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# NV5 Geospatial: ENVI Ecosystem

Cherie Tyrrell, Asia Pacific Regional Manager



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Geospatial solutions to solve the world's toughest challenges.



**1300+**

Worldwide  
Geospatial  
Professionals  
+5000 Total

**\$ ~1B**

Total Revenue

Completed  
Projects in

**182**

Countries

**100+**

Offices  
Worldwide

**500K+**

Software Users  
Around the World

# The ENVI Ecosystem: Imagery for All

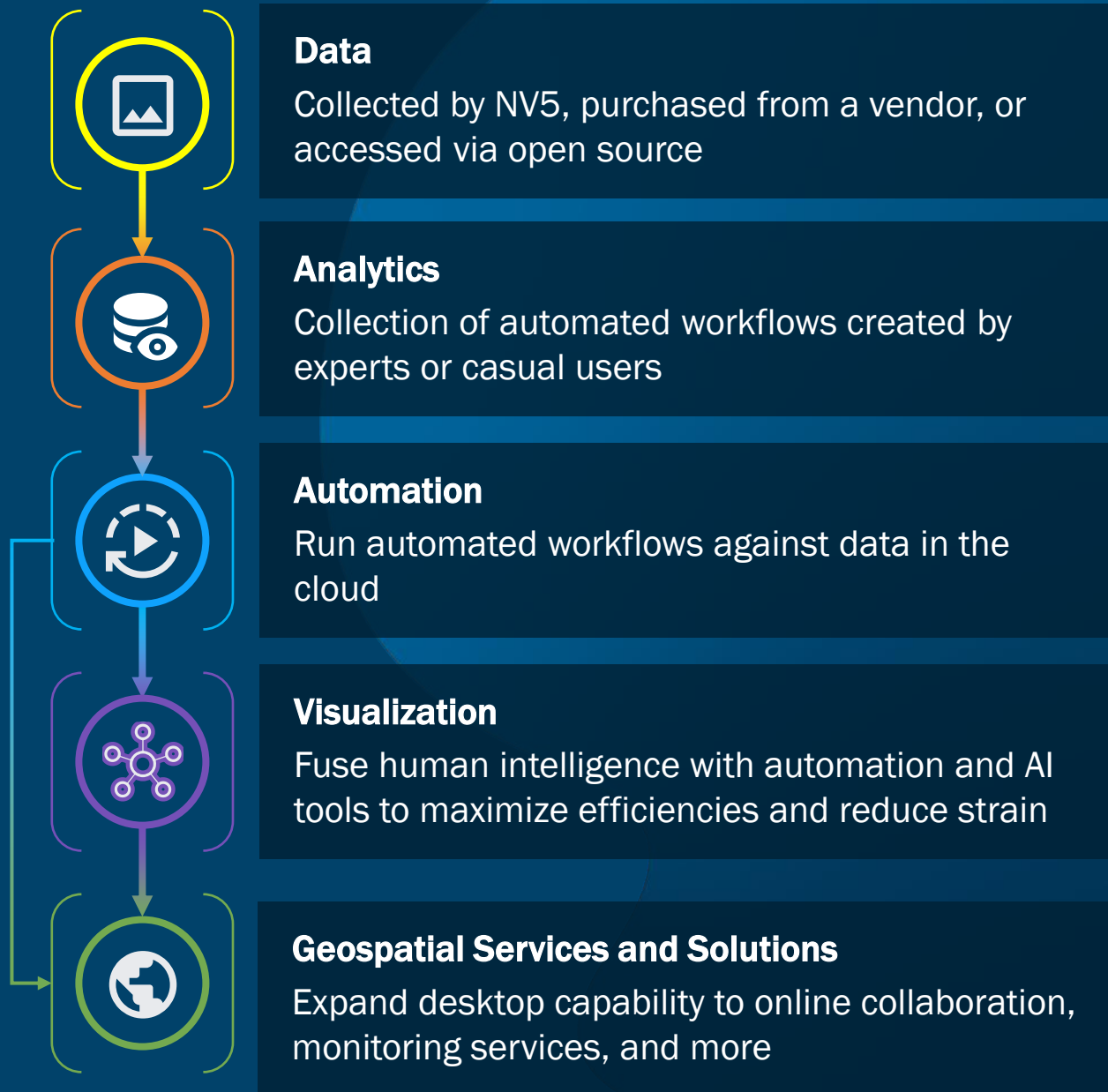
NV5

## Imagery Expertise. Actionable Insights. Seamless Integration.

The ENVI Ecosystem delivers end-to-end solutions for complex geospatial challenges - transforming imagery, SAR, video, and AI into mission-critical insights

Our robust desktop tools form the backbone of a powerful, automated workflow engine - enabling users to process, analyze, and share geospatial intelligence with ease

Our solutions drive faster, smarter decisions by seamlessly integrating with third-party systems like ArcGIS, Smart Twins, and TAK to get mission-critical information in the hands of users





# Industry-Focused Solutions

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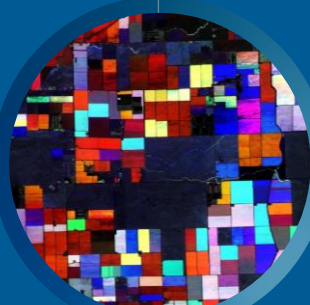
The ENVI Ecosystem enables critical decision-making when, and where, it matters most

**Climate  
Science**



**Disaster  
Management**

**Precision  
Agriculture**



**Federal and Civil  
Government**

**Transportation  
and Utilities**



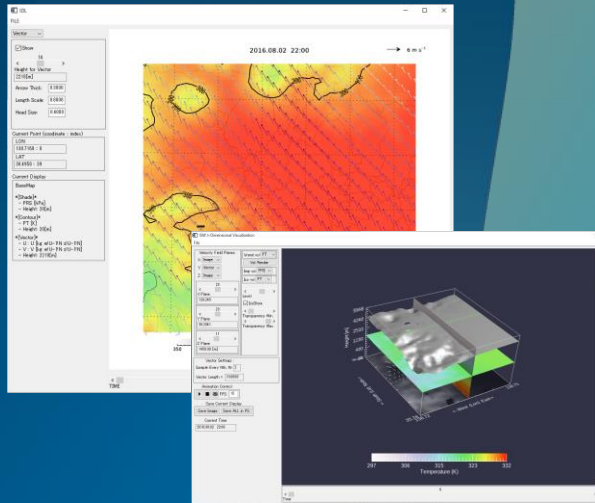
**Defense,  
Intelligence, and  
National Security**

**Academia**



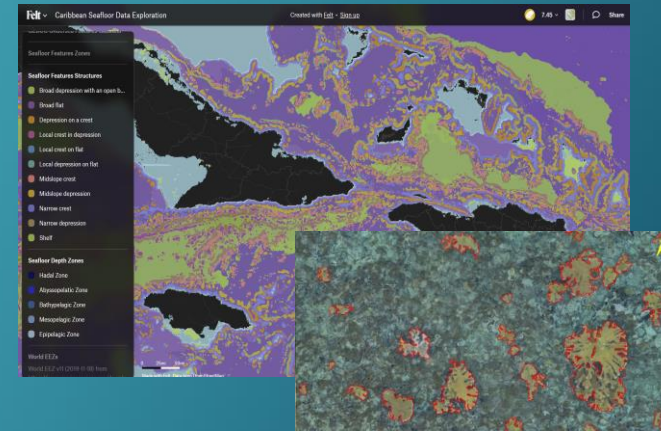
# Case Studies

## Improving Japanese Weather Forecasting With IDL



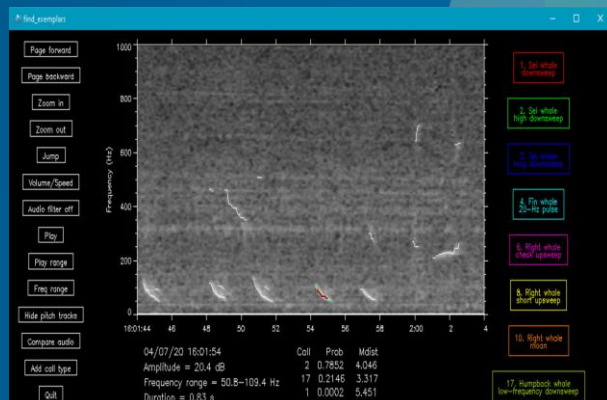
*IDL application for numerical weather prediction model improves analysis accuracy.*

## The Urgency of Conservation in the Caribbean



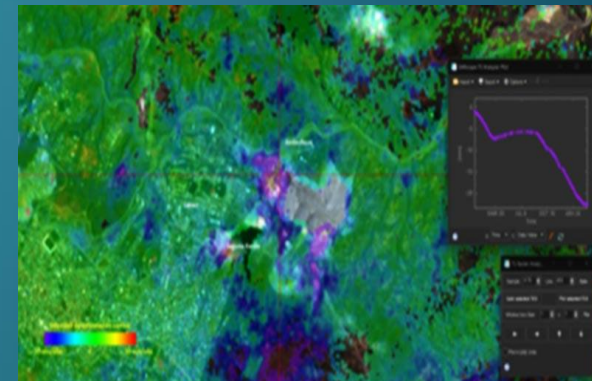
*ENVI is essential for staying ahead of environmental threats and protecting the Caribbean's natural heritage.*

## Harnessing Data Science for Marine Conservation



*IDL application for automated acoustic detection systems to process and classify whale calls for marine conservation.*

## ENVI SARscape to Analyze Llallagua Landslide in Bolivia



*Sentinel-1 time series results show progressive ground velocity rates exceeding 20 mm/year and accelerating months before the collapse.*



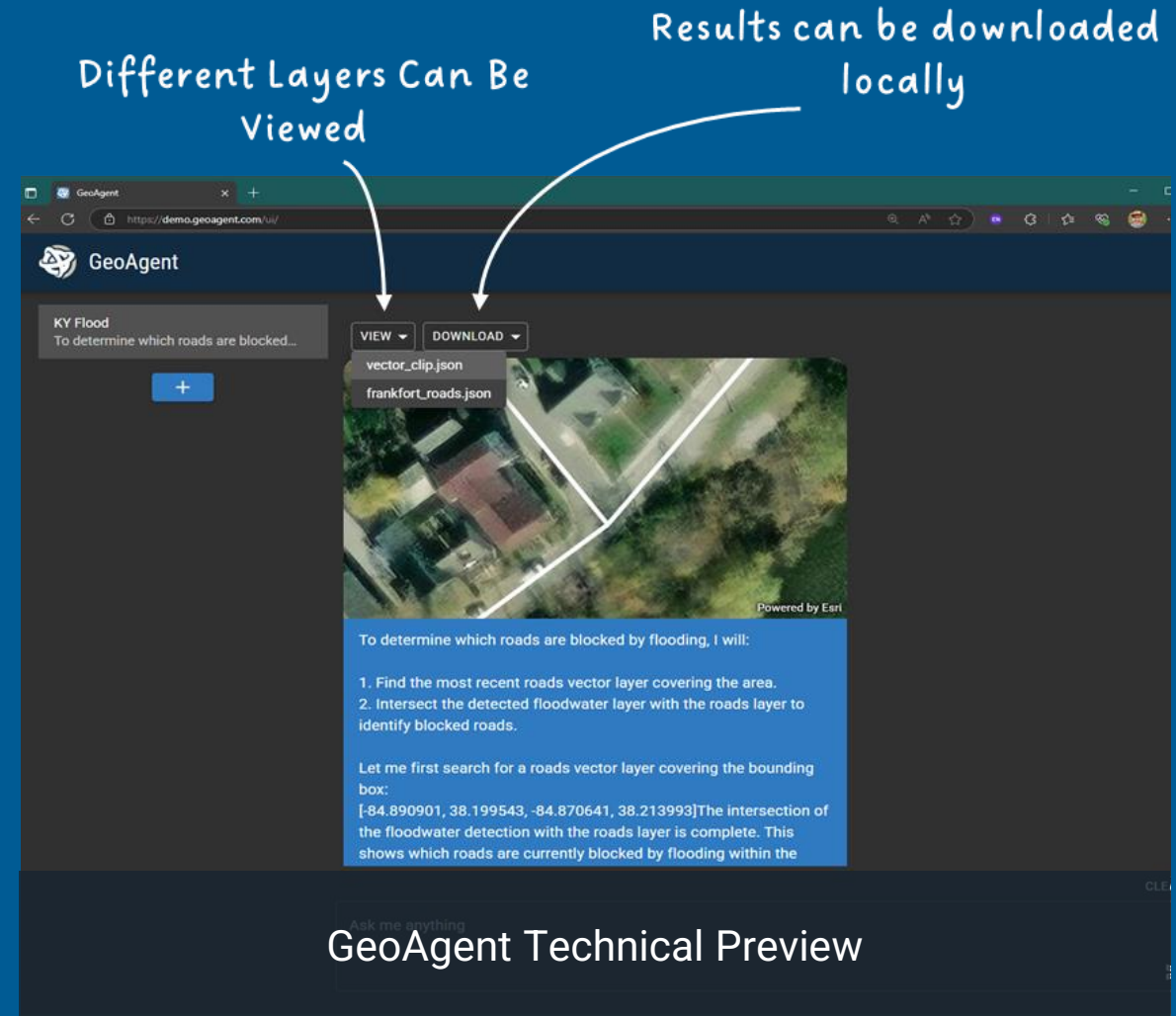
# What We're Doing with AI, ML, and Deep Learning



# Introducing GeoAgent

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- GeoAgent is an AI-based chat interface for all your geospatial systems
- GeoAgent executes tools and tasks based on natural language requests and data availability and leverages the power of ENVI, Esri, and more
- GeoAgent can create toolchains and execute them on your behalf, driving a new user experience when working with remote sensing data
- Support with training, tutorials, and automation
- Learn more at [NV5GeospatialSoftware.com/GeoAgent](https://NV5GeospatialSoftware.com/GeoAgent)



# GeoAgent Overview

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Layer View Selection

Downloadable Results

Sessions History

User Sign In

User Message Field

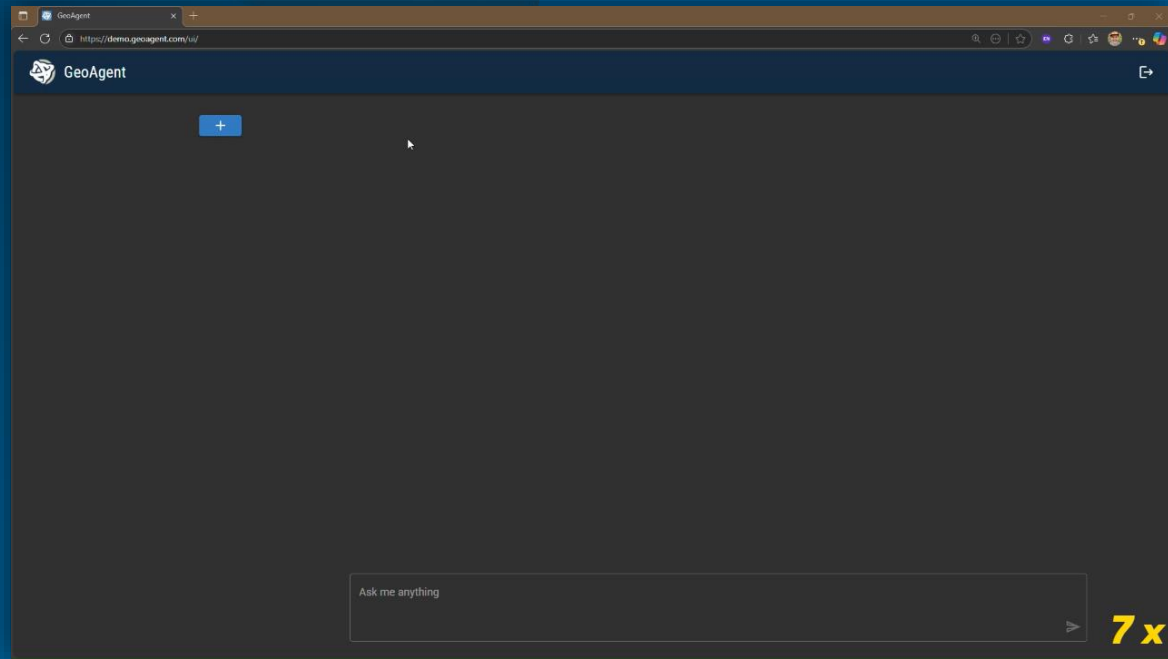
The screenshot shows the GeoAgent web application interface. At the top left, the 'Sessions History' section displays a session titled 'KY Flood' with the description 'To determine which roads are blocked...' and a blue '+' button. To the right, the 'Layer View Selection' section features a 'VIEW' dropdown menu and a 'DOWNLOAD' dropdown menu, with options for 'vector\_clip.json' and 'frankfort\_roads.json'. Below these is a map view showing a street intersection with a white line indicating a path. The 'Downloadable Results' section is located to the right of the map, containing a 'User Sign In' button. The 'User Message Field' is at the bottom, showing a list of instructions: 'To determine which roads are blocked by flooding, I will:', '1. Find the most recent roads vector layer covering the area.', '2. Intersect the detected floodwater layer with the roads layer to identify blocked roads.', and 'Let me first search for a roads vector layer covering the bounding box: [-84.890901, 38.199543, -84.870641, 38.213993]'. The intersection of the floodwater detection with the roads layer is complete. This shows which roads are currently blocked by flooding within the'. A 'CLEAR' button is located to the right of the message field.



# GeoAgent vs Desktop Flood Detection

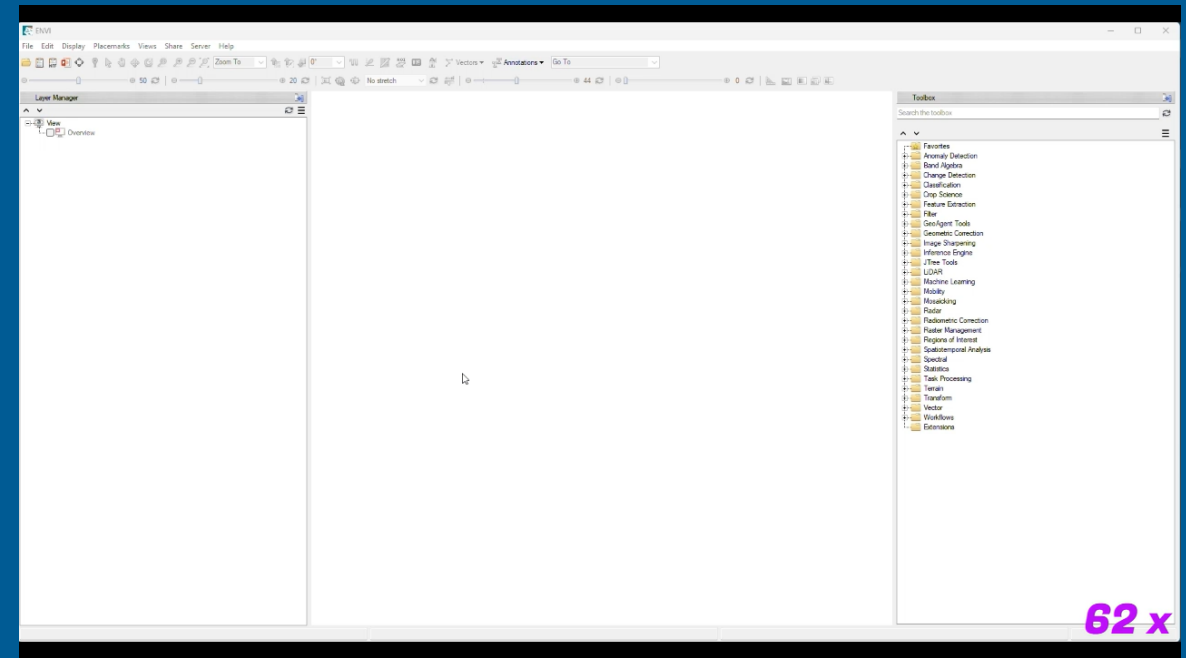
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## GeoAgent



3:31 minutes  
Novice User

## ENVI Desktop



30:46 minutes  
Expert User



## Flood Analysis

申し訳ありませんが、現在のツールで...



もちろんです。これから日本語でご案内します。

洪水解析を最初から始めます。  
どの地域で解析を行いたいですか？  
以下の情報を教えてください。

1. 解析したい場所の中心座標（経度・緯度）
2. 解析範囲の広さ（例：10平方キロメートル、20平方マイルなど）

もしアメリカ国内のデータが必要な場合は、その旨をお知らせください。  
ご希望の条件を教えていただければ、利用可能なデータを検索します。





## Flood Analysis

アメリカで利用可能なラスターデ...

もちろん、[日本語でも案内します。](#)

# Data Search

洪水解析を最初から始めます。

どの地域で解析を行いたいですか？

以下の情報を教えてください。

1. 解析したい場所の中心座標（経度・緯度）
2. 解析範囲の広さ（例：10平方キロメートル、20平方マイルなど）

もしアメリカ国内のデータが必要な場合は、その旨をお知らせください。

ご希望の条件を教えてください、利用可能なデータを検索します。

アメリカで利用可能なデータ

アメリカで利用可能なラスターデータ（衛星画像や標高データなど）は以下の通りです：

**1. Mountain Pass HSI（ハイパースペクトル画像）**

- 場所：ネバダ州付近

- データURI: s3://envi-agent/input/mountain\_pass\_hsi.zip

**2. Lake Charles DSM（デジタル表面モデル）**

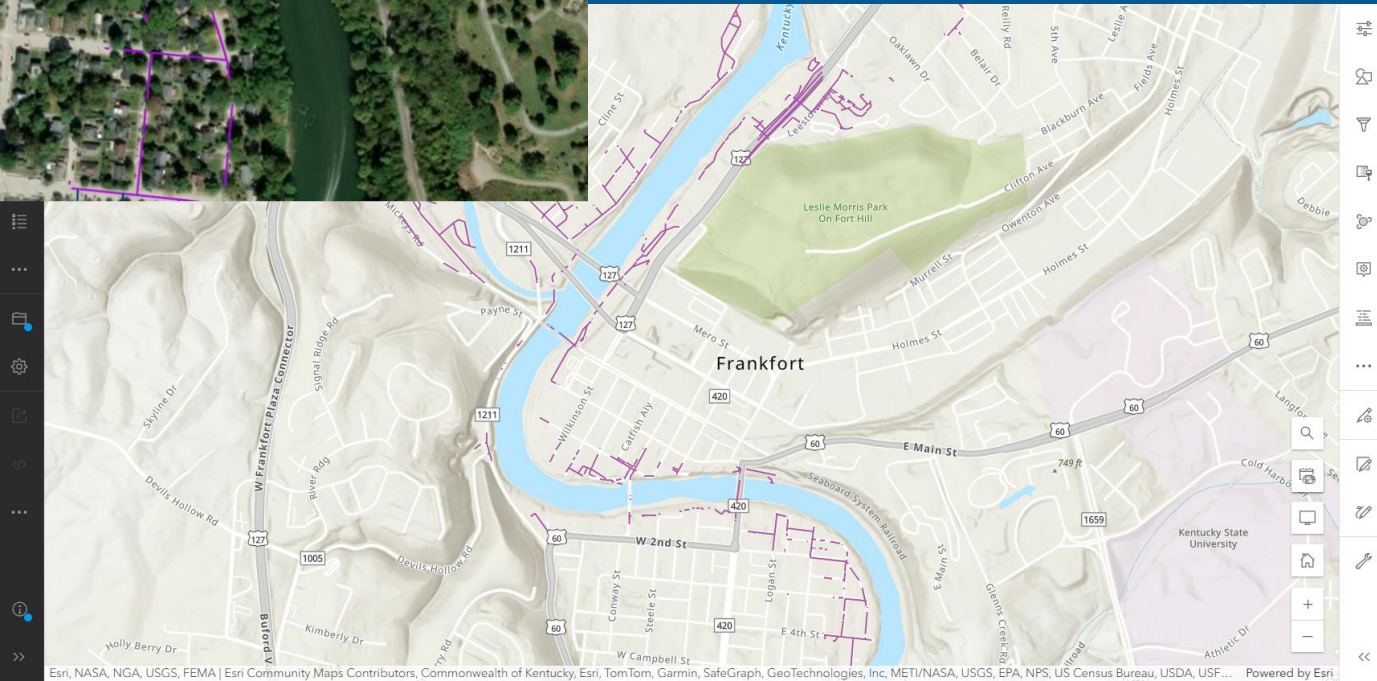
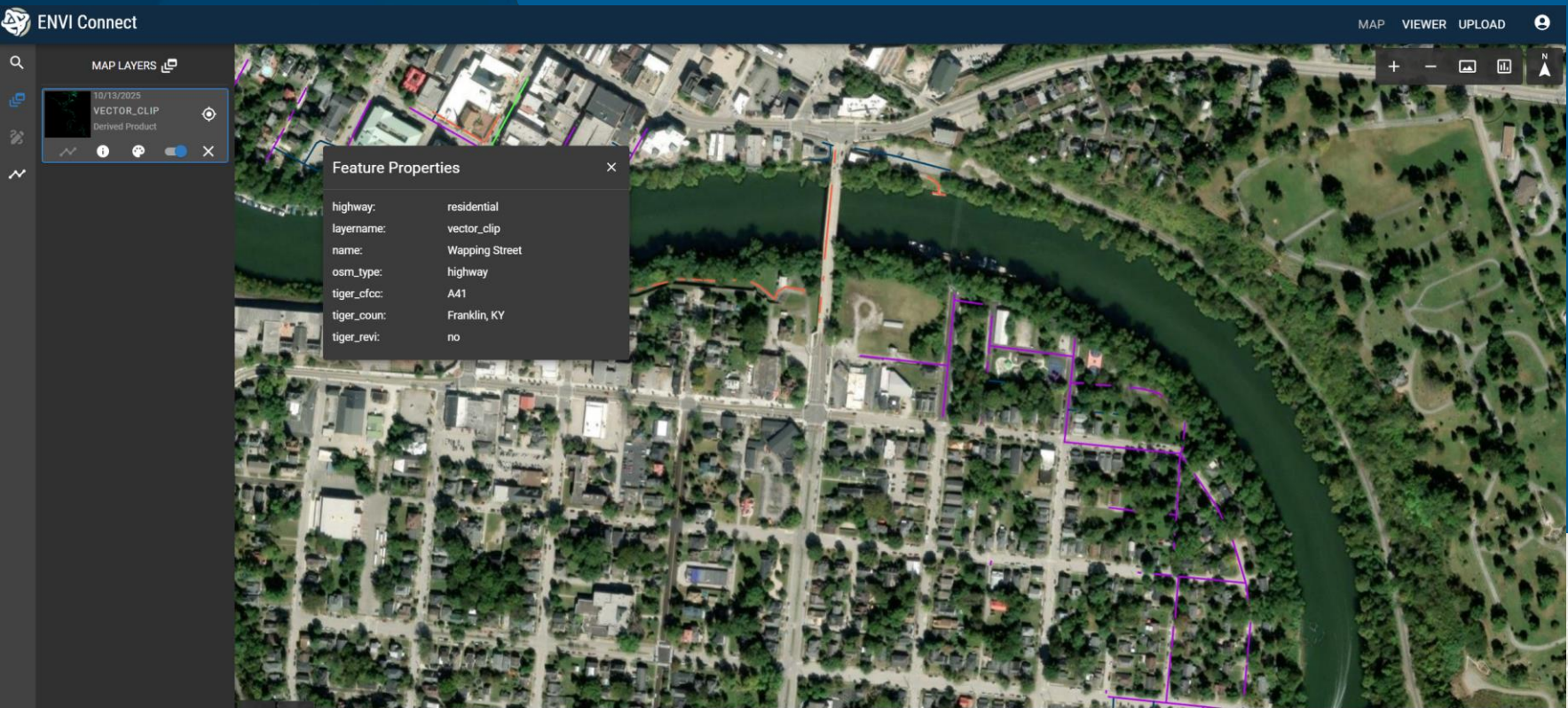
- 場所：ルイジアナ州付近

CLEAR

Ask me anything



# Results in ENVI Connect and ArcGIS Online

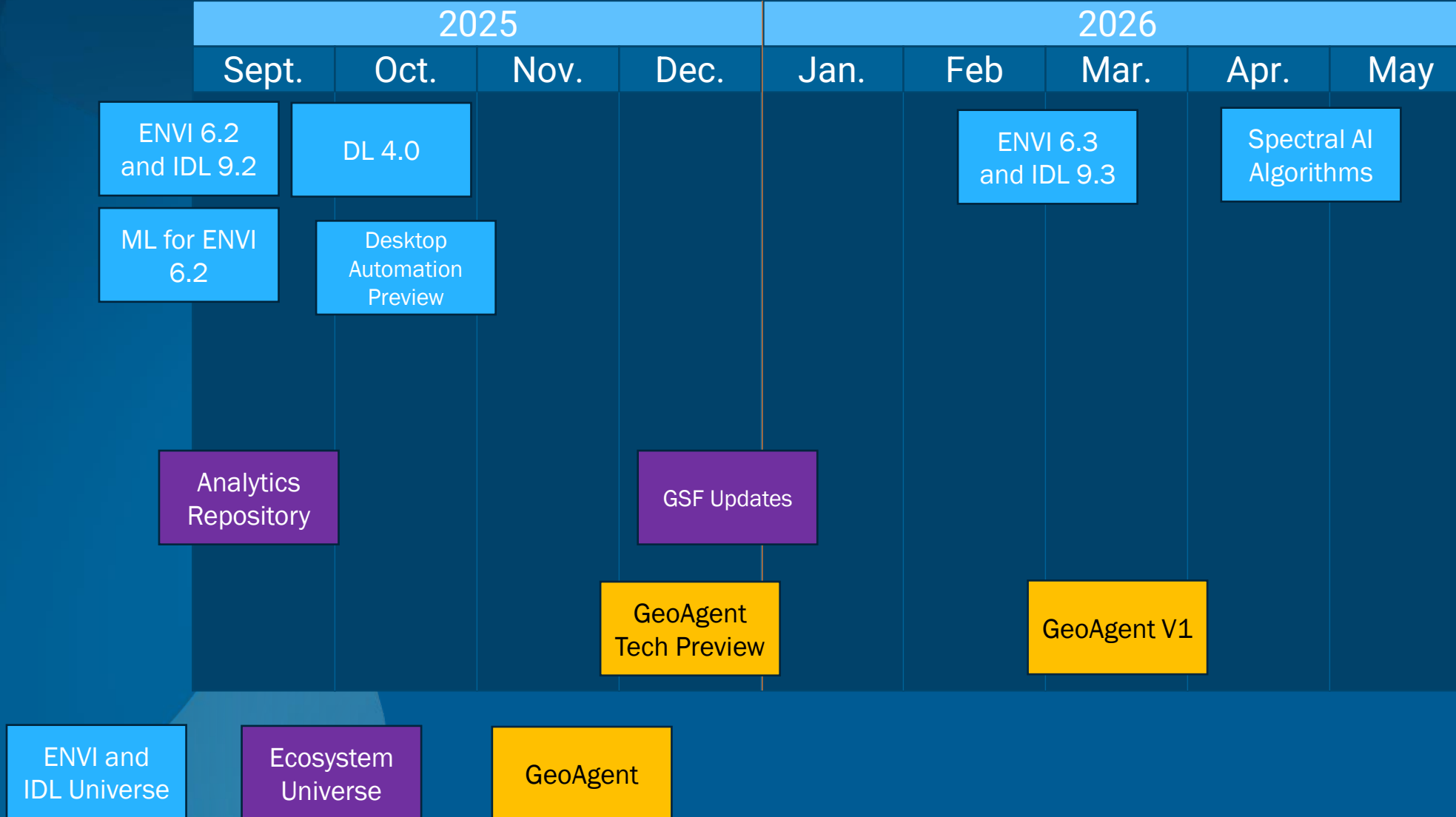




# A Glance at the Future

# Roadmap

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# Thank You

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