Data centers built for AI workloads _and_ sustainable, efficient energy

With Dell PowerEdge servers, organizations achieve new levels of innovation with sustainable AI and HPC workloads

Business needs

In data centers, the key to success is using efficient, renewable energy and delivering high performance. Balancing these two key levers is fundamental to advancing sustainability while meeting the increasing performance demands required for AI and HPC. That's because data centers require more power—a lot more power--to deliver the high compute performance needed to run AI workloads. But increasing power also increases financial and environmental costs.

Business results

The holy grail to sustain the environment is just the opposite, to decrease financial and environmental costs while increasing power. Verne has achieved this incredible feat by maximizing energy efficiency with renewable energy sources. This energy efficiency allows Verne to reduce overall costs while delivering AI and HPC high-performing IT infrastructure.

Solutions at a glance

- Dell DLC3000 solution with 80kw CDU (Direct Liquid Cooling)
- Dell PowerEdge R660 servers with cold plate solution
- PowerEdge R-series servers with NVIDIA GPUs
- Solution - AI

Verne's sustainability benefits **get multiplied** as it provides IT services to other organizations

To fully answer growing demands for high-performance compute, Verne is also utilizing Dell's direct liquid cooling, which leverages state-of-the-art tools to ensure optimal cooling and sustained system performance. The multi-vector cooling intelligently adapts to changing environments and configurations. Liquid cooling will further reduce energy usage, bolster sustainability and decrease costs with the potential to reduce the amount of energy used for cooling by 10 percent.

Making AI and IT sustainable

Headquartered in the UK, Verne worked with Dell Technologies to construct an innovative data center solution that advances the responsible conservation of energy. Using Dell PowerEdge servers across four Nordic data centers, Verne offers state-of-the-art data center and colocation services. Options range from a single rack to ultra-high-density pods that meet multiple megawatt requirements and support highly scalable applications.

Verne delivers sustainable data center solutions that help organisations cost-effectively scale their digital infrastructure while reducing their environmental impact. Businesses across automotive, engineering, financial services, life sciences, and research sectors are able to seamlessly implement sustainable AI and IT solutions from Verne's campuses. With a world-class ecosystem of partners, like Dell Technologies, the possibilities are endless for unlocking your business' potential., Verne empowers organizations to not only meet their growing digital demands but also to achieve their sustainability goals.

"Dell solutions running in a Verne Nordic data center are quite powerful for customers looking to be as environmentally efficient as possible. By using the latest Dell solutions with the most effective technology, such as direct liquid cooling, customers can make the best overall choice to reduce their carbon footprint," said Alex Picchietti, VP of Alliances & Partnerships, Verne.

Keeping it cool

Data centers use about 40 percent of their total energy on cooling[1]. Efficient cooling and reduced energy consumption are paramount—and increasingly so. As IT infrastructures transition to handle AI workloads, rack density is moving from low to high, rendering air cooling insufficient.

Verne's data centers are proactively designed to be as efficient and sustainable as possible. Due to the temperate climate throughout the Nordic countries, data centers located there also benefit from free air cooling. In addition, Verne's data center in Finland, in Pori, is located in underground tunnels with lower ambient temperatures.

> **By using the latest Dell solutions with the most effective technology, such as direct liquid cooling paired with Verne's renewable energy solutions, customers can make the best overall choice to reduce their carbon footprint."**
>
> **Alex Picchietti,**
> Vice President Alliances & Partnerships,
> Verne

1 https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/investing-in-the-rising-data-center-economy

Walking the talk

Verne offers flexible, optimised colocation services tailored for each customer's business requirements.

For example, Wirth Research needed compute infrastructure that aligned with its strong sustainability commitment while also supporting AI and HPC workloads. Verne and Dell Technologies were the ideal partners. Wirth Research worked with both companies to find solutions that could reduce the energy demands of their HPC workloads by up to 70% using Dell PowerEdge servers.

In turn, Wirth Research helps organizations save a lot of energy. Wirth Research provides sustainable options that boost building energy efficiency, provide energy-saving refrigeration technology and reduce fuel usage in commercial vehicles. So far, Wirth Research reports helping its customers save 37,813 tonnes of CO2 and 88,796,864 kWh.

Verne also enables cutting-edge automotive manufacturers to use HPC-powered design, model and test approaches that improve outcomes. Simultaneously, these manufacturers enjoy lower IT operating costs ($/kWh) and do so sustainably.

Powering the future

"To power a stronger future, it's important to prioritize energy efficiency so that valuable power is not wasted and the effect on the environment is kept to a minimum," shared Picchietti. To do its part, Verne data centers provide energy efficiency with limited environmental impact, even for the most intensive compute, enabling organizations to cost-effectively scale

> " The great thing about Verne and our Dell-equipped, low-cost, sustainably powered data center locations— is that it is actually much less expensive to do the right thing! Cutting carbon emissions helps the environment and reduces financial costs."

Alex Picchietti,
Vice President Alliances & Partnerships,
Verne

their digital infrastructure with zero to minimal toll on the environment.

Technology providers like Dell also play a big role in advancing sustainability. Hardware technology innovation is critical to contain the exponential growth in power. Support services help customers place workloads where they are best suited environmentally. Dell is committed to developing the best solutions with the most efficient design while making its solutions as environmentally sound as possible.

"Deploying Dell Solutions in our sustainably powered, cost-efficient data center locations, it is actually much less expensive to do the right thing! Cutting carbon emissions helps the environment and reduces financial costs.," said Picchietti.

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