

The Living Blueprint

Future Airspace Requirements Future Infrastructure

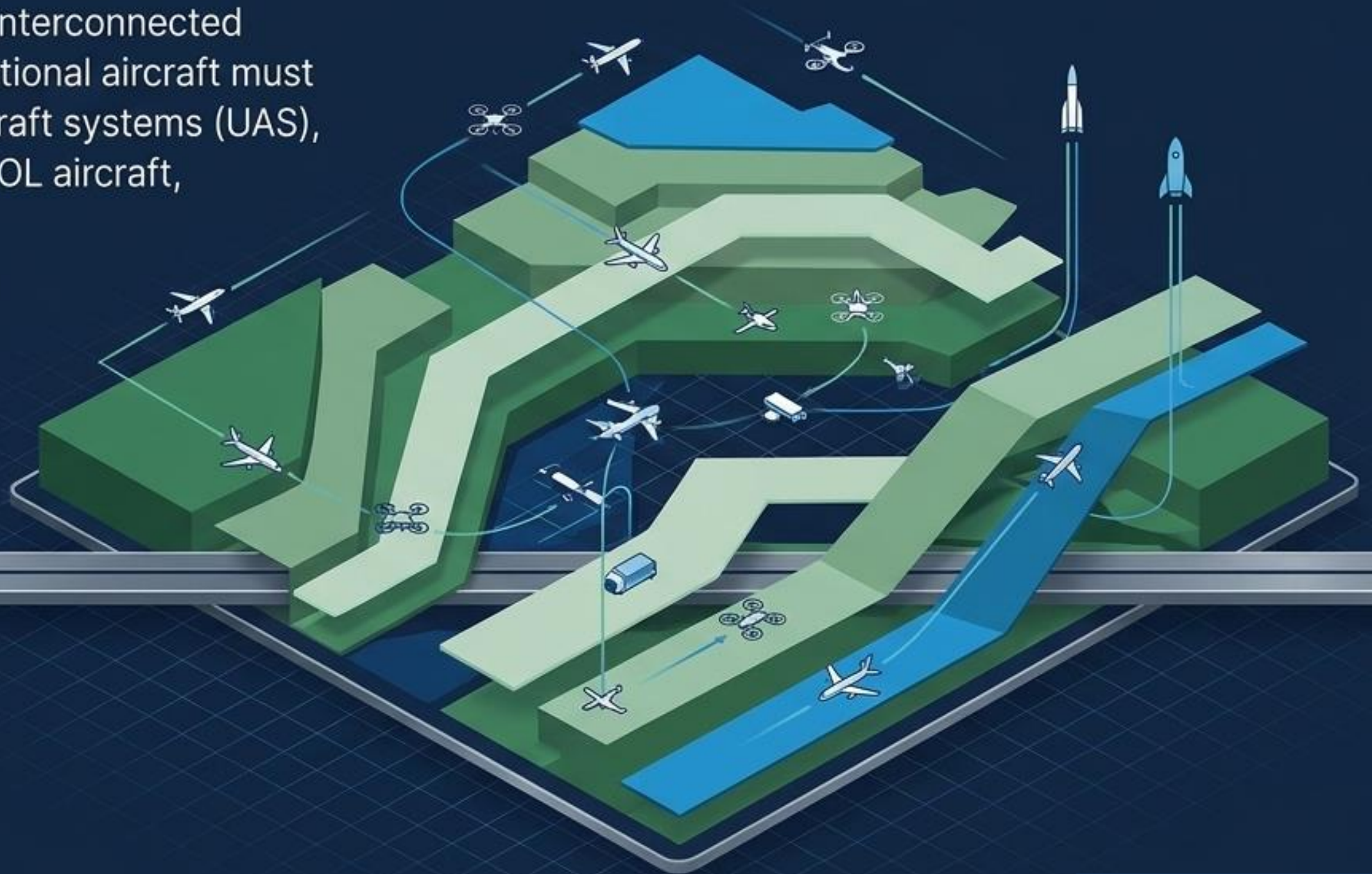
An Integrated Airspace Concept for Safety,
Security, Sustainability, and Resilience.

The Living B Context Note
Tenth Meeting of the Aerodromes Operations and Planning Sub-Group
(AOP-SG/10-14 August 2026, Bangkok, THAILAND)

Quintus AGL Maintenance Service Ltd.

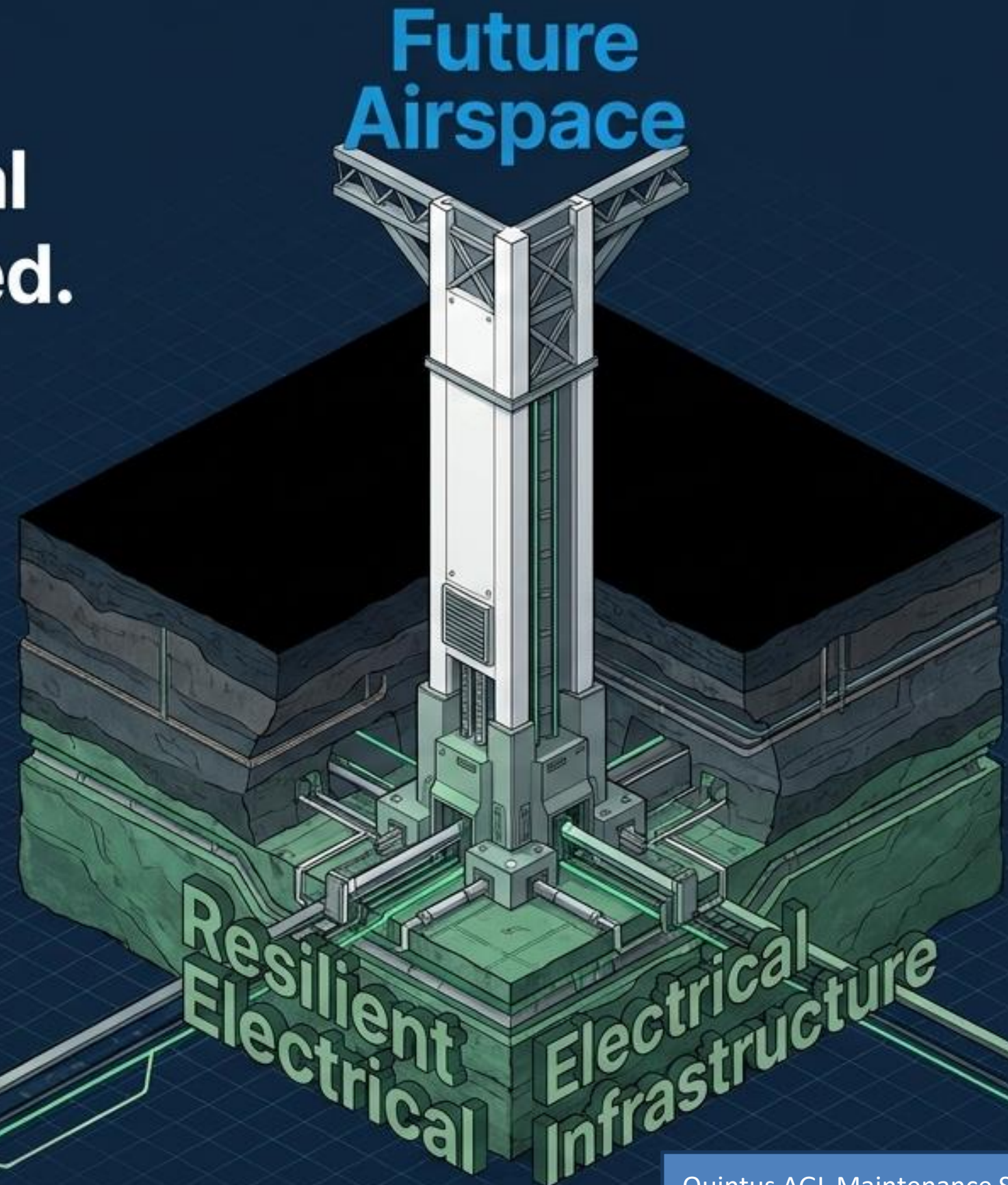
The aviation industry is entering a period of unprecedented transformation.

We are moving rapidly toward an interconnected aviation ecosystem where conventional aircraft must share the sky with unmanned aircraft systems (UAS), Advanced Air Mobility (AAM), eVTOL aircraft, autonomous logistics, and future commercial space transportation.



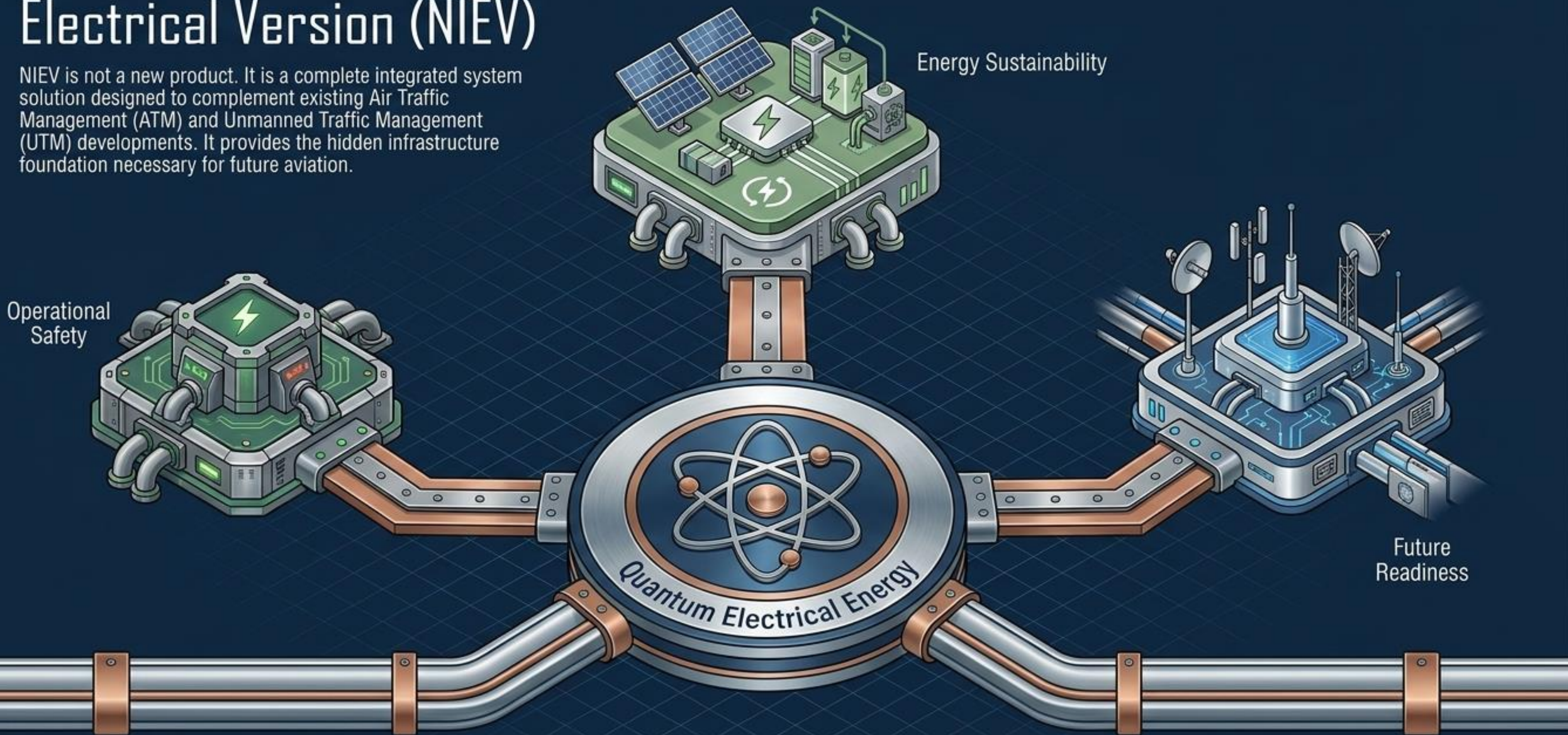
Global efforts are advancing ATM and UTM, but one critical dependency remains unsolved.

Aircraft movement, digital communications, navigation, surveillance, and autonomous operations all share a single point of failure. **Future airspace cannot operate safely** without resilient electrical infrastructure and intelligent airport systems.



Introducing the New Innovative Electrical Version (NIEV)

NIEV is not a new product. It is a complete integrated system solution designed to complement existing Air Traffic Management (ATM) and Unmanned Traffic Management (UTM) developments. It provides the hidden infrastructure necessary for future aviation.



The Integrated Infrastructure Framework relies on three interdependent layers

Layer 1 – Airspace Operations

- Air Ground Lighting (AGL)
- UTM
- AAM
- Future Space Traffic Integration

- Digital AGL Monitoring
- Predictive Maintenance
- Airport Operations Centre
- Regional Digital Datacenter

Layer 3 – Energy Infrastructure

- Distributed renewable energy
- Intelligent energy management
- Emergency backup power
- Charging for unmanned aircraft
- Airport energy resilience

Four strategic pillars ensure system-wide stability and operational continuity

Safety

Continuous monitoring of critical systems; early fault detection; safe integration of manned/unmanned craft.

Sustainability

Fossil-free energy integration; massive carbon reduction; optimized facility lifecycles.

Security

Cyber-resilient architecture; secure digital monitoring; protection against system-wide infrastructure failures.

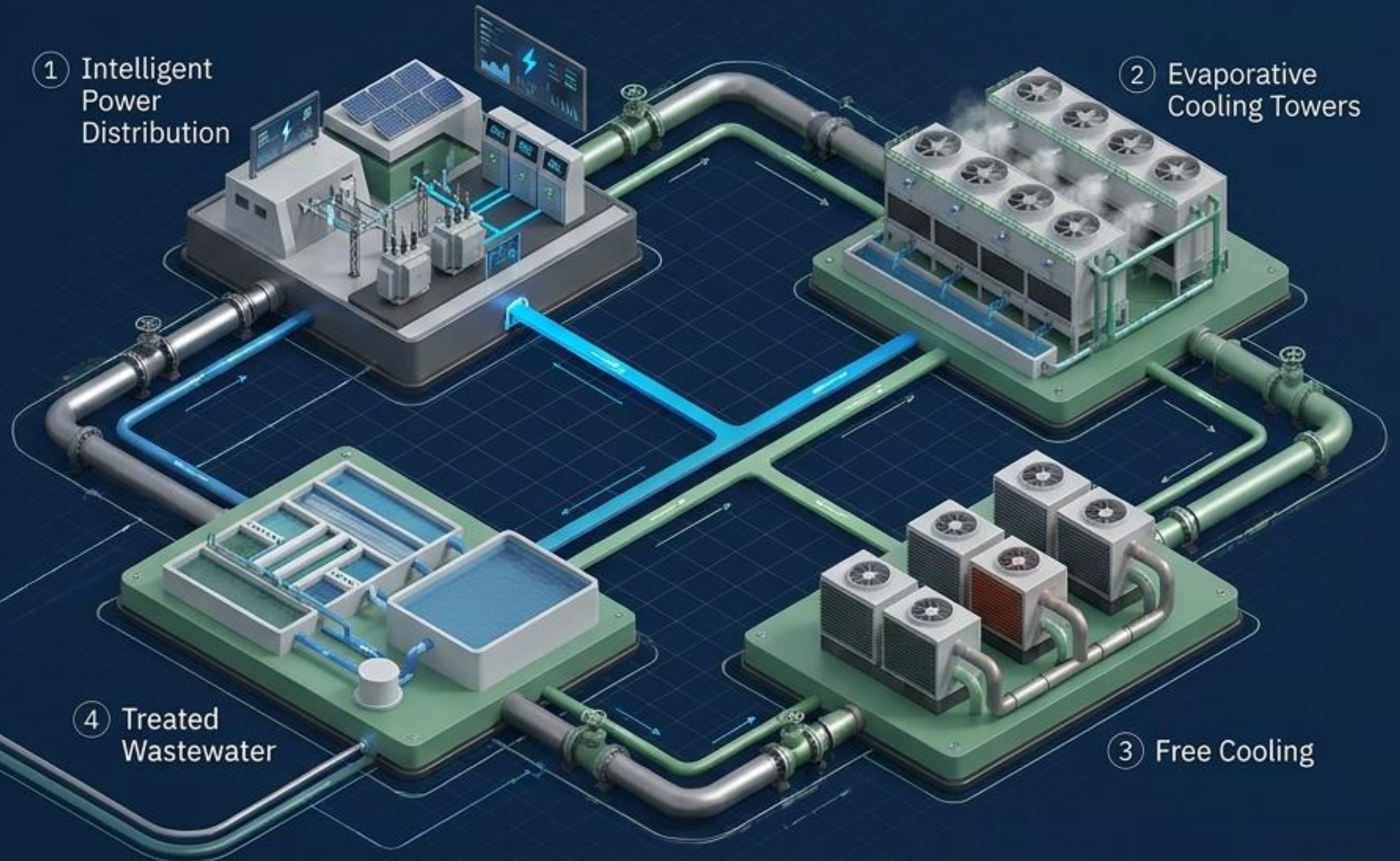
Resilience

Business continuity during emergencies; distributed infrastructure for natural disaster response.



Beyond renewable installation: Optimizing the facility lifecycle through circular design.

True sustainability requires revolutionary cooling solutions and intelligent distribution to reduce massive energy consumption and actively halt energy losses during operation.



The evolutionary transition from conventional airports to intelligent spaceports.

Conventional Airport



Single System
[ATM]



Grid-Dependent /
Reactive



Isolated AGL



Intelligent Infrastructure Hub



Integrated Systems
[ATM + UTM + AAM]



Self-Generating /
Distributed Power



Digital-Energy
Integration
[AGL + Datacenters]



Future Spaceport



Universal Space
Traffic Integration



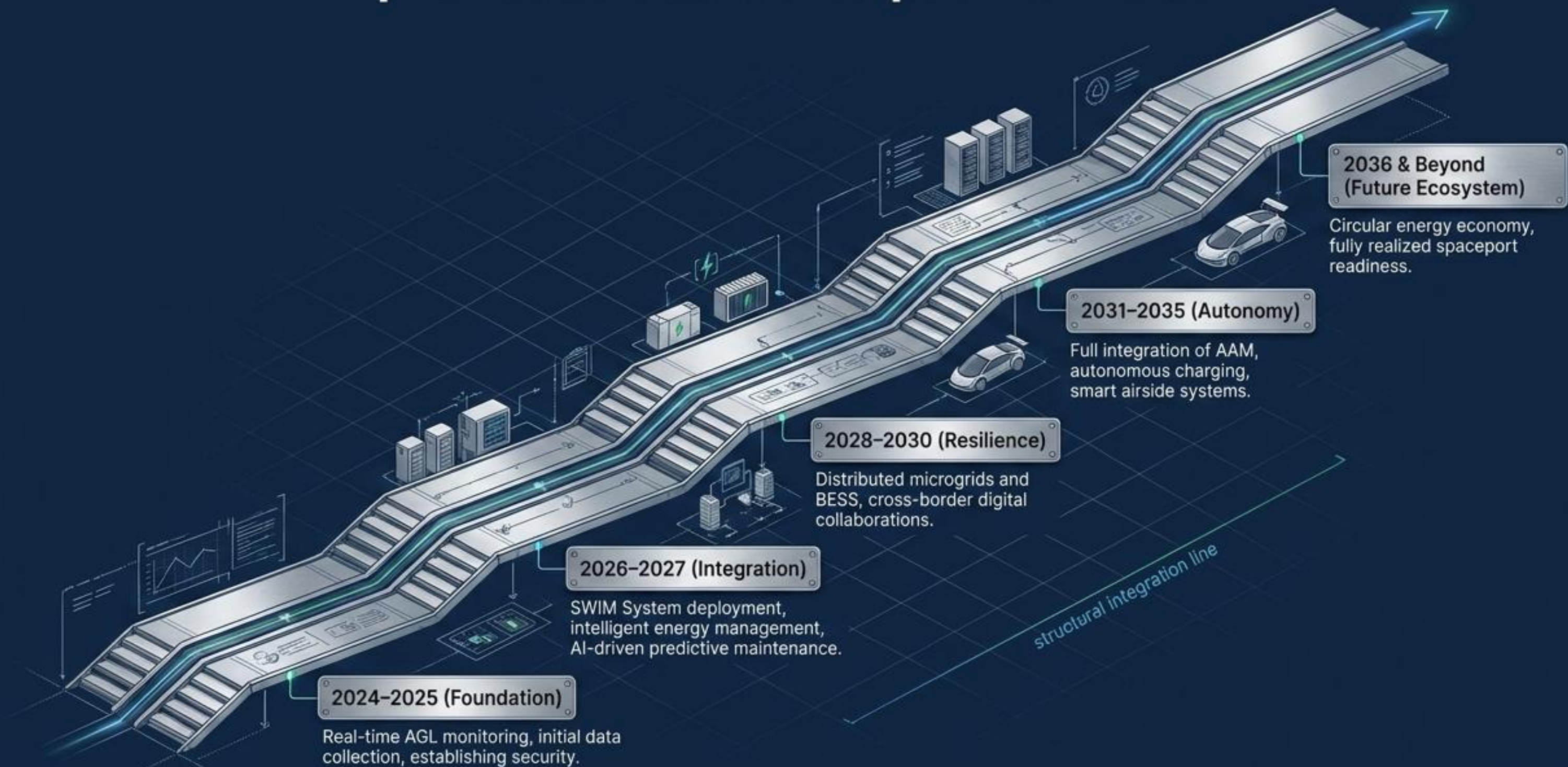
Fully Circular
Energy Economy



Fully Autonomous
Smart
Infrastructure



The Global Development Roadmap (2024–2045+) provides a structured path forward.

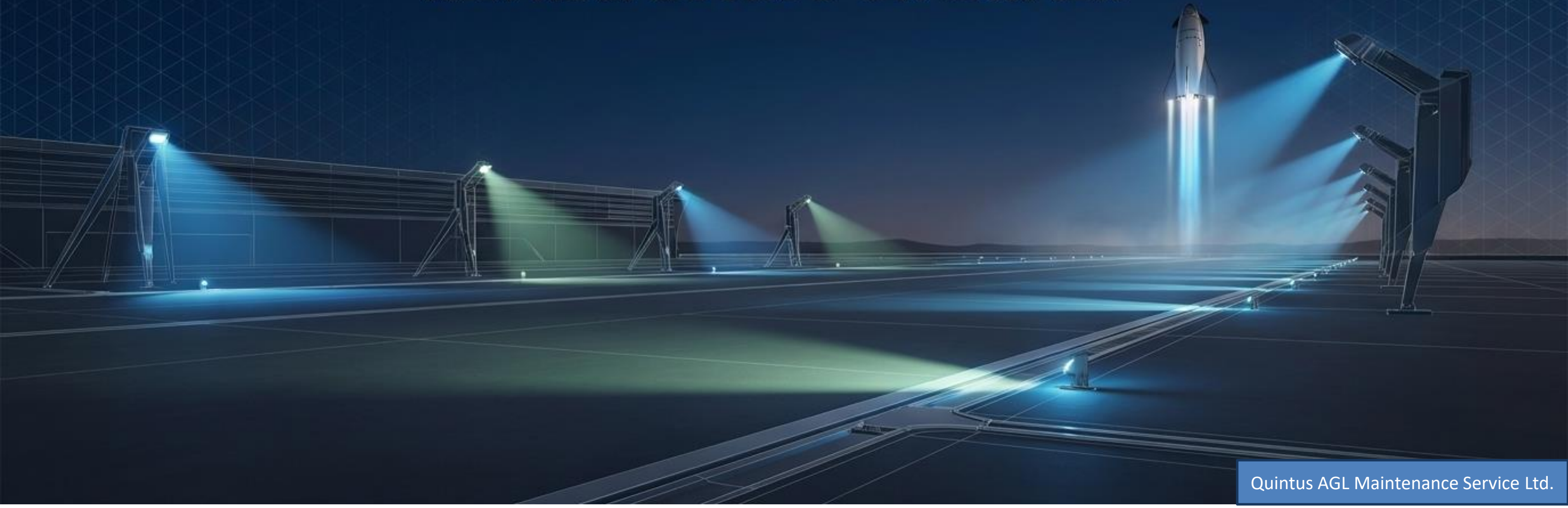


The Strategic Value of Green Investment: Positioning for global leadership in sustainable mobility.



The Ultimate Vision.

“The future is space, but every journey to space begins with resilient infrastructure on Earth.”



An open invitation to shape the future of international aviation infrastructure.

We respectfully invite the International Civil Aviation Organization to participate in technical dialogue regarding this infrastructure concept. Our shared objective is to explore how future airport infrastructure can better support the safe, efficient integration of manned aviation, unmanned aviation, Advanced Air Mobility, and future space transportation.



Bring Light to the World – No Country Left Behind.



Quintus AGL Maintenance Service Ltd. | Bangkok, Thailand.