HOW TO BUILD A GLOBAL DATA CENTER STRATEGY

IRON MOUNTAIN®
DATA CENTERS

7 CONSIDERATIONS IN A GLOBAL DATA CENTER STRATEGY

Developing a global data center strategy takes time, and there are many elements that need to be evaluated. Yet there are seven key considerations that are the foundation of a strong global strategy. Here's a look at what to consider.

WHY DO YOU NEED A GLOBAL DATA CENTER STRATEGY?

Even if you're a smaller organization, you want the ability to expand and scale. With the right colocation partner, you can easily add coverage across the US, or in international markets like Singapore, Frankfurt, Amsterdam or even India.

If you're a global hyperscale customer, it's important to be able to work with a data center partner that can ensure your requirements are consistently met on all continents. The right colocation partner understands your design requirements and can meet your frame-work of terms and conditions for

HERE ARE SEVEN THINGS TO CONSIDER AS YOU BUILD YOUR GLOBAL DATA CENTER STRATEGY

1. **Site Selection And Risk Factors**
2. **Hub Selection**
3. **Availability, Cost And Type Of Power**
4. **Connectivity**
5. **Ability to Expand**
6. **Consistency**
7. **Global Ambition**

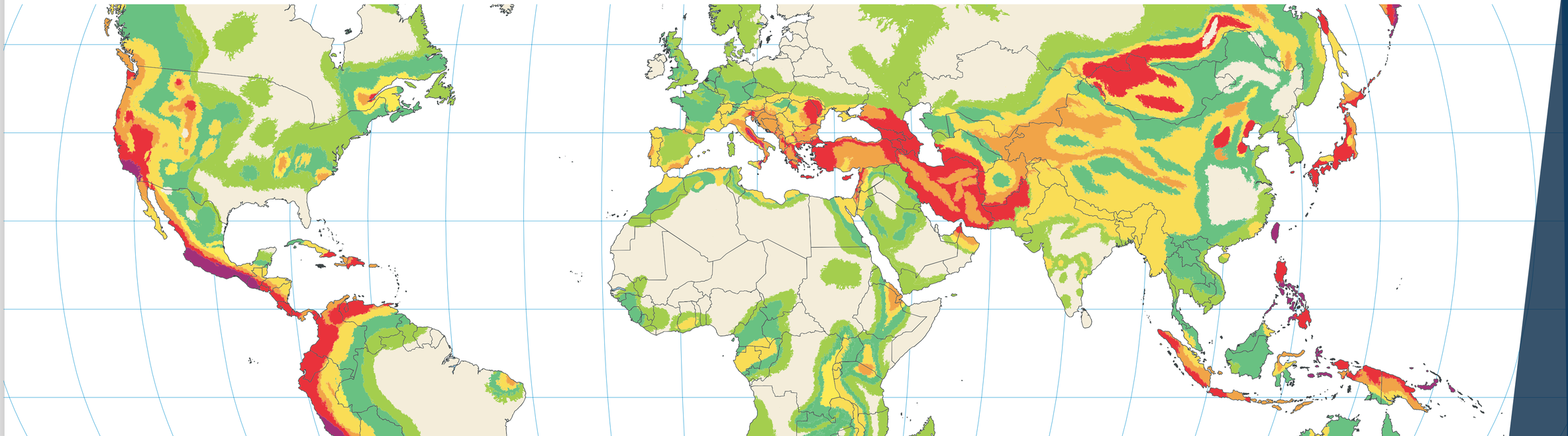
SITE SELECTION AND RISK FACTORS

1

Look for locations that offer safe building opportunities. First, consider weather-related threats. Is this location subject to earthquakes or natural disasters? Is it at risk of flooding?

Then evaluate less visible, yet potential hazards, such as airports or flight paths. If the most robust physical and environmental security is required, consider an underground facility.

Finally, look at the political stability of the country and region being considered. Identifying risk factors will help you eliminate potential danger zones and zero in on beneficial locations.



HUB SELECTION

2

Once you've selected key data center locations, look for a provider whose global platform maps to your needs. For data control and market reach, that often means metro hubs in North America and Europe. You might also consider a mix of advanced and emerging markets in and around Asia Pacific and elsewhere.

Apply the same rigorous assessment for each new continental hub that you did for your first data center, looking at natural risks, as well as each location's political stability. Latency to end-users should also be considered as more and more apps run across geo-diverse clouds.

Global Data Center Colocation and Interconnection Providers

Source: IDC, 2021

The range of global colocation players continues to grow. The 2021 IDC MarketScape vendor assessment of Worldwide Datacenter Colocation and Interconnection Services lists nine market leaders and major players. Each one has the scale and capability to support enterprises with the need for global reach. They include newer fast-growing global players like Iron Mountain Data Centers as well as more long-established global players.

WHERE ARE THE TOP DATA CENTER MARKETS?

NORTH AMERICA
- Northern Virginia/Washington D.C. (IMDC)
- Phoenix (IMDC)
- New York/New Jersey (IMDC)
- Chicago
- Silicon Valley/San Francisco
- Dallas/Fort Worth
- Atlanta
- Los Angeles/Southern California
- Seattle/Portland
- Austin/San Antonio

EUROPE
- Amsterdam (IMDC)
- Frankfurt (IMDC)
- London (IMDC)
- Paris
- Dublin
- Madrid

ASIA
- Singapore (IMDC)
- Delhi (IMDC)
- Mumbai (IMDC)
- Pune ((IMDC)
- Hong Kong

EMERGING MARKETS
- India
- Dubai
- Chile
- Argentina
- Poland
- Czech Republic

AVAILABILITY, COST AND TYPE OF POWER

3

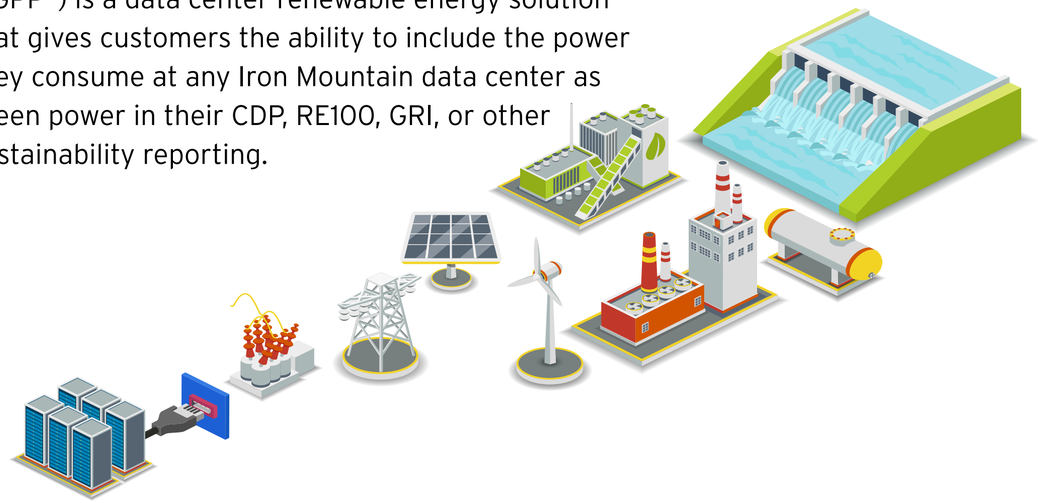
Power availability, redundancy and pricing are key concerns from both a continuity and cost perspective. First, ensure adequate power is available for your growing needs. Constrained resources can limit data center capacity.

Then consider energy cost. Energy is understandably one of the most significant expenses in a data center. Costs are location dependent. National/state and local taxes and incentives can also make a significant difference.

Next, consider the efficiency of the data center facility infrastructure, which is measured as PUE (power usage effectiveness). PUE varies significantly from market to market, as this study by the Uptime Institute shows. Look for a combination of low design PUE and modern facilities with the latest cooling designs and water use. Picking a location with efficient design can save a significant amount of energy cost over the long term.

While many organizations talk about their targets, look for a colocation partner that has put that commitment into action. Has the provider joined the RE100 or is a member of the Renewable Energy Buyers Alliance (REBA)? Have they signed the United Nations Global Compact? And if renewable energy is in place, are the benefits shared with customers?

Iron Mountain data centers are powered by 100 percent renewable energy. Our Green Power Pass ("GPP") is a data center renewable energy solution that gives customers the ability to include the power they consume at any Iron Mountain data center as green power in their CDP, RE100, GRI, or other sustainability reporting.



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AT IRON MOUNTAIN DATA CENTERS, WE'RE FIRMLY COMMITTED TO SUSTAINABILITY AND GREEN ENERGY SOLUTIONS. THIS MEANS POWERING OUR DATA CENTERS FROM RENEWABLE ENERGY SOURCES; **IT MEANS DESIGNING THE MOST ENERGY-EFFICIENT FACILITIES WE POSSIBLY CAN AND USING THE VERY LATEST TECHNIQUES AND ENGINEERING INFRASTRUCTURE TO PROVIDE EFFICIENT POWER AND COOLING TO OUR DATA HALLS.**

– ALEX SHARP, GLOBAL HEAD OF DESIGN & CONSTRUCTION,
IRON MOUNTAIN DATA CENTERS

CONNECTIVITY

4

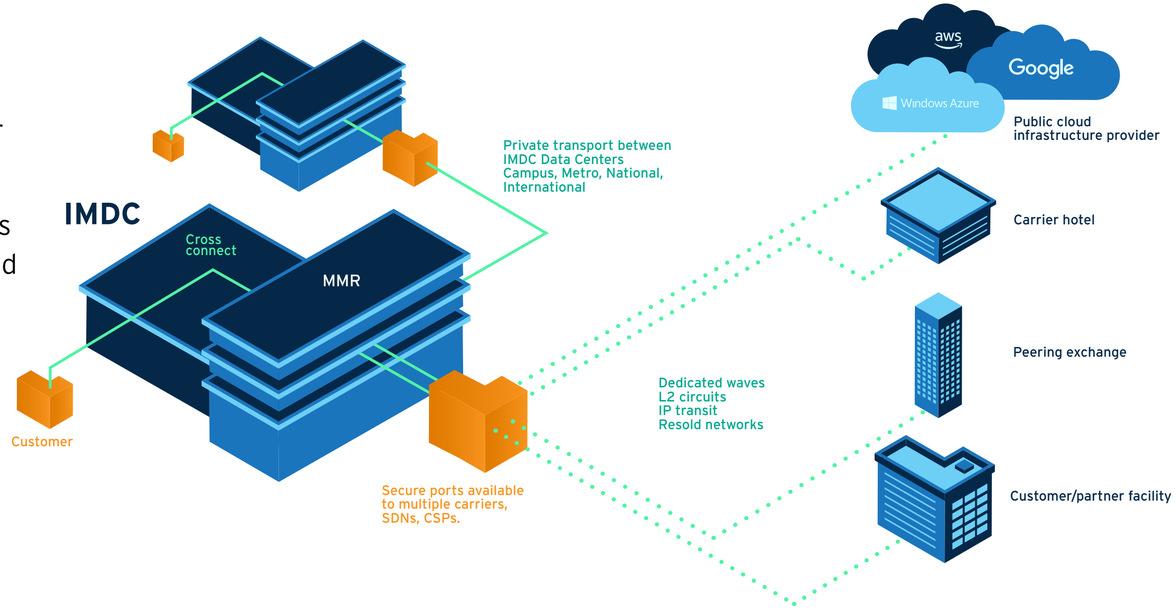
An important factor to consider in your global data center strategy is having access to an ecosystem of network service providers (NSPs), cloud service providers (CSPs) and a diverse variety of service and solution providers.

Look for a colocation partner that supports a vendor neutral approach to solution providers.

Colocating with the right data center partner ensures a rich networking ecosystem that enables you to build interconnections at cost, and scale as your requirements change.

A rich network ecosystem can provide you with a broad selection of IP transit providers, peering exchanges, cloud on-ramp services, metro connectivity and physical and virtual cross connects.

Iron Mountain's global network service portfolio enables our customers to connect to the carriers, clouds and partners of their choice, in a way that makes sense for their business.

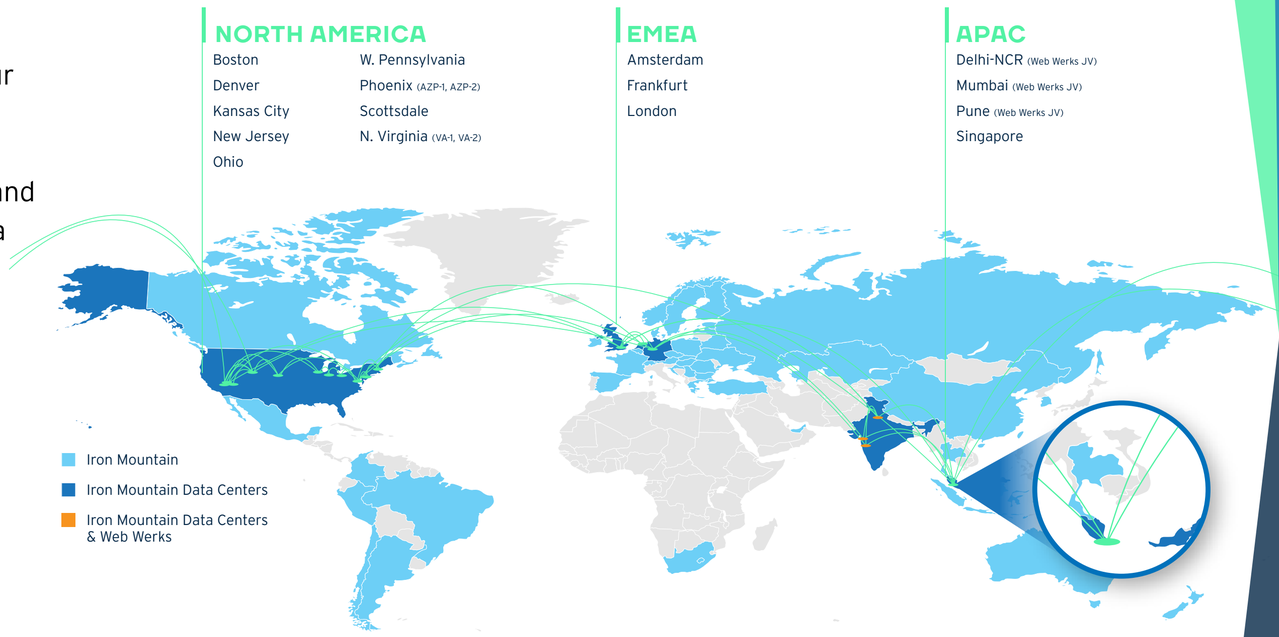


ABILITY TO EXPAND

5

Look for a provider that gives you the ability to expand globally. As digital demand grows and your business expands, you need options to scale your data center footprint and establish connectivity between deployments without comprising cloud and network connectivity needs. With data center as a service (DaaS), you can easily scale as you grow.

At Iron Mountain Data Centers, our global data center platform includes facilities in top data center markets on three continents, from Northern Virginia to Singapore to Frankfurt. We can support your growth strategy for the future.



CONSISTENCY

6

Partner with a data center provider that offers consistency throughout their portfolio. Yes, every data center market has local nuances. In Asia, data centers must deal with humidity, while places like Phoenix are hot and dry. Data centers may use different types of cooling or materials components across the globe.

Even with these local nuances, you need a colocation partner that offers consistent service, compliance, and security standards throughout their portfolio. This streamlined solution takes the guesswork out of your data center strategy. You'll have a data center partner you can count on.

While some data centers have multiple portals with differing services at their locations, at Iron Mountain Data Centers, our Global Network Operations Center (GNOC) and Smart Hands global standard provides a consistent platform across our portfolio. You'll have the same excellent standard of service no matter what Iron Mountain data center you choose.

IMDC Data Center Compliance

	AMS-1	AZP-1	AZP-2	AZS-1	BOS-1	DEN-1	KCM-1	LON-1	NJE-1	OHS-1	SIN-1	VA-1	VA-2	WPA-1
ISO27001 (Info Sec Mgmt)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ISO50001 (Energy Mgmt)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ISO14001 (Environ Mgmt)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SSAE18 SOC 2 Report	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PCI-DSS (report)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Green Power Pass	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Green Lease Leaders	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SOC 3 (report)	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HITRUST (aligned)	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NIST 800-53 (report)	–	✓	✓	✓	✓	✓	✓	–	✓	✓	–	✓	✓	✓
FISMA HIGH (aligned)	–	✓	✓	✓	✓	✓	✓	–	✓	✓	–	✓	✓	✓
HIPAA (Type I)	–	✓	✓	✓	✓	✓	✓	–	✓	✓	–	✓	✓	✓
ABS OSPAR (report)	–	–	–	–	–	–	–	–	–	–	✓	–	–	–
BCA Green Mark Platinum	–	–	–	–	–	–	–	–	–	–	✓	–	–	–
ISO45001 (Occ Health & Safety)	⊗	⊗	✓	⊗	⊗	⊗	⊗	✓	⊗	⊗	✓	⊗	⊗	⊗
ISO9001 (Quality Mgmt)	✓	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ANSI/TIA-942	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	✓	⊗	⊗	✓	✓	✓

✓ Yes ⊗ TBD – N/A

GLOBAL AMBITION

7

Finally, look for a global colocation partner that matches your vision. The right global partner will enable your organization as you grow and change, keeping your sustainability targets in mind. Look for continued investment and evaluate how your provider is growing and in what directions. Will they be able to meet future needs you may not have defined yet?

Many colocation providers are expanding through organic growth and acquisition. Finding a balance between these is key to ensuring that the double-digit growth of the sector fuels your ambition without undermining service levels because your provider is trying to integrate too many new businesses under one umbrella.

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