ARLULA

AUTOMATING WORKFLOWS FOR DAM TAILINGS

The Multi-Billion Dollar Blindspot

Is your mining operation unknowingly exposed to multi-billion dollar risks?

$30 Billion

Lost to preventable issues this decade

1-2

Major disasters per year

In the last 10yrs, mining companies have lost over $30 billion to failures that weren't caused by poor execution, they were enabled by structural blind spots. Fragmented data, lack of real-time visibility, and gaps in oversight have allowed tailings collapses, compliance breaches, and permit losses to escalate into billion-dollar events and preventable losses.

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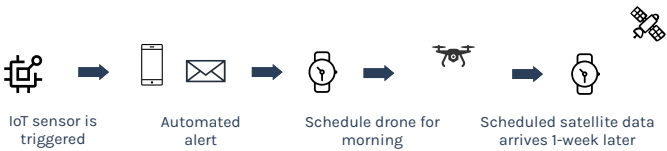
Workflows between sensing and response

One of the most common failure points across mine sites isn't the data, it's the **workflow between sensing and response**. Sites already have sensors for deformation, pore pressure, seepage etc. Many have drone coverage and satellite feeds scheduled fortnightly. And under the TARP framework, alerts are automated; RTFEs or site managers receive calls, SMS, or email when thresholds are breached on critical risk assets.

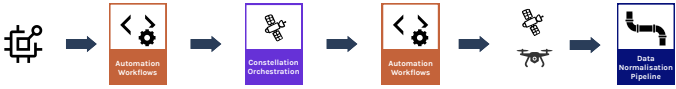
What happens next is still manual:

- There's no real-time check for what satellites or drones are overhead
- Drone response depends on a manual launch, even if pre-programmed for auto-pilot
- Satellite coverage is locked to a single orbital pass, creating blind spots and shadow distortion
- EO data arrives in raw formats that aren't directly usable in SCADA, risk models, or compliance reporting
- Engineers are left to coordinate vendors, check feasibility, and reprocess imagery, during critical moments

Typical workflow for when a lead or lag indicator emerges



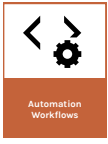
Automating responses with Arlula



1. IoT sensor is triggered
2. Automated coordination across satellites and drones
3. A swarm of multi-sensor EO captures are automated. Data is normalised and analysis ready

A modular product stack

Arlula's Modular Product Stack
This modular approach allows mining departments to deploy only what they need, while ensuring every component integrates cleanly with the rest of the stack. Each module is STAC-aligned, API-driven, and ready for secure deployment.



Automate workflows surrounding EO data via API's

API-driven workflows that trigger satellite or drone capture when IoT sensors, SCADA systems, or field monitoring equipment detect risk indicators. Optimises coverage during TARP events and other high-risk periods..

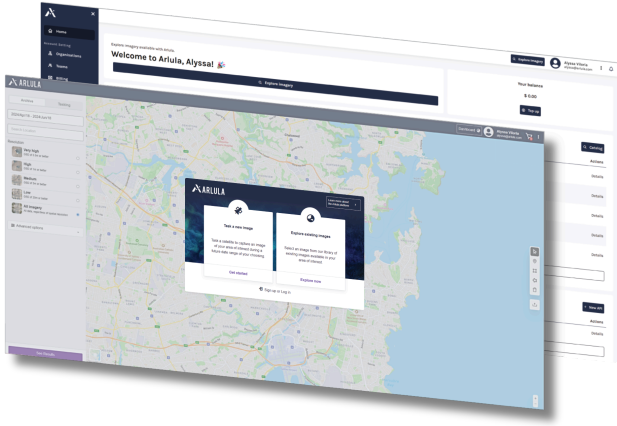
Standardize EO format aligned to STAC

Converts satellite, drone, or aerial imagery into STAC-aligned formats, removing delays from inconsistent formats and enabling direct ingestion into AI models, dashboards, or compliance tools.

Digital twin for satellite optimisation

Digital twin with machine learning that models satellites, sensors, orbits, and weather to automate multi-sensor scheduling. Reduces blind spots and captures the right data at the right time.

One view for all your data



Fulfilment Engine

One-Click Tasking, Fulfilment and Visibility

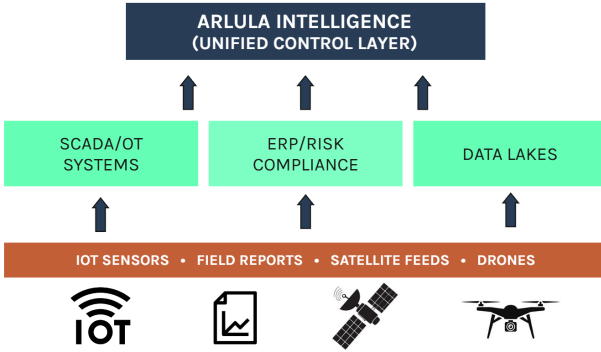
An operational dashboard that unifies satellite tasking, field reports, and analysed outputs in one map-based view. Tracks every capture with real-time logs, delivery confirmations, and audit trails. Highlights critical risk assets and dams through heat mapping, giving teams and regulators instant access to the most important data.

Advanced Data Management

Secure, compliant sharing

Control how satellite, drone, and plane imagery is shared, stored, and tracked across teams. Features include geofencing, user permissions, usage reporting, and license enforcement to keep risk data compliant and accessible.

Scalable across regions, systems and providers



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