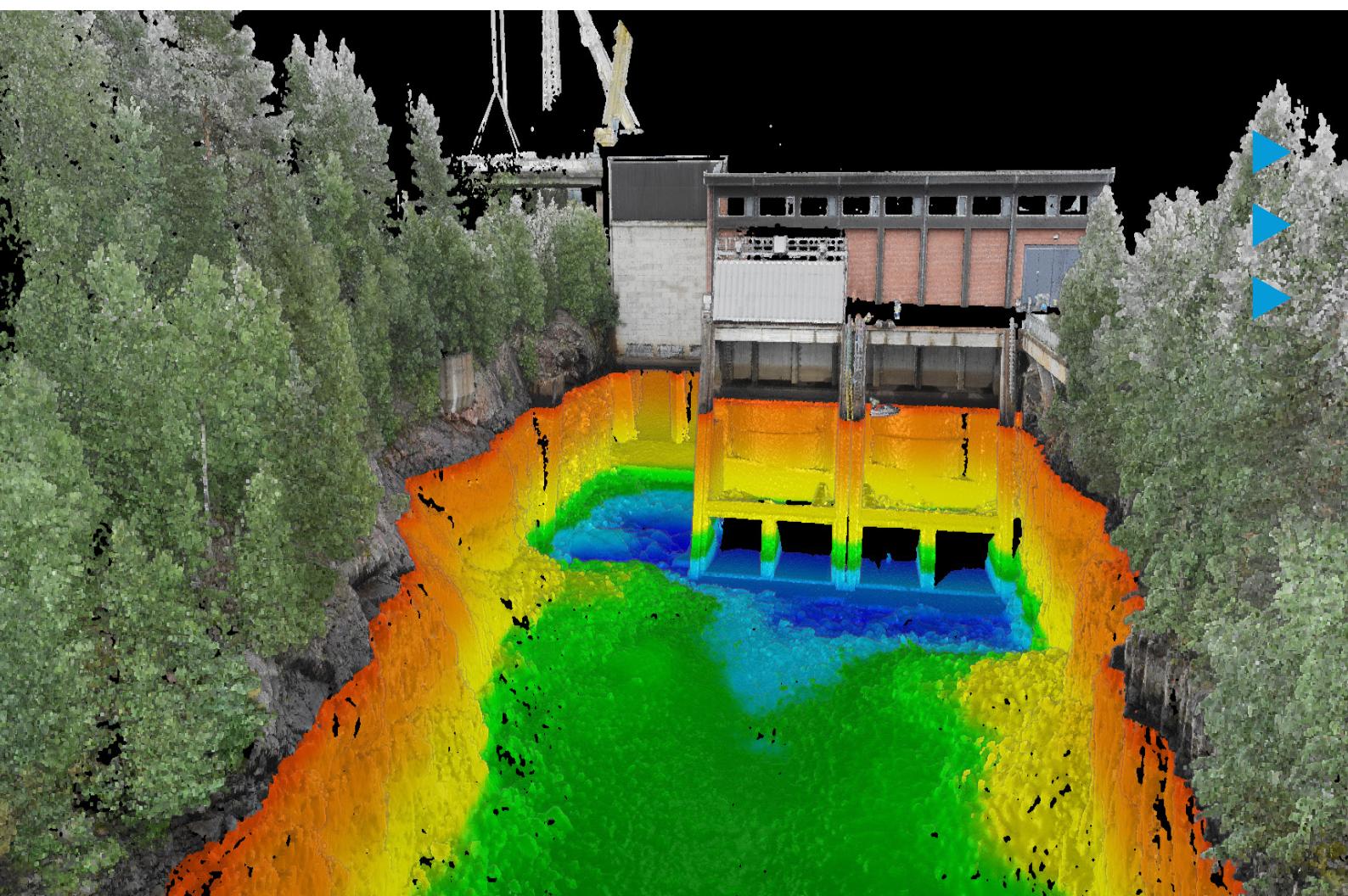


# VRT Uses POSPac to Improve Underwater Inspection Surveys



## Underwater mapping despite low visibility in Finnish lakes

VRT provides solutions for 3D surveys and the utilization of 3D data with Multibeam Sonar, Laser and Drone inspections. In collaboration with Applanix and using POS MV WaveMasters with POSPac MMS, VRT is able to provide highly accurate and precise data from underwater surveys.

### Solution

#### POS MV

POS MV blends GNSS data with angular rate and acceleration data from an IMU and heading from GAMS to produce a robust and accurate solution.

[applanix.com/products/posmv.htm](http://applanix.com/products/posmv.htm)

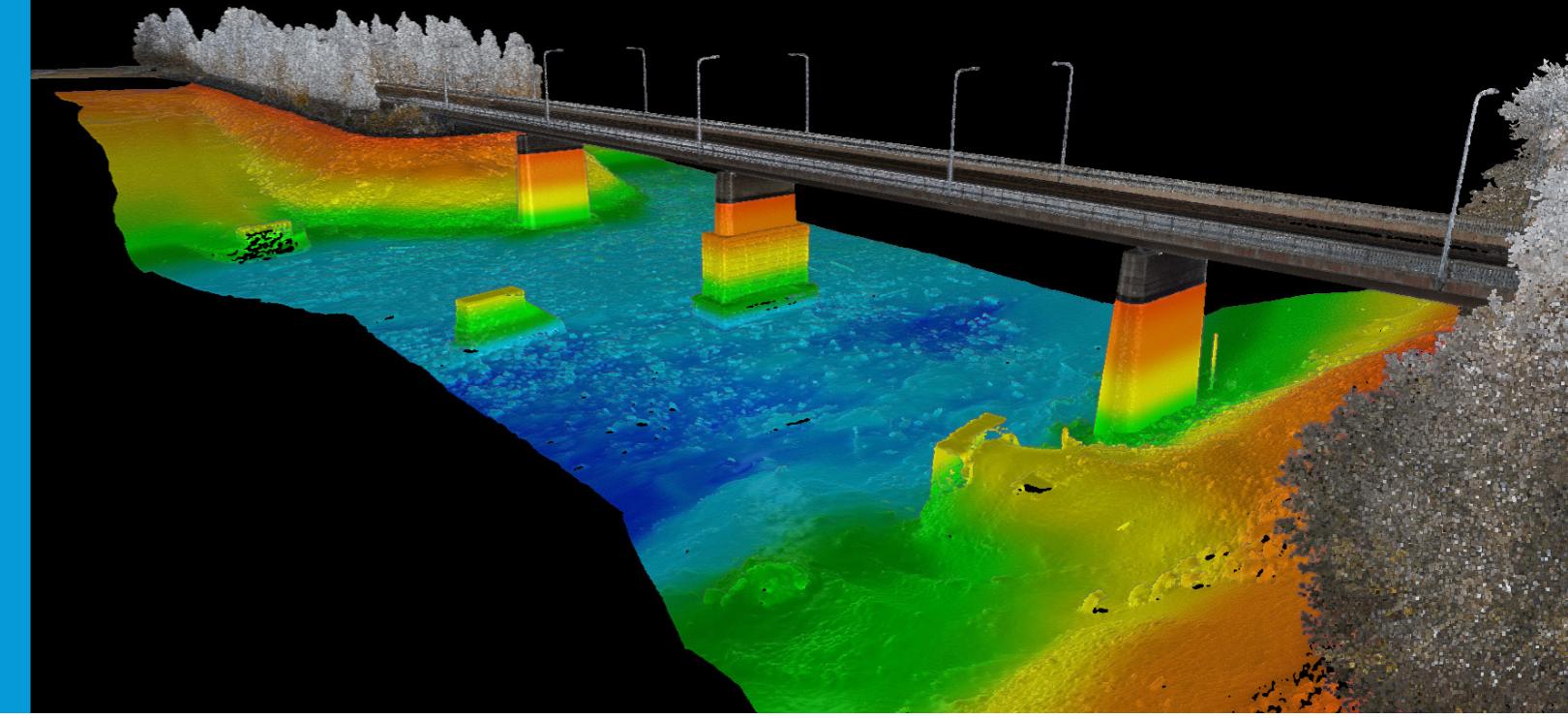
#### POSPac MMS

POSPac Mobile Mapping Suite is industry-leading software for Direct Georeferencing of mobile mapping sensors using GNSS and inertial technology.

[applanix.com/products/pospac-mms.htm](http://applanix.com/products/pospac-mms.htm)

# OVERVIEW

VRT Finland LTD performs high resolution structural inspections for bridges, ports, pipelines, oil terminals, offshore wind farms and hydro-power plants using Multibeam Sonar below the surface and Laser Scanner and Photogrammetry for structures above the surface.



## CHALLENGE

Faced with the regular challenge of harsh GNSS environments, VRT needed a solution that could provide robust positioning and orientation to aid in their underwater inspections.

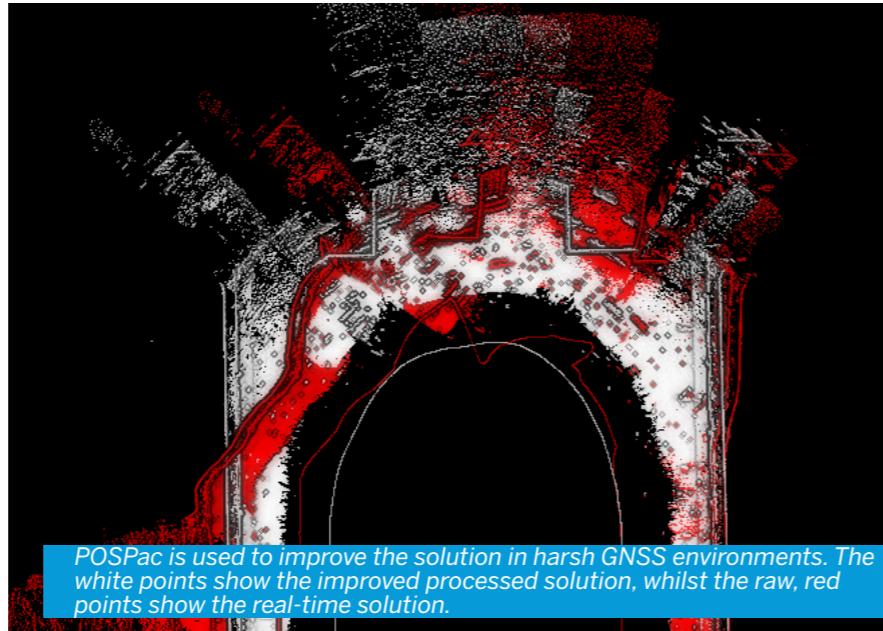
## SOLUTION

VRT partnered with Applanix to design the perfect solution.

VRT has two survey vessels that use **Applanix POS MV** to produce position and orientation solution.

In addition, VRT uses **POSPac** post-processing software to ensure the best quality data is achieved. Specifically, the **IN-Fusion SmartBase** and **IN-Fusion SingleBase** processing methods are used to improve the position and orientation solution, allowing noise point filtering and manual cleaning to become easier and more efficient.

If the survey area is accessible by the surveys vessels, VRT has 100 per cent confidence that POSPac provides the high quality data needed for inspection.



Even in extreme GNSS-environments like in urban canyons or beneath the bridge where GNSS data is completely lost for some time, POSPac has always made it possible to save the data.

**"The improved data quality helps inspectors to make better observations and to be more confident about the information,"** says Ville Mäkeläinen, Chief Business Development Officer at VRT.

## RESULTS

**"Using POSPac is easy and straightforward! The workflow is very similar in most projects. We are also very pleased with Applanix' immediate customer support that has helped us out of trouble several times."**



Ville Mäkeläinen  
Chief Business  
Development Officer

Contact your Distribution Partner today

CANADA  
Applanix Head Office  
85 Leek Crescent  
Richmond Hill, Ontario  
L4B 3B3  
+1 (289) 695-6000

UNITED KINGDOM  
Forester's House  
Old Racecourse  
Oswestry, UK  
SY10 7PW  
+44 1691 700500

USA  
15840 FM 529 Rd  
Suite 316  
Houston, Texas  
77095  
+1 713-936-2990

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