atNorth boosts ROI and sustainable efficiencies for Shearwater GeoServices

Global provider of powerful geophysical marine seismic acquisition and processing services experiences huge cost savings and reduced carbon emissions with atNorth's data center services in Iceland

atnorth

driving data innovation at every corner

Shearwater is a global provider of powerful geophysical marine seismic acquisition and processing services. Operating a modern fleet of marine vessels with expert imaging technology and innovative processing software, Shearwater provides an agile approach to high quality sensor imaging and seismic data analysis.

Traditionally, the company has located its imaging and processing equipment at a data center site in the UK. However, as Shearwater continues to grow and scale, acquiring and operating high performance workloads at a much greater scale, the company needed to find an alternative solution. To host its data-intensive workloads and processing equipment, Shearwater wanted a reliable partner that could meet its high-capacity compute demands with an environmentally responsible approach.

every challenge presents an opportunity

Shearwater approached atNorth to explore migrating its equipment to its high-performance computing site in Iceland. atNorth and Shearwater worked closely together to understand the migration process, with **atNorth presenting an attractive commercial agreement and second-to-none service** management.

With Iceland's renewable energy infrastructure and atNorth's commitment to sustainable operations, the Nordic country was an obvious option, albeit with some initial concerns over latency and reliability. With the nature of Shearwater's work, latency lag could present a big issue, alongside concern over natural disasters, and risks associated with underwater cable connections. The Shearwater and atNorth teams liaised extensively to assess any potential risks or challenges prior to migrating the equipment to its new home within atNorth's ICE02 data center facility.

With atNorth, we are already seeing the huge advantages that our partnership can bring with our shared commitment to the local community, environment and planet.

Key benefits:

Better ROI

atNorth's services have proven to be extremely cost effective for Shearwater with better carbon efficiency and unmatched return on investment for the company's imaging and processing demands.

Secure Reliability

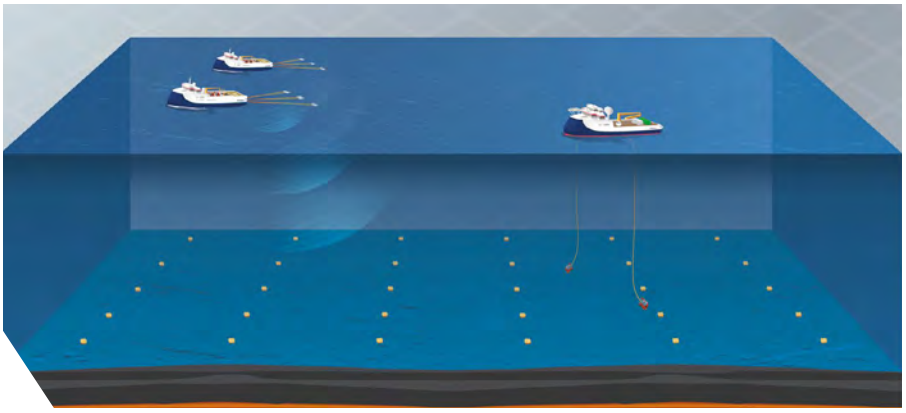
atNorth have given Shearwater complete peace of mind with its focus on ensuring continuity, security and reliability to meet the most stringent compliance and regulatory needs and ensure low latency across all operations.

Expert Support

The team at atNorth is entrusted to handle some of Shearwater's largest workloads and have gone out of their way to ensure trust, transparency and second-to-none support, taking the stress out of complex projects while delivering fast, efficient, and sustainable performance.

Sustainable Core

Shearwater has reduced its carbon emissions by moving its equipment to atNorth's ICE02 facility, which is powered by the highest rate of renewable energy, utilizes natural air cooling to maintain optimal temperatures, and employs circular economy principles across the whole site.



Shearwater's ocean bottom technology – read more

starting small to yield the perfect solution

In early 2022, Shearwater moved an initial, smaller footprint of equipment, (which had been located in the US), to atNorth's ICE02 data center facility in Iceland. This move served as a foundation to testing atNorth's services and the ICE02 site in terms of latency, risk, and reliability. atNorth's customer-first approach helped resolve all initial concerns immediately.

The team provided a 'walk-through' to simulate, anticipate, and mitigate the potential risks, while outlining the processes, procedures and steps atNorth has in place to avert any disruption – including redundancy contingency plans that protect and de-risk workloads and multiple paths of connectivity between Iceland and the UK that ensure low latency. During this testing period, it became apparent that the workload was running as effectively compared to previous existing workloads in the US and UK.

unparalled customer service

With initial "proof of concept" successfully in hand, Shearwater moved a large part of their infrastructure equipment to the ICE02 site and have furthermore secured space in order to double their footprint in the future at the same site. In turn Shearwater have experianced immediate benefits including great cost savings and sustainability efficiencies, of which the latter was quickly becoming a key initiative for the business.

In addition, atNorth's unparalleled customer service and support provided Shearwater with an easy migration path for additional workloads, which can often be restrained by a lack of in-house resource and HPC expertise. With the installation at atNorth's ICE02 facility, the Shearwater team could tap into atNorth's experts on the ground to ensure proper setup from the start, whilst maintaining maximum efficiency in the continuous running of its hardware with no downtime.

While the current facilities agreement in the UK was increasing three-fold due to energy price hikes and overall inflation, the return on investment with electricity savings alone in Iceland could not be ignored.

"The atNorth team have gone above and beyond to make us comfortable throughout the whole migration process. Our partnership has given us a true competitive advantage in several areas – from lower power usage and better hosting capabilities to cost effective and sustainable air cooling that doesn't impact the climate.

Nick Riddalls

Global Head of Processing, Shearwater Geoservices

atNorth Combines Decarbonization and Better ROI

	UK	Iceland
PUE average	1.75	**1.2**
Total Power including Cooling	175	**120**
Annual GWh	1.533	**1.0512**
Power cost €Kwh	0.33	**0.07**
Annual Power Cost	505,890	**73.584**
c02 grams per kWh	237	**28**
Annual Carbon Footprint (Tons)	363.321	**29.4336**
Type Energy	Mixed	**Renewable**
Iceland Power Cost Savings	-85.5%	
Iceland Energy Used	-31.5%	
Iceland Carbon Reduction	-91.9%	

CO2 World
https://app.electricitymap.org/zone/GB

Energy Pricing (day ahead)
https://www.nordpoolgroup.com/en/Market-data1/#/nordic/map

defining a true partnership

atNorth's facilities, service, and support alongside its straightforward approach to business are synonymous with Shearwater's procedures and partnerships. The two companies operate in harmony, as atNorth's ability to provide Shearwater with the utmost level of service is helping to build a strong, loyal working relationship.

We make a concerted effort to get under the skin of our customers, to understand their challenges and how we can then tailor a perfect fit solution. Working together helped us understand the pain points Shearwater faced with the current infrastructure, but also their perceived risks in migrating the workload to Iceland. This helped us shape a customized solution to yield maximum benefits with real peace of mind for Shearwater.

Ægir Rafn Magnússon
Director of Business Development, atNorth

With the partnership going from strength to strength, Shearwater and atNorth continue to work very closely together. Shearwater looks to migrate more of its IT infrastructure to atNorth's facilities in Iceland, whilst also exploring additional services such as GPU as a service.

did you know?

1. Iceland is considered a low-risk location for data center operations. With the correct mitigation actions in place, risks such as security, economy, political, energy, connectivity, and natural disasters measure at a very low rate
2. The long-term benefits of power production using renewable resources create potential shifts in carbon costs and CO_2 emissions and in most cases, can far outweigh the potential negative risks.
3. Iceland's undersea and terrestrial cable network is designed to offer the highest standards and uptime for data centers today. Its terrestrial network diversity is ensured through multiple pathways and routes across the country, while the new IRIS high-speed undersea cable system, spanning 1,700 kilometres in length, connects Iceland to Ireland with a six-fiber pair trunk capable of delivering a total capacity of 108 Terabits/s.

To find out more, get in touch at:

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