The rising complexities and scale of the project sites is driving the industry to become more and more data-driven. Which means the use of drone and satellite data combined with machine learning is becoming a critical component of all phases in the planning, development and execution of large construction projects. Understanding the interaction of complex ecosystems requires a synoptic view of not just the project site, but of the area around it. And it’s impossible to achieve that without remote sensing paired with state-of-the-art machine learning models.

Large developers are more and more proactively looking for new investment opportunities and to make informed decisions whether to decide on the investment or not. Localizing sites based on a set of criteria without leaving their head-office is a game-changer for their investment decisions.

At Picterra, we are seeing remote construction monitoring and land planning information requested by architects, builders, bonding agencies, insurers, real estate and even equipment rental companies. It doesn’t surprise us as it ensures maximum efficiency while reducing the cost. With Picterra, real-estate investors can reduce their risk exposure by having uncompromised historical and near-real-time data on their areas of interest. Our machine learning models make it possible to unveil blind spots that can be investment opportunities, identify illegal constructions, quantifying assets materials or localizing dumping of waste, and more, without travelling to a side to acquire such information.

Key customers

Intuitive and fast
Turn your ideas into actionable geospatial insights with only a few human-made annotations.

Flexible and versatile
Create and train your machine learning-based detectors quickly and securely, based on our pre-trained models and your own annotations. No need for large upfront investment.

Built to scale
Process TB of imagery with our auto-scaling, GPU enabled infrastructure.
Finding early new investment opportunities across large territories

Large international construction and real estate companies need to find before the competition the next best sites to renew or build up. Finding these new investment opportunities over large territories is typically difficult and involves a number of actors and heterogeneous data sources or requiring in most cases travelling on-site. In order to speed up this process and quickly narrow down the opportunities, geospatial data from Earth observation and machine learning comes to the rescue. As manually inspecting images is laborious, time-consuming, and prone to error, with Picterra and its pre-built machine learning-based detectors, you can detect objects, notice patterns, and monitor any change in a matter of minutes.

It also becomes straightforward to keep an eye on competitors, monitoring the progress of globally-distributed construction sites spanning hundreds of kilometers and getting alerts at certain construction stages. For example, a lift company will be able to be alerted when the lift columns in construction sites have been built and could trigger their outreach for services. Others would rather get alerted early when excavation and lifting vehicles are coming on-site to start earlier a close monitoring of such sites.

Proactive maintenance of road marks, asphalt damage, and horizontal signs

According to the recent studies conducted by the American Society of Civil Engineers, the lack of road repair and expansion translates into an annual economic cost of more than $100 billion. Although routine or preventive maintenance has been the standard way to keep assets operational for a long time, there is a lot of room for improvement in terms of infrastructure monitoring and proactive maintenance.

Detecting problems before they occur is key to Civil engineers who are responsible for the continuous maintenance and upgrades to the existing road infrastructure.
**Monitoring remotely construction site progress and activities**

Without Earth Observation data PMs or site managers have two options that are far from ideal: frequently travel to construction sites or rely on second-hand information. Thanks to geospatial data, they can remotely track progression. The activities around the site can be categorized and flagged to monitor the progress remotely. Waste material removal, end of excavation, crane setup or removal, etc. can be qualified and give tangible insights on the construction for remote end customers, managers, or head offices of construction companies. Satellite images are captured and archived regularly, giving access to independent, verifiable records of site progression for reporting purposes.

With machine learning and Earth observation data, the analysis of the data is no more tedious, time-consuming, or prone to error.

Pre-built models enable automatic monitoring and assessment of construction sites, bringing fact-based information to monitoring, reporting and decision making processes.

**Precise planning of construction material and waste**

STRABAG, one of the largest European construction companies, uses its drones and Picterra to assess and plan the materials on the ground that will be affected by a construction and will have to be moved (bare ground, paving stones, bitumen, etc.). When working on railway tracks, it uses its drones and Picterra to precisely localize damaged elements and plan the equipment needed for the response.

All these are supporting an optimized flow of material from and to the construction sites, eventually reducing the number of trucks required, equipment ordered and stored as well as new material moved on-site.
**Picterra is data agnostic.** We work with RGB, false-color, thermal, SAR, and NIR imagery. Bring your own drone, aerial, or satellite imagery, import from open-source image libraries, connect your own geo-servers, or order up-to-date and archival satellite imagery.

To monitor an area of interest, task a satellite without leaving Picterra and trigger alerts, reports and workflows automatically.

**Picterra fits seamlessly** into your existing workflow thanks to our growing suite of integration points and file formats.

**No coding skills** are necessary, but our SDKs, Training & Detection APIs & Docker* API & Docker integrations are available to those with unique needs or requiring integrations.

*For a Docker early access, contact sales to discuss the technical requirements.

**Quick facts**

**Get in touch**

Contact us to learn more about the role of geospatial data and machine learning in tackling construction and real state issues.

**Works with all sensor types**

RGB | False Color | Thermal | SAR | NIR

Picterra SA
Rue de la Mouline 8 1022 Chavannes - Switzerland - hello@picterra.ch

www.picterra.ch