

The Leapfrogs method

Why space-enabled development in Africa doesn't need to repeat a technological generation — and the platform Fondazione E. Amaldi is building to make the skip repeatable, not accidental, thanks to Space applications.

PANEL 1 — The Transformative Value of Space Applications in Developing Countries
Saturday 3 October 2026 – 10:35–11:35

Lorenzo Scatena

Secretary General
Fondazione E. Amaldi

Eleonora Lombardi

Head of Department & ESA BASS Ambassador
Fondazione E. Amaldi



Italy giving you Space.

Fondazione E. Amaldi — Italy Giving You Space

OUR IDENTITY

E. Amaldi Foundation (FEA) **is** an Italian institution for space applied research and technology transfer in support of the national scientific heritage. Born in 2017 from the will of the Italian Space Agency (ASI) and from the Hypatia Research Consortium, it strives to offer a new way of interpreting applied science.



OUR MISSION

Our Mission is to support and promote scientific research aimed at technology transfer, focusing on the Space sector as a fundamental tool for the economic development of Italy, and therefore an exceptional source of innovation and improvement for the country.



OUR VISION

Our Vision is to represent a scalable example of an innovation accelerator best practice and as a creative force of networks between enlightened private companies and the public sector.



Skipping a Generation Is Not New to Africa

China never built a continent-wide credit-card economy — it skipped straight from cash to mobile money. So Africa (**~50% of global mobile money transactions, over 1 billion active accounts, and more than \$1 trillion moved annually**) now run on infrastructure the rest of the world spent decades building first. The same pattern is already measured in the field, not just in payments.

DEMONSTRATED — PAYMENTS

~50%

of global mobile money transactions now run without a physical — 1B+ accounts, \$1T+ moved annually.

DEMONSTRATED — LOGISTICS

3 hrs → 26 min

Zipline's cut to medical-delivery time in Rwanda, operating today at commercial scale under a risk-based regulator.

What this panel adds: FEA challenged itself with a proposal that apply this same, already-proven pattern to logistics regulation, industry matching and cyber-space resilience — presented honestly as a pipeline, not as finished results.



Space Bridge Italy–Africa

Before a service can scale a match, someone has to prove the match works by hand.

Structured, not speculative

Curated delegations of Italian NewSpace and downstream SMEs — not a generic trade fair — matched to specific local demand.

Co-creation, not one-way sales

Missions are built around joint design of Earth observation, connectivity and downstream applications with local institutions and industry.

Local teams co-own the solution

Each mission is designed so a local partner team can run the resulting service themselves afterwards — not remain dependent on the Italian SME.

Outcome: lasting partnerships

Success is measured in joint pilots, local capacity building and follow-on commercial agreements — not one-off transactions.

What FEA proposes to do systemically
Space Bridge approach is designed to prove mission by mission.



Writing the Rulebook Once, Not Twice

92%

of the road network is unpaved

300–400 kg

target payload class with no dedicated framework

58%

of GDP from agriculture, limited by market access

Sierra Leone doesn't need sixty years of manned-aviation rulemaking behind it to regulate cargo drones — **a native, risk-based BVLOS framework can be written directly: benchmarked, not reinvented.** *For a mother in a rural chiefdom two hours from the nearest clinic, that framework is the difference between a same-day blood delivery and a day lost to impassable roads.*

Benchmarked on proven international models

Rwanda

Commercial delivery at scale (Zipline) via a clear, risk-based regulator

United States

Performance-based BVLOS rules focused on safety outcomes

China

Standardisation and airworthiness controls for higher-risk UAVs

The ask: Lead a dedicated policy process positioning Sierra Leone as an ECOWAS first mover, and opening the market to local operators and maintenance providers, not only to foreign fleets.



ORBIT-SHIELD Africa: Skipping the Ground-Based Build-Out

+23%

rise in weekly attacks on African organisations (2023)

1 / 15

African organisations hit by ransomware every week

\$180B

estimated losses from cyberattacks in Africa by 2027

Source: 4th INTERPOL Africa Cyberthreat Assessment Report, 2025

Zero ECOWAS countries have sovereign space infrastructure today — but closing the gap doesn’t require decades of fibre and firewall build-out first. **An encrypted SatCom backup channel and Copernicus / COSMO-SkyMed-fed CERT alerts can be layered in directly**, as an orbital complement to existing cyber frameworks. For the CERT operator on duty, it means an alert still arriving even when ground power and fibre both fail at once.

PILLAR I

Orbital Resilience

Encrypted SatCom as an out-of-band backup channel; authenticated GNSS (Galileo OSNMA) against spoofing.

PILLAR II

Supply Chain Integrity

Satellite-verified tracking and geo-tagging for a tamper-proof hardware chain of custody at ECOWAS port hubs.

PILLAR III

Space Intelligence & CERT

Copernicus and COSMO-SkyMed feed national CERT workflows with real-time geospatial threat alerts.

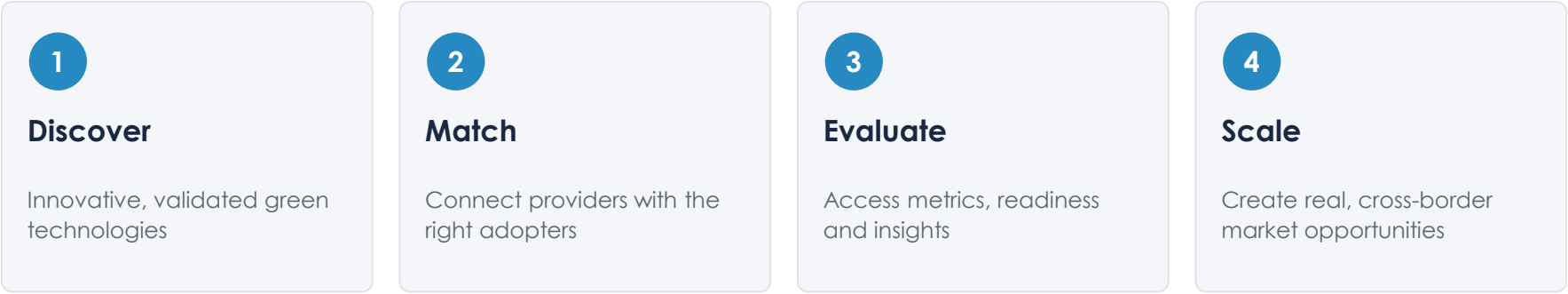
Local capability first: the training vehicle is CyberPro Train — Space-Cyber Edition Africa, targeting 200 African professionals trained within 18 months, certified in the ESA catalogue.



The ask: an Italy–Ghana Working Group on the Space-Cyber Nexus, with a 60-day horizon for a first joint assessment.

IMUH — The Engine Behind the Leapfrog

Interregional Market Uptake Hub: a digital one-stop-shop matching green & space-enabled technology providers with adopters — built for scale-up and duplication into new regions.



*What mobile money did for payments — a matching layer, not a single product — **IMUH is built to do for green technology adoption: turn one good match into a repeatable pattern, not a one-off mission.***



A Four-Step Mission Model

A conceptual engagement flow for turning a trade mission into a lasting technical partnership.



The Added Value — A Two-Sided Marketplace

To Technology Providers

- High visibility towards real users
- Growth opportunities through direct exposure
- Reduced time and cost to access new markets

To Solution Seekers

- Access to verified, high-quality technologies
- Reduced adoption and investment risk
- Confidence in technology readiness (TRL)

A structural win-win: technology providers gain a route to market, and public and private adopters gain confidence in what they are buying.



Thank You

Let's discuss how platforms, partnerships and policy can travel together — as one method.



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info@fondazioneamaldi.it · fondazioneamaldi.it