

## **Space Data Meets Sustainable Finance: Inside a Lively Evening of Ideas, Challenges, and New Possibilities**

On a beautiful evening in Luxembourg, a diverse crowd of space technologists, sustainability experts, ESG consultants, environmentalists and financial professionals gathered in the Grund with a shared purpose: to explore how satellite-derived data can strengthen sustainable finance (otherwise known as “saving the planet”).

What unfolded was a highly engaging, insightful, and enjoyable professional exchange. Over some food and drink, an interactive exchange revealed both the immense promise of space data and the practical hurdles that still stand in the way of widespread use of the data it produces.

The event, hosted by the Institute of Financial Integrity and Sustainability (IFIS) and moderated by Sabrina Alam of Matter Space and Defence and Eduardo Cruz of AIRMO Luxembourg, was structured around three blocks:

1. understanding the value of space data,
2. identifying adoption challenges, and
3. co-creating concrete next steps.

The format, designed by IFIS, was experimental, combining expert panellists Imeshi Weerasinghe, Alessandro Grasso, and Anna Illarionova with brainstorming and workshop collaboration that activated all participants.

The discussion was lively, fuelled by the mix of voices in the room. Engineers, data scientists, bankers, risk managers, startup founders, non-profit and sustainability strategists; each brought their own vocabulary, assumptions, and expectations to the table. The result was a diverse conversation that shifted between technical insight, business pragmatism and philosophical musing. A recurring theme was on the knowledge gap between providers and users: how to make space data accessible, trustworthy, and useful for financial and social policy decision-makers.

### **Why Space Data Matters**

The evening opened by exploring the core question: what can satellite data actually deliver for sustainable finance and for society at large?

Participants highlighted its potential for monitoring environmental and social outcomes, from tracking deforestation, forest health, and land-use change to assessing whether nature-based investments truly deliver on their promises. Space-based observations can also shed light on social impacts, such as safety risks for outdoor workers facing extreme weather conditions, like heat waves.

Attention then turned to renewable energy and infrastructure, where satellite insights help detect details such as dust on solar panels, anticipated maintenance needs, and map exposure to floods, wildfires, or coastal pressures, directly improving asset performance, resilience, and risk pricing.

In insurance, satellites enable faster, more objective claims processing and payouts by detecting and verifying droughts, floods, and crop damage.

Strategically speaking, decades of historical observations can support long-term trend analysis for all manner of users, from governments to corporations, enabling better scenario planning and climate-risk stress testing, with the proviso that the data is standardised, comparable, and auditable, a point repeatedly emphasised throughout the discussion.

### **The Translator Problem: When Worlds Collide**

Identified as one of the primary obstacles to promoting the common use of space data, an exchange emerged on the need to bridge language gaps among engineers, data scientists, and finance and sustainability professionals: the “translation challenge.” Engineers and data scientists speak in terms of spectral bands, resolution, and processing pipelines. Finance professionals speak in terms of risk flags, KPIs, and regulatory disclosures. Without a shared language, even the most powerful data remains underused.

One of the panellists expressed astonishment at the lack of knowledge some non-space participants have regarding the nature of information available from satellite monitoring. Experience shows that we can all operate in “bubbles” that limit our reach, and benefit from growth when they are burst. The observation led to a discussion of how the space industry might better explain its value to prospective users.

Participants repeatedly emphasised that trust in data requires transparency, consistency, and clear documentation of data sourcing, processes, and model behaviour. Without this, risk managers and auditors cannot rely on satellite-derived insights, no matter how sophisticated they may be.

### **Adoption Barriers: Why Space Data Isn't Yet Mainstream**

The second block of the evening shifted from value to obstacles, asking why, despite clear benefits, space-derived data is still far from embedded across finance, government, and society. Participants pointed first to organisational obstacles: many bodies lack the skills, governance frameworks, or even the confidence to experiment with “Earth Observation” data, making it difficult to secure sponsorship, contracts, and build technical capacity.

Standardisation emerged as another major barrier. Fund managers and sustainability teams want accessible dashboards, risk indicators, and comparable metrics rather than raw imagery, meaning satellite data must arrive in simple, compatible formats or at least follow a consistent workflow.

Cost and business models added further uncertainty. While much public data is free, the processing and analytics layers carry commercial costs, raising questions about whether satellite data might one day become a public utility, or whether privacy and security concerns will prevent that. Regulatory constraints and data sovereignty issues also complicate adoption, varying widely across jurisdictions.

Finally, despite Luxembourg's strong position in both finance and space, the overall ecosystem remains fragmented, with providers, analysts, and financial institutions

often working in silos. In Luxembourg, at least, it was agreed that a more coherent, connected landscape could unlock far greater potential.

### **Brainstorming the Future: Gaps, Risks, and Opportunities**

The brainstorming sessions, fuelled by colourful sticky notes and energetic debate, revealed a rich mix of concerns and opportunities. Participants questioned whether satellite data could or should be treated as a public good and how to ensure its responsible, equitable use. Ethical risks surfaced too, particularly the potential for misuse and the need for transparent methodologies to prevent greenwashing and expose false sustainability claims.

The little yellow notes pointed to emerging applications, from methane regulation to space-debris mitigation, highlighting how sustainability challenges now extend beyond Earth itself.

Financing models for long-term data provision were called for, while many stressed the need for greater awareness, training, and accessible demonstrations to help new users understand what space data can offer.

### **Key Takeaways: What the Evening Made Clear**

By the end of the event, several overarching insights had crystallised.

#### ***1. The Business Case Is Strong, but Translation Is Everything***

Space data can materially improve risk assessment, portfolio valuation, and sustainability reporting. But the real challenge is translating observations into decision-ready insights that financial and sustainability professionals can trust.

#### ***2. There is a strong demand for Integrated, Standardised Platforms***

Participants expressed a clear appetite for a consolidated, end-to-end solution that can handle multiple use cases with standardised outputs and governance. The current landscape of fragmented tools and datasets is a major barrier.

#### ***3. Trust Requires Transparency***

Traceability, knowing where data comes from, how it was processed, and how models behave, is essential for user confidence, regulatory compliance and internal risk governance.

#### ***4. Collaboration Is Essential***

Public data provides a strong foundation, but private analytics and specialised services are needed to make it actionable. Regulators and NGOs can help shape standards and governance frameworks.

#### ***5. Luxembourg Is Positioned to Lead***

With its strong finance sector, growing space ecosystem, and EU context, Luxembourg has the ingredients to become a focal point for space-enabled sustainable finance. But this will require continued ecosystem-building, pilot programs, and coordinated action.

### **Next Steps: From Conversation to Action**

The evening concluded with a set of concrete suggestions for moving forward:

- **Create a catalogue of finance-relevant use cases**, mapped to service providers or customer groups, along with expected ROI.

- **Develop and support a pipeline of pilot projects** in Luxembourg or the wider EU to test standardised outputs in real investment workflows.
- **Establish a “translator” function:** professionals who can bridge the language gap between satellite engineers and user teams. (Enter the Chief Earth Observation Architect?).
- **Convene follow-up events** focused on governance, standardisation, and shared data frameworks.
- **Launch a broader communications strategy**, potentially including social media channels, to raise awareness of space-enabled sustainability benefits.

These steps reflect a shared recognition that the potential is real, but progress requires coordination, clarity, and continued dialogue.

### **A Final Reflection: A Community Ready to Build**

What made the event memorable was not just the content but the atmosphere. The expert panellists kept the discussion focused, while the post-it and workshop activity brought energy and inclusivity. Participants spoke openly about challenges, but also with optimism about what could be achieved together.

Anthony Smith-Meyer, the Executive Director of IFIS, concluded afterwards that, “attendees left with a better understanding of where space data can deliver tangible value, what stands in the way of adoption, and how to begin closing the gap with concrete actions.”

Consideration of follow-up events or conferences is already underway. The momentum is real. The community is forming. And the opportunity to make space data a cornerstone of credible, effective, sustainable finance, specifically in Luxembourg, is too important to ignore. As they say, “Watch this Space!”