

LatConnect 60°

Vital Insights for Our World

SUSTAINABILITY & QUANTUM STRATEGY



1. BACKGROUND

Most countries in the Asia Pacific region have set targets for carbon neutrality by mid-century. These include Australia, Malaysia, Thailand and Indonesia. The shift towards sustainable practices has begun, and evident in the way investments are being made and risk ratings of countries, states and territories are being quantified.

There is increasing recognition and reliance on science and technology to provide the underpinning data that supports measurement, verification and reporting on activities, carbon sequestration and emissions that forms the basis on which monitoring can be carried out to gauge progress towards Net Zero.

LATCONNECT 60 SUSTAINABILITY STRATEGY

LatConnect 60 (LC60) is an active earth observation end-to-end company which collects data for collection and processing, and creation of solutions for use in a practical and affordable way. LC60 works across a range of sectors and has recognised the need for data and solutions to meet measurement and verification activities for industry and government parties. LC60's strategic and viable commercial approach and how it meets the demands and needs of many industry and Government parties are outlined below.

EMISSIONS MONITORING

Enable certified Methane & CO₂ emissions measurement at a broad area down to facility level for a range of purposes.

- 1) Provides O&G companies greater oversight to:
 - Measure and control extent of emissions, with necessary maintenance.
 - Report on emissions to relevant authorities for creation and compliance with self-control systems.
 - Acquire the necessary and correct amounts of carbon credits to offset emissions.
- 2) Provides Governments and Agencies the ability to:
 - Plan the Government sustainability and Climate Change management structure, including self-compliance and reporting by operators.
 - Monitor and enforce the standards.
- 3) National and International auditors to measure and certify as necessary.
- 4) Large Fund Investors to safely promote and invest in Industry players and sectors with Green Energy credentials which have been validated and certified.

AGRICULTURE

Utilise the Earth Observation data collected analysed and integrated by LC60 into the broad acre Farm Management System (FMS) down to the individual mobile AG60 Apps for:

- Developing and managing state and federal level programs for technical and financial support of producers to increase land health and productivity, a critical area in rice paddy farming to provide essential food resources.
- Individual farmers to gain Government support and improve their operations and returns.
- Assess potential for improved farming practices to assess additionality and the ability to sequester carbon and generate carbon credits.

FOREST CARBON SEQUESTRATION

LC60 uses its internally developed Digital Forest Inventory (DFI) system to leverage analytics from available Optical and SAR data to measure forestry health, biomass, and algorithms for cloud penetration, provided in a data cube which is populated with continuous change detection and classification to internal standards.

The initial target market is government management of native forest areas in Australia and the Southeast Asian region, to deliver a carbon sequestration results at UN-REDD standard and acceptable for carbon trading, which provides a major financial benefit to the Governments involved and can provide local purchasers of those credits with early market or investment access.



There is an increased understanding of the climate change issues across all participants including Governments, Investors, industry participants and the global community as a whole. It is regarded as essential for the future of our planet and enables shared decision making with a view to achieving their goals. The markets for Sustainability and Climate Change solutions are therefore growing in size, applications, and importance with the potential to deliver change. However, one of the biggest problems is the quality and availability of the necessary Data.

THE DATA ISSUES

There are many different types and qualities of Data used in Earth Observation including Hyperspectral, Short-Wave Infrared, Synthetic Aperture Radar and LIDAR, and many separate (but related) issues including:

- Degree of resolution measuring its source and accuracy (from 30m down to as low as 30cm).
- Spectral range either broad or focused.
- Repeat measurement availability, from weeks down to days or intra-day.
- Availability as an integrated package from different sources or requiring extensive in-house work to process, absorb and analyse as a package.

- Quality of analysis or solutions, and method of delivery, across different end users ranging from single paddy farmers to whole of Government with multiple agencies.
- Cost and availability to download and apply in separate analytics, or across different departments and agencies.

In many cases, these problems are not solvable under the current systems which means the solutions and benefits sought by the end-users are not available.

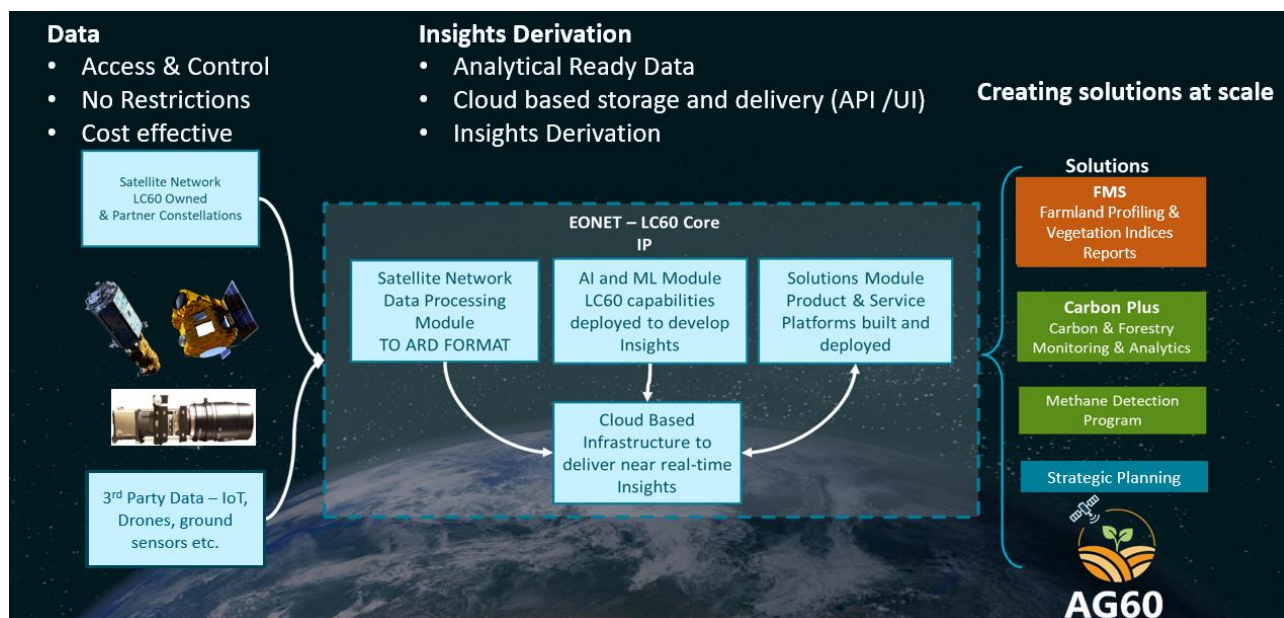
LC60's technology and IP development strategy solves the problems and provide the solutions.

2. TECHNOLOGY DEVELOPMENT STRATEGY

LC60's focus on the sustainability sector is timely and advantageous to all its targeted end-users because:

- The newly developing technology and payload sensors used to capture data of all types from satellites, ground sensors, drones and other sources has increased relevance and value, reduced cost with increased capture, immediacy, and other attributes. Industry players with current EO assets (which can't be changed during their lifetime without totally new investment) are therefore at a huge disadvantage to new developers.
- The new technology delivers vastly more data which would have been impossible to utilise under the existing data processing systems, but new AI adopted by LC60 makes this feasible.

The ability for LC60 to provide wide ranging solutions that can be deployed across the Asia Pacific Region is dependent on 3 key pillars: Data access, Insights derivation and solution deployment. LC60 continues to develop IP across all 3 pillars to ensure seamless delivery of insights to all stakeholders.



Data Access

Access to data is critical in order to generate useful insights. LC60 currently has global access on the S1-4 high resolution multispectral satellite and exclusive access over Australia. This provides LC60 access and flexibility to capture data where it is required unencumbered.

The next 6- 8 months

LC60 intends to expand its data access and will be adding more satellite capacity to provide greater flexibility and more frequent coverage over wider areas.

The next 24 months

LC60 also envisages the need for a constellation of Low Earth Orbit (LEO) satellites to measure Methane & CO₂ emissions from space at a much higher spatial resolution, and therefore improve detection and quantification accuracy for source-level monitoring and insights than what is currently available from satellites in-orbit. LC60 is firming up its constellation plans in terms of resolution, number of satellites and coverage areas with the intent on having one or more of these satellites operational by the end of 2025.

Insights derivation & Solution Deployment

LC60 is investing in its AI and machine learning capabilities to continue developing and refining models to support a range of end use insights requirements. The processes also must be efficient such that insights are derived in a timely manner. AI used by LC60 supports new and enhanced systems of GIS processing, data integration of all types, solution creation and platform delivery in ways not even foreseeable in the past.

LC60 continues to engage with academic institutions to work at the cutting edge of R&D to explore new AI methods. For the next 3 years LC60 has invested in an ARC Linkage Grant opportunity for Curtin University to develop new algorithms to be applied for a range of sustainability use cases.

QUANTUM COMPUTING TO ENHANCE INSIGHTS DERIVATION

The potential of Quantum is being explored and is envisaged to play a vital role in LC60's technology capability development as it matures. LC60 has identified key areas where quantum computing can dramatically improve GIS processes. These are listed below.

- **Quantum-Enhanced Data Processing:** Traditional computing systems struggle with the sheer volume of EO data. Quantum computing, with its ability to process vast datasets exponentially faster, can significantly reduce processing time, enabling real-time analysis of critical environmental metrics.
- **Enhanced Image Analysis:** Quantum computing can facilitate advanced image analysis techniques, including rapid object recognition, anomaly detection, and trend forecasting. This empowers ESG stakeholders to make informed decisions swiftly.
- **Quantum Convolution:** Quantum convolutional layers can perform convolution operations on quantum-encoded data, enabling the extraction of spatial features more efficiently than classical counterparts.
- **Quantum Algorithms:** Quantum algorithms like quantum Fourier transforms and quantum phase estimation can be integrated into Quantum Convolutional Neural Network (QCNN) to further improve their performance in tasks like data compression, feature extraction, and pattern recognition, which are crucial for ESG monitoring.
- **Quantum Encryption for Data Security:** Protecting EO data integrity and privacy is paramount. Quantum cryptography can be integrated into satellite communication systems to ensure the utmost security, safeguarding sensitive information from potential threats.

LC60 is also actively engaging with Australian Government Department of Industry Science and Resources on their National Quantum Strategy. LC60 is helping shape requirements and providing realistic immediate steps

where funding can be allocated to support industry in testing quantum computing. LC60 will continue to engage on the strategy, with a view to actively engage with the Critical Technologies Challenge Program.

Many specialist participants in different delivery sectors now recognise their aligned interests with an end-to-end player like LC60 and provide their specific essential services and technology access in partner style contracts which protects and enhances LC60's growth path, at a reduced capital cost, reduced operation cost, low risk and early delivery. These benefits can be shared with end-users.

LC60 CAN DELIVER SUSTAINABLE AND POSITIVE CHANGES

LC60 has developed and will deliver its Climate Change Strategy taking account of all of these factors with the advantage of being a first end-to-end mover in this sector and in this region, and will:

- Operate out of and focus on Australia and Southeast Asia because the major global players have logically concentrated on their major global markets which provide their returns and market dominance in those areas. They don't have the incentive, local knowledge, or need to change their strategies.
- Collaborate closely and in depth with regional Government, local operators and service providers to understand the markets, analyse the data and services required and how best delivered.
- Design the best infrastructure and delivery systems solve the data problems and to meet the end-user needs at the earliest practical time, and the lowest capital cost.
- Use Business and Technology Partners with existing capabilities and aligned interests to assist in payload and program delivery, timing, and cost.
- Develop new internal or partnered infrastructure only where necessary and covered by off-take or funding arrangements to reduce capital burden and risk.
- Share the Strategy benefits with end-user partners and clients, so as to deliver outstanding results at a very competitive price, and retain a reasonable return to fund future growth and returns to shareholders.

In all situations LC60 will apply the MEASURE REPORT VALIDATE rule, to deliver certification and validation which will satisfy all commercial, national and international Government and regulatory standards.

This is created and delivered on end-to-end basis, unlike most of the existing service providers which focus on their own particular service or product, not the end cost and inconvenience for the end-user.

LC60 WORKS WITH YOU

The LC60 team will on terms satisfactory to all involved parties including confidentiality and cost:

- Meet and assess each potential client's operations, concerns and needs.
- Develop a recommended course of action.
- Provide access to data, products and systems to be used, and where possible conduct Proof of Concept trials, to enable to end-user to assess the value and cost, both external to LC60 and internally, and reach informed decisions on the course of action.

LC60 will then work in a practical, flexible and transparent manner to achieve what our customers need and want, and in doing so help to deliver Sustainability and Climate Change. This is a genuinely shared passion across the whole company and is the reason why we're here.



Lat 60° Connect

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