

ISSN 2691-395X



AEROSPACE & DEFENSE REVIEW

BUSINESS AND TECHNOLOGY SOLUTIONS DRIVING THE A&D INDUSTRY

aerospacedefensereview.com



Certificate

ISSN 2691-395X
CANADA
AEROSPACE
& DEFENSE REVIEW

CERTIFICATE OF RECOGNITION

EarthDaily

This is to certify that **EarthDaily** has been recognized
by the Editorial Board of **Aerospace and Defense Review** as



EDITORIAL ATTESTATION:

This recognition is determined through a bona fide editorial process based on the Aerospace and Defense Value Assessment Model and its defined methodology. It draws on independent editorial research, subscriber nominations and industry input, assessing impact on mission readiness, engineering performance, system reliability and execution in highly regulated, security-sensitive environments.

Jonathan Allred

Jonathan Allred
Managing Editor
Aerospace and Defense Review



Dated : October 2026

EarthDaily

Making Planetary Change Measurable

A satellite image captures a moment in time. But for Don Osborne, CEO of EarthDaily, the more important question is what happens when that image is compared with the next one.

What changed? Where did it change? And, critically, is the difference actually real?

That question sits at the heart of EarthDaily's approach to Earth observation. As Osborne explains it, the company has developed a science-grade Earth observation system designed not simply to capture more images of the planet, but to measure planetary change consistently over time.

The ambition is to provide the world's most trusted measurement of planetary change: observations reliable enough to distinguish what is actually happening on Earth from variations introduced by the systems observing it.

That distinction matters as governments, businesses and increasingly AI systems rely on Earth observation to understand conditions and change across the planet.

The Measurement Problem

As Osborne tells it, EarthDaily's approach began with a market problem, not a satellite.

Agricultural organizations needed better information for applications such as crop-yield analysis, but available Earth observation sources had inconsistent revisit rates, uneven data quality and the time-consuming task of normalizing data collected by different systems.

EarthDaily initially explored whether existing data sources could be combined to provide the required information. When that approach could not deliver the consistency and quality customers needed, the company concluded that the measurement system itself had to be designed differently.

Building a constellation became the answer. The satellites were not the starting point; they were the final piece needed to solve the measurement problem.

At the heart of that problem, Osborne explains, is something deceptively simple: the pixel.

For observations made days, months or years apart to be reliably compared, EarthDaily focuses on maintaining



Don Osborne
CEO & Director

consistency in pixel size, spectral signature and geolocation across imagers, satellites and time. Even a slight difference in geolocation can make something that has not moved appear to have changed.

"If you can ensure that the pixel color signature is consistent, that the size of the pixel is consistent, and the geolocation of the pixel is consistent, then you know that the changes you're observing are true changes and not because of the inconsistencies of the overarching system itself," Osborne says.

The EarthDaily Constellation is designed to collect observations across 22 spectral bands, providing analysts with more information to identify environmental and operational changes. At full operational

scale, the system will generate approximately 100 terabytes of data each day and will be managed through cloud infrastructure.

But the objective is not simply to produce more data. It is to produce comparable observations that provide a dependable baseline against which change can be detected and measured.

What Consistent Observation Reveals

The value of Earth observation rarely comes from a single image. It comes from being able to compare observations over time and trust the differences between them.

The applications Osborne describes span industries and missions, but they share that fundamental requirement.

In defense and intelligence applications, repeated observations of border regions can reveal the emergence of new structures or changes in activity patterns. In the Arctic, EarthDaily's orbital architecture enables multiple observations per day in high-latitude regions, supporting applications such as vessel detection and identification. Thermal observations can provide additional information during periods of limited sunlight, while measurements such as soil moisture can add context about terrain conditions that may affect mobility.

In agriculture, consistent observations over the growing season can reveal changes in crop health and development. EarthDaily works with agricultural input manufacturers, insurers and crop financiers. In work with Syngenta, for example, the company analyzes growing areas for early indications of pests and fungal infections, helping support earlier intervention.

Mining presents another set of measurement challenges. EarthDaily can help narrow areas for expensive core sampling and use repeated observations to identify possible unauthorized activity within mining claims. For applications such as ground movement and tailings monitoring, the company can also incorporate synthetic aperture radar data from other satellite sources.

The subjects being observed may be very different—a crop, a vessel, a border region or a mining operation—but the underlying requirement does not change. The observation needs to be consistent enough for a difference detected over time to mean something.

AI Raises the Standard for the Data Beneath It

The rapid development of machine learning and artificial intelligence has expanded the scale at which Earth observation data can be analyzed. For Osborne, however, that makes the quality of the underlying observations more important, not less.

AI can process enormous volumes of imagery and identify patterns at a scale that would be impossible through manual analysis alone. But it can also process inconsistencies at enormous scale.

If differences between observations are caused by sensors, viewing conditions, calibration or geolocation rather than by changes on Earth, an algorithm has no inherent way to know that the difference is artificial. The integrity of the result therefore depends in part on the integrity of the observations being compared.

This is where EarthDaily's emphasis on science-grade consistency becomes particularly important. The objective is to create a dependable measurement record in which changes detected over time can be attributed with greater confidence to the planet itself rather than to the system observing it.

For EarthDaily, AI does not replace the need for rigorous measurement. It increases it.

Different Customers, Different Requirements

Osborne also points to an important distinction in how EarthDaily's customers use Earth observation. Not every organization needs, or wants, the same thing.

Large institutional customers, including governments and defense organizations, may have the teams, infrastructure and analytical capabilities to ingest large volumes of Earth observation data and conduct their own analysis. What they need from EarthDaily is a consistent, science-grade source of observations that can integrate into their own systems and workflows.

Other customers need EarthDaily to take the analysis further.

An agricultural insurer, for example, may need to establish whether a crop was planted, what was planted and what condition

it was in before a damaging event. The useful output is not necessarily the satellite image itself, but reliable evidence that can help answer those questions and support claim validation.

The distinction reflects something broader about EarthDaily's role. The company can provide the underlying observations when customers can interpret them themselves, or apply its own analytics when customers need a more specific answer.

In both cases, the value begins with the same requirement: a reliable measure of change.

“

If you can ensure that the pixel color signature is consistent, that the size of the pixel is consistent, and the geolocation of the pixel is consistent, then you know that the changes you're observing are true changes.

Measuring a Changing Planet

Ultimately, Osborne's vision for EarthDaily extends beyond any individual satellite, dataset or industry.

Earth is continuously changing.

Crops emerge and mature. Forests are disturbed. Infrastructure appears. Mines expand. Ships move. Water levels change. Weather alters landscapes. Human activity reshapes the physical world.

Observing those changes from space is no longer the central challenge. The harder problem is measuring them consistently enough to know that what appears to have changed actually has.

That is the larger ambition behind EarthDaily: to establish the world's most trusted measurement of planetary change.

EarthDaily's science-grade observations are designed to provide a consistent record of the planet over time. That record can stand on its own or be combined with weather, radar, operational information and other datasets to provide a more complete understanding of what is happening on Earth.

For Osborne, that is ultimately what separates an image from a measurement.

A satellite can show what the planet looked like at a particular moment. A consistent system of observation can establish how it changed.

And once change can be measured reliably, it becomes possible to understand it. **AD**