



Geo-enable your organization with MLOps



Pascal van Dalen
Chief Growth Officer



Versatile & easy-to-use software platform for geospatial machine learning

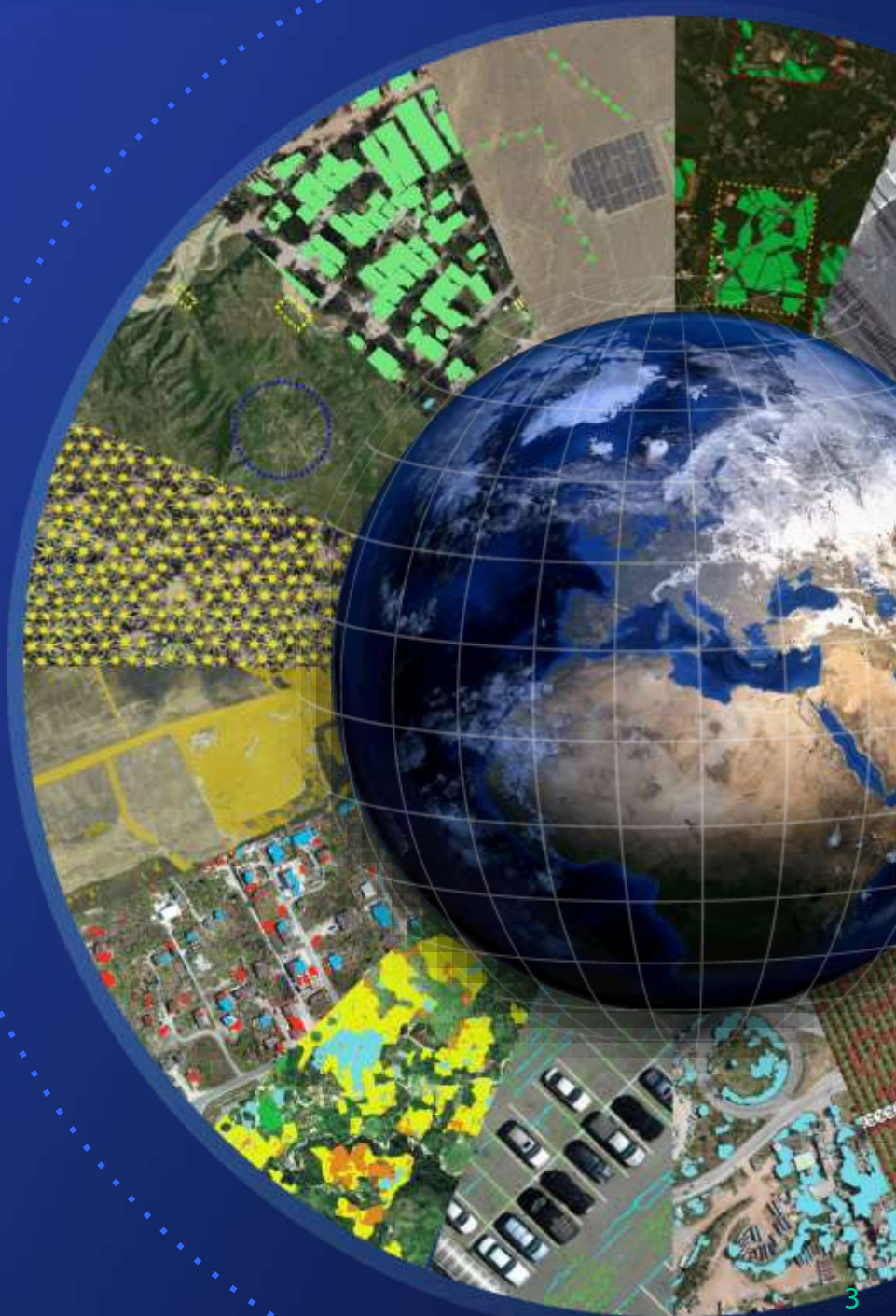
- *Founded in 2016 in Switzerland*
- *Cloud-native & secure platform*
- *100+ enterprise clients globally*



80% of geospatial AI initiatives fail

We fix that by revolutionizing the way organizations approach the **deployment and development of geospatial applications:**

- giving our customers direct control for **monitoring their physical assets**, without middle men
- Turning cutting edge **geospatial AI** into a no-code easy to use platform



Produce a scalable ML model **in days**, not months



Organize data	Label data	Develop model	Train model	Deploy to production	Prod QA/QC	Model maintenance	Results visualization	Scaling to new type of objects
1 week	4 weeks	4 weeks	2 weeks	8 weeks	2 weeks	1 week	1 day	3 weeks
Data scientist GIS associate	Data scientist Annotator	Data scientist	Data scientist	Software engineer Developer engineer	Data scientist GIS associate	Data scientist	GIS associate	Data scientist



Using Picterra
1 week

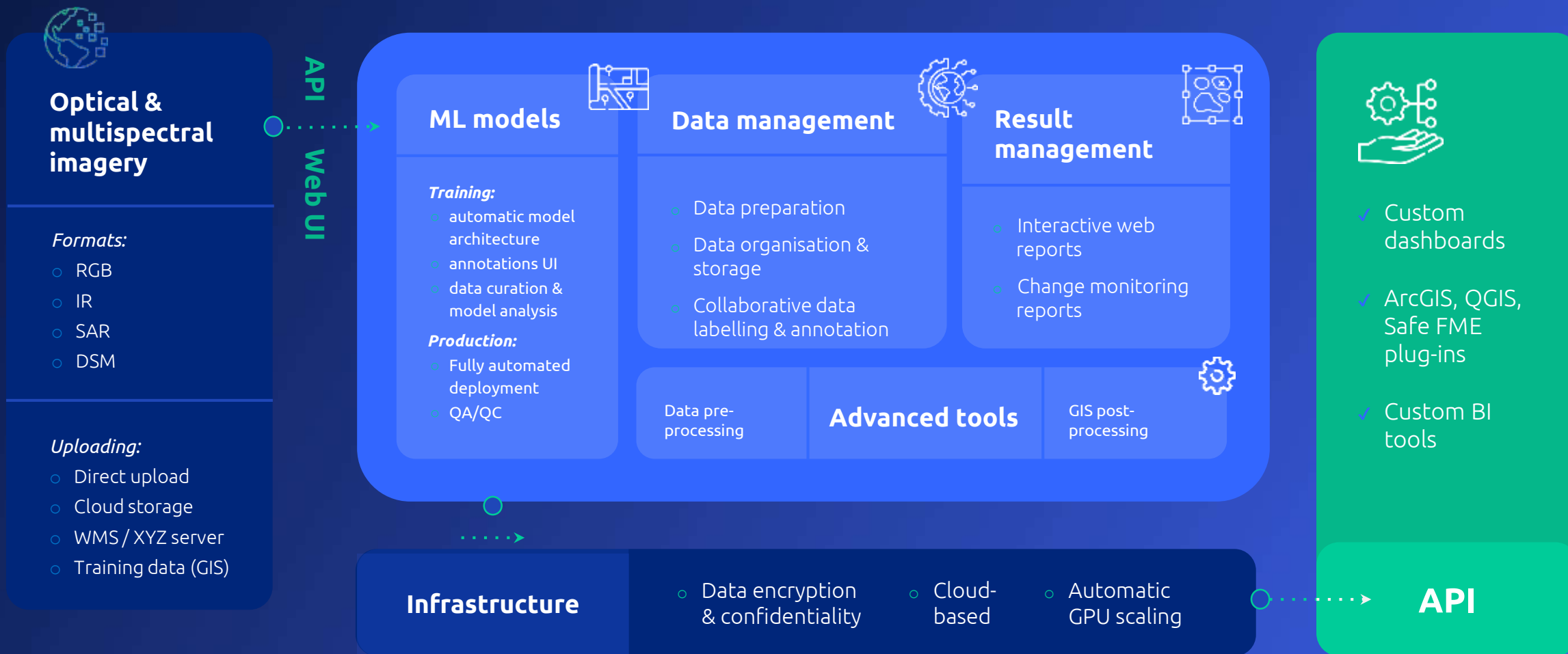
95%
time saved



Organize data	Label data	Develop model	Train model	Deploy to production	Prod QA/QC	Model maintenance	Results visualization	Scaling to new type of objects
4 hours	8 hours	Automated	1 hour	Automated	40 hours	5 min	5 min	1 day

NO CODING SKILLS REQUIRED + EASILY SCALABLE FROM SINGLE USER TO TEAM COLLABORATION

Scale your geospatial practice with a **cloud-based MLOps platform**



Enabling new use cases **across industries**

AGRICULTURE & FARMING

Crops, weed & livestock monitoring

FMCG

Sustainable supply chain management
ESG reporting

MINING

Cracks & erosion, water bodies localisation
Haul roads mapping
Mines rehabilitation

CONSTRUCTION & CIVIL ENGINEERING

Land assessment
Infrastructure monitoring
As-planned vs. as-built reporting

LINEAR INF.

Integrity inspections

FORESTRY & CARBON MARKETS

Tree inventory
Seedling detection
Survival assessment

INSURANCE

Insurance risk profiling

Machine learning

Picterra

...AND MORE

Integrate Picterra with other GIS softwares or custom dashboards

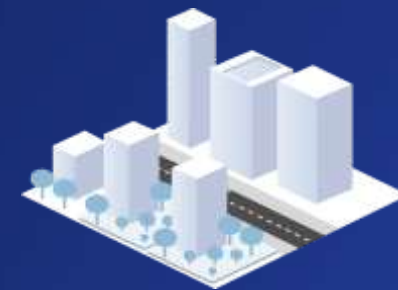
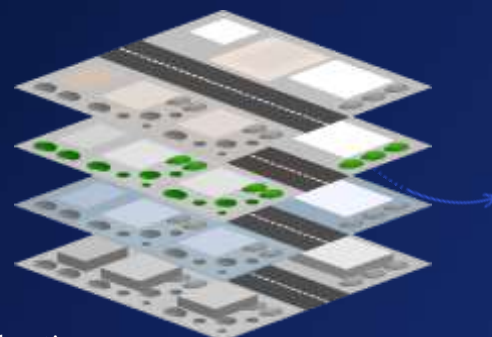
Example: **Picterra ArcGIS integration**



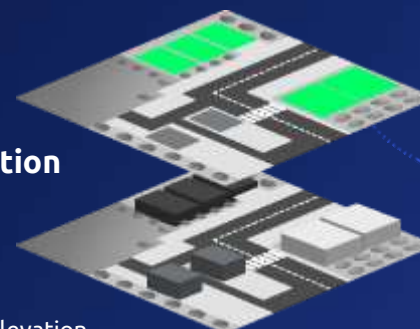
Advanced tools

Streamlining and simplifying geospatial workflows with access to the most common **GIS tools in just a few clicks directly in Picterra.**

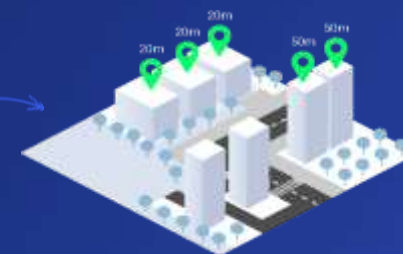
R
G
B



DEM
Digital Elevation
Model

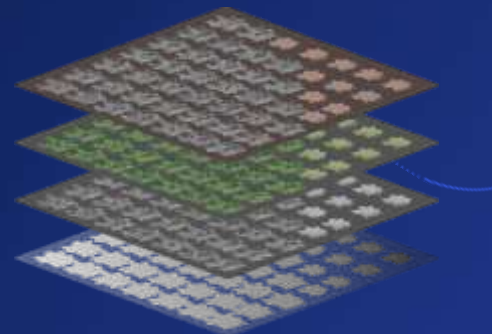


Detection



DEM
Digital Elevation
Model

R
G
B
NIR



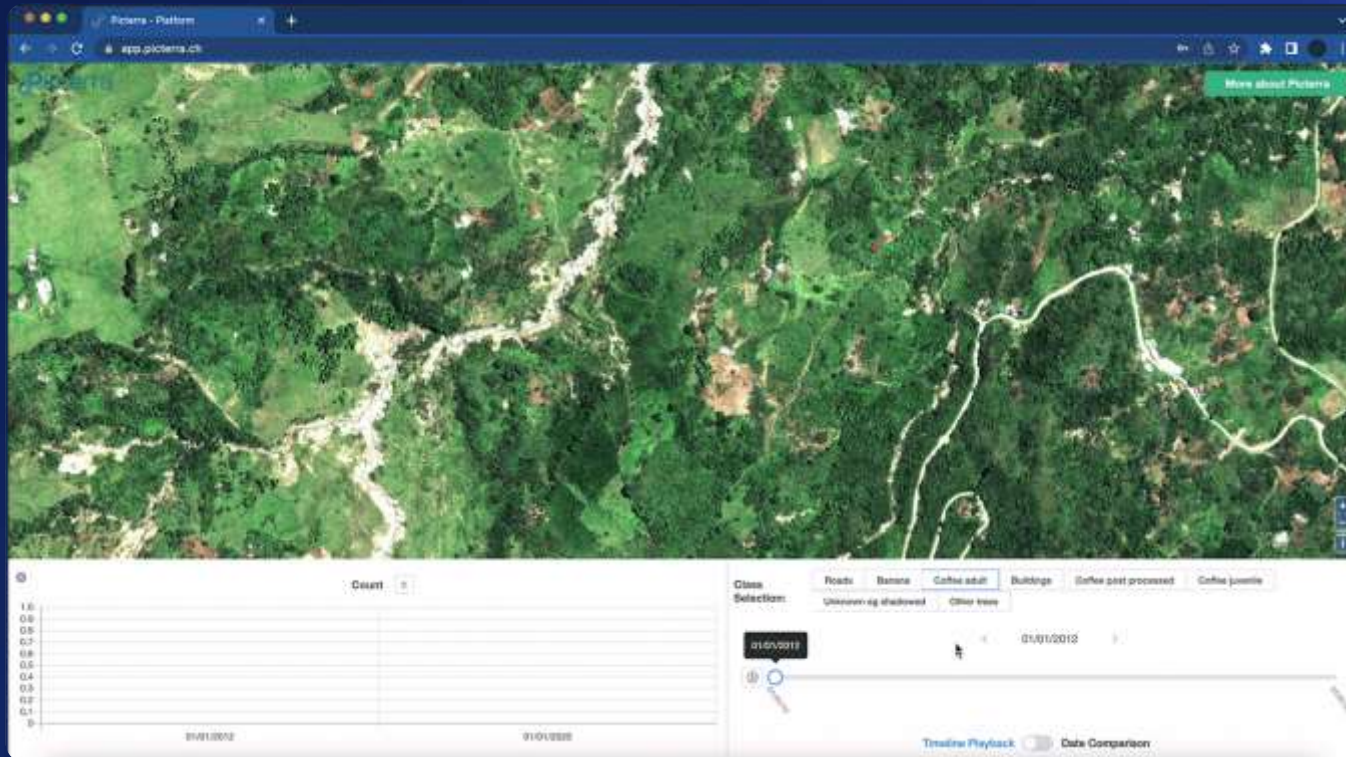
Faster ML production with **Meta AI's Segment Anything**

Fastest annotation and training process in the industry to bring ML production to all of our user's fingertips

- Our new AI magic wand powered by Meta AI's Segment Anything Model (SAM) enables one-click annotation of land patterns or objects
- No installation of libraries or toolboxes required



Complex **land segmentation & crop classification** for biodiversity assessment



Challenge

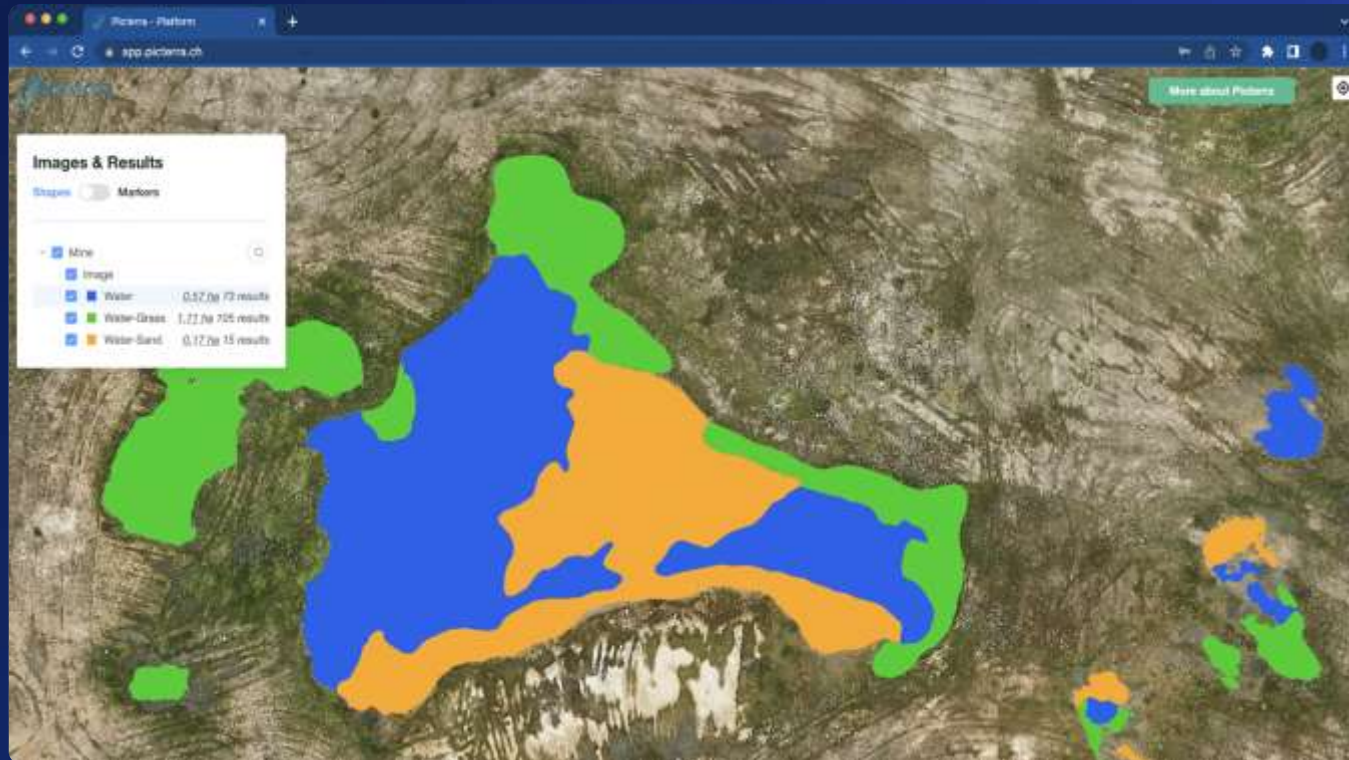
Biodiversity assessment of coffee plantation & transition to shade-grown coffee farming

Solution

Satellite imagery at 50 cm resolution

Multi - class model differentiating several classes of coffee (ie. adult / juvenile / post-processed), banana & other types of trees

Automation of critical site inspections for mine safety: **water bodies mapping**



Challenge

Detecting and mapping water bodies across the mining sites.

Solution

Input data: 5cm drone imagery

Running ML models to detect:

Three classes of water

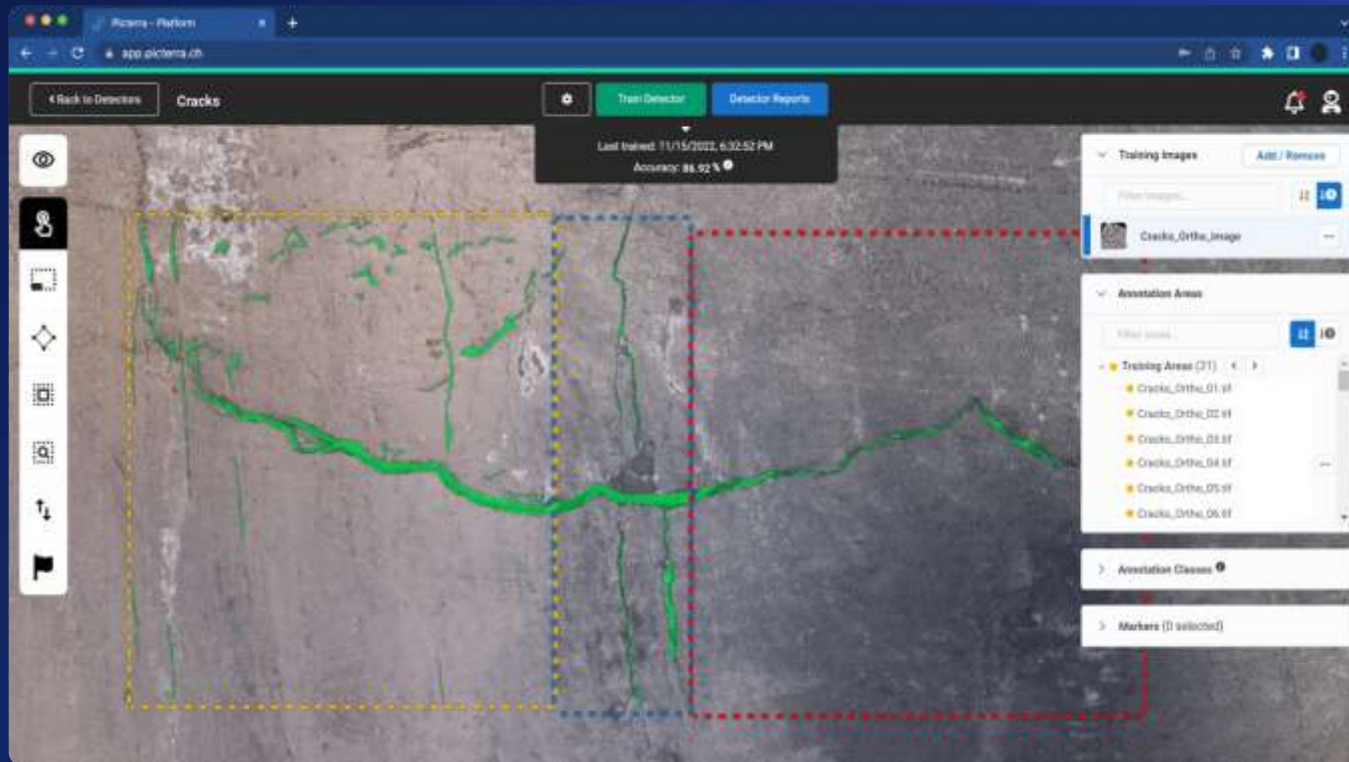
Classes:

Water

Water-sand

Water-grass

Automation of site inspections for mine safety monitoring: **early detection of cracks & erosion**



Challenge

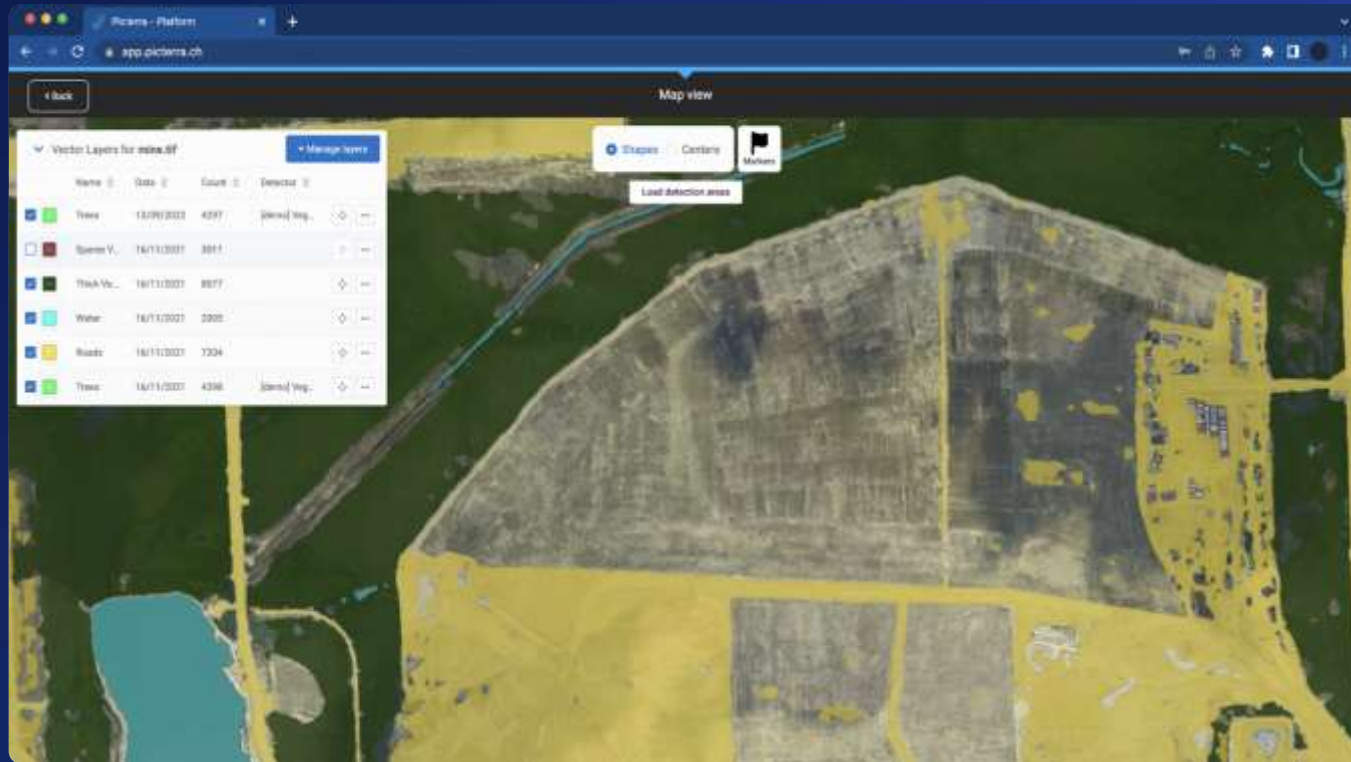
Monitoring of existing and identification of new cracks along geological features around the mining site for safety assessment and the risk of structural danger.

Solution

Input data: 8cm drone imagery

Running ML models to detect: cracks detector

Precise **land mapping for mine rehabilitation** planning & progress monitoring








Challenge

Accurate mapping & land classification across the mine site in preparation for rehabilitation (ie re-vegetation) planning & establishing digital data records of reference for reporting

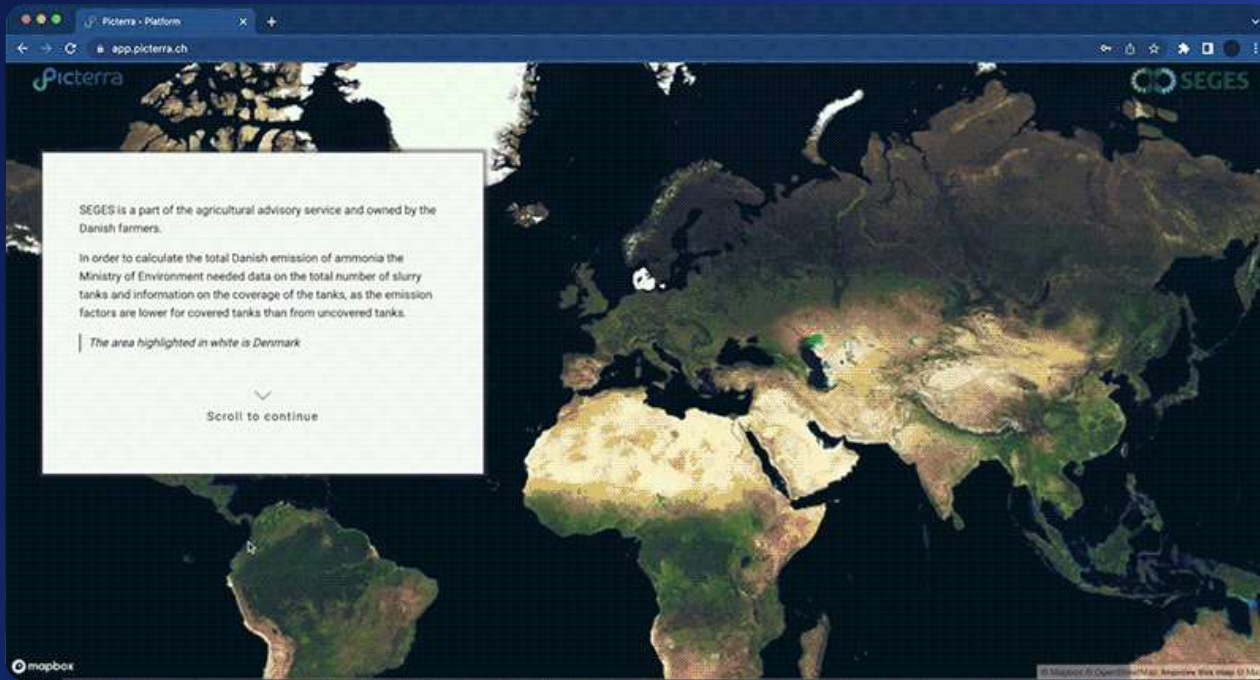
Solution

Input data: 5cm drone imagery

Running ML models to detect: Land mapping and classification model incl. i.e.:

-  Trees
-  Water
-  Sparse vegetation
-  Roads
-  Thick vegetation

Country-wide **slurry tanks identification** for ammonia pollution monitoring



[CLICK TO SEE THE LIVE REPORT](#)

[Read the case study](#)



Ministry of Environment
of Denmark

Danish expert in farm management, providing the industry with the right technology, the latest knowledge, and the very best advisory service to improve farming.

Goal: automate the identification of covered and uncovered **slurry tanks** across 34,000 farms country-wide.

Input data: A WMS imagery server covering Denmark at 25 cm resolution

26,000 slurry tanks detected in a few hours

Successful estimation of ammonia pollution

Key **takeaways**



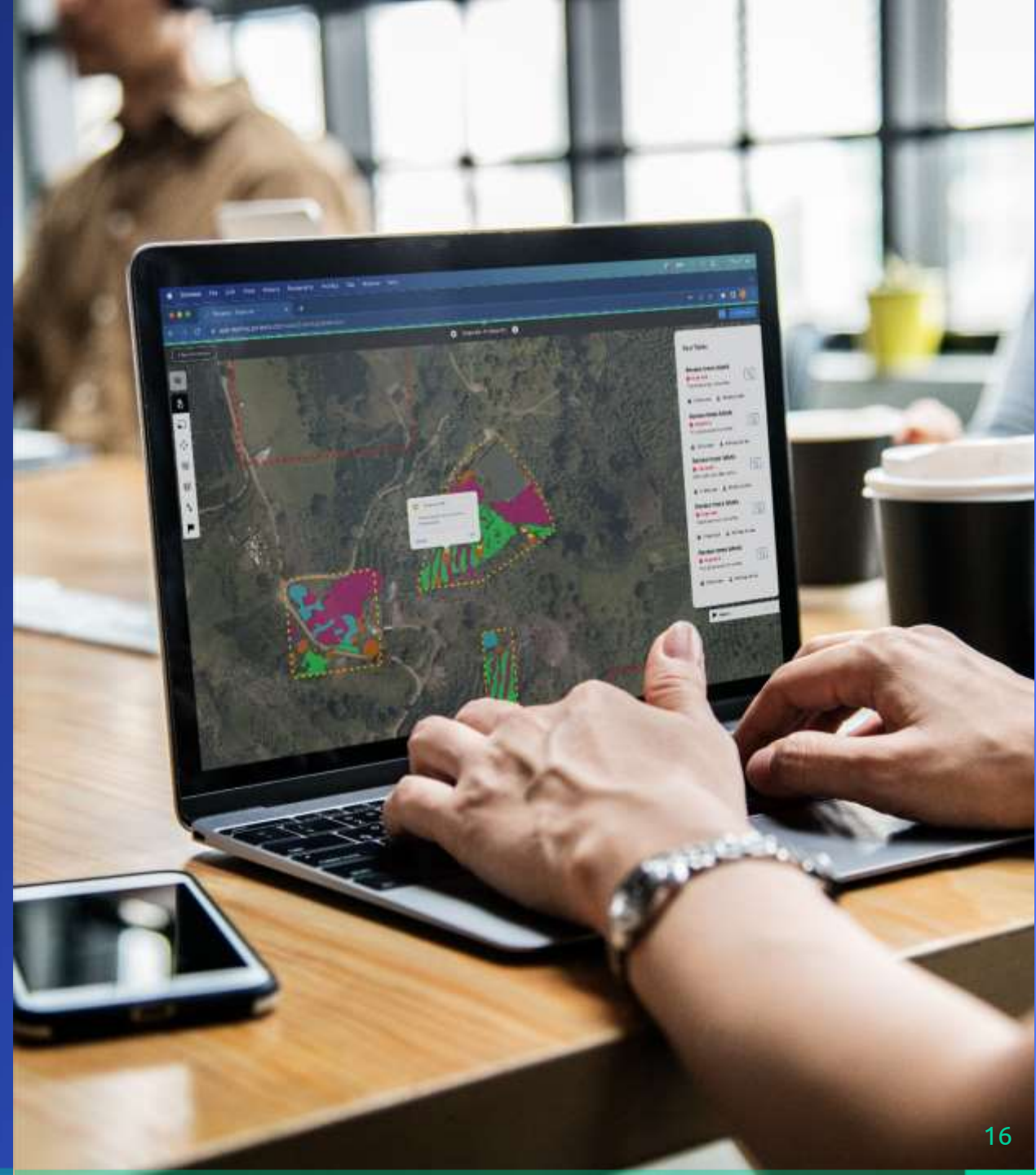
Ready to use geospatial ML
& auto scaling infrastructure



No massive upfront
investment in data science



Quick ROI: drastic cost
reduction & productivity gains



Thank you



Find out more



Picterra info



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Video content



picterra.ch