

Unify Your Geospatial Analytics

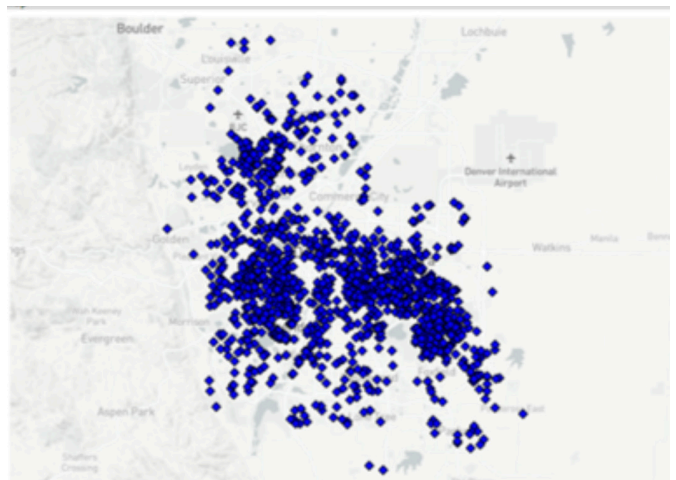
Today agencies are transforming their analytics, by automating key processes and upskilling data teams to accelerate the creation of actionable insights.

More and more organizations are turning to geospatial analytics to better identify threats, optimize resources and increase situational awareness.

GIS is Good, Unified Analytics **with Geospatial is Better**

Many organizations think geospatial analytics is the exclusive domain of GIS specialists with access to specialized GIS systems, but change is here. As the availability of third-party spatial data like satellite imagery has increased, organizations are beginning to understand the need to better leverage spatial analysis and incorporate it into their descriptive, predictive, and prescriptive workflows.

Instead of leveraging expensive GIS systems or having the inconvenience of moving data from multiple systems, many government organizations are streamlining and unifying their geospatial analytics through **Analytic Process Automation (APA)**.



Alteryx is the Analytic Process Automation Platform that **unifies analysis** for your **entire organization**.

US Census Bureau Digitally Transforms their Analytics



Location Analysis and Input Data



Image Search and Collection



Production Mode and Classifications



Validating and More Specific Training

MISSION

- Every 10 years, the US Census Bureau conducts a national count of the US Population and demographics, but they also capture and track valuable insights related to economic indicators that have a profound impact on consumer confidence, Wall Street, and federal funding allocations to local communities.
- In fact, U.S. Census data is one of the most valuable national assets. It must be accurate, timely, protected, and used wisely to effectively allocate over \$675 billion in federal funding to states, local communities, and businesses.

CHALLENGE

- The sheer volume, velocity, and veracity of Census' Big Data is hard to manage with legacy systems. Manual surveying and data processing are labor-intensive, time-consuming, and costly.

HOW ALTERYX HELPED

- They used an innovative advanced analytics solution using satellite image analyses from Reveal and Alteryx to digitally transform data collection, analyses, and dissemination processes for the U.S. Construction Indicator.

SOLUTION

- With this solution, Census is dramatically reducing operational costs while improving the accuracy and quality of Census economic indicators.

Alteryx Geospatial Analytics in Action

Alteryx is the Analytic Process Automation Platform that unifies analysis for your entire organization. The following use cases illustrate how Alteryx has turned geospatial analytics into critical insights.

With this insight, the organization was able to execute **targeted outreach** to impacted families...

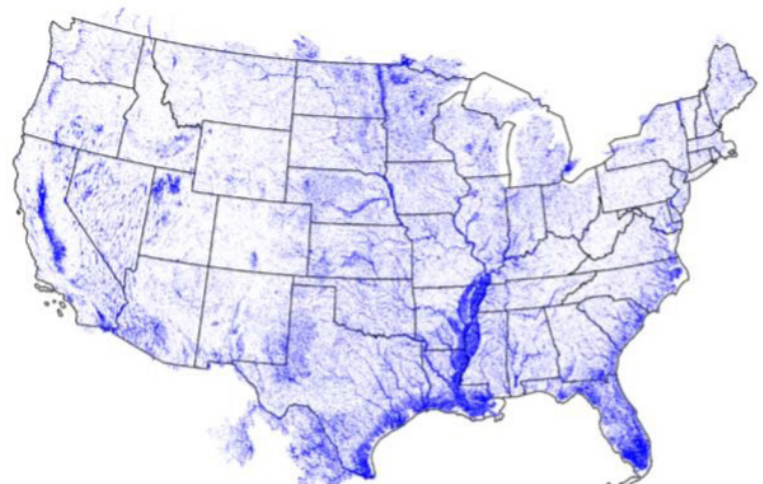
When major hurricanes hit Puerto Rico, Alteryx accelerated recovery efforts by using Alteryx to unify and deploy predictive modeling and geospatial analysis. In this scenario, actionable insight was created by analyzing weather and building construction data. The resulting insight helped disaster management teams predict where the greatest level of damage occurred, allowing them to prioritize those areas for physical inspection. This resulted in faster delivery of disaster recovery resources for the communities most in need.

In another example, the US Census Bureau used the power of Alteryx to analyze satellite imagery to automate the tracking of construction starts. The US Census Bureau used machine Learning to train for image recognition and the geospatial capabilities in Alteryx to automate insights related to a key economic indicator.

When Covid-19 hit and schools closed, critical gaps across the food security network developed. One state agency responsible for the welfare of children and families turned to geospatial analysis in Alteryx to match families in need with local resources that could satisfy their nutritional requirements.

As wildfires ravaged parts of California, one business analyst leveraged the geospatial analytics found within Alteryx to identify which members of their insurance company were most at risk or who had already suffered a loss. With this insight, the organization was able to execute targeted outreach to impacted families, coordinating the delivery of services related to shelter, clothing, food, and medication for those most in need.

With Alteryx you can Turn your Data into a Geospatial Goldmine



With built-in spatial analytics, the Alteryx Platform enables anyone to **unleash the power** of geospatial intelligence.

Powering up decisions with geospatial data and analysis to optimize resource deployment, improve transportation and logistics, or accelerate response to disasters and emergency situations can deliver powerful results. Yet blending multiple datasets, applying geocoding, and enriching it with location intelligence is time-consuming, error-prone and used to require access to dedicated GIS-based systems. With built-in spatial analytics, the Alteryx Platform enables anyone to unleash the power of geospatial intelligence.

Predictive Analytics for Historical Benefit Claims



MISSION

- Help veterans receive certain healthcare benefits based on events from the Vietnam war, specific to Agent Orange exposure

CHALLENGE

- Analytics required processing, cleansing, and blending many different data sources (war events, individual patient, dates, geospatial, etc.) to accurately create a predictive model
- Much of these datasets were historical ship logs from over 700 ships, which were handwritten, often incomplete, and hard to leverage with modern analytic tools

HOW ALTERYX HELPED

- Ingested and processed nine different data sources (1.5M+ rows), including interpolating ship logs efficiently
- Identified incorrect positions in the data (possibly from transcription errors)
- Flagged and plotted the historical paths of individual ships deployed in the theater during a certain timeframe

RESULTS

- Cut man-hours from 60 days to just minutes, resulting in expedited veteran care for health claims and predictive analytics for others at risk
- VBA was able to spatially plot individual ship paths using interpolation/Alteryx spatial workflows to confirm existing claims and proactively reach out to high-risk individuals

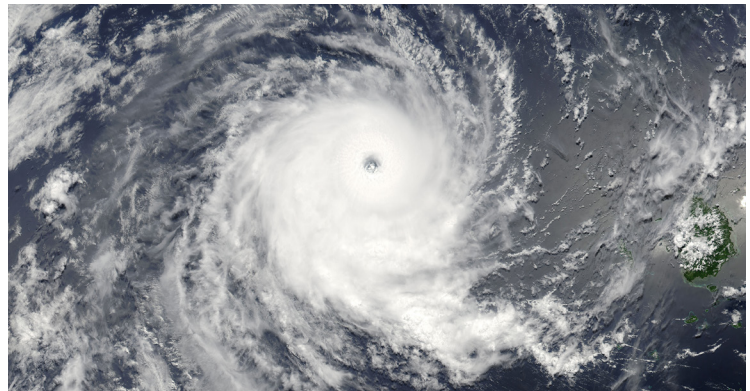
Alteryx makes turning traditional data into geospatial data **easy**.

Blend, Geocode, Enrich — and Accelerate Insights

With an intuitive workflow that allows you to visually combine several datasets, geocode them, enrich them with spatial data sources like TomTom and the U.S. Census and demographic data, Alteryx makes turning traditional data into geospatial data easy — no data science or GIS skills required.

- **Easily source data:** Pull from spreadsheets, file databases, unstructured data, satellite imagery, social sources, mobile apps, CRMs, or ERP sources
- **Spatially enable your data:** A powerful street geocoding tool spatially enables data by taking standard address information and geocoding them to determine latitude and longitude
- **Enrich for more insight:** Use your spatially-enhanced dataset to blend in household data or firmographic information from sources like Dun & Bradstreet and Experian

Health Insurance Provider Automates Predictive Analytics for Fire/Hurricane Victims



MISSION

- Provide subscribers with services and support during crises

CHALLENGE

- Develop a deeper operational understanding of the situation on the ground from across the country so that impacted subscribers could receive proactive service
- Review and collate forecasted weather/natural disaster data to quickly predict impacts
- Merge emergency alerts with real-time data feeds to target specific comm to right audience
- Understand the aftermath of events and share analytics quickly in a consumable fashion

Built-in spatial analytics tools from Alteryx make geospatial analytics **easier** than you **ever** thought possible.

HOW ALTERYX HELPED

- The health insurance provider built 3 custom workflows (Natural Disaster Predictions, Emergency Alerts, Natural Disaster Impacts) that blended multiple government feeds (via API) with membership, employee, call center, and patient data that fed a near real-time Tableau dashboard

RESULTS

- They were able to monitor hundreds of high-risk patients across natural disaster zones, ensuring more frequent, proactive support during fire/hurricane situations

Take it to the Next Level with Spatial Intelligence

Built-in spatial analytics tools from Alteryx make geospatial analytics easier than you ever thought possible. Perform field service and resource optimization, asset location planning, transportation and logistics management, location-specific service delivery, and emergency response planning.

Alteryx Features:



Multiple Spatial Capabilities: Distances, drive time, polygon manipulation, and trade areas points make spatial calculations simple



Spatial Matching Tool: Calculate and establish relationships between spatial objects, such as how many citizens fall outside a 10-minute drive time from service locations



Trade Area Tool: Size a targeted area surrounding each location, facility or point of interest, ideal for calculating and building insight into service delivery capabilities and resource optimization based on a wide array of demographic insights

Start solving with Alteryx today

Get the Spatial Analytics Starter Kit >

ABOUT ALTERYX

As a global leader in analytic process automation (APA), Alteryx unifies analytics, data science and business process automation in one, end-to-end platform to accelerate digital transformation. Organizations of all sizes, all over the world, rely on the Alteryx Analytic Process Automation Platform to deliver high-impact business outcomes and the rapid upskilling of their modern workforce.

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Atkins and FEMA Provide Rapid Support for Hurricane Victims



MISSION

- Inspect buildings impacted by hurricanes to determine damage

CHALLENGE

- Labor-intensive processes
- The sheer size of the disaster made this an impossible task

HOW ALTERYX HELPED

- Blended over a dozen GIS and tabular data set and used predictive and geospatial analytics to predict where the greatest extent of structural damage occurred

RESULTS

- With these new insights, damage inspectors could be sent to the most impacted areas. This saved thousands of hours of field work and sped recovery and reconstruction efforts in Puerto Rico and the U.S. Virgin Islands.

Power Up your Geospatial Data Visualization Tools

Data visualization tools or geographic information systems have powerful geospatial visualization capabilities. Alteryx makes it easy to output the results of your enriched, spatially-enabled data so you can see and analyze your data based on a whole new set of location enabled attributes or metrics.

- **Output to your geospatial visualization tools:** Alteryx supports a variety of file formats, such as Microsoft Excel, ESRI, XML, PDF, Tableau, and Qlik
- **Get more out of your geographic information system:** Overlay detailed maps or satellite imagery on your spatially-enriched data to uncover more insights
- **Spatially enable your data warehouse:** Update your cloud or on-premise data warehouse with spatially-enriched results to enhance all downstream analytics, including dashboards or reports