CSI-EO
Community-Sourced Intelligence for Earth Observation

Omanos combines satellite data analysis with community intelligence and other ground data sources to identify and monitor social and environmental impacts. CSI-EO provides a scalable, portable, streamlined and secure service for the collection of participatory ground data that can be applied to a host of problems including ground truthing of and additional context to satellite/remote sensing data, artificial intelligence (AI)/machine learning (ML) algorithm training and community mapping/data collection projects.
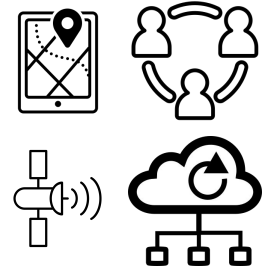
The system is built upon a free, open-source smartphone app, cloud-based data transfer/storage and delivery of bespoke data products for a range of potential sectors. It is end-to-end encrypted and supports GDPR-compliance.

Problem/Solution

Ground data is critical to the accurate interpretation of satellite EO data, and provides a way to increase community engagement, delivering:

- important layers of additional context
- local knowledge and insights
- constraints for the building of AI/ML training datasets
- increased community cohesion and action

However, acquiring this type of data can be resource intensive, expensive and difficult to standardise at scale. **CSI-EO** overcome these barriers, building on our extensive experience operating at the intersection of satellite and ground data collection and analyses.

Product

- Delivered via a **free**, **open-source** smartphone app available on both iOS and Android
- Data is transferred and stored using a **secure cloud-based** service, with end-to-end encryption
- **Bespoke app configuration**, including:
  - Options for collection of points, lines and polygons
  - Fully customisable, use-case specific data fields/types
  - Timestamped and geotagged photos + free-text notes
- **Training** for data collectors across a range of technical abilities
- Wide **range of potential data products** depending on customer requirements

Use Cases
Participatory Mapping
Ground Truthing
AI/ML Algorithm Training Data
Citizen Science Projects

Stakeholders
International NGOs
Space Data Providers
Communities
Estate Managers
Government Bodies

Data Products
User-focused reports
Slide decks
GIS products
Interactive visualisations
Physical maps