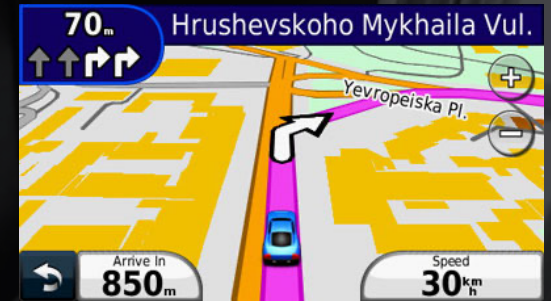
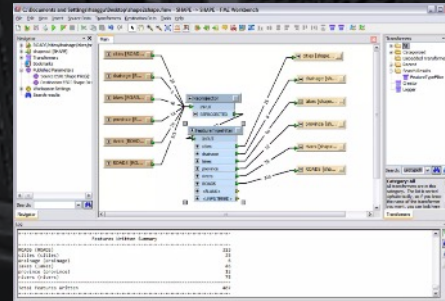


Hybrid Approach for Aerodrome Safeguarding



Aerial Survey | Laser Scanning | Data Fusion

First introduction to FME was in 2010 when I began my geospatial career as a Geographical Analyst graduate at Navteq Ukraine.



Field data collection, geocoding, more geocoding, Roads, PA and POI, happy Garmin users



Since moving to New Zealand in early 2013, I have worked for multiple engineering consultancies as a Surveyor, bridging the gap between GIS and Land Surveying.

With my passion for photography and everything geospatial, and with support from senior management, I started a drone team at Woods in 2017, certified the business for CAA Part 102, and acted as a Prime Person.



That's when I met my business partner, Bevan, who helped me develop exposition documentation for the Civil Aviation Authority. Being a commercial pilot and avionics engineer, it was just a matter of time and a few pints for us to come together and join the Christchurch Aerospace Challenge run by the **Smart Christchurch** team.

With \$10k of funding as finalists, we built a compact mapping payload, certified for a fixed-wing aircraft to support **emergency responders** with aerial imagery. It is self-contained and remotely controlled.



Christchurch Aerospace Challenge Winner Announced

Christchurch Aerospace Challenge Winner Announced

THURSDAY, 23 JUNE 2022



The winner of the Christchurch Aerospace Challenge was announced at an awards ceremony on Wednesday, which showcased the rising talent working on aerospace innovations across New Zealand with a focus on aerial imagery technology.

“

Aerial imagery is important for decision-making in cities and regions, but the current process is slow and costly. This solution will improve that process and be invaluable for work the Council carries out, such as 3D modelling and monitoring air pollution and water levels.”

Michael Healy - Christchurch City Council Smart Christchurch Manager

Who are blackmaps geospatial?

We are aviation focused geospatial consultancy and specialise in hardware development, which enables the collection of high-resolution aerial imagery and laser scan data using **manned, unmanned and terrestrial platforms.**



Why **Aerodrome Safeguarding** products?

- We needed cashflow!!!
- We saw a **geospatial problem**
- We applied learnings from various reality capture projects to operational airspace around airports
- We have expertise and developed key partnerships



NZTG Airport OLS and Crane Tool

- OLS Labels
- OLS Geometry

Crane Tool

Maximum crane height in metres above ground level (AGL).

- 137.15 to 0 penetrates OLS
- 0 to 20 m AGL max crane height
- 20 to 40 m AGL max crane height
- 40 to 60 m AGL max crane height
- 60 to 378.12m AGL max crane h...

OLS Obstacle Analysis

Obstacle proximity to OLS in metres. This layer shows OLS vs 2019 LiDAR Digital Surface Model.

LiDAR Terrain

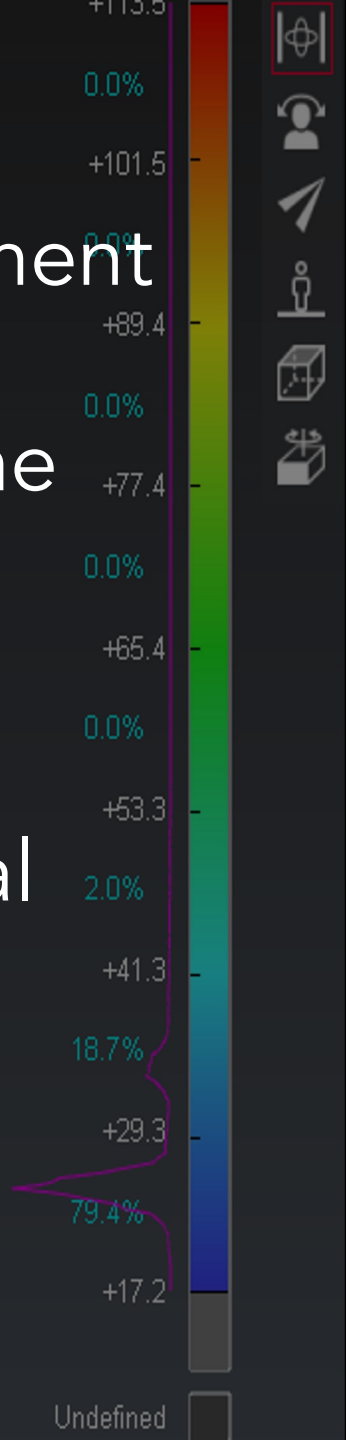
Elevation in metres above mean sea level (AMSL). Digital elevation model from 2019 Aerial LiDAR as 10m grid. Vertical datum NZVD2016.

Aerial Imagery - Basemaps



- Airports, heliports, vertiports are key parts of urban ecosystems
- Expertise and strategic partnerships bring a wholistic understanding of the problems airports face
- We reverse engineered the traditional approach to optimise operational management and compliance reporting
- Help airports visualise data so that it can be used to highlight safety issues, and inform scenario-based decision making

- Subscription based business model
- More efficient client engagement with low procurement costs
- Data updates at a cadence that is appropriate for the solution
- Automated operational airspace modelling, data processing and reporting
- Regulatory compliance and future proofing of digital solutions



Thank you!



Aerial Survey | Laser Scanning | Data Fusion

