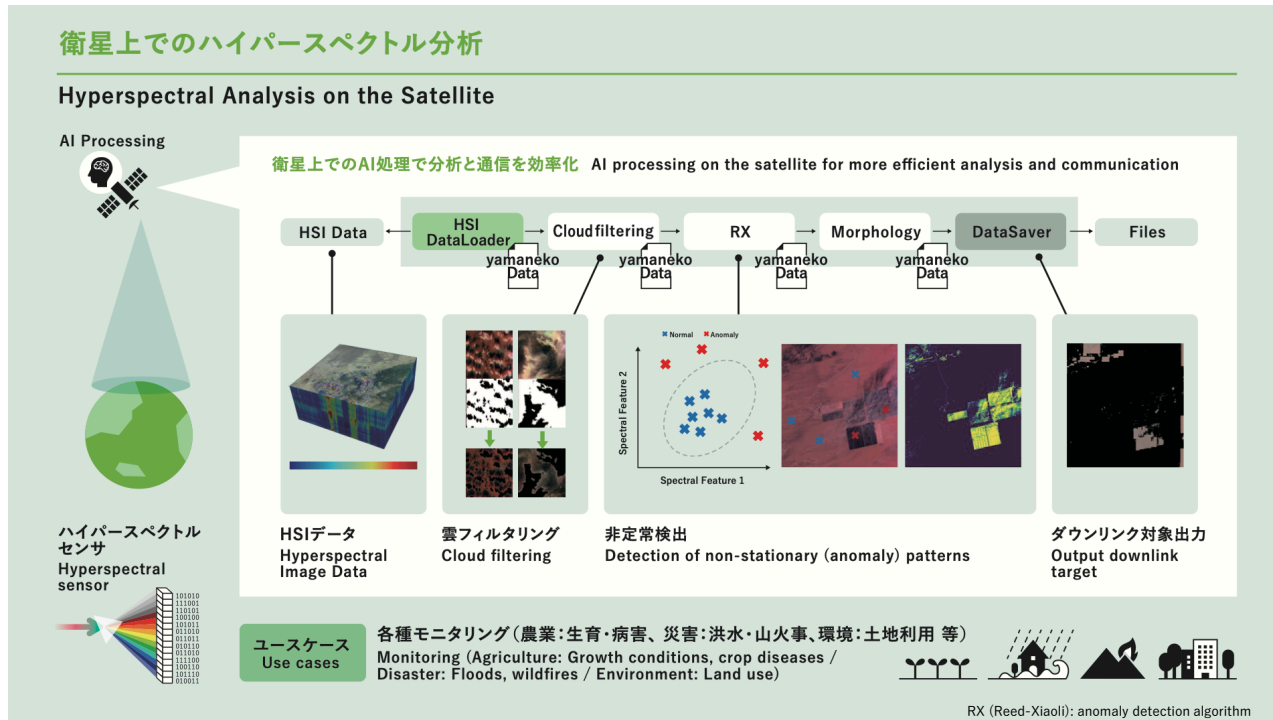




On-orbit AI sends only key results to enable faster decisions Hyperspectral analysis on the satellite

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 AI. (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

Technology Schedule FY26

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