessee.[4] And while we know it's a leap to compare the average data center to a Google data center, it might give you an idea of the importance of off-site data centers.

Ultimately, power, cooling, redundancy, monitoring, growth, expansion and staffing (among other factors) come at a cost – an investment your business doesn't have

4 Seattle Times: Google touts $1.8 billion investment in Oregon data center, Q22018

Ask The Expert

TIM KITTALA

Director, Data Center Strategy // Parallel Technologies

In your experience, what is the biggest reason businesses choose to outsource their data center services?

The major driver is investment or cost.

Why is that?

We have found that customers choose to "get out of the data center business," because of the impact to resources from a time-implementation standpoint, especially when it comes to operations and maintaining a critical environment. Managing a data center can easily become a full-time job for an individual who needs to constantly balance the IT requirements needed to meet the goals and objectives of both the data center and the business.

How do you see the data center landscape changing over the next five years?

The data center landscape's biggest change over the next five years will probably come from the immense amount of data being consumed on a daily basis. This network demand will force companies to get smarter and be more flexible on how they manage the deluge of data from bandwidth, latency, storage and cost standpoints. They will also need to justify how they will leverage said information, which will inevitably change the equipment located within the data center.

What about 10 years from now?

Taking a broader look at the next 10 years – it's probably wise to look at the history of the data center. If there's a major change to a data center's IT infrastructure, that impacts the load demand profile – either power, cooling or network. Because of these continual changes and dynamics, the choice between serving IT equipment in the cloud, colocation and on-premises will require flexibility, but more importantly, a purpose-built facility. With the focus on operations, being flexible is the only way to handle this changing landscape.

Parallel Technologies uses years of technical expertise and experience in critical infrastructure to provide complete solutions for reliable data centers and intelligent buildings.

By creating distance between your headquarters and your data center, you're eliminating the risk of a single event – such as a utility blackout or natural disaster – taking out both facilities.

to make when outsourcing is an option. Essentially, you don't have to be Google or have access to funds like Google – to reap the business benefits of choosing a data center provider.

Reliable Internet Access

Data centers can provide you with direct network access – giving you, your customers and your employees the instant connection we all crave. The average web page takes about 15 seconds to load entirely, but the average person will leave a page if it takes longer than three seconds to load.[5] If potential customers aren't receiving the speed they need to your site because the servers are bogged down, you might be losing out on business.

If you are experiencing a lag, bandwidth could be an underlying issue, too. Data centers provide direct network access – so your bandwidth is faster, and more reliable.

Risk Mitigation

By creating distance between your headquarters and your data center, you're eliminating the risk of a single event – such as a utility blackout or natural disaster – taking out both facilities. Choosing a data center that is geographically diverse, away from your primary data and IT resources, is just another way to protect your critical equipment.

Less Responsibility

Owning your own business is challenging. Wouldn't it be nice to have one less worry? Outsourcing your data equipment can help make that happen. Whether you're a small business without an IT team, or have only one IT staffer, choosing a data center provider that will perform reboots and backups can make things easier for you.

5 Think With Google: Find out how you stack up to new industry benchmarks for mobile page speed, Q12018

Should Colocation Play a Role in My Business?

Housing equipment in a data center isn't for everyone. Keeping your equipment near you, on-premises can have its benefits, too. However, more businesses are starting to see the upside of data center protection and downfalls of having solely in-house equipment.

Colocation is the industry term for when a business houses technical equipment in a third-party data center.

Five Questions to Ask Yourself *Right Now*

1. Where is my company's equipment currently located – and is it safe?
2. How do we backup critical data?
3. What kind of core applications do we rely on to function every day?
4. Are we experiencing slower than normal speeds when accessing our core applications?
5. Do we have an IT strategy that will set us up for success three years from now?

Could This Be You?

Midco's team isn't new to the data center business. In fact, our team has a combined five decades of experience in managing data center infrastructures – not including our experience engineering and managing our own network gear and data, which powers one of the most robust networks in the country.

As a result, we've seen a thing or two, and can provide guidance on when it's a good time to colocate. While the following scenarios are (mostly) fictional, if the situation sounds like your business, it's time to think about whether your needs require in-house equipment, data center colocation or a mix of both.

TECHNICAL NEEDS

Availability: Whether or not the equipment needs to be easily accessible by staff

Infrastructure: The building or facility that the equipment is stored in is suitable for IT and server equipment

Performance: Measures how quickly the business needs their equipment to complete commands

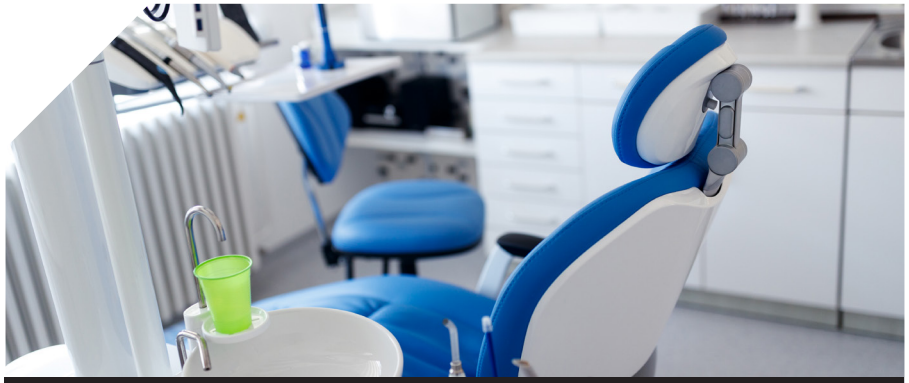
Throughput: Allows for a high amount of information to pass through a system or process

Company A is a large-scale cabinetmaker.

Company A uses a database management system to store customer records and past project information – and likes to have it readily available for its sales staff, should a customer have questions. The thing is, the sales staff works remotely from all over the area, causing slow database access and website slowdowns. **There just isn't enough bandwidth to get complex records on demand.**

MIDCO ASSESSMENT: Company A values performance over everything else. Its staff members need access to the database at the drop of a hat, and the website needs to stay up and running for potential customers. Moving the cabinetmaker's servers to a data center backed by a reliable network will give them the direct, dual path network access to solve performance issues.

Technical Need	On-Premises	Data Center
Availability	↑	↑
Infrastructure	↓	↑
Performance	↑	↑
Throughput	↓	↑



Company B is a dental clinic.

Company B recently transferred all of its paper customer records into an electronic system. They didn't think much about the equipment that kept that system up and running, and don't have an IT manager on staff, so they put everything in the basement and shut the door. Spring came, and so did the flooding – straight into the basement. All of the server equipment is compromised.

MIDCO ASSESSMENT: **Company B needs protection from Mother Nature, but doesn't have the expertise or capacity to build and maintain a safe place to house its own data.** Frankly, they just want one less thing to worry about – they know teeth, not IT. Transferring their server equipment to a data center will help protect it, and enable specialists to perform backups and reboots for them.

Technical Need	On-Premises	Data Center
Availability	↓	↑
Infrastructure	↓	↑
Performance	↑	↑
Throughput	↑	↑

Company C is a bank.

Company C has three locations in two nearby towns, and takes care of managing its IT equipment in small areas at each location. Recently, opportunity came knocking. It acquired another bank, and now has eight diversely placed locations. With the acquisition came more equipment and applications, also diversely located, and the bank's **IT team is often driving to each office location to manage it all.**

MIDCO ASSESSMENT: Company C needs to consolidate and store its IT equipment in one place. By moving to a data center, they'll be able to streamline their processes and save on travel time.

Technical Need	On-Premises	Data Center
Availability	↓	↑
Infrastructure	↓	↑
Performance	↓	↑
Throughput	↑	↑

Company D is a local boutique.

Company D has a small storefront, but it also thrives on online sales. All the IT equipment is in the backroom, locked away with the safe. But they just experienced a robbery. Thieves broke into the backroom and in the process of stealing the safe, they destroyed the IT equipment, along with the boutique's data backup.

MIDCO ASSESSMENT: Not only does Company D **need better security, but it also requires a diverse backup strategy.** Plus, multiple locations would provide an additional level of business continuity. By moving its critical pieces to a data center, the boutique will get all this and more.

Technical Need	On-Premises	Data Center
Availability	↑	↑
Infrastructure	↓	↑
Performance	↑	↑
Throughput	↑	↑

Tell Me About The Tiers

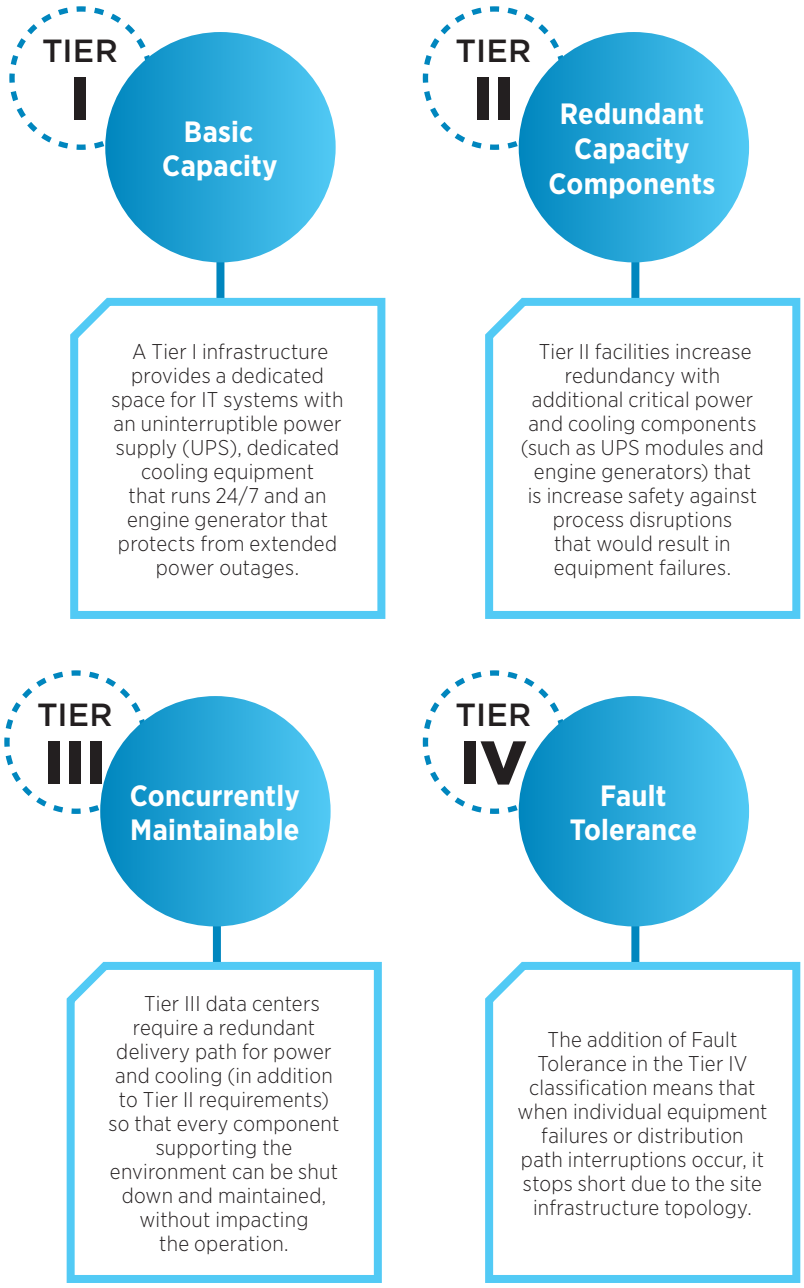
In 1993, the Uptime Institute started constructing a system to evaluate data center infrastructure performance, or uptime. Now present in more than 85 countries around the world, the Tier Standard has become the industry's trusted global standard for data center design, build and operation. The levels are progressive, meaning you must meet the lower requirements before achieving the next.

In the U.S., there are only 100 data centers certified by the Uptime Institute.[6] The Midwest includes 24 certified facilities, with 88% at the Tier III level.[6]

An ideal data center is one with a facility design and structure based on these tiers. Knowing which level your business needs is something to consider when choosing an outsourcing partner.

DID YOU KNOW?

Midco's data centers are built to Tier II and Tier III standards.



6 Uptime Institute: Uptime Institute Tier Certification World Map, 2Q2018

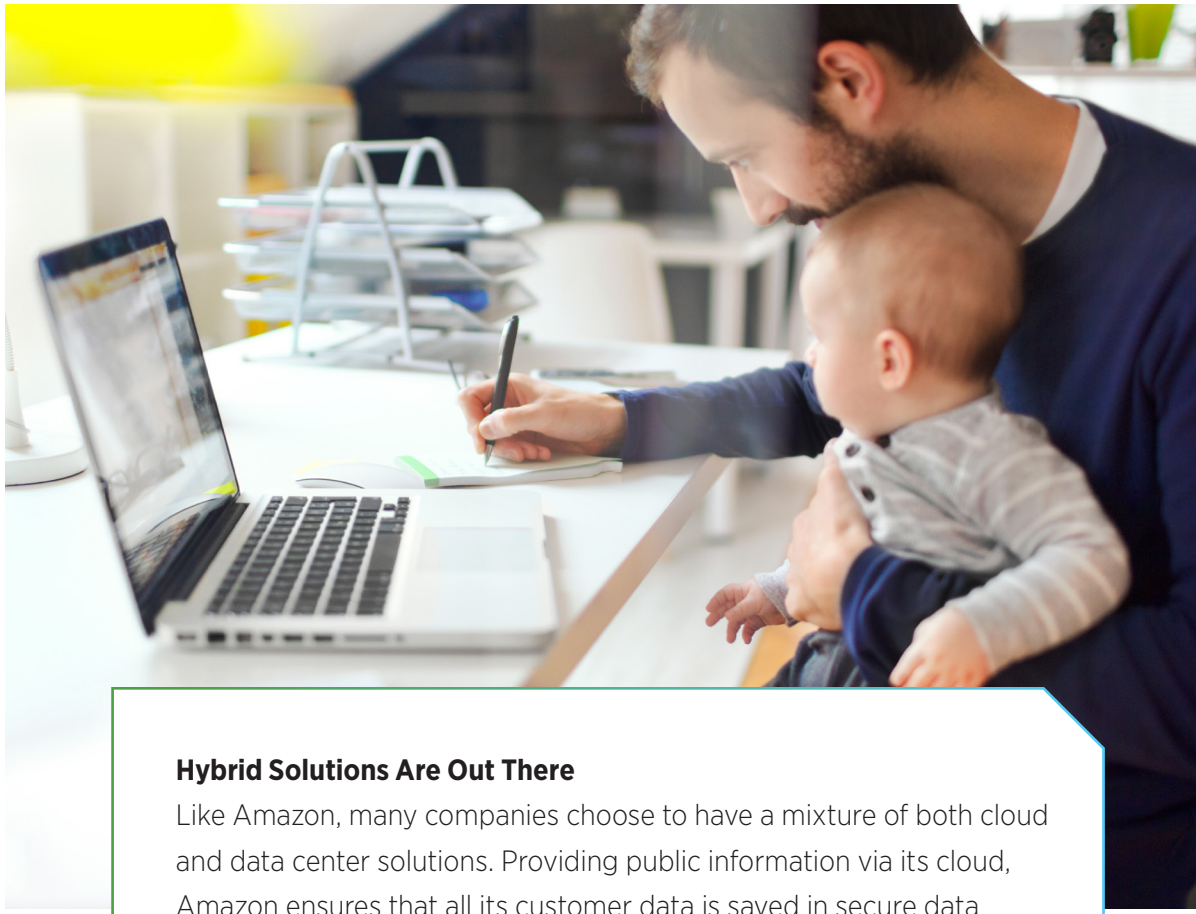
What's Cloud Got to Do With It?

Everyone keeps telling you to move your data to a virtual cloud and ditch your server equipment. Yet, here we are, telling you how important your physical equipment is and that you should consider moving it to a data center to keep it safe. Let's take a moment to break down how the cloud relates to the data center.

Without Data Centers, the Cloud Wouldn't Exist

The idea that the cloud is going to lead to the death of the data center is a myth. The cloud's existence begins and ends within data centers.

For example, when you wake up in the morning and ask Alexa what the weather report is, she accesses Amazon's cloud-based servers to quickly tell you that it's 75 degrees and sunny outside where you live – completing your request.[7] Your request, along with your voice recognition data, is then stored in one of Amazon's many data centers, so that they can remember you in the future and personalize your Alexa.



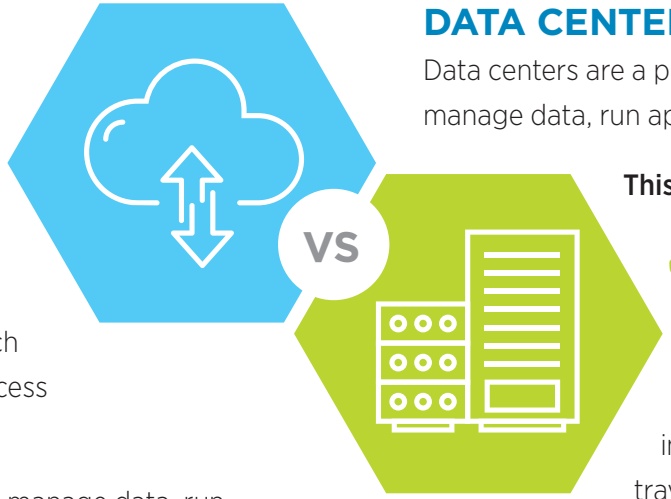
Hybrid Solutions Are Out There

Like Amazon, many companies choose to have a mixture of both cloud and data center solutions. Providing public information via its cloud, Amazon ensures that all its customer data is saved in secure data centers. If your business needs to maintain a private network while also interfacing with the public, creating a hybrid solution is for you. Just remember, choosing the right outsourcing providers will mean more security and less work.

7 Amazon, Alexa and all related logos are trademarks of Amazon.com, Inc. or its affiliates.

CLOUD ENVIRONMENT

The cloud is not a physical space – hence the name. It's actually a large network of remote servers from all over the world, connected together to operate as a single system. So, instead of accessing files and data from your local computer, you're accessing them online from any device – which what makes it possible for you to instantly access information anywhere you go.



A cloud environment is designed to store and manage data, run applications and deliver content.

This type of storage is great for businesses needing:

- ✔ **Accessibility**
  Cloud serves make it easy to access and maintain your data remotely from different geographical regions – but can also make it easy for others to access your data as well.
- ✔ **Instant Scalability**
  Because the storage is all virtual, cloud service providers allow you to easily grow as you need to by adding more virtual space anytime.
- ✔ **Mass Distribution of Public Information**
  Things like the daily weather report and cat videos belong on the cloud – along with your website – making them accessible at all times.

DATA CENTER ENVIRONMENT

Data centers are a physical space and are also designed to store and manage data, run applications and deliver content.

This type of storage is great for business needing:

- ✔ **Secure Infrastructure on a Private Backbone**
  Data center providers that also own their own network can help you to keep your critical equipment secure both physically and virtually by sending information via a private cloud. Your information never travels through the public internet.
- ✔ **Private Records Maintained**
  If you have information that you don't want others to have access to – like social security numbers and patented applications – data centers will keep those records physically secure.
- ✔ **Speed & Control**
  When you outsource to a cloud provider, you're giving them the power to maintain your data for you. Outsourcing to a data center will help you maintain control.

Are you ready to learn more about outsourcing your data center services?

A Midco consultant is ready to discuss your needs.

Midco.com/Business/Contact | **1.800.888.1300**

Or learn more about Midco data center offerings at **Midco.com/DataCenters**.

ABOUT MIDCO | Founded in 1931, Midco is dedicated to providing industry-leading solutions to the businesses it serves. Midco currently owns and operates four state-of-the-art data centers, diversely located throughout the Midwest.