



CASE STUDY

Tracking intensity: Norseman Xtreme Triathlon

Norway



NXTRI/Ariel Wojciechowski

Industry

- Public Safety

Solution

- Octave OnCall Connect

Challenges

- Extreme environmental conditions
- Severe elevation and terrain demands
- Complex race monitoring and safety management

Results

- Real-time operational visibility with web-based COP
- Single interface for monitoring and decision-making
- Integrated incident alerts and live data

The **Norseman Xtreme Triathlon** was the first extreme triathlon in the world. Each year, the best of the best put themselves to the ultimate physical and mental test, attempting to complete 226 kilometers (approximately 140 miles) of unforgiving icy temperatures, high altitudes and inhospitable rugged Norwegian wilderness, in what is one of, if not the, toughest races of its kind on the planet.

The 21st edition of the race took place in 2024 in Norway. A group of 250 athletes (each accompanied by his or her support team), chosen from thousands of applicants made a brave jump from a ferry into the Hardangerfjord and swam 3.8 kilometers

(2.4 miles) to shore, where they cycled for 180 kilometers (112 miles) across rugged terrain and steep climbs, before running 42.2 kilometers (26 miles), finishing at the top of Mount Gaustatoppen.

The Zalaris Norseman Xtreme Triathlon is unlike other endurance challenges in that it is a point-to-point race, covering a very large area of rugged and diverse terrain. The unique course presents challenges in marshaling the race and keeping track of athletes, both for their safety and the competition. To accomplish this, in 2024 Norseman employed Octave OnCall Connect (formerly HxGN Connect).



NXTRI/Alexander Koerner

"Octave was excited about the project from day one and it was clear to everyone that OnCall Connect had all of the attributes we needed for a functioning race control room in the Norwegian wilderness."

Espen Laaveg

Chief Venue Control
Norseman Xtreme
Triathlon



Eye on athlete safety

The brutal Zalaris Norseman Xtreme Triathlon course is described as "a journey through fjords, mountains and valleys" through "raw nature." And that course includes 5,000 vertical meters (16,404 vertical feet). The terrain is beautiful, but unforgiving. The management team wanted to source a system that would give them an overview of the entire course and allow them to monitor and manage the race including athletes, support crews, medical teams and marshals, from the fjord to the finish line.

Eager to embrace new technology across every facet of the race, the team learned of Octave's expertise in building real-time incident center as a service solutions and wanted to explore the opportunity to use its technology for the triathlon.

Norseman Xtreme Triathlon Chief Venue Control Espen Laaveg stated, "Octave was excited about the project from day one and it was clear to everyone that Octave OnCall Connect had all of the attributes we needed for a functioning race control room in the Norwegian wilderness."

On the day of the race, event organizers needed only an internet-connected device with a standard web browser to have a high level of insight regarding how the event was progressing. The OnCall Connect interface

provided a single screen from which they were able to scroll through the list of competitors and check their tracker information, view interactive 2D and 3D maps of the course, check the water temperature of the fjord (for safety during the swim), monitor the transition zones and finish line and view footage from video camera feeds. They were also able to receive and rapidly respond to incident alerts.

Tracking the course

The trackers worn by each athlete were integrated with OnCall Connect, feeding data into a real-time common operating picture and giving the Command Control a view of the athletes' exact locations and positions in the race. Race penalties and documentation of athletes retiring from the race were also integrated into the solution.

A pivotal moment in an extreme triathlon like Norseman is ensuring athletes are always on course. The last 4.7 kilometers (2.9 miles) of the run leg are on a rocky trail in the Norwegian mountains, and there are monitoring zones with pre-identified notifications if athletes take a wrong turn or path in the mountains. "When alerted to a situation, we were able to contact the support team and put them on the right path," added Laaveg.



NXTRI/Lars-Erik Blenne Lien

Toward the future

The race winner completed the course in just over 10 hours, with the final racer crossing the line nine hours later. The Octave team monitored the event digitally for every swim stroke, push of the pedal and step of the way.

Norseman Xtreme Triathlon Head of Marketing Fredrik Mandt stated, "The Octave team and OnCall Connect did an amazing job during a very long day in the Norwegian wilderness."

The team is looking at expanding its use of OnCall Connect, to enable information to be shared with support crew on the course (via mobile devices) and emergency services, to deliver even greater situational awareness for all race stakeholders. With the system developed, tested and proven in Norway, opportunities to use it for other dates on the XTRI World Tour, including races in Brazil, Canada, Greece, Italy, Montenegro, Nepal, Scotland, Slovakia, Sweden, Switzerland, Taiwan and the United States, are also being explored.

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

© 2026 Intergraph Corporation and/or its affiliates. All rights reserved.