KEYVAN
AVIATION

TERRAIN & OBSTACLE DATA SOLUTIONS



WORLDWIDE GEOSPATIAL INTELLIGENCE FOR SAFER AVIATION OPERATIONS

Every flight takes place in a three-dimensional environment. Terrain elevations, natural features and man-made obstacles can influence route selection, aircraft performance, procedure development and safe flight operations.

KEYVAN Aviation provides worldwide Terrain and Obstacle Data solutions for different operational needs, including fixed-wing operations around aerodromes and low-altitude helicopter and uncrewed aircraft missions in complex urban environments.

Solutions at a Glance

Our solutions combines data provision with visualization capabilities, helping users turn coordinates and elevations into practical spatial understanding

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1 WORLDWIDE TERRAIN DATA

Applications across the aviation ecosystem:

- **Airlines and aircraft operators:** terrain-related planning and situational assessment.
- **Flight simulation and training:** scenario creation, terrain depiction and operational familiarization.
- **Helicopter and special missions:** low-altitude route planning and mission briefings.
- **Drone and advanced air mobility systems:** geospatial risk assessment, corridor studies and low-altitude obstacle context.
- **Aviation software developers:** integration into maps, planning engines and visualization solutions.

Terrain elevation influences route planning, clearance considerations, flight simulation, mission preparation and visualization of the operating environment. KEYVAN Aviation offers worldwide Terrain Data for aviation stakeholders requiring geographic context across large operating areas. The dataset can serve as an elevation reference in flight-related systems, geospatial platforms and analytical tools, while also supporting the interpretation of obstacle elevations and three-dimensional visualization.



2 AIRPORT OPERATIONS OBSTACLE DATA

Obstacle awareness around an aerodrome is particularly important during departure and arrival, where aircraft performance, flight path geometry and the surrounding environment must be considered together. KEYVAN Aviation's Airport Operations Obstacle Data focuses on aerodrome environments and areas that may affect aircraft flight safety. It is suitable for performance-related assessments, flight planning support and departure environment review.

Engine-Out SID and departure analysis

An engine failure during departure may require assessment of an engine-out path different from the published standard instrument departure. KEYVAN Aviation's airport-focused obstacle information and visualization tools can support the identification and examination of obstacles along proposed departure tracks. Users can view obstacle locations in relation to terrain and planned flight paths, helping performance teams prioritize features for detailed analysis.

FOCUSED GEOGRAPHIC SCOPE.
OPERATIONALLY RELEVANT OBSTACLE CONTEXT.
MONTHLY DATA UPDATES.
CLEAR VISUALIZATION OF COMPLEX DEPARTURE ENVIRONMENTS.

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3 CITY-LEVEL OBSTACLE DATA FOR HELICOPTERS AND DRONES

Low-altitude operations introduce different challenges. Helicopters and drones may operate close to buildings, towers, masts, cranes and other structures in dense or rapidly changing urban environments. KEYVAN Aviation's City-Level Obstacle Data is designed specifically for helicopter, drone and other low-altitude use cases where awareness of the built environment is a critical planning consideration. City-level content is defined according to the geographic areas included in the customer's delivery and the applicable coverage profile.

Representative applications:

- **Helicopter operations:** route and approach environment review, urban mission planning and operational briefings.
- **Drone operations:** corridor selection, site assessment, infrastructure inspection planning and mission risk analysis.
- **Emergency response and public-service aviation:** contextual awareness for time-sensitive missions.
- **Advanced air mobility and eVTOL concepts:** vertiport surroundings review, corridor exploration and low-altitude airspace studies.
- **UAS platform and software providers:** obstacle context for planning, visualization and geospatial decision-support tools.



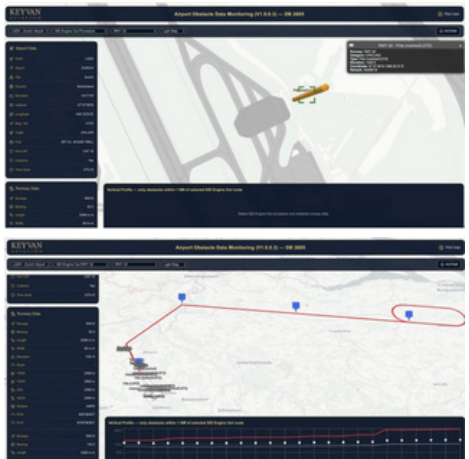
DESIGNED FOR THE URBAN OPERATING ENVIRONMENT

By viewing obstacles in relation to terrain, intended flight paths and operational boundaries, teams can identify potential conflicts, compare routing options and improve pre-flight risk discussions.

4 VISUALIZATION & OPERATIONAL INTELLIGENCE

Coordinates and elevations alone do not always make an obstacle environment easy to assess. KEYVAN Aviation complements its Terrain and Obstacle Data portfolio with visualization tools that help aviation professionals understand spatial relationships and communicate operational assessments. Terrain surfaces, obstacle locations and mission-specific reference layers can be displayed in a common geographic view. For airport applications, visualization can support departure-environment and engine-out routing reviews. For helicopter and drone applications, it can support analysis of urban obstacle concentrations, possible routes and operating areas.





Practical benefits:

- **Spatial understanding:** inspect obstacles relative to terrain, airports, routes and mission areas.
- **Scenario discussion:** compare candidate tracks or operating concepts.
- **Cross-team communication:** provide pilots, engineers, planners and decision-makers with a shared view.
- **Analysis workflow support:** identify features requiring further verification or specialist assessment.
- **System integration:** align data delivery and visualization with the customer's operational workflow.

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DATA LIFECYCLE, DELIVERY & PRODUCT SELECTION

KEYVAN Aviation's portfolio is structured to match the intended operation with the appropriate data specification.

Monthly obstacle updates:
Both obstacle product lines are supported by a monthly update cycle, allowing customers to ingest refreshed information and review changes regularly.

Delivery content, effective coverage, availability of change information and validation requirements should be documented in the applicable service agreement or dataset specification.

From airport departure assessments to helicopter routes and drone missions, KEYVAN Aviation Terrain and Obstacle Data solutions help aviation organizations understand their operating environment with greater clarity.



Worldwide terrain coverage, specialized obstacle products, monthly obstacle updates and visualization capabilities provide a practical foundation for integrating geospatial intelligence into aviation workflows.

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Find the right Terrain and Obstacle Data solution for your operational needs.

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