

Supernatural power — from the heart of Iceland

Verne Global delivers high-intensity compute services powered by clean, affordable energy.



Customer profile

VERNE GLOBAL

Data Center Solutions | United Kingdom



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Dominic Ward

Chief Executive Officer, Verne Global

Business needs

Verne Global needs robust server and storage infrastructure to meet the high performance computing needs of some of the world's most innovative and demanding industries.

Business results

Verne Global helps its customers:

- Customize high intensity compute solutions using the latest processor architectures
- Cut operational costs and improve sustainability with 100 percent renewable energy
- Enable business growth with an IT infrastructure that scales easily to meet current demands and
- Simplify management with an IT environment fully supported by technical experts.

Solutions at a glance

- Data centers powered by 100 percent renewable energy
- Dell EMC PowerEdge servers with AMD EPYC™ processors
- InfiniBand® and Ethernet networking
- High-performance and high-capacity storage systems

Computing with a zero-carbon footprint

Verne Global operates a vast, industrial-scale data center campus in Iceland, built from the ground up with scalability, sustainability and security front of mind. Located on a former NATO base and fueled by 100 percent renewable energy sources, this groundbreaking data center powers some of the world's most innovative and demanding organizations whose competitiveness depends on high performance computing, artificial intelligence and data-driven applications.

Sustainability is at the heart of the Verne Global value proposition — and that's one of the compelling reasons for locating the company's industrial-scale data center on 45 acres in "the land of fire and ice," as Iceland is known. Iceland's grid is powered entirely by renewable energy — the nation generates virtually 100 percent of its electricity



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from hydropower and geothermal resources. That creates a plentiful supply of clean energy at a predictable price. Another reason for the location of the data center is that Iceland's climate makes it possible to cool data center facilities with cold, ambient air.

And, of course, Iceland is strategically located for global businesses, midway between the largest financial markets in Europe and the United States. That makes the location work well for companies focused on financial services, earth sciences, life sciences, engineering, scientific research, manufacturing and artificial intelligence, among other Verne Global customers.

All of these diverse customers greatly value data center services powered by energy with a zero-carbon footprint, according to Dominic Ward, Chief Executive Officer at Verne Global.

“We have customers in all of the industries that you could possibly imagine,” Ward says. “The focus, however, is for customers that require high intensity compute, and high performance compute, with a sustainable footprint that is provided entirely by 100 percent renewable energy. And Iceland is the only country in the world that can state that they have all of their resources generated from hydroelectric and geothermal. That sets us apart from other data center operators.”

Services from Verne Global

Verne Global offers its customers a rich menu of data center services, backed by expert technical support. These services are all based on flexible, scalable and highly optimized data center infrastructures located within the same campus in Iceland.

Data center service offerings from Verne Global include:

- **Colocation services** that are optimized for high intensity and high performance compute applications and built from the ground up for scalability, sustainability and security
- **Racks** that can scale up to meet a customer's growing need for high intensity compute
- **Data halls** designed to meet the needs of customers who require the highest possible specifications for enterprise-ready data center environments and
- **Ultra-high-density PODs** that are custom engineered to meet the customer's specific needs for high intensity, high performance compute.

Whether the customer is looking to push the boundaries of HPC for data-intensive applications or simply seeking a highly secure and reliable environment to run mainstream applications, Verne Global can meet the need, Ward notes.

“We provide compute and the environment in which that compute sits for all types of customers in all types of industries,” he says. “That can be from the latest, most sophisticated hardware for the most complex application types and the highest specification compute through to more mainstream enterprise applications that require more modest hardware and an environment that can support that type of compute. Regardless of the need, we have the skillset and the operational capability to deploy and support the type of compute that the customer runs.”

Solving customer challenges

Organizations turn to Verne Global to solve a wide range of challenges. Standard items on the customer checklist include power, security, connectivity and customer support. Beyond those basic needs, top-of-mind concerns for customers include cost of operations, compute density and infrastructure scalability, Ward says. Verne Global meets these needs head-on.

On the operational front, Verne Global provides customers power at an affordable and predictable price, thanks to Iceland’s plentiful supply of renewable energy.

“One of the things that we’re able to do is provide them with not just low cost, but cost certainty, well into the future,” Ward says. “Our power agreements, because of our location in Iceland, enable us to provide price certainty at the lowest possible cost in Europe for more than a decade into the future.”

At the same time, Verne Global addresses the need for greater compute density by locating data center facilities in Iceland, where the ambient air temperatures provide natural cooling. The local climate supports free cooling 365 days a year.

“We have built a data center facility that makes optimal use of Iceland’s unique environment. The climate enables us to support the highest possible compute density for our customers, while also providing our customers with the opportunity to scale their operations,” Ward says.

Indeed, Verne Global makes it easy for organizations to scale their compute to keep pace with ever-growing volumes of data and the need for new data-driven applications, like those for AI, machine learning and deep learning.



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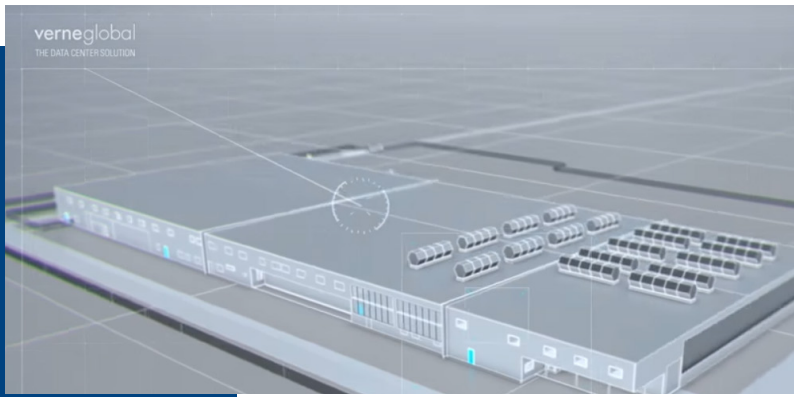
“Because of our environment, and because of the scale at which we operate, we’re able to provide our customers with bespoke or general high intensity compute infrastructure that enables them to have absolute 100 percent fully sustainable compute with the highest scalability that they could find anywhere on this planet,” Ward says.

A case study

Verne Global solves all of these challenges for Wirth Research, a U.K. engineering firm that operates its entire IT environment with computing resources based in Verne Global’s data center in Iceland.

In all of its work, Wirth Research focuses sharply on sustainability-related issues: Commercial vehicles that use less gasoline. Buildings that leverage efficient natural ventilation schemes. Grocery store refrigerators that keep the cold air in, rather than spilling it out on the feet of shoppers. These are among the challenges that Wirth Research engineers conquer with computational fluid dynamics (CFD) and other computer-aided engineering tools — and they are all located at Verne Global’s data center powered by renewable energy.

Previously, Wirth Research’s headquarters were tethered to where its CFD supercomputer was located, on a site with substantial energy costs and cooling requirements.



For an inside look at Verne Global's highly secure data center, take the [Verne Global Data Center Fly-Through Tour](#).

By moving its HPC environment to Verne Global, and replacing its existing hardware with new hyper-efficient processors, Wirth Research's costs were reduced so significantly that the savings in energy usage easily justified the investment in upgraded hardware.¹

"The challenge for Wirth Research is that they require very high density compute," Ward says. "They sought an operator that could provide them with a fully sustainable approach, high intensity compute expertise and the ability to support their growth for the years ahead. They chose Verne Global, enabling them to do more at a lower cost with a totally sustainable footprint for their compute."

Verne Global and Dell Technologies

Verne Global works closely with Dell Technologies to put together high performance computing solutions for many of the firm's customers. In a sign of the strength of this relationship, Verne Global is a Dell Technologies [Titanium Partner](#), a designation granted to only select strategic partners.

¹ Business Wire, "[Computational Fluid Dynamics Expert Wirth Research Turns to Verne Global to Go Carbon Zero](#)," September 1, 2021.

With the support of Dell Technologies and its computing solutions, Verne Global provides specialized HPC and AI colocation services that go far beyond the general infrastructure-as-a-service offerings of today's hyperscale cloud data centers. To that end, all types of organizations — from financial services providers to manufacturers to research institutions — are turning to Verne Global and Dell Technologies to build and support sustainable, turnkey high intensity compute infrastructures that they couldn't get from typical cloud service providers.

What's more, access to flexible, cost-effective infrastructure is only part of the value proposition for this partnership. Organizations also look to Verne Global and Dell Technologies for the in-depth technical expertise and hands-on support services that are essential for successful computing.

"Whether we are asked to support customers that are running their high intensity or high performance compute with the latest Dell EMC PowerEdge servers, or whether our customers need substantial high performance Dell EMC storage, we're able to provide the infrastructure through our partnership with Dell Technologies," Ward says. "And we are able to provide an environment in which that hardware can fit most efficiently and run most cost effectively — all backed by a highly expert team of data center engineers, which offers round-the-clock support."



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