

CASE STUDY

Eye on the prize

How a Swiss aerial mapping maverick embraced innovative direct georeferencing technology to take surveying and remote sensing to new heights



X-Eye's leadership team

was on the hunt for new ways to improve upon the pinpoint accuracy, efficiency and precision of its turnkey aerial mapping platform (including camera and Lidar configurations), winged through the skies in the belly of its lightweight, low-emission fixed-wing aircraft, the Pipistrel. From glacier monitoring to powerline inspections to 3D city modelling, X-Eye's mapping solution, certified by the European Aviation Safety Agency, was fast, easy to deploy and remarkably cost-effective. It revolutionized aerial mapping and took the industry maximum—stop planning, start mapping—to a new level.

“It consistently delivers unparalleled data quality, underscoring its **reliability and performance** in diverse applications”

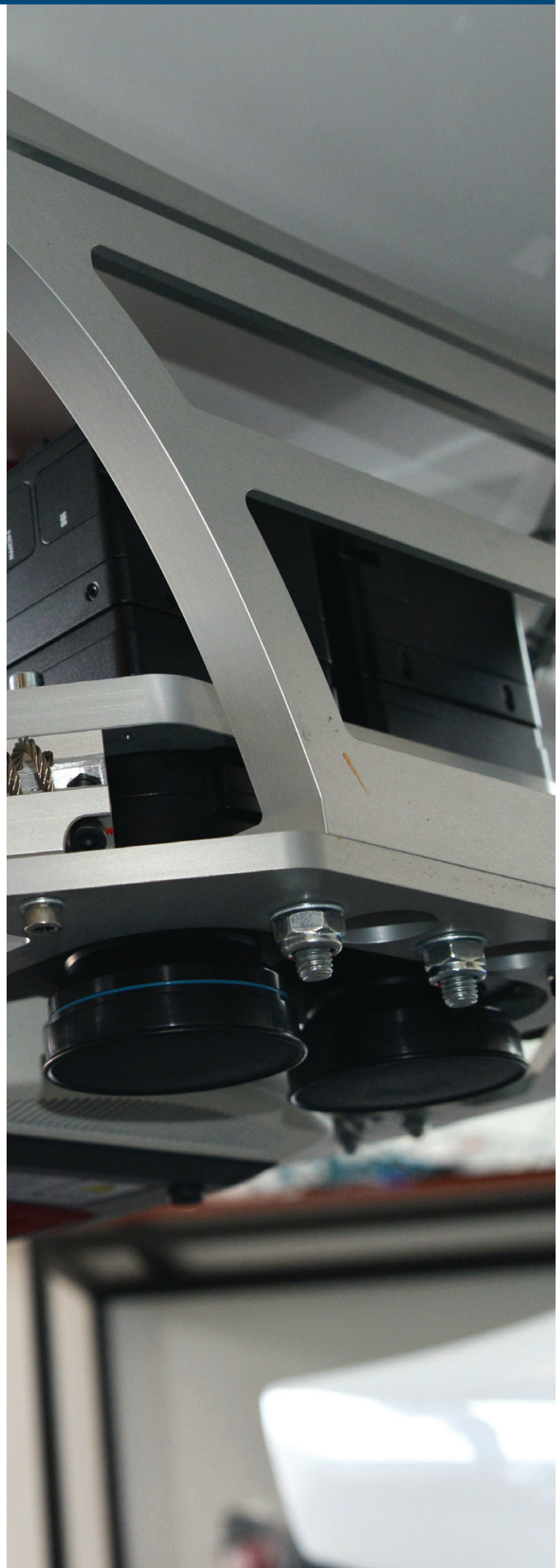


Then, the team discovered the next-gen Trimble® Applanix® AP+ GNSS-inertial solution for direct georeferencing (DG), a compact solution ideal for high-efficiency airborne mapping systems. Tasks such as corridor mapping, forestry analysis, and urban cartography benefit from the increased efficiency and reduced limitations this DG solution offers—a significant advantage over traditional Aerial Triangulation methods using GCP's, most often employed by drones. "It consistently delivers unparalleled data quality, underscoring its reliability and performance in diverse applications," **X-Eye CEO Marc Corpataux** says when describing the seamless integration of Trimble Applanix AP+ GNSS-inertial solution for DG into X-Eye's lightweight mapping platform.

Reaping the benefits of efficiency, versatility and low emissions

X-Eye's aerial surveying and remote sensing solution caters to diverse industries. Its aircraft strike the perfect balance between efficiency and advanced sensor technology, ensuring high-resolution data acquisition. The use of the **Trimble AP+ GNSS-inertial** together with the **Applanix POSPac™ MMs post-processing SW solution** reinforces the company's commitment to delivering top-tier value to clients.

X-Eye's leverages the Applanix POSPac PP-RTX, a cloud-based service delivering cm-level accuracy without the need for physical base stations. This streamlines workflows and offers maximum efficiencies.



In addition, the choice of **Pipistrel aircraft**, known for lower fuel consumption and emissions, aligns with **X-Eye's** commitment to environmental responsibility. This certification enables widespread deployment while maintaining the aircraft's capability to accommodate cutting-edge sensor technologies.

By incorporating the **Trimble AP+ GNSS-inertial solution** and the **POSPac MMs**, there are additional key benefits, including:

Cost effectiveness and time efficiency

Not only for X-Eye, but also its customers. By consolidating numerous smaller drone missions into a single flight, the X-Eye and Trimble Applanix AP+ projects that would traditionally take days or weeks to complete with drones or larger aircraft can now be accomplished in a matter of hours. Also, reduced fuel costs contribute to an exceptionally favourable price-to-performance ratio.

Surveying grade accuracy

Without base stations via the Applanix post-processed Trimble CenterPoint® RTX (PP-RTX) module brings ultimate efficiency to X-Eye's mapping workflow.

Best performance in all environments

With Trimble Applanix next-generation IN-Fusion+ multi-sensor aided inertial technology. This allows X-Eye's solution to guarantee an unequaled level of robustness – anywhere, anytime.

Improved jamming, spoofing and multipath mitigation capabilities with **Advanced Trimble Maxwell™ custom GNSS positioning technologies** such as EVEREST™ Plus and ProPoint® engine.

Fuel flows as low as 13t/hr

Resulting in very low fuel consumption and emission compared to other single-engine aircraft.

Protective pod

Sensors that are securely mounted to the underside of the plane in a protective, aerodynamic belly pod.

For more information

For more information, contact our Customer Support Team (techsupport@applanix.com) or visit our [Customer Support Portal](#).

Acknowledgement

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