



# Leading Provider of Geospatial Solutions

January 2021

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Your World. Made Simple.



# Intermap Reader Advisory



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*All dollar figures presented in this presentation are in US dollars.*



# Overview



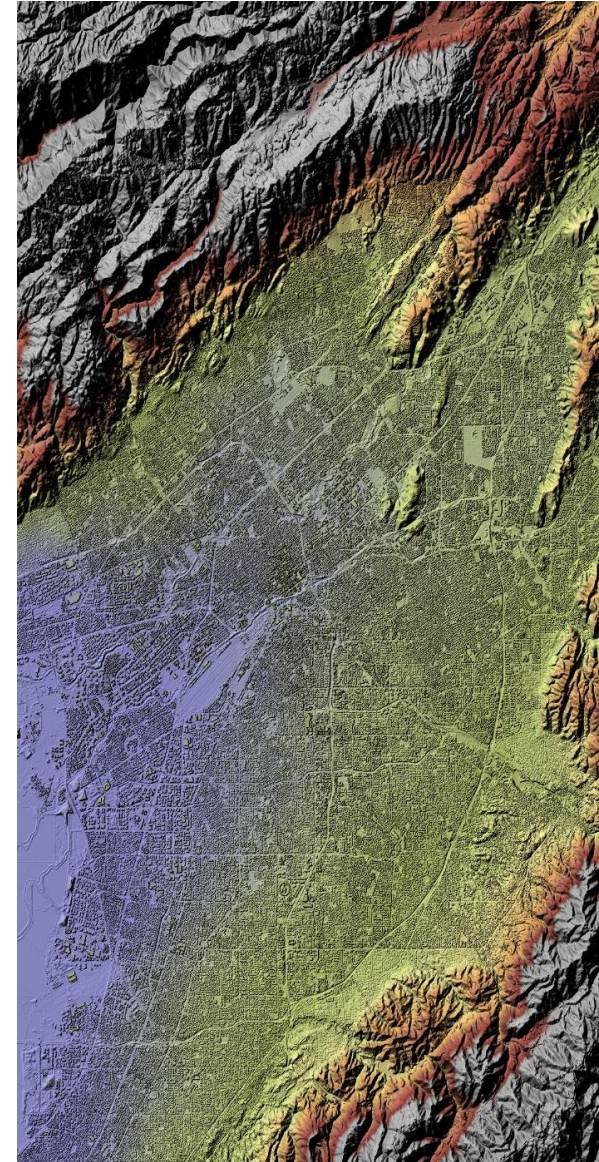
Intermap is a geospatial data company that had over \$10 million in 2019 revenue. The Company has invested in its technology, data library, and software, and is currently a world leader in producing 3D elevation models, used by governments and businesses to understand their terrain environment.

The Company has a long history of collecting, processing, analyzing and delivering 3D terrain data, from all sources, that answer questions and solve problems with speed, accuracy, recency, and global scale, made simple for customers to use.

Governments rely on Intermap's patented technology to deliver situational awareness in extreme environments where there are significant weather hazards, event risk, and insufficient models.

EASA recently awarded global certification to Intermap and its exclusive partner, Lufthansa Systems, to deliver NEXTView™, the world's first and only 3D terrain dataset for aviation. This will dramatically improve avionics systems used by airline pilots and drone operators for navigation, terrain warning systems, and flight planning.

Commercial uses of Intermap's 3D data and models include flood and wildfire risk modelling for insurance underwriting, telecommunications network planning, and railway corridor risk management.



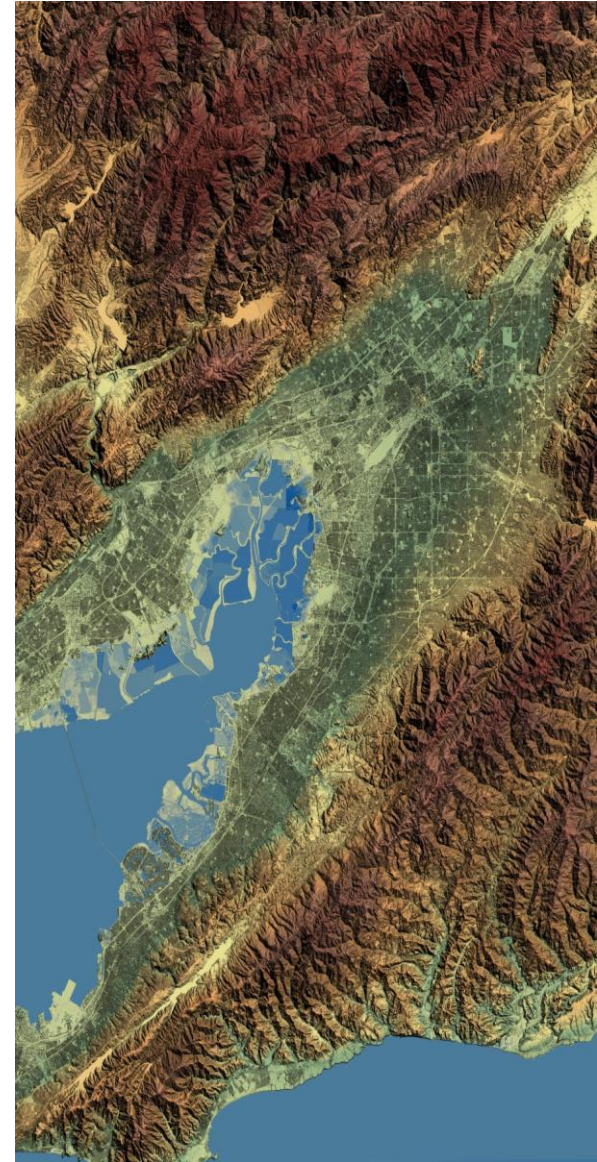


# Overview - Continued



The Company enjoys support from many established global customers. It has recently won new contracts for government solutions and software products serving attractive, high-growth markets, including federal digital infrastructure, insurance, aviation, and telecom.

In addition to acquiring data, Intermap is an expert at processing and delivering 3D data from multiple data sources. Intermap's vertically integrated products, solutions and software simplify many large-scale terrain data challenges and make the solutions accessible to non-expert users - "Your World. [Made Simple.](#)"



# Government Solutions



Intermap has a long history of government contract work. The Company has helped over 48 national governments on every continent around the world build critical geospatial infrastructure, allowing partners to make critical planning decisions affecting resource allocation, transportation, power management, environmental monitoring, topographic mapping, disaster mitigation, smart city integration, public safety, and defense.

Intermap's Processing, Exploitation, and Delivery services include:

- Construction of national topographic base maps, thematic maps and contour maps
- Extraction of feature data, change detection and maintenance and management programs
- Geospatial audit, maintenance, and training
- Special mission data collection, intelligence, surveillance, and reconnaissance
- Full data fusion with our sensor agnostic approach to data collection and integration
- Maximize information extraction from data with our patented IRIS technology
- Worldwide 6m 3D DEM available off-the-shelf
- Related applications, services, and solutions to make terrain data information accessible
- Standard OGC solutions delivered through cloud software solutions



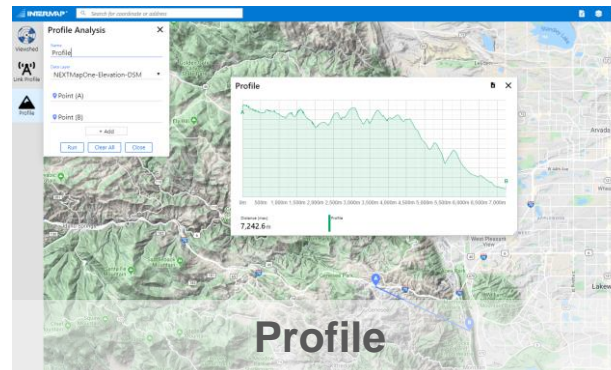
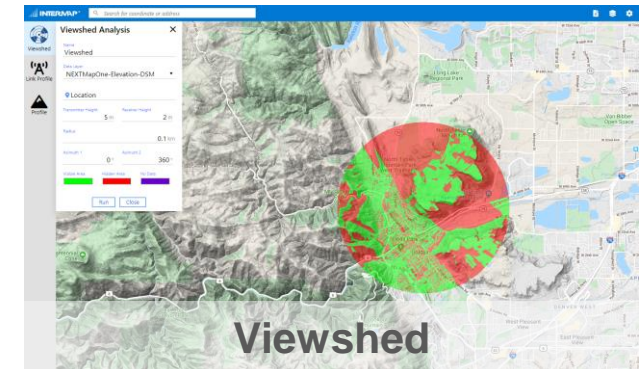
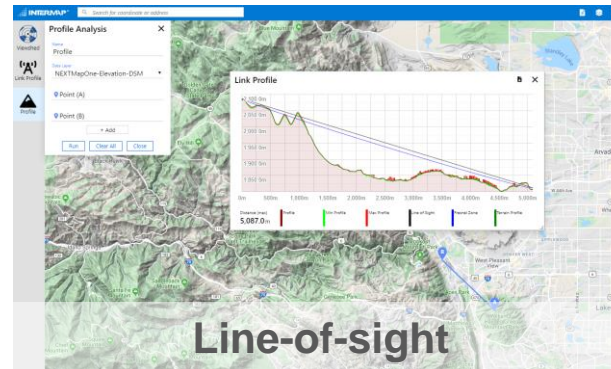
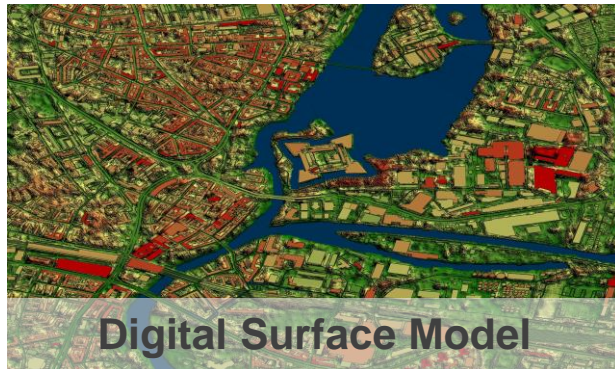


# Commercial Solutions



Intermap's globally available commercial solutions are based on our proprietary NEXTMap® elevation datasets. Commercial applications of Intermap's 3D data and models include:

- Flood and wildfire risk modelling for insurance underwriting
- Aviation applications, such as synthetic vision systems, UAV flight operations, and UTM flight planning
- Telecommunications network planning
- Railway corridor risk management
- Satellite imagery geometric correction (orthorectification)



# Vertically Integrated: Intermap Builds the World's Best 3D DEMs



## Source Appropriate Data

- Intermap's proprietary foundation data covers the globe
- Collect the best data available to achieve requirements



- Use multisource data or deploy proprietary sensors as needed
- Intermap data is military-grade

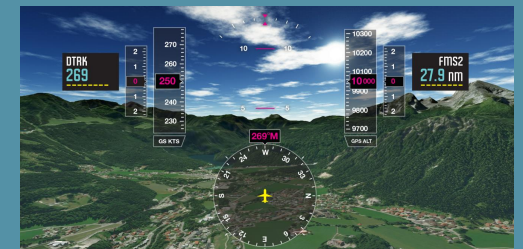
## Build Customizable 3D DEMs

- NEXTMap is the world's largest, high-resolution, commercial 3D DEM
- New data is enriched and fused with NEXTMap using patented algorithms and automated processing



## Deliver Solutions Quickly

- Deliver 3D DEMs as a service to solve specific problems
- Delivered fast and accurately, as software or solutions



- Customized for government base maps, aviation and drones, insurance, telecom, railway, and satellite correction
- Elevation-Data-as-a-Service (EIDaaS) APIs integrate with existing software and workflow





# Subscription and Licensing Revenue



## **Intermap has transitioned many accounts to recurring subscription over the past 24 months**

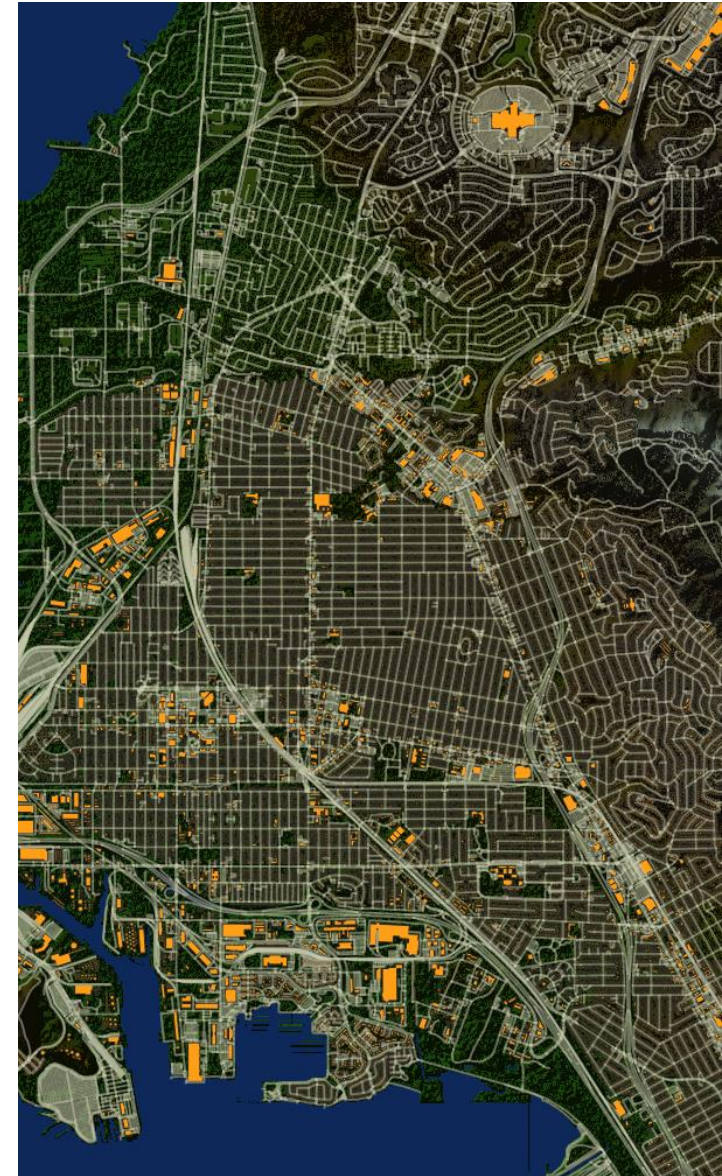
- Three years ago, Intermap commenced the process of transitioning existing accounts to recurring revenue models
- The average account size of recurring solution and software is growing
- The average contract duration has more than doubled in the past 24 months

### **1. Lufthansa Partnership for Aviation Market**

- Brought to market the world's first certified, high-resolution, global geospatial terrain dataset, called NEXTView™
- In three months, Intermap completed NEXTView for over 75 countries
- With certification (EASA Type 1), NEXTView will revolutionize safety and efficiency for a variety of aviation markets, including avionics and unmanned aerial vehicles

### **2. Rise Broadband: Telecommunications**

- Signed contract with Rise Broadband, Inc for NEXTMap One™ based telecom analytics for microwave link planning and network planning
- Rise Broadband is the largest residential fixed wireless broadband provider in the United States





# Commercial Revenue



## 3. Drone Delivery: High-resolution terrain awareness for UAV navigation

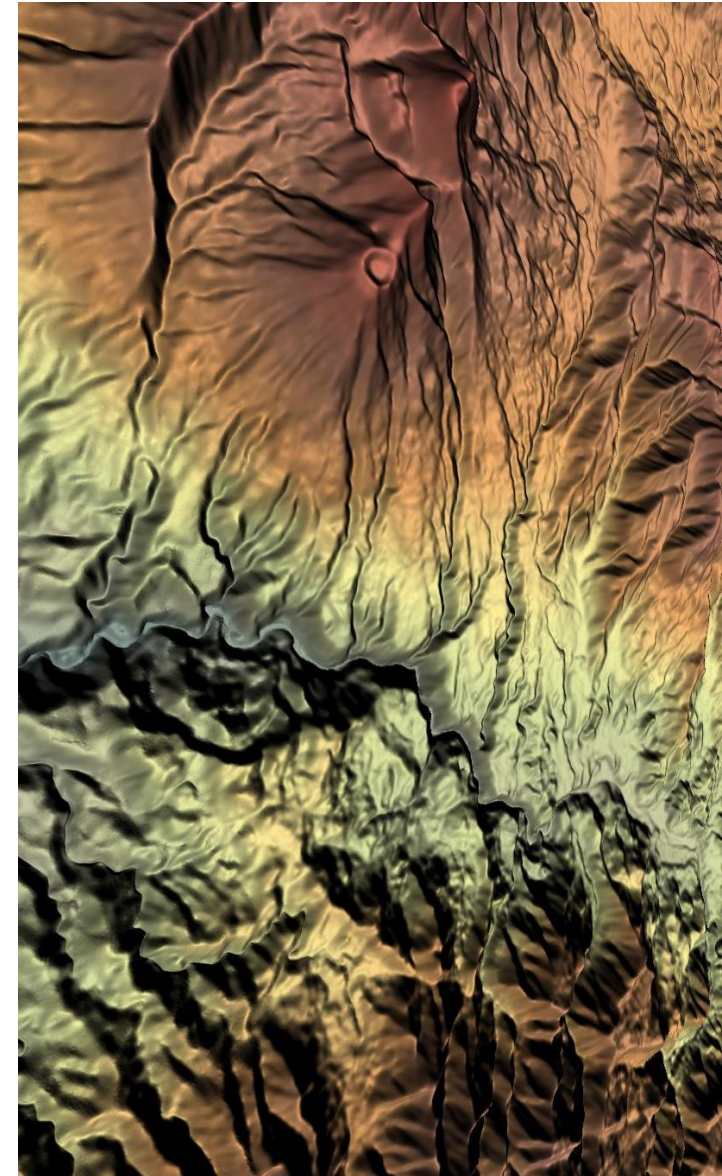
- Signed a multi-year contract with international drone operator
- Intermap will deliver NEXTView terrain dataset to improve flight efficiency, navigation and safety

## 4. Terrain Data for Golf Applications

- Signed a contract to provide 6m DTM for over 40,000 globally distributed golf courses to support golf companion app
- Initial contract is 3 years with annual minimums and royalties based on subscription usage

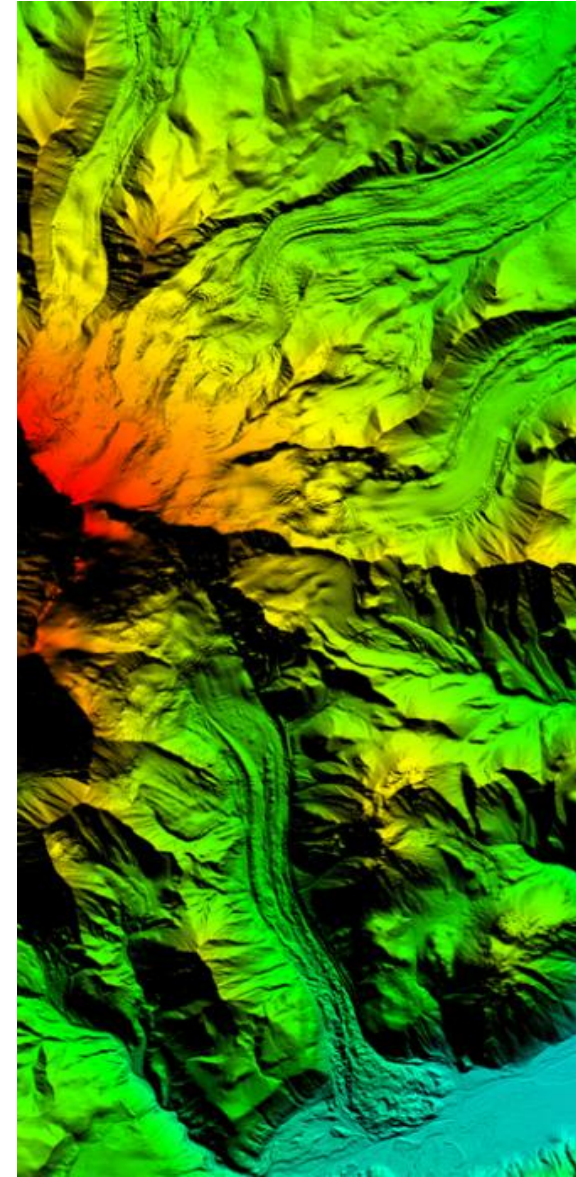
## 5. Annual Subscriptions from top insurance companies for InsitePro®

- Annual subscriptions for data and analytics provided for insurance underwriting applications with dozens of customers



# History of Innovation

- 1996** Acquired the world's most advanced terrain data collection system
- 2000** NASA awarded a contract to map Earth for Space Shuttle
- 2002** Acquired Aerosensing multi-sensor capability (Munich)
- 2003** Acquired software development capability through Multimedia Corp (Prague)
- 2004** Completed first national 3D mapping program (UK)
- 2005** Developed first L-band canopy penetration sensor
- 2007** Web services and cloud data access
- 2009** Completed first 3D map of USA – 8 million km<sup>2</sup>
- 2012** Completed NEXTMap World30, world's first global, seamless 3D digital elevation model
- 2016** Launched InsitePro – online application for insurance
- 2017** Launched the highest bandwidth multi-sensor commercial terrain data collection system
- 2018** Released NEXTMap One™ 1 meter global dataset
  - Obtained patent for FloodScope™ global flood model
  - Obtained patent for IRIS™ data-fusion engine
  - Announced NEXTView™, a groundbreaking aviation product with Lufthansa Systems
- 2019** Launched telecom suite and NEXTMap Orthorectification Service
  - Launched drone-focused aviation product suite
- 2020** NEXTView becomes the first certified surface dataset for aviation, making aviation safer and more efficient around the world





# Data Collection: Proprietary Sensor Advantage



## Fast data collection

- FAA-certified commercial Learjet-36 is capable of fast data collection, including triple-canopy foliage penetration at high altitudes

## Complete tactical awareness

- Complete situational awareness with multi-sensor technology

## All-weather acquisition

- Guaranteed imagery in any weather condition, regardless of smoke or clouds

## State-of-the-art technology

- Most advanced commercial RADAR platform with real-time images and change detection
- Integrates with all-source data using our IRIS™ fusion engine

## Wide-area coverage

- Large mapping footprint sees objects over a 25km swath

## Under-foliage penetration

- Reveal information under triple canopy, such as infrastructure



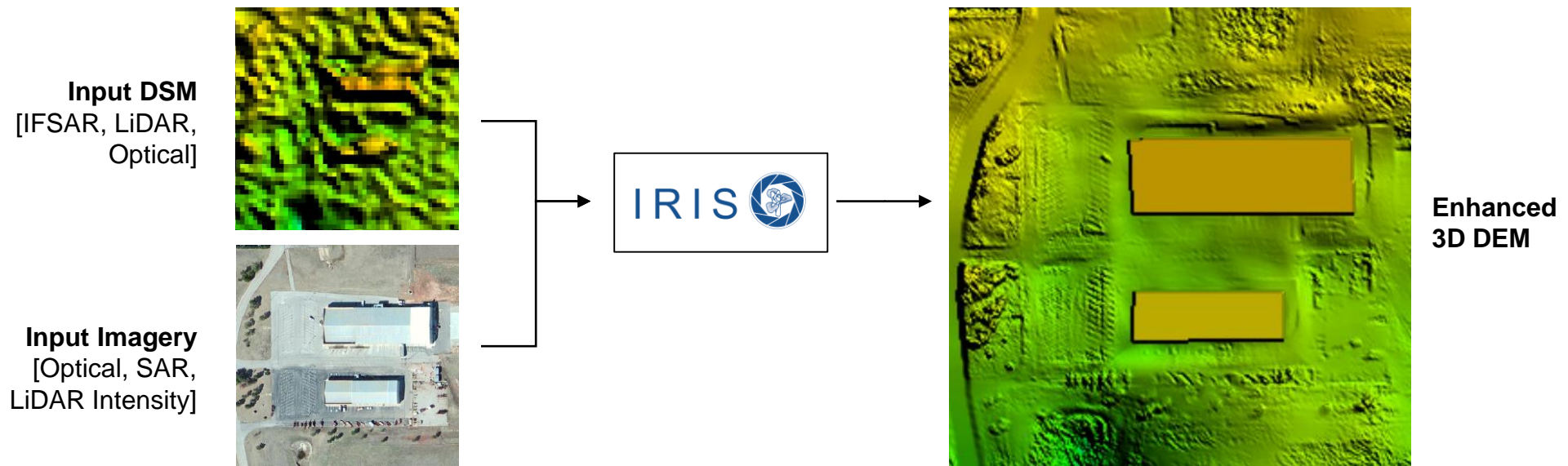
# Patented Technology: Enhancing 3D Models

## Intelligent Resolution Improvement System™ (IRIS)

- IRIS improves 3D model resolution from all sensors using a novel process. It is designed to increase the spatial content, resolution, terrain definition and feature detail in a 3D DEM
- Patented as a “Method and Apparatus for Enhancing 3D Model Resolution” (U.S. Patent No. 10,002,407)
- Technology is sensor agnostic and scale invariant. We have applied this breakthrough technology to multiple types of sensors, including optical, SAR and LiDAR, and demonstrated performance at a variety of resolutions

## Creates enhanced 3D DEMs

- Exploits the feature details of high-resolution imagery to update existing 3D DEMs so data is never obsolete
- Integrates the image over the DEM surface, enhancing detail that’s only partially captured by lower resolution DEM





# Advantages of IRIS: Processing, Exploitation, and Dissemination

## Multi-source data integration, at any scale

- Incorporate data from multiple sources and scales
- Leverage existing and current data (drone, electro-optical, SAR, LiDAR) in a single all-source 3D DEM
- Reduce the dependency on new collection, especially in denied environments

## Reduce manual processing through AI-driven processes

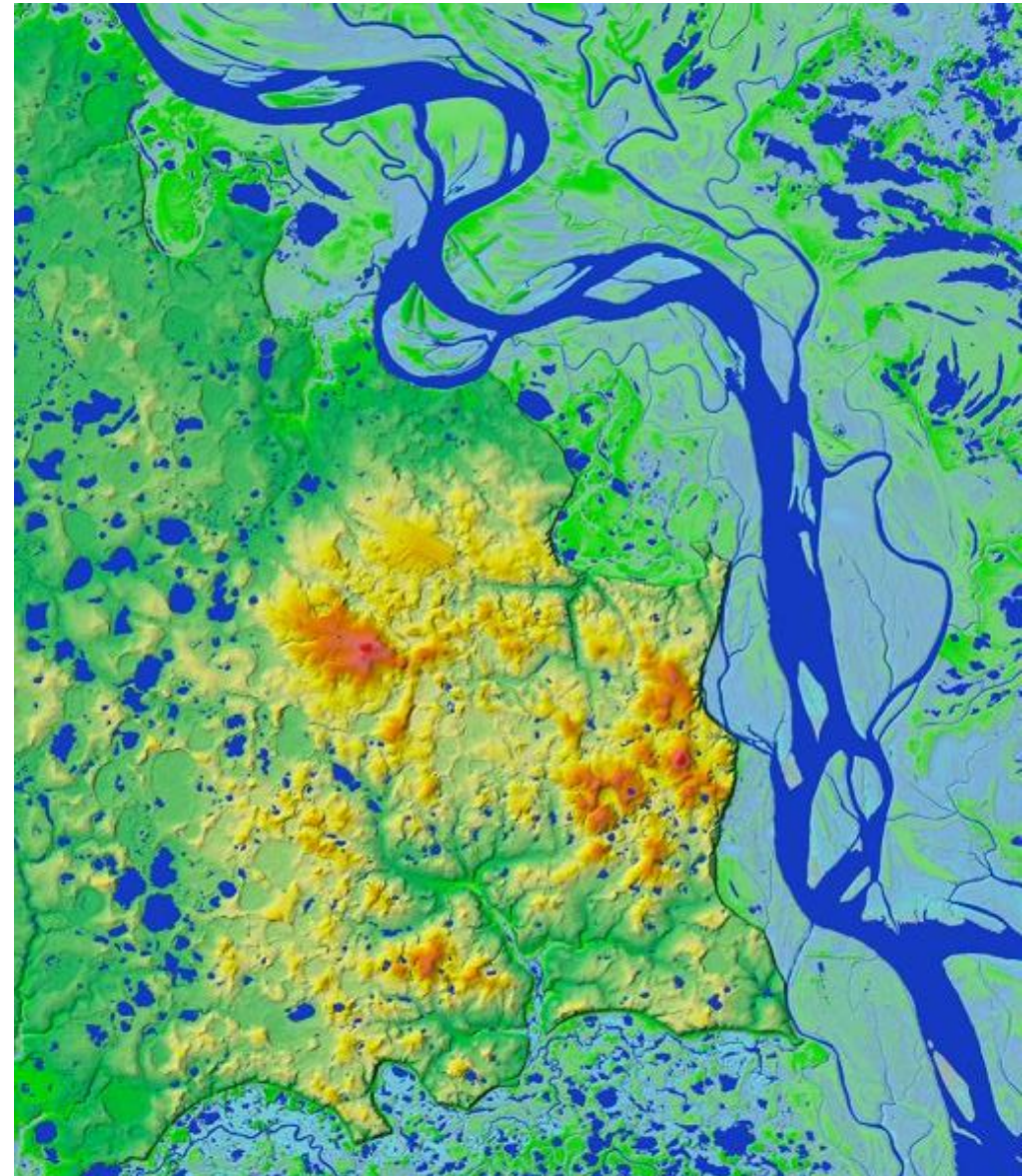
- Extraction of foundation layers such as buildings, roads and land cover
- Automatic generation of bare Earth terrain models
- Rapidly derive topographic layers such as contours and hydrology

## Fast, light-weight, scalable processing

- Light-weight process deployed on anything from laptop to enterprise servers
- Commercial, government and military uses are all supported

## Rapid exploitation and dissemination

- Analytics and software simplify large-scale terrain data awareness challenges
- Customized solutions provided as Elevation-as-a-Service (EaaS)
- Solve previously intractable terrain problems, everywhere, on-demand





# Advantages of a Global Data Library: NEXTMap One™



## Extensive geospatial database

- A rich database offering accurate and seamlessly fused mapping products and solutions for government and commercial applications
- Mapping scale starts at 1:5,000

## Global coverage

- Available for all countries and locations worldwide

## Feature and bare Earth 3D models

- DSM with natural terrain features and DTM showing the bare Earth

## Stay up-to-date with the latest data

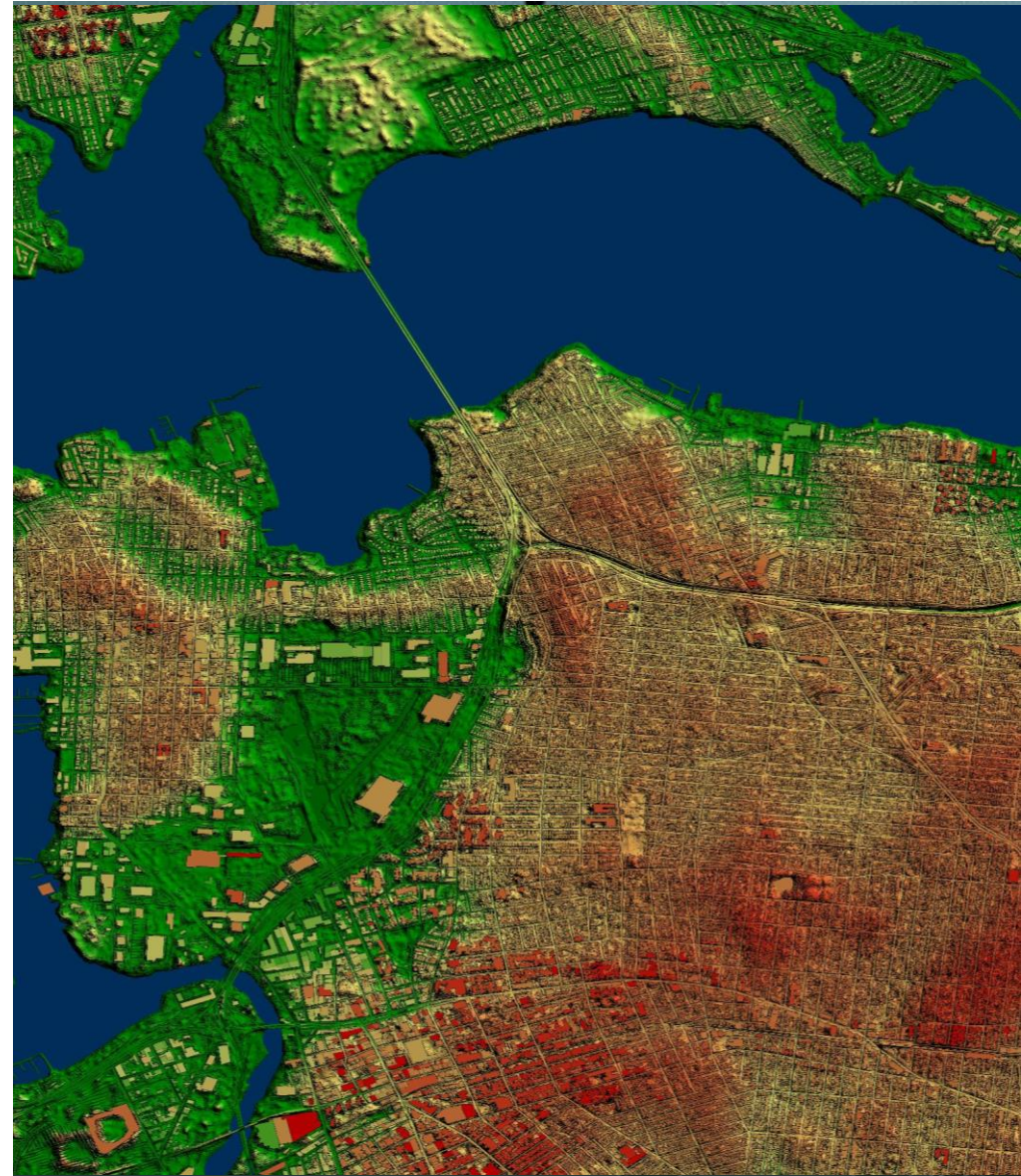
- Refresh available on-demand
- Off-the-shelf NEXTMap One data built with 2016 or newer satellite data

## High spatial detail and accuracy

- Resolves features at 1m spatial resolution with a vertical accuracy up to 1m LE90

## Limitless applications

- DSM and DTM ideal for in-depth analysis and can be used in countless applications





# Government Base Mapping



## Providing precise and efficient mapping for entire countries

- 260 km<sup>2</sup> / minute of high-resolution IFSAR imaging and precise 1 m 3D elevation data
- Dual-frequency X-band (25 cm) and P-band (85 cm) SAR imagery
- Compatible with high-resolution data ingested from anywhere on the globe

## The unique requirements of each collection are carefully incorporated into every mission plan and collection scenario

- Provide full coverage of the AOI
- Optimal line spacing
- Most efficient cost of collection
- Identify and manage air space restrictions
- Ensure collection specifications are achieved

## Ground control

- For many collections, no ground control points (GCPs) are required
- For higher accuracy requirements, GCPs are planned and deployed before collection

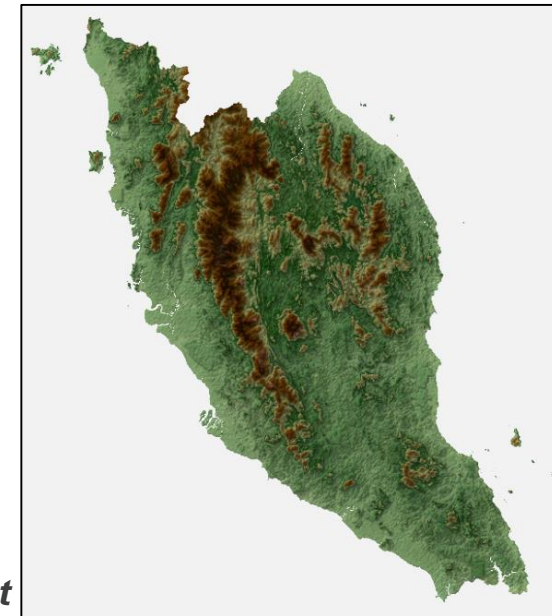
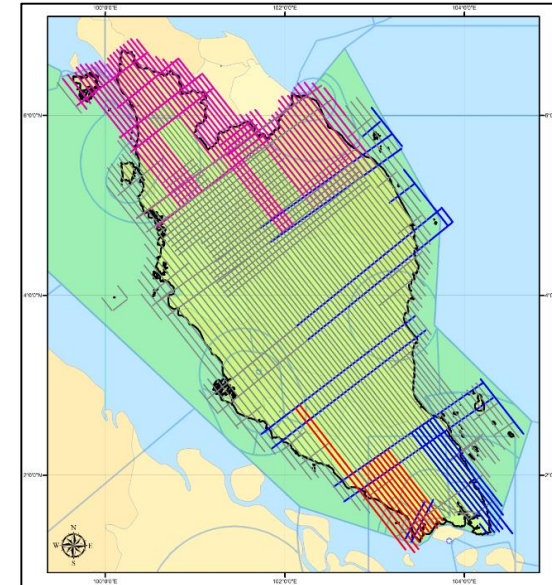
## Tactical planning

- Each sortie is meticulously planned to ensure maximum mission efficiency
- Plan based on mission priorities, fuel load, alternate airports, latest weather and NOTAM
- Maximize on-line collection time, while minimizing ferrying time to AOI

## High-speed processing provides deliverables quickly after collection

***Intermap has always captured 100% of targeted AOIs***

***Collections have always completed on-schedule or even earlier and on budget***



# 3D Data for Time-Sensitive, Critical Missions



## EXAMPLE: Thailand Cave Rescue, 2018

### Intermap supported rescue efforts in Chiang Rai, Thailand

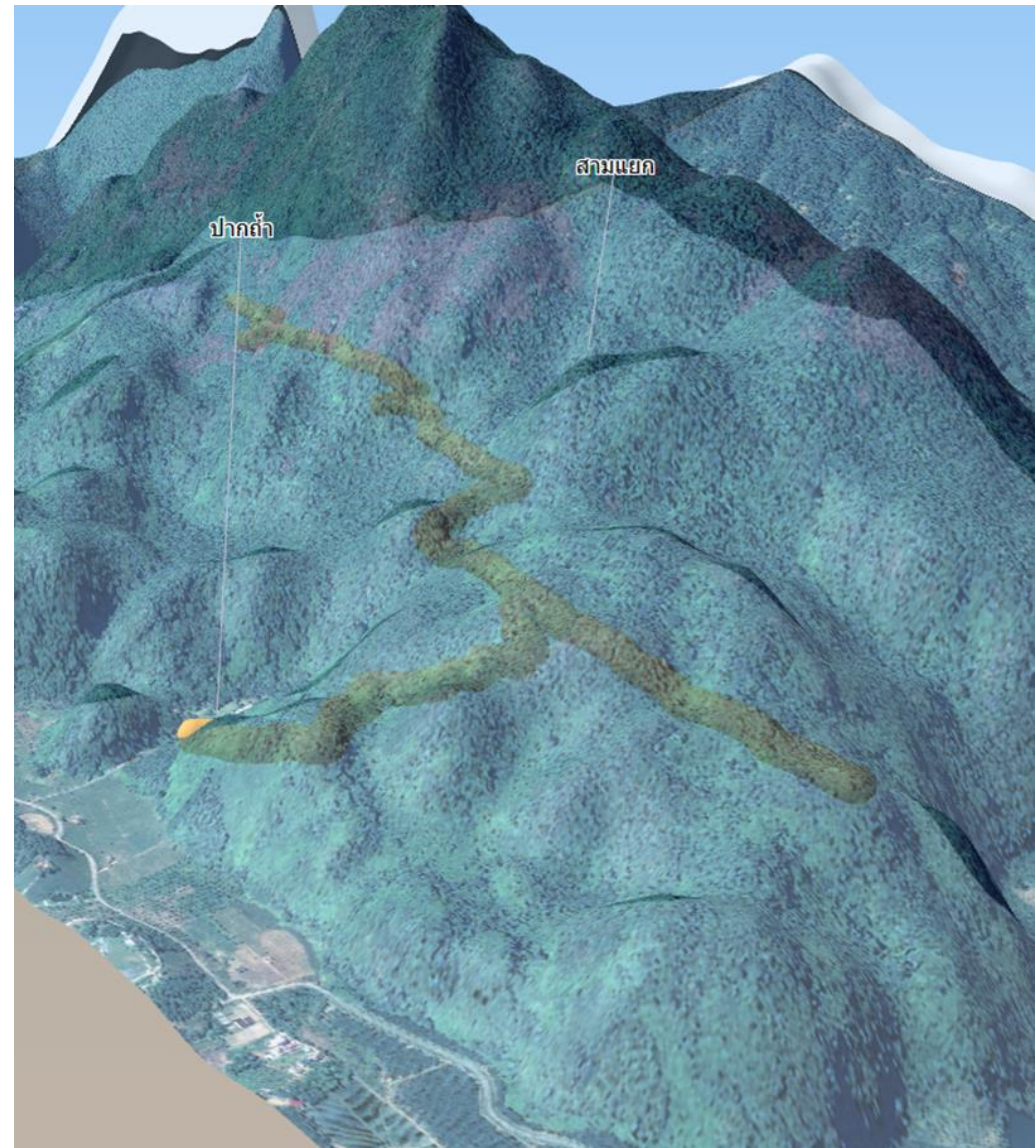
- Provided precise 3D model of the region within 3 hours of support request
- Combined 3D terrain model with 3D cave map to support logistical rescue effort planning

### Intermap data enabled accurate planning of shaft drill locations

- Enabled crews to prepare for circumstances that might occur
- Used for pumping out water, pumping in air and providing supplies
- Managing water during heavy rains which threatened to flood the cave and endanger rescue crews

[Video: Data from half a world away helps rescue stranded Thai football team](#)

[Press Release](#)







# NEXTView Aviation Data Improves Aviation Safety

## Certified aviation surface data

- Developed in partnership with Lufthansa Systems, NEXTView is the world's first and only certified commercial aviation 3D DEM
- Certified to EASA and RTCA standards for use in the cockpit, UTM systems and other aviation applications

## Specifically designed for aviation applications

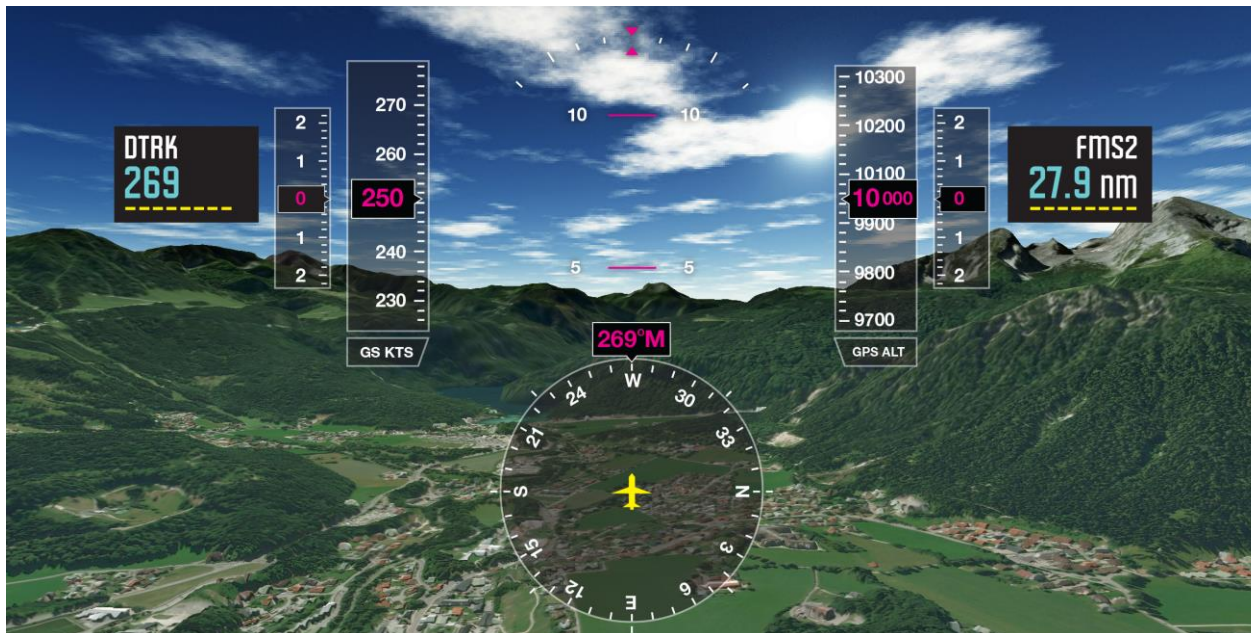
- Includes details for over 12,000 aerodromes and billions of obstructions spanning the globe

## High-resolution dataset

- 6 meter resolution is over 200x more detail than currently available 90 meter datasets

## Improves flight safety and efficiency

- Plan with confidence with continually updated data in your subscription area



# Aviation Applications: UAVs and UTM

## **NEXTView improves UAV flight safety and efficiency**

- Optimize operations for UAV missions such as delivery services and mapping
- Improve efficiency of flight plans by reducing the “uncertainty envelope” on flight paths
- Determine and select optimal routes, minimize elevation gain, determine shortest travel time, and increase payload weight
- Improve safety in all environments with high-precision locations for obstructions and terrain

## **Surface data is critical for Unmanned Traffic Management systems (UTMs)**

- UTM systems compile all the necessary information for safe and efficient flights and assist UAV operators with flight planning and air traffic clearance
- NEXTView provides the UTM industry with certified, detailed surface data to ensure safe UAV operations





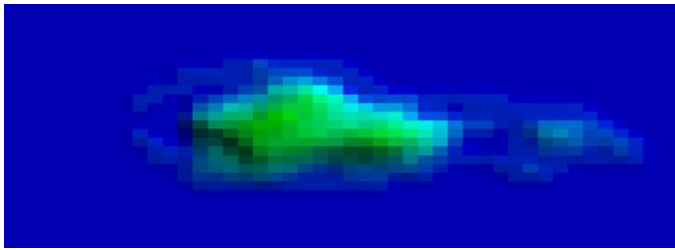
# NEXTView Elevation-as-a-Service Saves Lives



## EXAMPLE: Blackrock Island – Low-Resolution Foundation Data

### Irish Coast Guard rescue 116 crash – controlled flight into terrain

- On March 14, 2017, the Irish Coast Guard were conducting a rescue operation with a Sikorsky S-92 CHC Helicopter
- Poor visibility conditions meant the crew must depend on it's EGPWS (Enhanced Ground Proximity Warning System)
- The EPGWS terrain database did not represent the true height of the rocky island, resulting in a collision with the terrain
- All four crew members were killed



**Inadequate foundation data cost lives and compromised the mission**



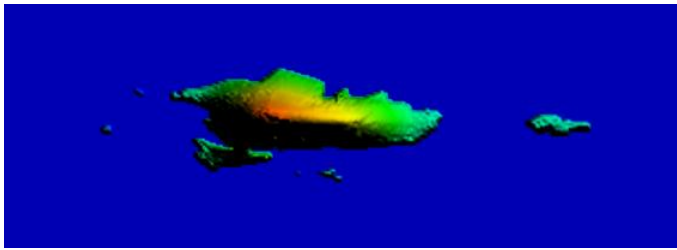
# NEXTView Elevation-as-a-Service Saves Lives



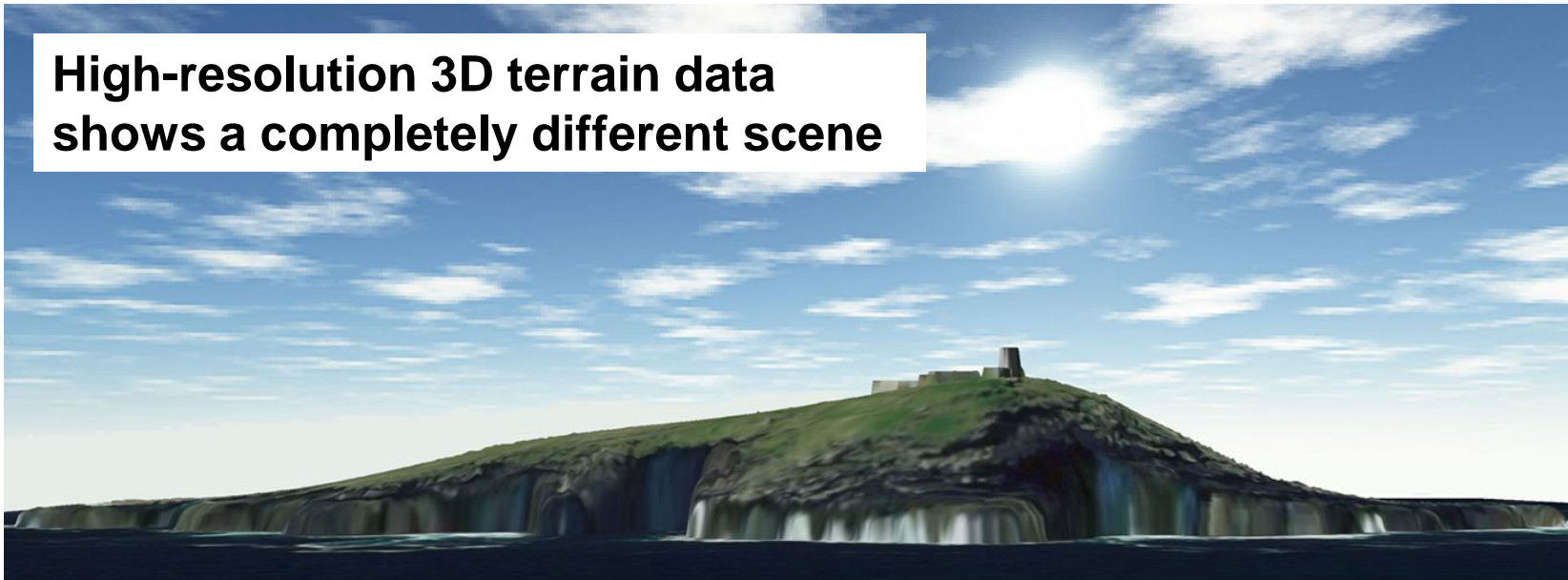
## EXAMPLE: Blackrock Island – NEXTView Aviation DEM

### Safely navigate with high-resolution, high-accuracy 3D data

- Using high accuracy 3D data results in a 50 m vertical difference compared to the data used by Rescue 116
- Intermap provides reliable data that have been independently validated and verified for critical missions



**High-resolution 3D terrain data  
shows a completely different scene**





# Intermap Tool Advantages: InsitePro<sup>®</sup> Insurance Underwriting Platform



## Accurate flood risk score

- Most accurate flood risk selection, risk segmentation and risk rating
- Floodzone simulation model to visualize flood impacts

## Consistent

- Only InsitePro combines NEXTMap data with high-accuracy peril models and analytics

## Customizable

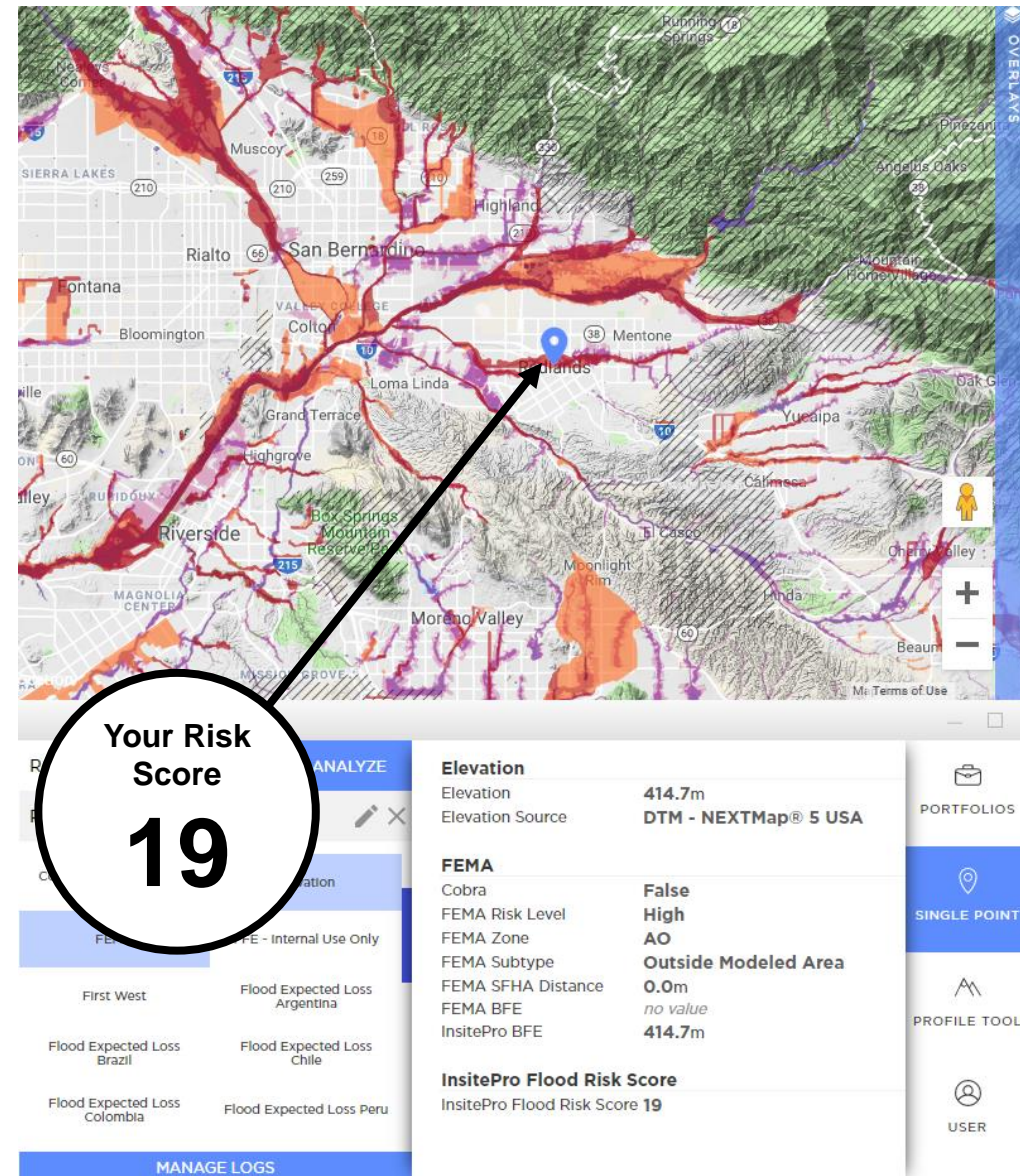
- Customizable score based on specific risk management objectives

## Increase profitability

- Better selection of risk leads to higher profitability

## Manage entire portfolios

- Know your exposure for millions of address with a single click



# Intermap Tool Advantages: Telecom Link Planning



## On-demand analysis

- Optimize networks with these applications:
  - Link Profile: instantly profile an entire country or just a single block with line-of-sight analysis
  - Viewshed / RF Viewshed: visibility and obstruction analysis based on NEXTMap One data

## High-resolution data

- 1 meter resolution data including DTM, DSM, clutter, and clutter height

## Globally available

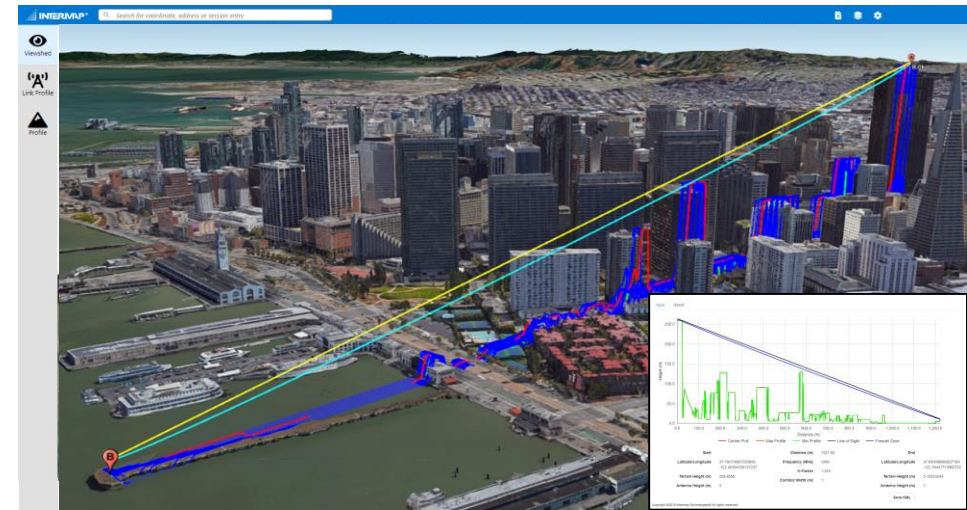
- Consistent and high-quality, available anywhere on the globe

## Continually updated

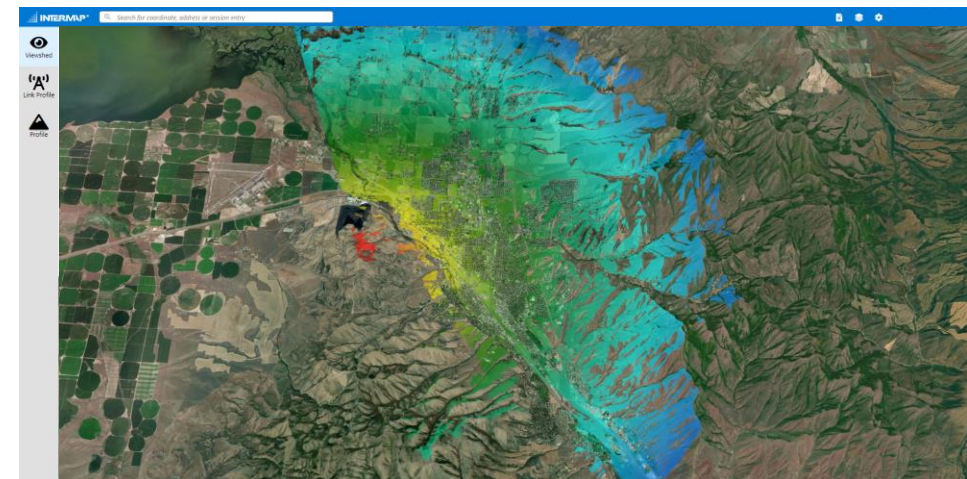
- Plan with confidence with continually updated data in your subscription area

## Fully compatible with other software

- 100% compatible with major RF planning tools



Link Profile



RF Viewshed



# Intermap Tool Advantages: NEXTWave™ Rail



## Risk Management Solution for Railway Operators

- Evaluate risk across entire rail networks with the highest quality geospatial data and advanced risk analytics for flood, tree encroachment and wildfire

## Tree Management

- Manage tree encroachment with a customized software suite that leverages continually updated satellite information to detect trees near the rails

## Flood Risk

- Perform effective risk mitigation to reduce or eliminate repair costs and freight delays by proactively preventing track washout

## Wildfire Risk

- Access wildfire risk quickly and efficiently so operations teams can target high-risk areas and focus on clearing and other mitigation measures

## SaaS Package

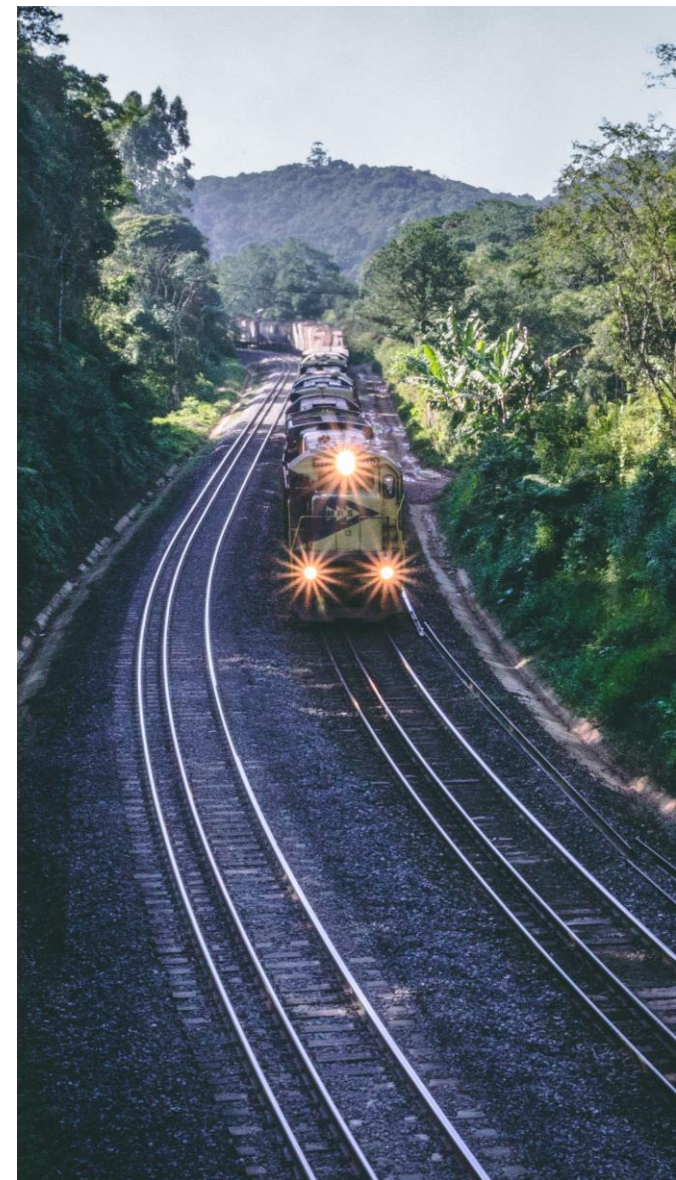
- Advanced risk analytics global insurance companies that is both economical and efficient
- Worldwide 1 meter and 6 meter resolution data including DSM, DTM, clutter, and clutter height

## Integrate with an API

- Integrate risk analytics directly into existing workflows using NEXTWave's API and web services capabilities

## Continually Updated

- Plan with confidence with continually updated data in your subscription area



# Intermap Tool Advantages: NEXTWave™ Pattern of Life

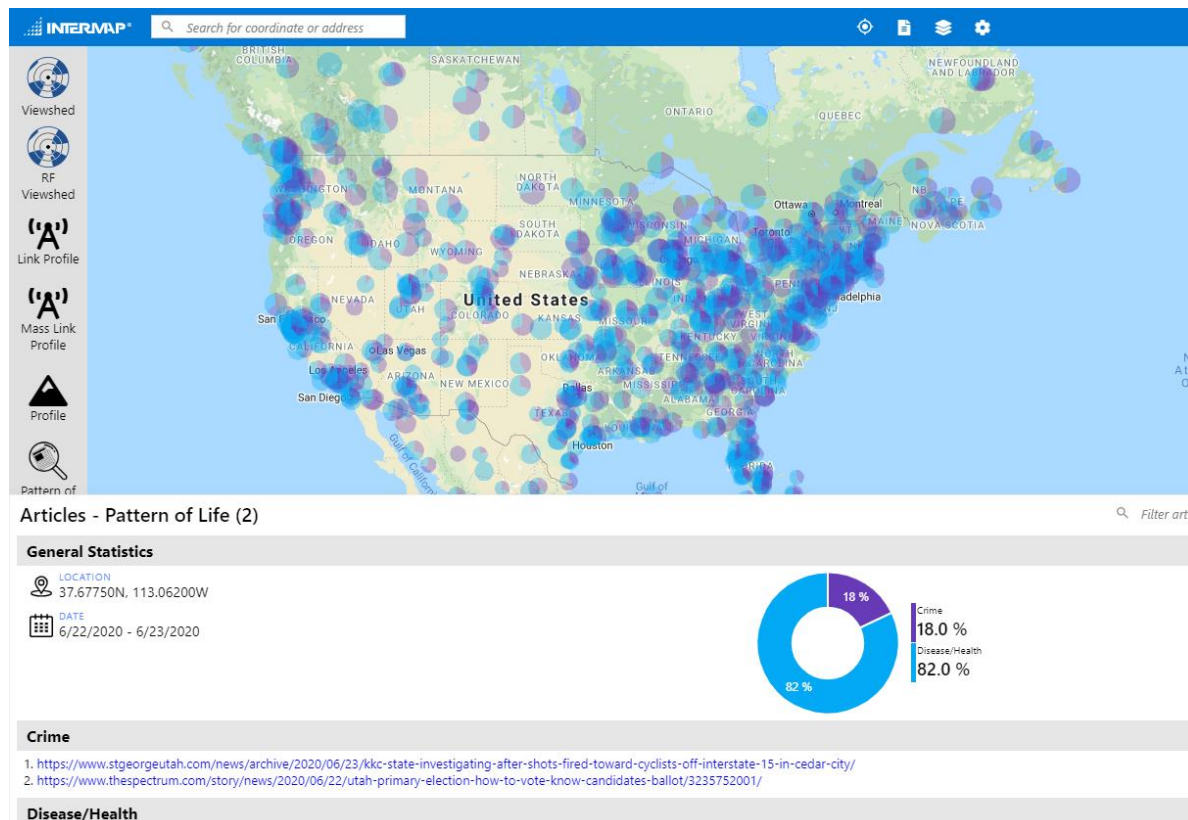


## Powerful data and analytics map real-time events into meaningful information

- Real-time events are plotted on a map as they unfold
- Analyze historical events and analyze trends over time

## Intelligent filtering and predictive analytics for complete insight

- Filter events by category and find related events
- Identify linked events and predict likely outcomes to plan and manage response
- Call up the original news feed to read the full story and understand the full context of events



Compare correlation and causation with past history to predict future events under different scenarios.

Example query of crime and disease data across the U.S. in a span of 48 hours.

Selecting a specific location shows percentage of each category and clickable news articles



# Statutory Rights of Rescission for Purchasers



This presentation is considered an “offering memorandum” under the securities laws of the provinces of Ontario and Saskatchewan and therefore purchasers of securities of Intermap in those provinces are entitled to certain statutory rights if there is a misrepresentation in this presentation, as described below. Purchasers in Alberta, British Columbia and Québec are not entitled to the statutory rights described below. **Securities of Intermap are not being offered to investors in Manitoba, New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland and Labrador, Yukon, the Northwest Territories or Nunavut.**

The following summary is subject to the express provisions of the relevant securities legislation and the rules, regulations, and instruments applicable in Ontario and Saskatchewan, which may contain other limitations and statutory defences on which Intermap and any other applicable parties may rely. These remedies, or notice with respect to these remedies, must be exercised or delivered, as the case may be, by the purchaser within the time limits prescribed by applicable securities legislation. Purchasers should refer to the applicable provisions of the securities legislation of their province for the particulars of these rights or consult with a legal advisor.

For the purposes of the following, “misrepresentation” means:

- a) an untrue statement of a material fact;
- b) an omission to state a material fact that is required to be stated; or
- c) an omission to state a material fact that is necessary to be stated in order for any statement not to be misleading or false in light of the circumstances in which it was made.



# Statutory Rights of Rescission in Ontario



## Ontario Purchasers

OSC Rule 45-501 and Section 130.1 of the *Securities Act* (Ontario) (the “Ontario Securities Act”) provide that a purchaser who purchases securities offered by an offering memorandum (such as this presentation) has, if the offering memorandum contains a misrepresentation and without regard to whether the purchaser relied on the misrepresentation, a statutory right of action against the issuer for damages or for rescission. If the purchaser elects to exercise the right of rescission, the purchaser will have no right of action for damages. No such action shall be commenced more than, in the case of an action for rescission, 180 days after the date of the transaction that gave rise to the cause of action, or, in the case of any action other than an action for rescission, the earlier of: (a) 180 days after the purchaser first had knowledge of the facts giving rise to the cause of action, or (b) three years after the date of the transaction that gave rise to the cause of action.

The Ontario Securities Act provides a number of limitations and defences to such actions, including the following:

- a) the defendant is not liable if it proves that the purchaser purchased the securities with knowledge of the misrepresentation;
- b) in an action for damages, the defendant shall not be liable for all or any portion of the damages that the issuer proves do not represent the depreciation in value of the securities as a result of the misrepresentation relied upon; and
- c) in no case shall the amount recoverable exceed the price at which the securities were offered.

OSC Rule 45-501 provides that when an offering memorandum is delivered to a purchaser (including a prospective purchaser) to whom securities are distributed in reliance on the “accredited investor” prospectus exemption, the right of action referred to in Section 130.1 of the Ontario Securities Act is applicable unless the purchaser (including a prospective purchaser) is: (a) a Canadian financial institution, meaning either (i) an association governed by the *Cooperative Credit Associations Act* (Canada) or a central cooperative credit society for which an order has been made under section 473(1) of that Act; or (ii) a bank, loan corporation, trust company, trust corporation, insurance company, treasury branch, credit union, caisse populaire, financial services cooperative, or league that, in each case, is authorized by an enactment of Canada or a jurisdiction of Canada to carry on business in Canada or a jurisdiction in Canada; (b) a Schedule III bank, meaning an authorized foreign bank named in Schedule III of the *Bank Act* (Canada); (c) the Business Development Bank of Canada incorporated under the *Business Development Bank of Canada Act* (Canada), or (d) a subsidiary of any person referred to in (a), (b) or (c) above, if the person owns all of the voting securities of the subsidiary, except the voting securities required by law to be owned by the directors of that subsidiary.





# Statutory Rights of Rescission in Saskatchewan



## Saskatchewan Purchasers

Section 138 of *The Securities Act, 1988* (Saskatchewan) (the “Saskatchewan Securities Act”) provides that in the event that an offering memorandum (such as this presentation), together with any amendments thereto contains a misrepresentation, a purchaser who purchases securities covered by the offering memorandum has, without regard to whether the purchaser relied on the misrepresentation, a statutory right for rescission against the issuer or a right of action for damages against the issuer, every director of the issuer at the time the offering memorandum or any amendment thereto was sent or delivered, and every person or company whose consent has been filed with respect to the offering (but only with respect to reports, opinions or statements that have been made by them), among others. If such purchaser elects to exercise a statutory right of rescission against the issuer, it shall have no right of action for damages. No such action for rescission or damages shall be commenced more than, in the case of a right of rescission, 180 days after the date of the transaction that gave rise to the cause of action or, in the case of any action, other than an action for rescission, such action shall be commenced before the earlier of (i) one year after the purchaser first had knowledge of the facts giving rise to the cause of action and (ii) six years after the date of the transaction that gave rise to the cause of action.

The Saskatchewan Securities Act provides a number of limitations and defenses, including the following:

- a) no person or company will be liable if the person or company proves that the purchaser purchased the securities with knowledge of the misrepresentation;
- b) in the case of an action for damages, no person or company will be liable for all or any portion of the damages that it proves do not represent the depreciation in value of the securities as a result of the misrepresentation; and
- c) in no case will the amount recoverable in any action exceed the price at which the securities were offered to the purchaser.



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