Turning Earth Observation data into knowledge,
and knowledge into actionable business insights

Australia **India**

Geo-Spatial data- Macro scale application

Urban planning

Natural resource management

Environmental monitoring

Energy infrastructure

Disaster management

Geo-Spatial data in Disaster Management

SPACE
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Before the disaster it provides early warning systems for better preparation

During disaster it provides situational awareness for effective deployment of resources

Post disaster it helps in getting detailed information about the extent of damage

Australian Forest fire

18.6 million hectares of land damaged

5,900 buildings destroyed

34 lives lost

$ 70 Bn loss

Source: Deloitte Access Economics report

Role of Geo-Spatial Technology in Wildfires

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Through EO satellites, capture high resolution images of forests like the canopy cover, canopy height in multiple spectral bands.

By analysing these images we can study:

- The vegetation properties of the forests
- The chlorophyl content of the trees etc

Collect other Geo-spatial data such as terrain, weather, wind, dryness parameters




These two data can be integrated into the AI/ML models which predicts the path of fire and help the authorities be better prepared

Our Downstream Solutions

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- High-resolution satellite imagery
- Big data
- Smart sensors
- Machine learning
- AI
- Edge computing

PLATFORM

Descriptive, diagnostic and predictive end-to-end solution uniquely tailored to our customers' specific business goals and needs

- Optimise
- Plan
- Monitor
- Model
- Design

Our Downstream Applications

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Windfarm

Agriculture

Mining

Disaster Management

Overseas data

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Limited control over timely availability of data

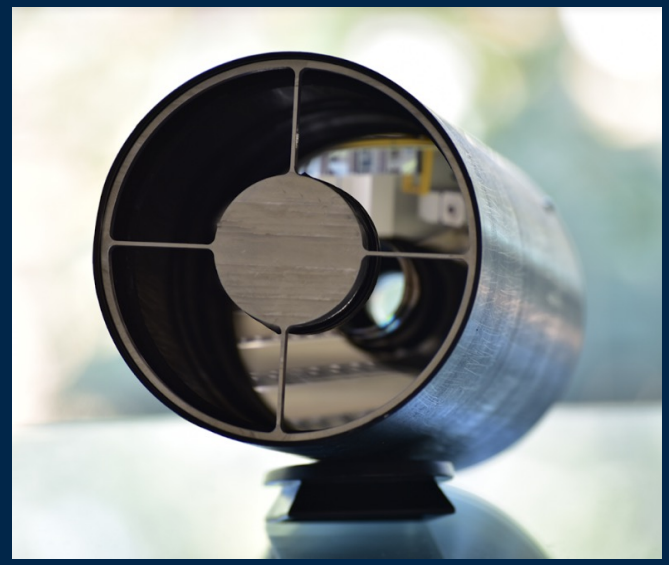
The cost of acquiring EO data is very high

Concerns about national security

Australia has niche EO requirements compared to the rest of the world

Thus we need access to our own proprietary data

Upstream Solutions



Multi payload satellites in a cube sat form factor with

Multispectral Capability

Thermal infrared sensors

That can capture wide swath images in the visible and near-infrared spectrum range

Satellite Capability – Fire Monitoring

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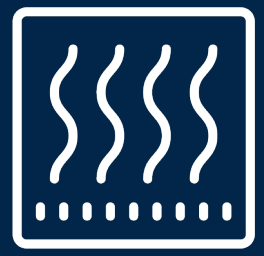
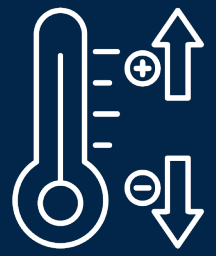


Thermal sensors can detect the emitted thermal radiation from the flames



It can capture the temperature distribution and intensity of the fire

Identify the location and extent of the fire even at night or through smoke

Imaging sensors provide visual information about the fire front

Together this data assists in understanding **fire spread patterns** and identifying **hotspot areas**

AI/ML Fire model

Simulate fire spread patterns

Predict future events

Identify areas with a higher probability of wildfires

Assist in evacuation planning and resource allocation

Thank you!