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**Case  
Study  
Fintech**

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# UK QUANT HEDGE FUND INNOVATOR CAPITALIZES ON NORWAY FOR DATA CENTER EXPANSION COST AND SUSTAINABILITY



*Sustainability and Cost Goals Required  
Commitment, Creative Approach, and Network  
of Trusted Partners to Deliver a Comprehensive  
and Innovative Fintech Data Center Solution*

A UK-based Quant hedge fund found itself poised for significant growth in 2020, fueled by artificial intelligence (AI), machine learning and smart innovation in automated trading. The amount of data generated and consumed by massive quantitative analysis, based around high performance applications and high density computing, meant they needed to expand beyond their two connected data centers in London.

They came into the market looking for more data center space to house their high performance computing (HPC) research cluster but with a keen desire to focus on sustainability and also drive a lower total cost than traditional colocation.



*Hydro power station in Kristiansand.*

AI is driving unprecedented IT workloads for financial organizations. This customer builds fully automated technology to predict and trade electronic financial markets. They have a goal over the next few years to trade all liquid electronically tradable products. Their new HPC cluster would triple the compute capacity of the combined existing data centers in London.

It needed an AI server architecture on the high end of current average power usage of 30+ kW per rack and would need cooling strategies that only the latest data center designs can provide. Add to the equation their high expectations for reducing their carbon impact and this firm was facing significant challenges to balance performance, sustainability and cost.



*Data center aisle inside N01 Campus.*

# NEW MARKETS, NEW PROVIDERS, AND NEW REGULATIONS: PARTNERING IN THE AGE OF COVID-19

***“When we set out to look for additional data center space to build our new HPC research cluster, we set ourselves two goals. Sustainability is really important to us and so first and foremost we needed to find a renewable source of energy. Secondly, we had to ensure that the solution was cost effective, especially given the scale.”***

To move forward, they consulted with trusted hardware solutions provider [Business Systems International \(BSI\)](#), who was already assisting with hardware and equipment selection in the design process, and [Bulk Data Centers](#) was engaged as a potential provider of data center solutions. ***“Drawing on our existing network of industry contacts, suppliers and existing data center providers, we arrived at a short list of three data centers in three different Nordic countries, all of which had the potential to meet our requirements.”***

During this time, COVID-19 made the customary travel, meetings and site visits impossible to do in person. After initial face-to-face meetings, the rest of the negotiations and planning had to be done remotely. All of the requisite details would be managed without the usual assurance that comes with being there.

Initially, Norway was not even on the company’s radar. For Bulk, part of the challenge was demonstrating Norway’s advantages in the face of evolving offers in Iceland and Finland. The customer’s consultants had prior experience working in those alternative markets, so the Bulk team set about making the case. The company was trying to reduce complexity of setting up a business in the Nordics and needed guidance on navigating Norwegian compliance and tax regulations. Bulk was able to mobilize a network of internal and partner expertise to create a comprehensive approach and solution that would take best advantage of unfamiliar conditions in a new market, saving the company time and money.



# TEAMING FOR SUCCESS: DELIVERING A COMPREHENSIVE AND TIMELY SOLUTION

***“After an initial round of introductory meetings, we received proposals from all three and worked closely with each to tailor the specification to our needs. Following this, we had further commercial discussions to arrive at a set of final proposals. One provider was unable to provide a solution which met all of our needs and so at this point we decided not to take them forward, instead choosing to focus all our attention on the remaining two.”***

The ultimate solution went far beyond the more routine offerings of colocation, dedicated white space, build-to-suit, or powered land. Bulk tapped their network of established partners to reduce complexity and to help plan and execute this project to meet an aggressive timeline. They helped the customer with power procurement analysis and counsel on attractive options using ADAPT. They also provided advice on import tax rules, where Bulk obtained a binding ruling to further simplify the process and help to limit cost. Bulk were able to support the logistics in receiving and managing the equipment and by acting as an importer of record, reducing the cost significantly.



Entrance and building at N01 Campus.

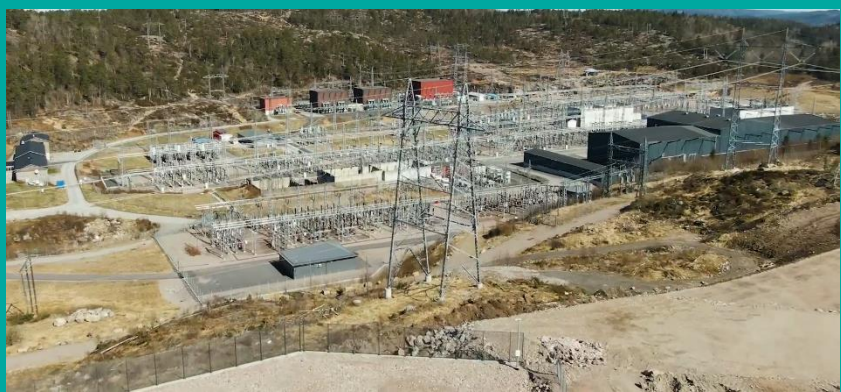
The project would go into Bulk's Norway Data Center Campus (N01), a 300ha site with up to 1GW of renewable power and 100 percent availability. Located in the lowest cost energy region of Norway and next door to Europe's largest renewable substation, N01 delivers the lowest cost energy and with the highest levels of resilience. Direct connection to the substation reduces electrical losses and grid costs and is supported by over 12 independent feeds.

***“Our new HPC research cluster at N01 will triple the size of our existing compute capacity, while the high-density design requires only twice the number of physical servers to accomplish this.”***

There was no question of whether the solution would be 'green' with the site being directly connected to many of the regions massive Hydro power plants. This 100 percent carbon-free energy was a huge tick in the box when achieving targets for sustainability. However, Bulk was able to go even further by investing in the planting of 1,000 trees by Climate Justice Ambassadors from [Plant for the Planet](#), a global organization engaging children and youth from 74 countries.

Bulk teamed with partner BSI to finalize equipment selection and help with shipping and logistics. They also provided scoping on the cabling design and installation along with server deployments with partner [Netsecurity](#). All of this and more, including highly trained and experienced on-the-ground installation and operation support teams allowed Bulk and their partners to provide a fully integrated and comprehensive solution against a hard deadline.

The contracts were signed in June and the customer had a need to be operational by 1<sup>st</sup> November to meet the capacity requirements of the business. Along the way, Bulk had to demonstrate a clear plan on how to achieve the required colocation solution for high density and high availability as well as an implementation program to enable the customer to meet this tight deadline.



*Kristiansand Sub Station – 12 independent feeds with 3.6 GW of 100% carbon free power.*

# UNDERSTANDING NEEDS, PULLING IN EXPERTISE AND DELIVERING VALUE

**“In the end we chose Bulk as we had found them to be very engaging throughout and really understood our two main goals. Bulk was most aligned with these and worked hard to make their solution the most attractive overall, considering both sustainability and the total cost of operation.”**

Bulk’s ability to provide solutions to the various challenges we faced by listening to our customer’s requirements, providing options in an open and transparent way and at the same time reducing complexity made the process extremely smooth. Add to this the additional restrictions in place because of Covid-19 and we had to adapt and work in partnership which Bulk and their partners were able to do.

Now with the data center live in Bulk’s N01 campus the company is benefitting from a highly resilient solution which is 100 percent carbon free. And with cost savings of up to 60 percent on power alone when compared to an equivalent installation in London it really hits home the potential TCO benefits of being with Bulk in Norway.



*3D illustration of our N01 Campus in Kristiansand.*



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