



EarthDaily
analytics

The EarthDaily

C O N S T E L L A T I O N

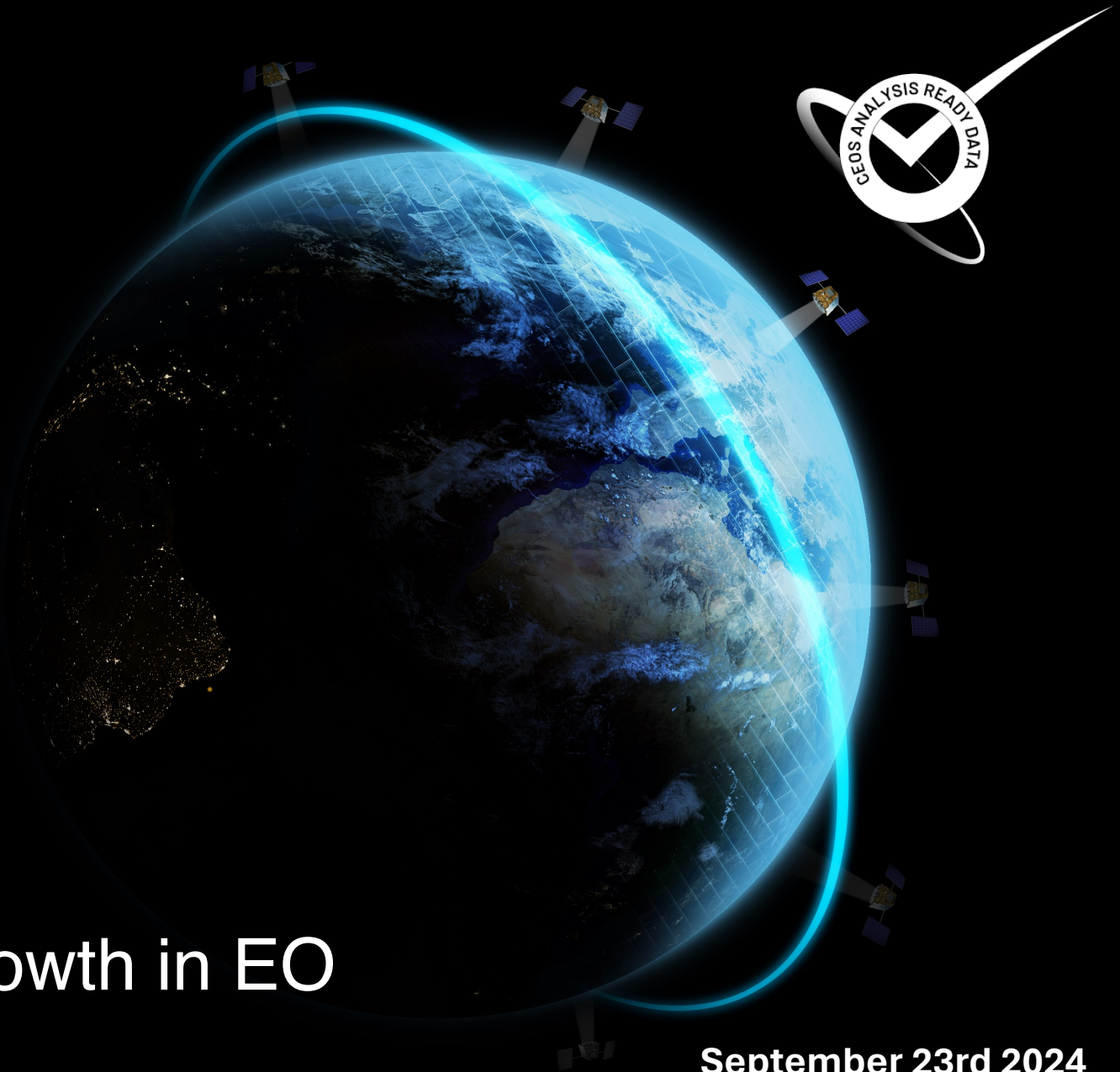
Everywhere. Everyday.™

The world's most advanced Change Detection system.

CEOS ARD

Standards as Catalysts:

Accelerating Commercial Growth in EO



September 23rd 2024

Presented by Paddy Brennan



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Today we will cover

Introduction to EarthDaily Constellation (EDC)

Scientific Quality, Calibration and Cross-Calibration

EarthPipeline™ - Ground Segment

Commercial Challenges: The Case for CEOS ARD

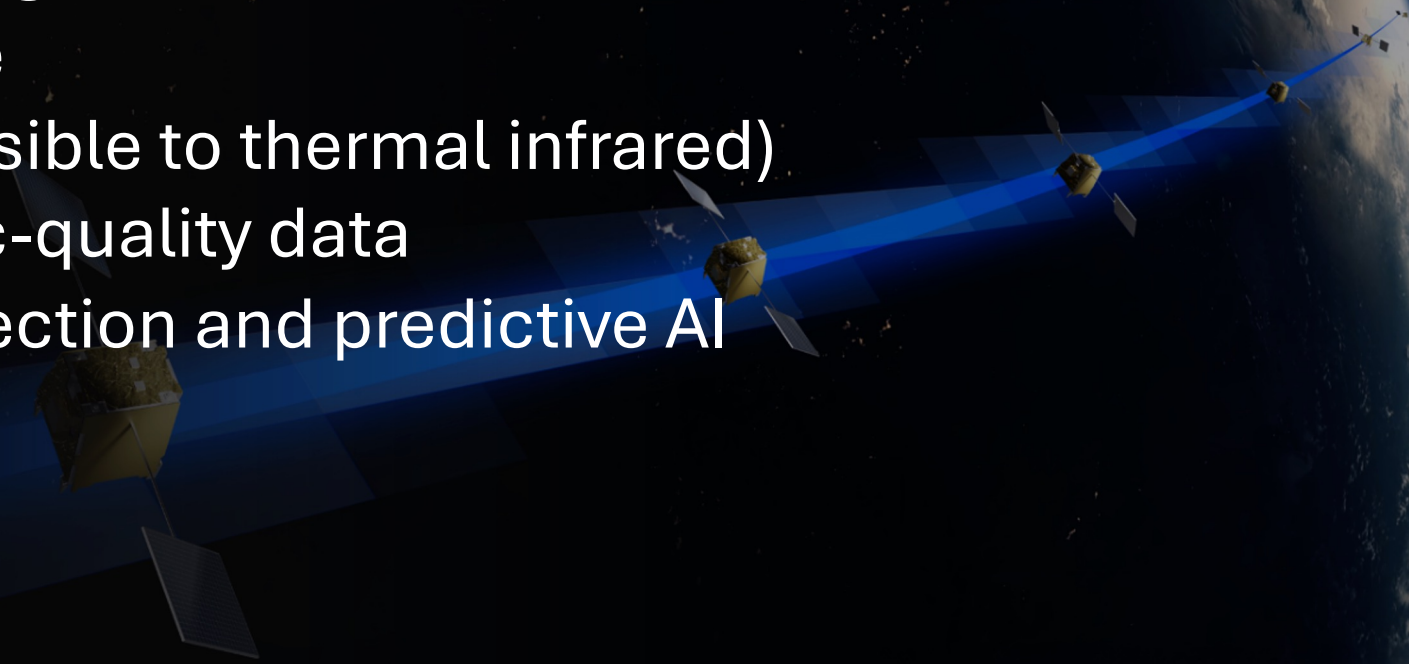
How to work with us



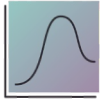
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Constellation Overview

- 10 satellites launching Q1 2025
- Daily global coverage
- 22 spectral bands (visible to thermal infrared)
- Consistent, scientific-quality data
- Enabling change detection and predictive AI



World Class Expertise



**Applied
Mathematicians
and Physicists**



**Defense &
SAR
Specialists**



**Meteorologists &
Remote Sensing
Specialists**



**Agricultural, Mining
& Energy Industry
Expertise**



**Insurance Carriers
and Reinsurance
Industry Expertise**



**Satellite Design &
Operational
Leadership**

Our distinguished backgrounds



MILLENNIUM PARTNERS



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Vancouver, Canada
Satellite Imagery
Data & Analytics



Minneapolis, USA
Agriculture Analytics;
Digital Ag.



Toulouse, France
Research &
Development



Perth, WA
Mining & Insurance;
Data & Analytics



Los Alamos, USA
Research &
Development



Our **data subscriptions** are uniquely suited to applications in a broad set of markets.



Agriculture



Climate Change



Finance & Insurance



Science,
Research & Policy



Natural Disaster
Risk Management



Defense &
Intelligence



Environment,
Sustainability &
Governance



Maritime



Forest,
Natural Resource
Management



Mining,
Infrastructure &
Land use



EarthDaily Constellation: Scientific Focus & Space Segments

EarthDaily Constellation: Key Pillars



Consistent

Stable observations across time and space.

10 identical satellites in a highly controlled, always nadir-viewing orbit.

Continuously calibrated.



Scientific-quality

Precision multi-spectral measurements across 22 bands.

Excellent signal-to-noise ratio.

Highly accurate geometric and radiometric measurements



Daily

Complete coverage of the Earth's landmass and coastal zones

Provides crucial temporal resolution

Collecting up to 100 TB

So what:

Consistent, Scientific-Quality,
Daily Global Observations & Measurements.



Consistent



Scientific-quality



Daily

CEOS Standards Aligned

Enabling rapid integration, change detection
and ML/AI applications at scale.



Space Segment

EarthDaily Constellation is a systematic collection mission, always nadir looking, always-on (over land).

Other experimental and special use-case modes exist on a by-request basis, subject to mission capacity.

Trusted Technology Partners



Camera Optical Systems and Payload Integration.



Satellite Bus.



Thermal Camera.



Payload Electronics for Camera Systems.



LOFT ORBITAL

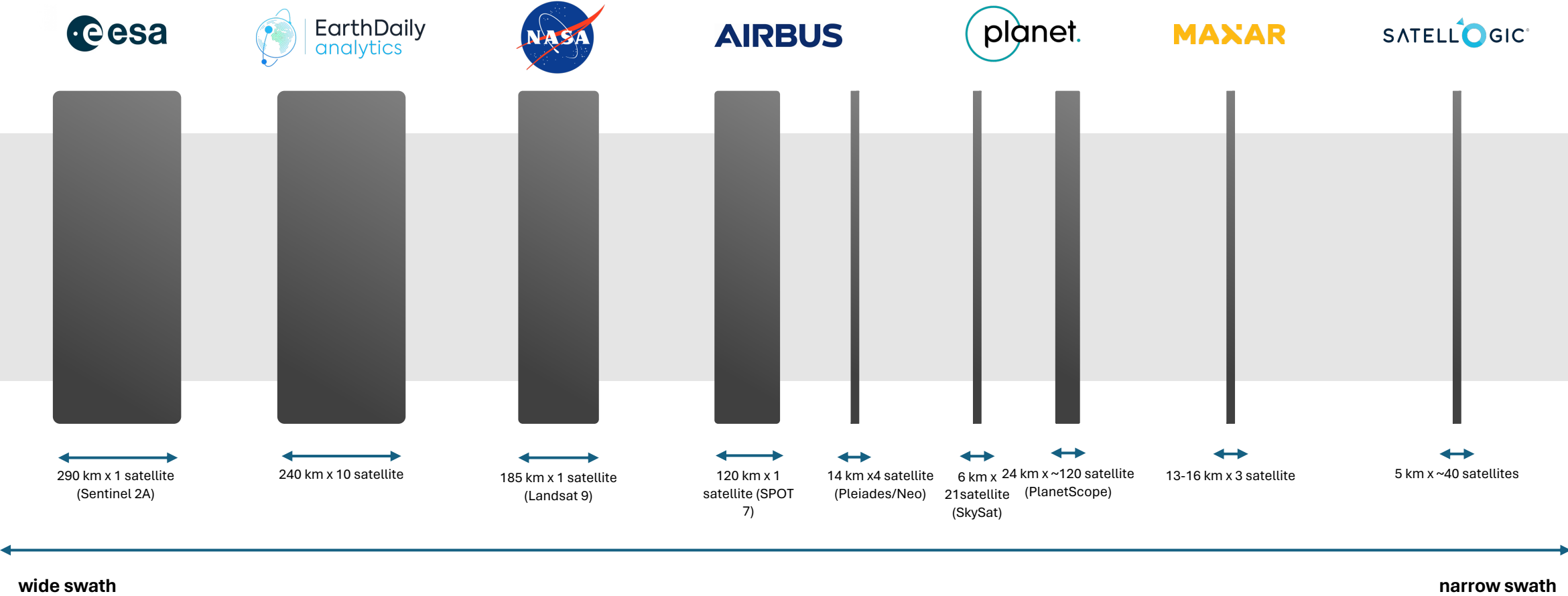
Satellite Launch, Satellite Control System and Operations.

Number of Satellites	10
Spacecraft	Arrow bus from Airbus
Design Life	10 years
Orbit	Sun-synchronous; 10:30 AM local time pass over
Sensor design	Push-broom with Time-Delayed Integration (TDI)
Revisit	1 Day; daily coverage of ~100% of Earth's landmass
Resolution	VNIR: GSD 5.0m SWIR: GSD: 95m Thermal: GSD: 120m
Spacecraft Mass	200kg (Total); supports long-term stability
Altitude	~630km
Viewing Angle	Nadir (always)
Calibration	Tuneable laser pre-launch techniques

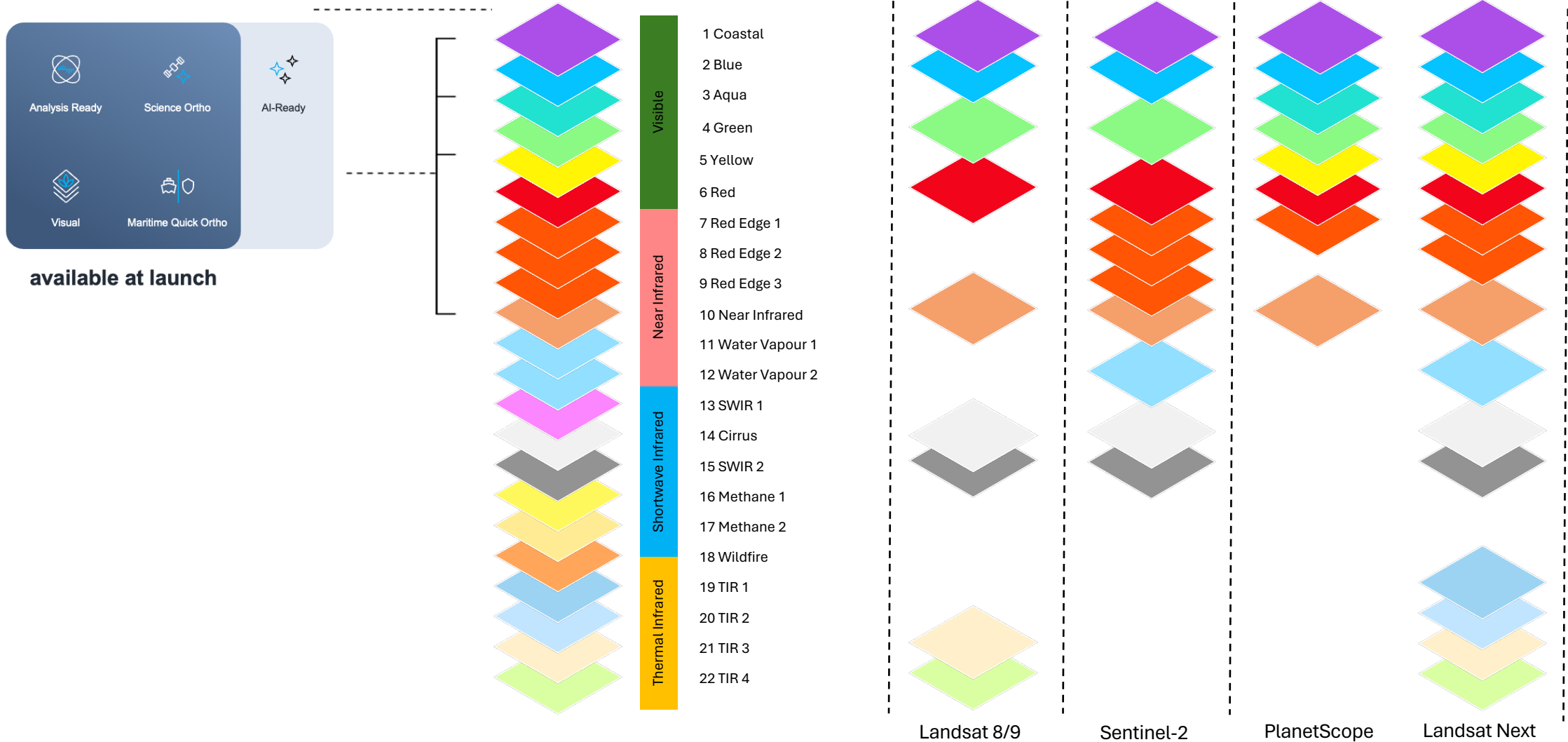
A satellite is shown in orbit above the Earth's surface. The satellite has a large, rectangular solar panel array extending from its main body. The Earth's surface is visible below, showing a mix of blue oceans and brown landmasses. The satellite's main body is grey and has various instruments and antennas on top. The solar panel is black with a grid of white lines. The background is the dark blue of space.

EarthDaily Constellation: Science Mission Alignment, Bands & Ground Segment

Common missions: imaging swath width compared



EarthDaily Constellation Bands: Scientific Compatibility



EarthPipeline™ is a turn-key scientific grade ground-segment.

A New Ground solution for New Space, designed to transform downlinked satellite data into high scientific quality “Analysis Ready Data” (ARD) at scale.

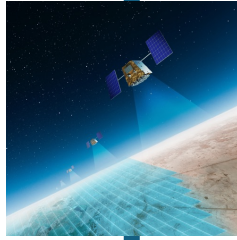


EarthMosiacs™ - Advanced ARD Products

Build high-quality, cloud-free temporal mosaics, using existing Landsat and Sentinel imagery



Our Technology



2025 - Upstream:

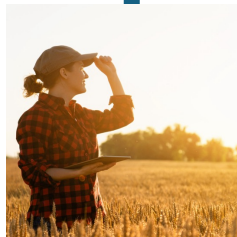
EarthDaily Constellation



Today - Midstream:

EarthPipeline

EarthMosaics



Today - Downstream/Source Data: Operational in Australia

Agriculture - Landsat, Sentinel

Mining – Sentinel-2, ASTER L1T, EnMAP, PRISMA

Insurance – Optical, Synthetic Aperture Radar

Global Deformation Monitoring – InSAR, Sentinel-1





Commercial Challenges: The Case for CEOS ARD



Advancing Earth Observation Forum

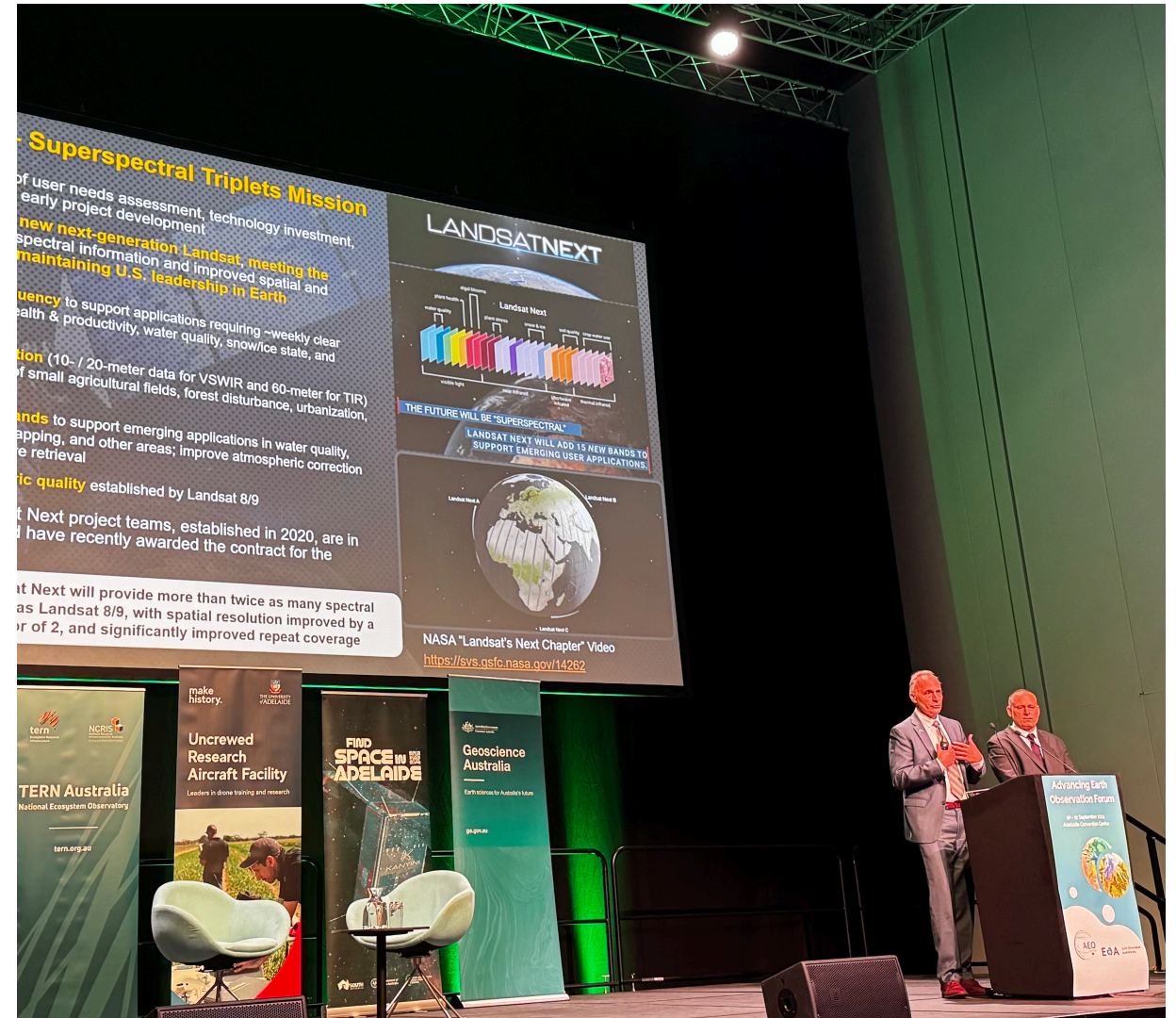
Adelaide 10 - 12 September 2024

Jonathon Ross
Geoscience Australia

Tim Stryker
USGS National Land Imaging Program

George Dyke
Symbios Communications

Aravind Ravichandran
TerraWatch Space



Australian Government
Geoscience Australia



Economic Valuation of Landsat and Landsat Next 2023



Current Economic Impact of Landsat – Published September 2024

Underestimated Value:

- \$25B in direct economic value in the US (2023) from direct users.
- Does not account for indirect users via platforms like Google, Amazon, Microsoft, Esri.

Projected \$33B in economic benefits across sectors with Landsat Next.



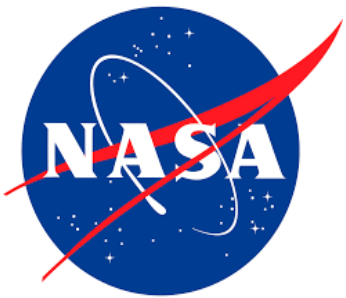
Over 50% of EO newsletter subscribers now from non-traditional sectors

Largest reader groups: agriculture, insurance, finance, climate, energy, mining, utilities, sustainability

EO market expanding beyond core industry users

terrawatchspace.com

The foundation of many commercial products...





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Built on your data, we deliver
analytics and **insights**
for these markets



Agriculture



Climate Change



Finance & Insurance



Science,
Research & Policy



Natural Disaster
Risk Management



Defense &
Intelligence



Environment,
Sustainability &
Governance



Maritime



Forest,
Natural Resource
Management



Mining,
Infrastructure &
Land use

The Commercial Challenge of A Crowded Landscape

Rapid Proliferation of EO Companies

Multiple providers, similar products, varying in quality

Overwhelming Choice for Buyers

Matching products to business problems difficult, time consuming

Navigating Complexity

While choice can be beneficial, the crowded EO market makes it increasingly difficult for buyers to make informed decisions and find the right fit for their requirements

A Remedy

By creating a standardized, consistent format for EO data, we reduce complexity and remove uncertainty.

Standards as Catalysts: Accelerating Commercial Growth in EO

The Current Challenge:

- *Perception Barrier:* Top commercial talent views the Earth Observation industry as complex and less profitable.
- *Buyer Hesitation:* Without standards, decision-makers face risks, slowing down adoption of innovative solutions.

The Power of CEOS Analysis Ready Data (ARD):

- *Simplifies Buying Decisions:* Establishes a common framework, reducing complexity and uncertainty.
- *Enhances Trust and Reliability:* Buyers gain confidence in product quality and interoperability.

A satellite is shown in orbit above Earth. The satellite has a grey rectangular body with various instruments and sensors on its top surface. Two large, dark solar panels are extended from the satellite. The Earth's surface is visible below, showing blue oceans and white clouds. The background is the blackness of space.

EarthDaily Constellation: Summary & Collaboration Opportunities

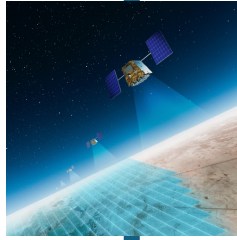
EarthDaily Constellation

Everywhere. Everyday.™

- 10 satellites launching Q1 2025
- 22 spectral bands (visible to thermal infrared)
- Consistent, scientific-quality data
- Actively engaged with CEOS ARD certification process

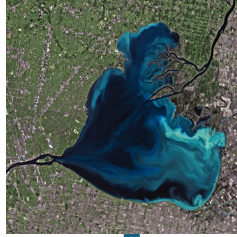


Our Technology



2025 - Upstream:

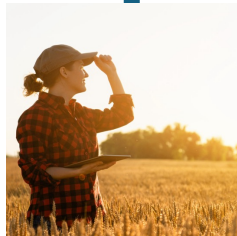
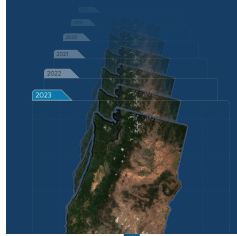
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Global Deformation Monitoring – InSAR, Sentinel-1



EarthDaily is actively pursuing
CEOS ARD compliance
Certification for
our products.





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Foundational Partner Program

Join our global network of partners pioneering next-gen technology and developing innovative solutions for the planet.

Key Benefits:

- Early access to beta data and platform programs starting Q1 2025
- Strategic market positioning ahead of competition
- Direct support from EarthDaily subject matter experts
- Prominent marketing opportunities as a pioneering partner



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