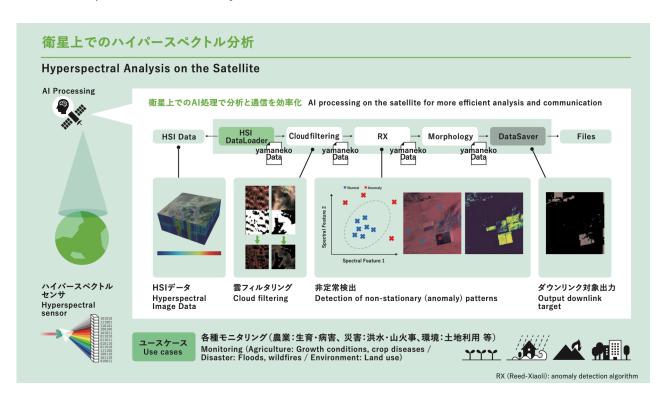




# On-orbit Al sends only key results to enable faster decisions Hyperspectral analysis on the satellite

## **Background and Technical Challenges**

Real-time use of hyperspectral data is difficult due to the large volume and complex analysis. Efficient on-orbit processing and data compression are key challenges for applications such as disaster response and anomaly detection.



#### **R&D Goals and Outcomes**

Onboard satellite AI enables fast analysis of Earth data, aiding disaster response and mitigating labor shortages.

### **Key Technologies**

#### 01 Core Technologies

- Processing pipeline for real-time onboard Al. (e.g., cloud filtering, band filtering)
- Lightweight anomaly-detection technology.

### **02** Key Differentiators

Compared with full data downlink, onboard preprocessing and analysis of hyperspectral images enables efficient transmission and shortened lead time from image capture to actionable results.

Use Cases Aerospace & Defense	R&D phase	Research
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