

Drive for growth in the age of sustainability

Why finding the right global data center partner with established sustainability credentials and a proven innovation track record is the key to enable growth and ensure net zero.



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In today’s connected, data-driven world, organizations across every sector are looking to strike the right balance between driving strategic growth now, innovating for the future, and realizing their sustainability ambitions.

Data is at the center of this complex equation, with quickly growing capacity requirements, as well as the volume and variety of data that organizations manage, making the access to agile data centers more critical than ever.

This is being driven by new and emerging tech like AI, Machine Learning, 5G and IoT that continually increase the need to grow and evolve compute and storage capabilities. And the rapid enterprise adoption of Hybrid- and Multi-Cloud which in turn creates new customer expectations.

But as all these trends converge and blend in more and more into our everyday lives, businesses are now also faced with the need to not only deliver against these increasingly complex requirements but do so in a way that will have minimal environmental impact at the same time.

The wider sustainability drive to significantly reduce carbon footprints means there is a growing pressure on organizations from investors, customers and employees alike to meet diverse ESG goals and innovate to join the global effort to reach net zero.

To strike the right balance, businesses must weigh the requirements around strategic growth ambitions and the consequent increase in data volumes, with the responsibility of becoming truly sustainable over the long-term.

“ To achieve growth goals while meeting the sustainability pressures, **businesses need a trusted data center partner that brings global capabilities as well as continual innovation at scale.** ”



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Maintaining net zero ambitions alongside a drive for growth will require businesses to learn how to integrate sustainability initiatives into their overall business strategy.

To achieve that, they must first have a clear, practical understanding of the three critical elements that can be utilized to drive sustainability of data-related operations and act as a catalyst for that long-term change. And be aware of various regulations, and wider sustainability-related initiative and targets.

At NTT, we're committed to achieving net zero emissions across operations by 2030 and across our value chain by 2040 as well as 100% renewable energy in our data centers by 2030, and in our offices and facilities by 2035.¹

“ **NTT's climate strategy is guided by the United Nation Sustainable Development Goals (SDGs). Our net zero emissions and 100% renewable energy targets have been submitted to Science Based Targets initiative (SBTi) for validation.**



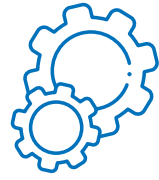
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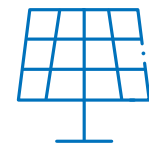
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Operational efficiency

– the ability to utilize available resources effectively, minimize waste, and function in a cohesive, connected and agile way across every area of business to drive optimal results.

At NTT, our global data center facilities are always designed to be as efficient as possible. Our Berlin 2 Data Center uses intelligent power management and power-saving components. It also helps decarbonize the regional energy supply by re-using up to 20% of the heat it generates.² While our site in Navi Mumbai uses Liquid Immersion Cooling (LIC) and Direct Contact Liquid Cooling (DCLC), improving energy efficiency for the facility by almost 30%.³



Using green power sources

– either sourced externally by identifying a right partner to supply your operations with eco-friendly energy or created internally by investing in building and maintaining your own source of renewable energy e.g., a solar power plant.

In the U.S. we use Power Purchase Agreements (PPAs) whereby every megawatt-hour of renewable energy we generate is exchanged for Renewable Energy Certificates (RECs) that can be applied as carbon credits to move us closer to our net zero goals. Globally, we have already reached over 1 million MWh of renewable energy.



Physical design of data center facilities

– to ensure they are future-ready by utilizing optimal power, connectivity, cooling and security systems while also taking into account any unique, local factors.

Our Silicon Valley SV1 Data Center campus is the first data center in the U.S. that utilizes a base isolation system for earthquake resistance⁴, which was a need specific to its location in California. It also has a comprehensive recycling program, and four electric vehicle charging stations installed, among other initiatives.

Naturally, gaining an understanding of all the different steps that can be taken to drive more eco-friendly data center operations is only the first step to success. To fully realize their sustainability ambitions, organizations need a partner that truly understands their challenges and brings global data center capabilities while being equally committed to the pursuit of sustainability initiatives.

1. NTT, Our sustainability ambition, <https://services.global.ntt/en-gb/about-us/sustainability-ambition>
2. NTT, Berlin 2 Data Center Goes Live, <https://services.global.ntt/en-gb/newsroom/berlin-2-data-center-goes-live>
3. NTT, NTT leads the way for green technologies in data centers with first deployment of Liquid Immersion Cooling and Direct Contact Liquid Cooling technologies in India, <https://services.global.ntt/en-gb/newsroom/ntt-leads-the-way-for-green-technologies-in-data-centers>
4. NTT, Silicon Valley SV1 Data Center, <https://services.global.ntt/en-gb/services-and-products/global-data-centers/global-locations/americas/silicon-valley-sv1-data-cente>

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At NTT, we believe we're well positioned to support businesses in a strategic shift toward net zero and accelerate the realization of their sustainability strategy while ensuring seamless operational performance across all areas of the business with our full-service offering that extends well above and beyond our data center capabilities.⁵

As a founding member of the Climate Neutral Data Center Pact (CNDCP) we're at the forefront of the global sustainability push for net zero by 2030, and we have numerous use cases of sustainability innovation within data centers as well as a host of certifications and awards.

Our Munich 2 Data Center features free cooling integrated and separated coolers with own-programmed, weather-dependent energy management systems as well as additional ground water cooling.⁶

In Phoenix, we're designing and building mechanical, electrical, plumbing, and fire protection systems for maximum energy conservation and minimum water usage. Our PH1 Data Center also utilizes a closed loop water cooling system, as well as air-cooled chillers with airside economizers for efficient cooling.⁷

Our Singapore Serangoon Data Center was designed as a smart building with state-of-the-art green features such as using rain/recycled water for cooling, and has attained

multiple certifications including LEED Gold Standard, and recognition including the Green Mark Platinum Award from BCA.⁸

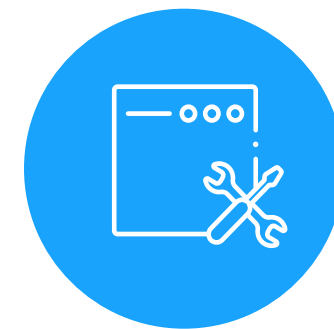
Beyond our commitment to support our customers in realizing their sustainability ambitions, we also understand their need to maintain seamless operational performance at the same time, and have the right capabilities to support it.

We have a truly global data center footprint capable of satisfying the biggest capacity and availability needs. As well as network and cloud capabilities to deliver exceptional uptime and consistency while ensuring low latency and high-performance levels.

NTT Global Data Centers bring:



85+ data centers around the world



Over 100 real-time security feeds



In-house security onsite 24x7x365



Availability in 20 countries across 4 different continents

5. NTT, Fully Integrating Technology and Business for your Benefit, <https://www.global.ntt/our-business.html>

6. NTT, Munich 2 Data Center, <https://services.global.ntt/en-gb/services-and-products/global-data-centers/global-locations/emea/munich-2-data-center>

7. NTT, Phoenix PH1 Data Center, <https://services.global.ntt/en-gb/services-and-products/global-data-centers/global-locations/americas/phoenix-ph1-data-center>

8. NTT, Serangoon Data Center, <https://services.global.ntt/en-gb/services-and-products/global-data-centers/global-locations/asia-pacific/serangoon-data-center>

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While a commitment to sustainability values, together with global data center capabilities supplemented by a full-service offering are key to delivering against organizations' needs today, the third ingredient to ensure a fruitful and long lasting relationship is the ability to innovate in the sustainability area and beyond.

New, advanced use cases are rapidly being unlocked by emerging tech, and these often represent significant opportunities for organizations to drive differentiated service offerings, bring new products to market faster and gain first entry advantage in lucrative developing markets.

By 2030, the number of global connected IoT devices could grow to as many as 29 billion, creating significant data demand and making available capacity and reliable uptime critical drivers of success.¹⁰

We are already looking for innovative ways to meet the increasing complexity and urgency around rapidly scaling data requirements. One of these is a partnership between SKY Perfect JSAT and NTT, which is exploring how to create a "new space enterprise" that may launch data centers into space as early as 2025.¹¹

Through significant R&D in our Innovative Optical and Wireless Network (IOWN) concept, we're also building new communication infrastructure that can provide high-speed broadband communication and enormous computing resources by using innovative technologies like photonics and optical. In time, this will further sustainability efforts while increasing performance, capacity and speed.¹²

We're well positioned to drive sustainability within data centers into the future as our commitment to 100% renewable energy and zero emissions by 2030 demonstrates. This also means, our customers can be certain that we'll be able to support them in the future, and enjoy a long lasting relationship. At the same time, we remain focused on delivering the right capabilities now so that our data center customers can continue to grow their business.

10. Statista, Number of Internet of Things (IoT) connected devices worldwide from 2019 to 2021, with forecasts from 2022 to 2030, <https://www.statista.com/statistics/1183457/iot-connected-devices-worldwide/>

11. Data Center, NTT and SKY Perfect are building data centers in space, <https://datacentremagazine.com/technology-and-ai/ntt-and-sky-perfect-are-building-data-centres-space>

12. NTT, Research and Development, <https://www.rd.ntt/iown/0001.html>

13. IEA, Data Centers and Data Transmission Networks, <https://www.iea.org/reports/data-centres-and-data-transmission-networks>



“ New tech is creating significant demand for greater flexibility to scale up and down as requirements arise, which may be turned into a competitive advantage. **Already, 5G's growing share of mobile data traffic is projected to rise to 60% by 2027.**¹³ ”

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At NTT, we bring a global data center capacity to help the world’s fastest growing businesses get the right capabilities that meet their complex needs, in the exact locations that matter most to strategic growth ambitions.

We strive to build long lasting and successful relationships with our customers. We partner with each one individually to deliver a customized solution that meets their unique needs now, as well as continuous innovation to help them achieve their future goals.

Our cloud and data center network is available in over 190 countries with more than 600,000m² of existing and planned global data center space, delivering the capacity and capability to meet truly global enterprise needs.

And we understand the critical importance of sustainability, bringing cutting-edge technologies and the pioneering Innovative Optical and Wireless Network (IOWN) concept to drive sustainable change and support net zero requirements.

Our power management, optimum design and continual bleeding-edge developments mean we can support your sustainability journey and accelerate your efforts to reach net zero while delivering world-class performance.

Discover how we can help drive your growth through our global, intelligent data center capabilities and connectivity that is sustainable and secure.

[Find out more](#)

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