

CLIENT SUCCESS STORY

# **Zelim:** Revolutionising maritime safety with smarter systems



**ZEIM**

Edinburgh-based technology company, Zelim, is on a mission to redefine search and rescue with AI-powered detection software and unmanned vehicles. This is how we're transforming their ideas into reality in our data centres.

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## The challenge

Millions of men and women across the UK work in hazardous environments such as oil rigs, cargo ships and wind farms, where accidents are common.

Zelim is working to protect these workers. Its flagship product, Zelim Optical Enhancement (ZOE), applies artificial intelligence to video streaming data to help search teams spot potential casualties and fast-track rescue efforts. It's also developing unmanned search and rescue vehicles so fewer people put themselves at risk to help others.

Zelim approached Pulsant, looking for a partner to help them develop the robust, powerful and adaptable IT infrastructure required to deliver these advanced solutions.





## The infrastructure behind the intelligence

When Zelim launched, it chose to store and manage its infrastructure on-premise – at its CodeBase offices in Edinburgh. The thinking was simple: this technology was mission-critical and needed close attention.

But this approach soon created several issues.

There were environmental and financial costs to consider. Zelim's IT team had to reboot the servers regularly, creating energy consumption spikes. These surges translated into hefty bills and an outsized carbon footprint. This would be an issue for any business, but as many of Zelim's customers are environmentally conscious energy companies, it needed to protect its sustainability credentials.

The servers were also running powerful machine learning (ML) programs, which generated significant noise, disrupting the workspace for employees. Additionally, maintaining and cooling this hardware became a major responsibility for the IT team, diverting their attention from more meaningful, high-value tasks. The servers also occupied a substantial amount of space, which posed a growing challenge as the Zelim team rapidly expanded.

Perhaps most importantly of all, storing the servers onsite meant that Zelim was vulnerable to power outages, flooding, theft, and fires. Any one of these disasters could compromise its infrastructure and stop the business from delivering essential services to clients.

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Doug Lothian, CTO, Zelim



## More than a data centre

Zelim's leadership team knew they needed to rethink their approach to infrastructure.

They initially considered cloud options from leading providers but quickly realised this would be expensive and impractical.

"Processing high volumes of video data in the cloud is expensive," explains Euan Cowie, Software Engineer, Zelim. "Plus, we'd sacrifice control of the environment."

So, the search began for a local data centre in the Edinburgh area, and they soon discovered Pulsant. We were able to offer space in our much-sought-after South Gyle data centre, just miles from Zelim's offices.

"The location was critical," said Cowie. "ML systems need to be reconfigured regularly to optimise performance and meet specific client requirements. With a data centre ten minutes away, we have the access and control we need to stay on top of updates."

Close proximity has led to a strong relationship built on collaboration – "we were impressed by Pulsant's willingness to be flexible," said Doug Lothian, CTO of Zelim. "We initially planned to move into the South Gyle data centre in March or April 2023 but had to bring the date to January. For most data centre providers, this would be a major problem, especially given the popularity of the site in question. But the Pulsant team was able to make it happen."

"The quality of support has been outstanding," added Cowie. "We had a particular set of requirements – a low-latency environment; logical and physical separation; significant power demands; regular access to the site; and specific hardware requests. Pulsant has delivered on all counts."

Zelim's servers are now managed by Pulsant's people, relieving the burden on its IT team and helping the business reduce disruption, costs and the size of its carbon footprint. And as we have generators onsite, Zelim's servers are immune to power cuts and associated disruption.

## A platform for growth

Moving to South Gyle has solved Zelim's data centre headache, but it's also helped the business prepare for the future.

"Our servers are critical to our business and our continued success," said Lothian. "Co-locating in Edinburgh, just a stone's throw from our office, in an environment that offers resilience and flexibility is a huge advantage for us. It gives us the platform and confidence we need to grow."

"We're already talking about expanding our footprint in the data centre," added Cowie. "With Pulsant, this is easy; we can duplicate racks within one room, so there's no need for cross-building wiring."

Zelim is also considering new ways to use Pulsant's services – "we currently store video data in the cloud, but we are considering migrating this to servers in Pulsant's data centre. It's just more practical and cost-effective," said Cowie.

Now the business is looking towards new horizons – "we're keen to expand into new markets across Europe," said Lothian.

"Pulsant's Enterprise Architects helped us lay the foundations for this next growth phase. Together, we've developed an infrastructure that's flexible, robust and resilient; truly future proof" he continues.

Robin Ferris, Enterprise Architect at Pulsant said "It has been a pleasure working with the Zelim team and guiding them in their growth strategy. Assisting their transition from a Public Cloud environment into their own AI Inference platform hosted in Pulsant will deliver their business case quicker and more efficiently.

"Leveraging what Pulsant has to offer in the form of robust infrastructure, extensive experience, and deep expertise has been instrumental in achieving this" he continues.

"Working with Zelim doesn't feel like work," said Chris Lumsden, Account Manager at Pulsant. "They're an open and collaborative team, building something truly important and their technology is fascinating. It's been a joy to witness their success and growth firsthand and I'm excited to see what they do next."



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