Google Maps

Google Imagery partnership provides mission critical map context for Utah government

UTAH AGRC
LOCATION MATTERS
gis.utah.gov

At a Glance

- The State of Utah uses high-resolution imagery licensed from Google to better deliver public services and inform decisions while reducing costs.
- 20 terabytes of high-resolution images have been delivered to Utah for use by state agencies, local government, and their contractors.
- Over 300 Utah government organizations and their partners use Google's imagery to provide enhanced content and understanding.

"Google Imagery is a foundational technology used by many state and local agencies in Utah to do their jobs more effectively. It's helped them with everything from responding to emergencies, to managing natural resources, improving transportation, and attracting new businesses."
—Bert Granberg, Director, Utah Automated Geographic Reference Center

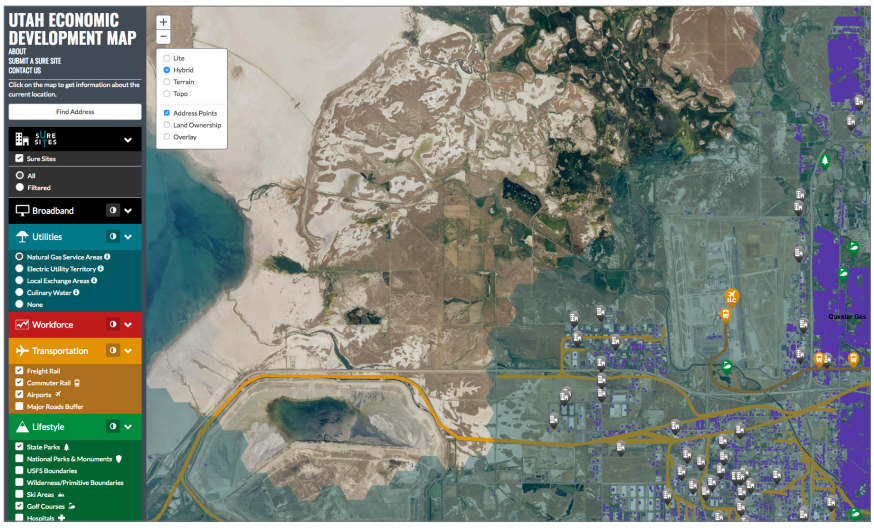
Challenge

Utah is a state of stark contrasts, with the highly urbanized Salt Lake City metro area surrounded by some of the most remote, rural areas in the country. Approximately 80% of the state's population lives on three percent of its land area. The rural areas present both astoundingly beautiful landscapes and resource management opportunities and challenges.

Digital mapping (GIS) efforts have long been employed throughout Utah's public sector to manage land, infrastructure, services and the environment. But high-resolution aerial photography was only affordable in the most urban areas. Rural-interested agencies struggled to make do with lower resolution imagery, which when zoomed, provided only a blurry view of important energy, transportation, water system, habitat and recreation site details. These shortcomings had significant impacts. Examples include extra trips and preparation to visit regulated facilities, and quality and completeness limitations for any remotely collected information, including a state canal safety inventory.

"The broad reach and benefits from Utah's Google Imagery license have far exceeded our expectations."
— Bert Granberg, Director, Utah Automated Geographic Reference Center

In recent years, partnerships coordinated by the **Automated Geographic Reference Center** (AGRC) had acquired and made available public domain 6-inch pixel aerial photography for Utah's urban areas at a cost of about $200,000 on a three-year cycle. Acquiring the images for areas outside the small urban core area was cost-prohibitive. In 2015, AGRC, with backing from a partnership of 14 organizations, sought an affordable source of aerial imagery that would provide high-resolution views anywhere in the state, and increase the update frequency in the fast-changing urban areas.



About Google Maps

Millions of websites and mobile apps use our precise location data every week to create engaging experiences for their customers and gain actionable business insights. From delivery services to travel providers, many of today's most successful businesses depend on the speed, accuracy, and comprehensive coverage of our mapping, navigation, and location data.

For more information, visit
enterprise.google.com/maps/

Solution

Because Google was the only provider with high-resolution imagery (6-inch pixels) for the entire state and its prices were far lower than previous acquisitions, it was an easy decision for the AGRC-led partnership to select Google. Through AGRC's efforts, Utah was able to license high-resolution imagery for streaming and on-premise uses for all Utah public sector activities. Because the images were ready for use, delivery was completed in a matter of weeks.

For more than two years, AGRC has used **Google Cloud Platform** (GCP) to store Google imagery together with Utah's existing collection of other aerial photography and base maps. **Google Compute Engine** runs the application that delivers the images and saves the state money.

"Conservatively, Compute Engine does the work five times cheaper than if we hosted the application and data in AGRC's existing application environment," says Bert Granberg, AGRC Director. Similarly, storing this vast collection of data in **Google Cloud Storage** represents about a 5x savings, he says. An added benefit is that the common base map provided by Utah's map technology, including Google's licensed imagery, make it easy to integrate siloed databases across government agencies. Having everyone working off a single set of maps and information is a top priority for the state.

More important than cost savings is the fact that the high-resolution statewide aerial imagery is helping the state provide better services to residents, businesses and visitors. Google aerial imagery allows the state's emergency 911 centers to see detailed views of the areas that calls are coming from and provide location information that can help emergency personnel more quickly respond to callers. Transportation departments use the imagery to manage assets, plan maintenance, and assess future needs. Wildlife, water, energy, and other natural resources are mapped and stewarded. The high-resolution imagery is key to Utah's efforts to offer a forthcoming comprehensive map of hiking trails and other recreational opportunities. The imagery also assists in the management of election precinct boundaries.

The imagery and map data are also part of the state's effort to attract more businesses. Utah's **economic development map** app features Google's imagery along with more than 20 additional map layers in an effort to improve relocating businesses' access to site-specific details and amenities. The application displays important information companies need to know about doing business in Utah, including the location of fiber internet, railroad, gas and electric service, tax incentive zones, and recreational and educational facilities.

"If just a single large company is influenced by that app to locate in Utah, the site should pay for itself many times over," Granberg says.

Benefits

- Expanded Utah's high-resolution imagery coverage to include the entire state and moved to an annual imagery update in urban areas.
- Improved outcomes across public safety, transportation and infrastructure management, disaster planning, natural resources stewardship, environmental protection, and economic development
- Reduced imagery storage and web-delivery costs by a factor of five

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