

ASX RELEASE

27 July 2022

Kleos Space Q2 2022 Activities Update and Outlook

Highlights:

- **Cash receipts from customers for Q2 of AUD\$1.3M (€0.89M) ^{iv}**
 - **Net operating cash out flows reduced from -AUD\$2.5M (-€1.6M) in Q1 2022 to -AUD\$0.9M (-€0.6M) in Q2 2022 ^{iv}**
- **AUD\$10m secured to accelerate growth, expected to complete mid-August**
- **Data collection constellation continues to build with**
 - **Patrol Mission; Kleos' third cluster of four satellites successfully deployed into orbit**
 - **Observer Mission; Kleos' fourth cluster of four satellites manifest to launch on upcoming SpaceX Transporter-6**
- **Strengthened Board and management with key appointments:**
 - **Highly experienced space industry executive Ms. Dawn Harms appointed to the Board as a Non-Executive Director**
 - **Alan Khalili appointed as new CFO, experienced in the field of aerospace/satellite, technology, and DaaS**
- **Continuing to build world-class industry partnerships and market engagement including agreements signed with US Navy Surface Warfare Center and with international aerospace company; Kongsberg**
- **Corporate brochure published**

Kleos Space S.A (ASX: KSS, Frankfurt: KS1) (Kleos or Company), a space-powered Radio Frequency Reconnaissance data-as-a-service (**DaaS**) and Mission-as-a-Service (**MaaS**) company, provides the following update for the quarter ending 30 June 2022 (Q2 2022), along with its Appendix 4C cash flow report.

Commenting on the Company's second (June) quarter progress, Kleos Space CEO Andy Bowyer said:

"Data is the foundation of all decision making, our recent agreement with the US Navy is a great example of a government user engaging early with unique data sets such as ours to rapidly innovate with solutions for military challenges that facilitate quicker decision making.

"Kleos' radio frequency (RF) geospatial data provides this value, enabling users to speed up decision making in time-critical, high-risk areas of conflict. Our exceptional engineers use our proprietary software and algorithms to analyse, process and extract 'needles in the haystack' from the radio noise that our sensors collect. This intelligence assists in the detection of environmentally, economically, and societally damaging human activity and empowers the ability to act.

"As our market and business continues to mature, it is this decision-enabling value that we are monetising. Our 'product' is not a commodity, it is a value-add technology & service. We continue



to increase the value of our data through innovation and industry leadership in world-class signal processing and RF technologies.

“In Q2 we have delivered customer receipts of AUD 1.3 million^{iv} reducing net operating cashflows and marking a major step towards positive operating cash flow. Our new Mission-as-a-Service offering improves cash flow, although revenue recognition may be more backloaded as the service ramps up. Additionally, Mission-as-a-Service will ensure longer-term asset utilisation and return, focused on building long term customer relationships.

“Funding enables us to respond to market needs and is clearly vital for future Company growth. We are proud to have secured a new and highly respected funding partner in PURE Asset Management, to help fund further satellite constellation and team expansion.

“The team has done a fantastic job this quarter, further enhancing our space-based sensor network as well as our services and technologies on the ground, which is driving continued growth in cash receipts, contracts and bookings.

“Finally, I am delighted to welcome Dawn and Alan to our global Board and executive teams. Both are exceptionally high calibre candidates with extensive industry-specific experience in financial and business operations and will deliver great value for Kleos’ next chapter of growth.”

COMMERCIAL PROGRESS ^{i, ii, iii, iv}

During the quarter, cash receipts from customers were AUD\$1.3M (€0.89M) and Kleos received purchase orders and contracts with a total value of approximately AUD\$1.95M (€1.3M) and of that, €0.7M of non-refundable cash receipts were booked as deferred revenues.

Annualised revenue of US\$18M previously targeted to be achieved by calendar year-end is now targeted for Q1 2023 and the achievement of monthly Adjusted EBITDA^v positive status during mid-2022 is now targeted for the second half of 2022, due to satellite launch and commission delays.

Kleos currently has a global pipeline of more than 260 government and commercial, qualified deals, spanning defence departments, national security agencies, coast guards, sanctions agencies and data aggregators.

Partnership agreements

Kleos’ RF geolocation data is suitable for a broad range of maritime and land-based applications and can be used to establish a baseline pattern of behaviour, validate, or tip and cue existing commercial datasets. Partnerships with government departments, data aggregators, and analytics providers play an important role in increasing awareness, trial, and adoption of Kleos’ intelligence data.

During the quarter, Kleos entered into a Cooperative Research and Development Agreement (CRADA) with the U.S. Navy to test the capability of its RF geolocation data in realistic maritime scenarios, such as sanctions reporting, trans-shipment monitoring, resource management, smuggling, and border control. The agreement is the first phase of the SCOUT Experimentation Campaign. It includes discovery test exercises, which will contribute to the development and integration of technologies that allow for quicker leadership decision making.

In July, Kleos signed a non-exclusive channel partner agreement with Kongsberg Satellite Services for the delivery and integration of Kleos’ data within a larger dataset, complementing other intelligence sources.

TECHNOLOGY & INTELLECTUAL PROPERTY

The most important technology developed by Kleos is its digital signal processing, leveraging the raw satellite data. This is reflected by the largest customer demand for Kleos' fully processed data product (LOCATE data), which relies on its world leading signal processing intellectual property. Satellites are a convenient way to collect global data as they are free from airspace restrictions that affect drones and aircraft and provide wider coverage, however they are slower to deploy and operate.

Kleos Infrastructure:

- Kleos owns and operates a sensor network, the Guardian satellite constellation, which collects data without restriction.
- The sensor network is composed of clusters of four satellites that carry passive RF sensors. Each sensor within a cluster receives the same RF signals whilst sufficiently distanced to ensure variation in time and frequency of the received signals required for the geolocation.

Raw output from sensors



Kleos Processing:

- Kleos has developed and proven a Geolocation System that uses signal processing technologies that take the raw collect from the sensors and transform it into Geolocation data.
- The Geolocation System is responsible for performing signal processing operations to detect and passively geolocate uncooperative targets using Time Difference of Arrival (TDOA) and Frequency Difference Of Arrival (FDOA) techniques. These signal processing operations include:
 - Time alignment of all received data and data slicing by time and frequency. The slicing considers the frequency bands used in Very High Frequency (VHF) maritime mobile communications and X-Band maritime radar, as well as physical phenomena relative to the motion of the sensors, and the waveform of the captured signal.
 - TDOA and FDOA measurements are filtered using proprietary algorithms to discard erroneous measurements caused by low Signal-to-Noise Ratio (SNR) values, interference, and false alarms. Measurement filtering is done blindly (i.e., no beacons at known positions or signals with known pilot sequences are required) and increases the reliability of the measurements used for geolocation.
 - A system of nonlinear equations is deployed across the measurements, with a minimum of two measurements needed to estimate the target position (two TDOAs, or two FDOAs, or any combination thereof). The more sensors, and hence measurements, the better the estimation accuracy of the geolocated position.
 - The position estimation is performed using an iterative numerical nonlinear least-squares optimisation algorithm. Once the target position is obtained, the confidence ellipse parameters (semi-major axis, semi-minor axis, and orientation angle) are computed by relying on the Dilution of Precision (DOP) concept, which depicts the relation between the sensors, target geometry, and the Root Mean Square Error (RMSE) of the positioning errors.
- After performing position estimation, the geolocation system outputs: the carrier frequency of the detected transmitter, the mean reception time, the transmitter coordinates, and the confidence ellipse parameters (the LOCATE data product).

Analytic ready signal/geospatial intelligence



Sales

- Data is distributed to the customer network for ingesting in analytic tools via a RESTful API:
 - direct to end users such as government agencies,
 - to integration partners who are adding the geolocation data to their other data sets,
 - to channel partners/resellers who support a local end user & integrator base.

Constellation Growth

The latest clusters in Kleos constellation are equipped with VHF, and X-Band payloads. The four satellites in each cluster, once fully operational will expand Kleos' data collection capability and improve revisit rates over valuable areas of interest.

Patrol Mission – Cluster 3

The four Patrol Mission satellites have been successfully deployed from D-Orbit's orbital transfer vehicle, ION Satellite Carrier, and commissioning has commenced. The Patrol Mission is anticipated to be brought into operational use during H2 2022.ⁱ

Observer Mission – Cluster 4

Kleos confirms its four Observer (KSF3) satellites are manifested to launch on the Transporter-6 SpaceX mission H2 2022. The Observer Mission is anticipated to be brought into operational use during H1 2023.ⁱ

The Observer Mission satellites will be launched into a Sun Synchronous orbit from Cape Canaveral Space Force Station in Florida.

CORPORATE DEVELOPMENT

Leadership

During the quarter, Kleos appointed highly credentialled U.S.-based space industry executive, Ms. Dawn Harms, to its Board as an Independent Non-Executive Director. Ms. Harms is the Chief Revenue Officer at NASDAQ-listed Momentus Inc (MNTS) and brings extensive operational, management, and Board experience gained at Boeing, International Launch Services, Space Systems Loral (now Maxar), and ManSat Ltd. Ms. Harms replaces Non-Executive Director Mr. Pdraig McCarthy, who transitions to an operational advisor role to support Kleos through its next growth phase.

Kleos strengthened its global leadership team in July, appointing international finance executive Alan Khalili to the role of Chief Financial Officer. U.S.-based Mr. Khalili is the former CFO of SpaceX and Aireon LLC, and has a wealth of industry, investment banking, and M&A experience. Mr. Khalili replaces part-time CFO Iain Hackston.

Events & Conferences

Kleos continues to engage with potential customers and partners at industry conferences and events. The Company participated in several key conferences during the quarter:

Key events:

- In April, Kleos exhibited at [GEOINT 2022 Symposium](#) in Denver. The event is one of the industry's largest for geospatial intelligence professionals in the USA. Kleos' U.S. Director Karyn Hayes-Ryan opened the event as a member of the foreword panel.
- In June, Chair Peter Round was a panellist at the [Euromaritime 2022](#) roundtable on space services at the core of the blue economy.
- Kleos exhibited at Eurosatory 2022 in Paris, as part of the Luxembourg national pavilion.

New U.K. office

During the quarter, Kleos' U.K. subsidiary established operations at Space Park Leicester - a technology-centred hub for innovative research, enterprise, and education in space and earth observation.

The hub has state-of-the-art facilities and is home to companies from across the space spectrum, from satellite design and engineering to downstream data and applications.



Kleos' CIO Miles Ashcroft (left) with Space Park Leicester's Director of Strategic Partnerships, Professor Martin Barstow

Videos & podcasts

Kleos continues to leverage its owned content channels to increase awareness of its unique technology. During the quarter, Kleos released episode 6 of its *Kleos Insights* interview series, featuring senior digital signal processing engineer Rami Othman and Space Systems Engineer Federico Gardosi discussing active and passive geolocation techniques, geolocation accuracy, and the benefits of using clusters of four satellites. The episode was released on [YouTube](#) and [Spotify](#).

New Australian Registered Address

The Company wishes to advise that its Australian registered office address will be moving to: 44/104 Miller Street, Pyrmont, NSW, with effect from 1 August 2022.

FINANCIAL ACTIVITY

Secured A\$10 million debt facility

In July, Kleos secured a four-year A\$10 million debt facility under a binding term sheet with PURE Asset Management. Kleos will use the two-tranche debt facility to expand its constellation and to increase Kleos' team to support operational growth. It is expected that the initial funding of AUS \$6M will be closed in mid-August, upon the completion of the loan documents.

Summary^{i,iv}

Q2 2022 cash receipts were AUD\$1.3M (€0.89M), resulting in a significant movement towards a positive operating cash flow. Of those cash receipts, the Company anticipates the related €0.7M of deferred revenues to be recognized in Q3 2022.

Based on the timeline to fully operationalise the constellation, it is anticipated that the Company will become monthly Adjusted EBITDA positive in Q4 2022.

The Appendix 4C quarterly cash flow report for Q2 2022 is attached. Cash and cash equivalents were €2.4M (AUD\$3.6M) as of 30 June 2022. Total cash outflow in the quarter was €1.2 million (AUD \$1.78 million), after a net operating cash outflow of €0.6M (-AUD\$0.89M). The following is a summary of receipts and expenditures for business activities in the June 2022 quarter (refer also accompanying ASX Appendix 4C):

(EUR'000)	June Qtr	Year to date (6 months)
Receipts from customers	888	947
Product manufacturing and operating costs	-146	-281
Research and development	-2	-6
SG&A (Corporate Overhead)	-1,310	-2,853
Investing Activities	-652	-1,393
Financing payments / receipts	-9	7
Other (F.X. movement on cash balance)	-5	200

OUTLOOK

Kleos remains focused on continuing to enhance the quality and frequency of its satellite capacity and data delivery, converting introductory subscriber contracts to growing revenue, and targeting monthly Adjusted EBITDA¹ positive status in the second half of 2022. In addition, Kleos will continue to build its constellation to increase the value and volume of its radio frequency geolocation data, growing subscriber numbers and increasing revenue contribution from existing subscribers.

Kleos' 2022 priorities are:

- Onboard new customers, increasing revenue as higher-value data sets become available
- Deliver increasing commercial data from both the Vigilance (KSF1) and Patrol (KSF2) Missions in 2H 2022.
- Launch the Observer Mission (KSF3) satellites in H2 2022 and begin commercialising that data H1 2023.
- Begin the procurement process for further constellation growth.



This announcement has been approved for release by the Board of Kleos Space SA.

- ENDS -

Investor information:

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About Kleos Space S.A.

Kleos is a space-enabled radio frequency Reconnaissance data-as-a-service company with operations in Luxembourg, the U.S. and U.K. Kleos locates radio transmissions in key areas of interest around the globe, efficiently uncovering data points to expose human activity on land and sea. Using clusters of four satellites, proprietary radio frequency data (R.F. Data) is collected, transmitted to the ground, processed, and delivered to customers worldwide. Customers, including analytics and intelligence entities, will license data on a subscription basis (Data-as-a-Service aka DaaS), for government and commercial use cases – aiding better and faster decision making. Kleos' first satellite cluster, the Scouting Mission (KSM), successfully launched in November 2020 and is performing as a test and technology demonstration whilst collecting data. The company's second satellite cluster, the Vigilance Mission, successfully launched in June 2021 and its Patrol Mission launched in April 2022. Kleos' fourth cluster, the Observer Mission, is targeted for a 2022 launch. These satellite clusters form the foundation of a global high-capacity constellation of up to 20 satellite clusters, which will deliver high value global observation. For more information visit: www.kleos.space

i The forward-looking statements relating to targets involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance, and achievements to differ materially from any future results, performance or achievements, expressed or implied by these forward looking statements. Relevant factors may include, but are not limited to, technical and launch delays, satellite health status, foreign exchange fluctuations and general economic conditions, increased costs, the risk and uncertainties associated with space technology, Geopolitical and social risks, Supplier delivery issues, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues, covid 19 or other pandemic impacts, and litigation. For further information as to the risks which may impact the Company's results and performance, please see the risk factors included in the Prospectus lodged with ASX in August 2018.

ii this target is formed with reference to the current customer base and the satellite capacity that is anticipated to be online by the end of the year, and is subject to the risk factors set out in footnote i.

iii A qualified deal is defined as such through detailed communication in some form with the customer, i.e. ensuring that the KSS products can fulfil the customer need and there is a procurement budget available. The negotiations on these deals have advanced beyond the unqualified lead stage, but contracts have not yet been signed, or contracts have been signed but are subject to the delivery of data.

iv FX rates applied:

- Q1 - Average rates: AUD\$1 = EUR 0.6420 and USD 1 = EUR 0.8899; End of the period rates: AUD\$1 = EUR 0.6756 and USD 1 = EUR 0.9071
- Q2 - Average rates: AUD\$1 = EUR 0.6710 and USD 1 = EUR 0.9470; End of the period rates: AUD\$1 = EUR 0.6620 and USD 1 = EUR 0.9630

v EBITDA is defined as earnings before interest income and expense, income tax expense or benefit, and depreciation and amortization. Adjusted EBITDA has been calculated using EBITDA adjusted for (gain)/loss from discontinued operations, satellite impairment loss, unrealized loss/(gain) on



derivatives, stock-based compensation expense, realized gain on conversion of notes, loss on issuance of the Notes, debt issuance cost expensed and transaction cost expensed.

This release does not in any jurisdiction, constitute or form part of, and should not be construed as, any offer for sale of, or solicitation of any offer to buy, or any investment advice in connection with any securities of Kleos, nor should it or any part of it form the basis of, or be relied on in connection with, any contract or commitment whatsoever

Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

Kleos Space S.A.

ABN

625 668 733

Quarter ended ("current quarter")

30 June 2022

Consolidated statement of cash flows	Current quarter EURO'000	Year to date (6 months) EURO'000
1. Cash flows from operating activities		
1.1 Receipts from customers	888	947
1.2 Payments for		
(a) research and development	-2	-6
(b) product manufacturing and operating costs	-146	-281
(c) advertising and marketing	-30	-84
(d) leased assets	-34	-34
(e) staff costs	-796	-1,610
(f) administration and corporate costs	-452	-1,097
1.3 Dividends received (see note 3)		
1.4 Interest received		
1.5 Interest and other costs of finance paid	0	-1
1.6 Income taxes paid	-146	-175
1.7 Government grants and tax incentives		
1.8 Other (VAT reimbursement)	148	148
1.9 Net cash from / (used in) operating activities	(570)	(2,193)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities		
(b) businesses		
(c) property, plant and equipment	-652	-1,393
(d) investments		
(e) intellectual property		
(f) other non-current assets		

Consolidated statement of cash flows		Current quarter EURO'000	Year to date (6 months) EURO'000
2.2	Proceeds from disposal of:		
	(a) entities		
	(b) businesses		
	(c) property, plant and equipment		
	(d) investments		
	(e) intellectual property		
	(f) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		
2.6	Net cash from / (used in) investing activities	(652)	(1,393)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)		1
3.2	Proceeds from issue of convertible debt securities		
3.3	Proceeds from exercise of options		25
3.4	Transaction costs related to issues of equity securities or convertible debt securities		
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings	-9	-19
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (provide details if material)		
3.10	Net cash from / (used in) financing activities	(9)	7

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	3,642	5,785
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(570)	(2,193)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(652)	(1,393)

Consolidated statement of cash flows		Current quarter EURO'000	Year to date (6 months) EURO'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(9)	7
4.5	Effect of movement in exchange rates on cash held	(5)	200
4.6	Cash and cash equivalents at end of period	2,406	2,406

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter EURO'000	Previous quarter EURO'000
5.1	Bank balances	2,406	3,642
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,406	3,642

6.	Payments to related parties of the entity and their associates	Current quarter EURO'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	
6.2	Aggregate amount of payments to related parties and their associates included in item 2	
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

7.	Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i> <i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end EURO'000	Amount drawn at quarter end EURO'000
7.1	Loan facilities	128	128
7.2	Credit standby arrangements		
7.3	Other (please specify)		
7.4	Total financing facilities		
7.5	Unused financing facilities available at quarter end		0
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		
	The company has received a loan of €146,456.98 from the Luxembourg government. The loan bears interest at 0.5% with repayment over the 4 years 2022 to 2025.		

8.	Estimated cash available for future operating activities	EURO'000
8.1	Net cash from / (used in) operating activities (item 1.9)	(570)
8.2	Cash and cash equivalents at quarter end (item 4.6)	2,406
8.3	Unused finance facilities available at quarter end (item 7.5)	
8.4	Total available funding (item 8.2 + item 8.3)	2,406
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	4.22
	<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>	
8.6	If item 8.5 is less than 2 quarters, please provide answers to the following questions:	
	8.6.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
	Answer:	
	8.6.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
	Answer:	
	8.6.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
	Answer:	
	<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 27 July 2022.....

Authorised by: The Board.....
(Name of body or officer authorising release – see note 4)

Notes

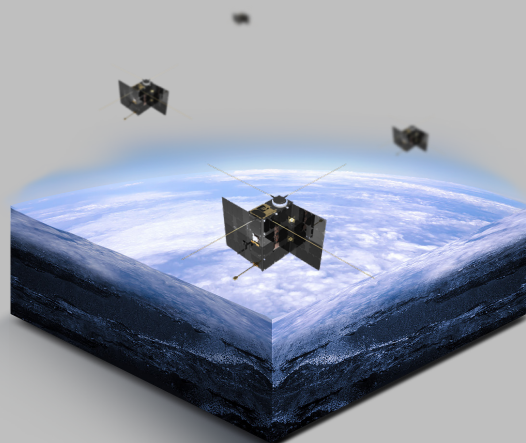
1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.



SPACE POWERED SIGNAL & GEOSPATIAL INTELLIGENCE

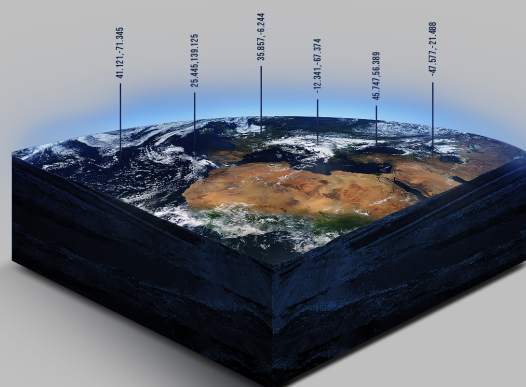
CORPORATE BROCHURE

July 2022



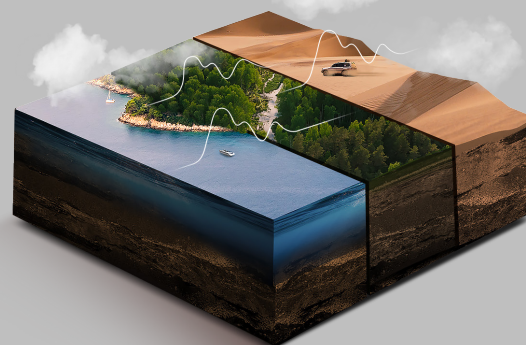
COLLECT

Constellation of satellites collecting RF signals over critical areas of interest.



LOCATE

Signals are processed, precisely geolocating RF transmitters.



INFORM

Delivering actionable, analytic-ready data of hidden radio activity.

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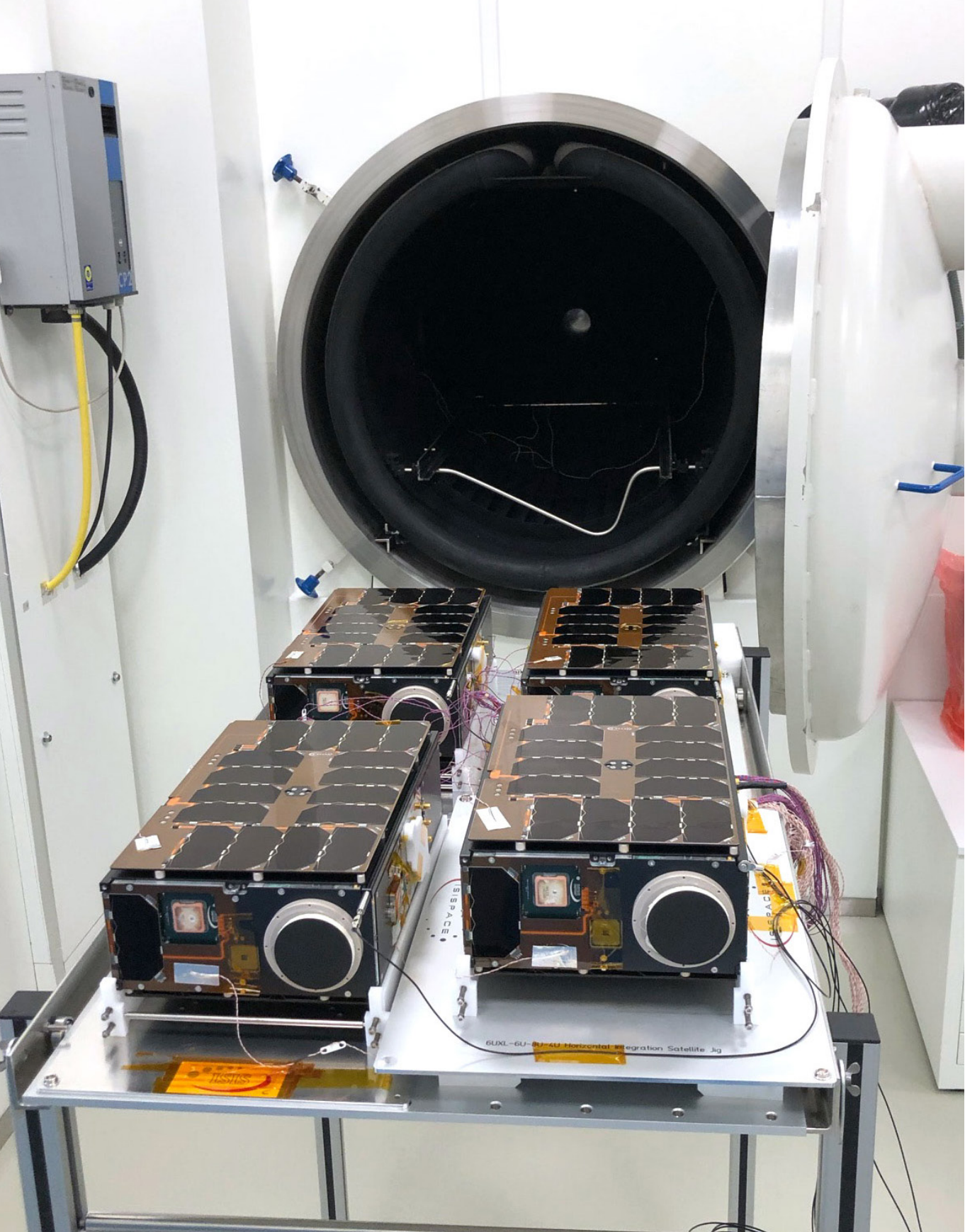
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All values are stated in US dollars unless otherwise stated.



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KLEOS IS A SPACE-POWERED RF EARTH OBSERVATION COMPANY WITH OPERATIONS IN LUXEMBOURG, THE US AND UK.

Kleos uses Space technology to locate radio transmissions in key areas of interest around the globe, efficiently uncovering and exposing activity on land and sea. Using clusters of satellites, RF data is collected, transmitted to the ground, processed using proprietary technology, and delivered to customers worldwide.

Customers, including analytics and intelligence entities, license data on a subscription basis (Data-as-a-Service, DaaS) or by buy dedicated satellite capacity (Mission-as-a-Service, MaaS). The provided data is applicable to government and commercial use cases, aiding better and faster decision making.

KLEOS' UNIQUENESS IS BASED ON THE FOLLOWING ELEMENTS:

- Clusters of 4 satellites fly in formation; 3 clusters (12 satellites) already in orbit.
- Kleos technology designed for precision location, and large collection volumes.
- Rapid development cycles allow for most up-to-date technology onboard with each new deployment.
- All collected RF data is downlinked, providing rich source for analytics.
- Data-as-a-Service and Mission-as-a-Service data is delivered via API.
- Significant pipeline of global, industry leading data fusion & integration entities.

KLEOS IS A WORLD LEADER IN RF EARTH OBSERVATION, UNCOVERING PREVIOUSLY **HIDDEN** HUMAN ACTIVITY ON LAND AND SEA.ⁱ



12
SATELLITES
in orbit with global coverage



253
MILLION KM²
current max daily collection capacity



300
METERS
best case geolocation accuracy



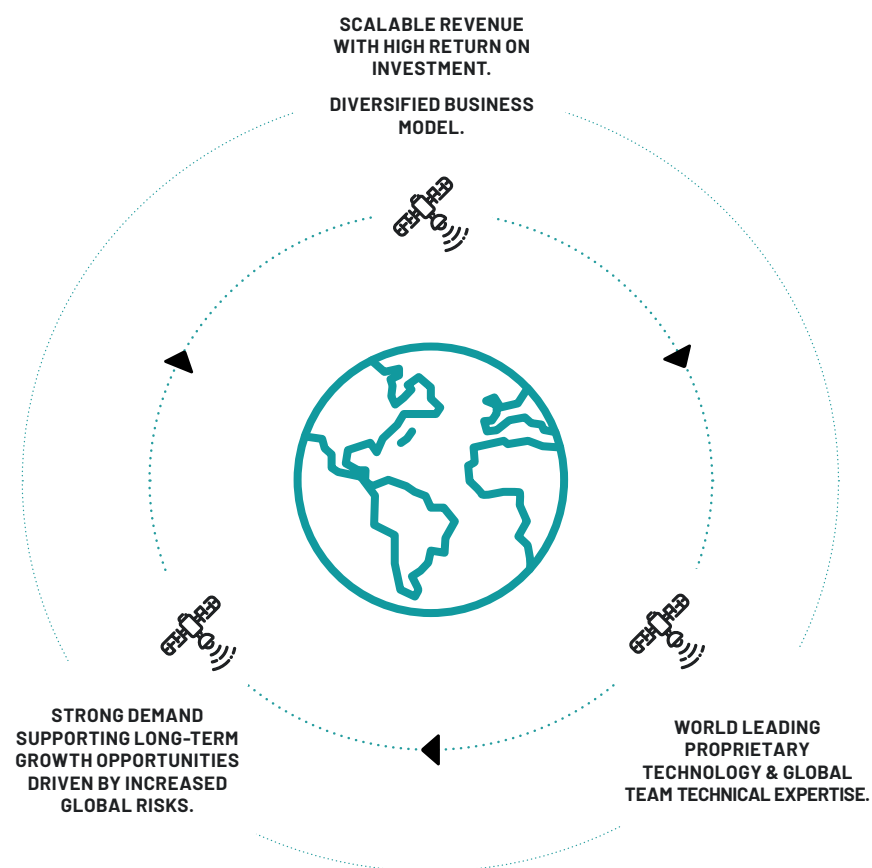
GLOBAL
COMPANY
with an ability to supply the world



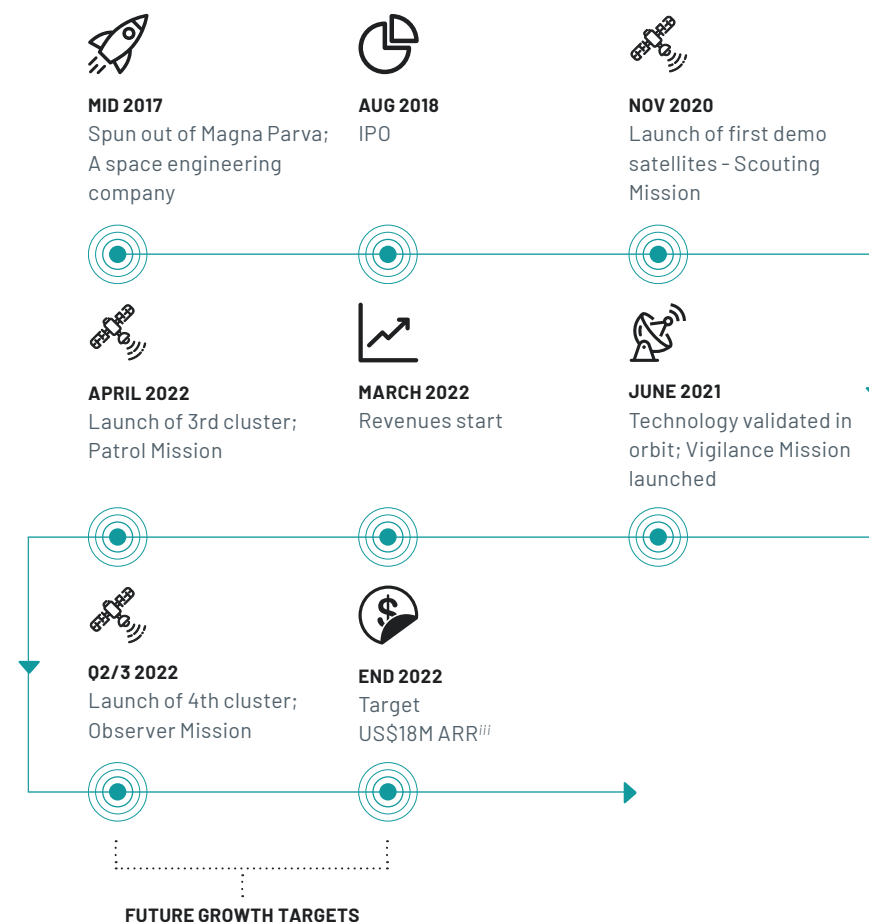
260+
QUALIFIED DEALS
across 4 continentsⁱⁱ

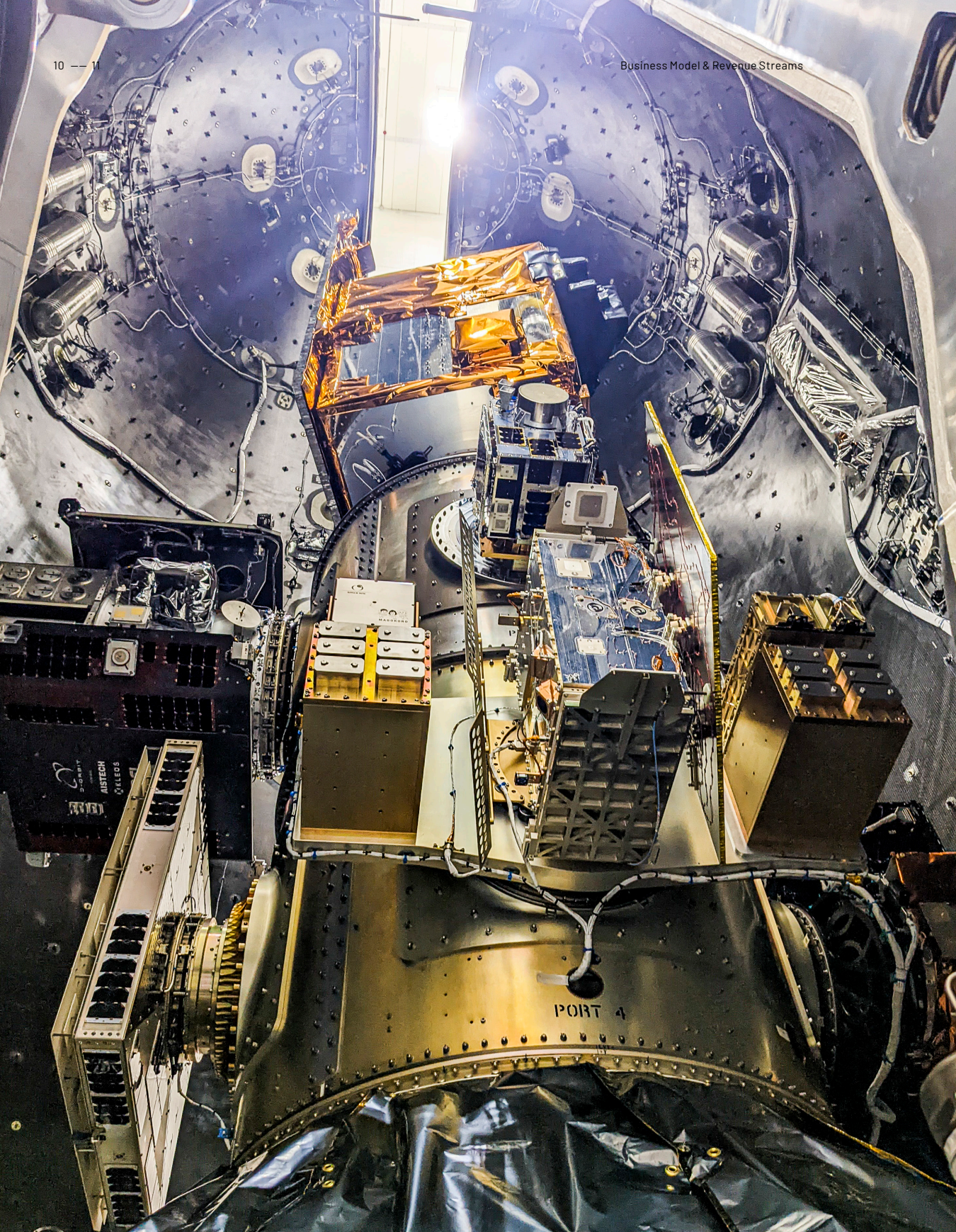


REVENUE
GENERATING
and scaling



SINCE LAUNCHING ITS FIRST SATELLITES IN Q4:2019, THE COMPANY HAS ACHIEVED MULTIPLE MILESTONES





KLEOS IS GROWING A CONSTELLATION OF SATELLITE CLUSTERS FOR OPTIMAL GLOBAL COVERAGES FOR ITS DaaS AND MaaS OFFERINGS.

Kleos' constellation roadmap includes the deployment of new clusters in a short timeframe, increasing accuracy, improving latency and supporting a range of intelligence, defense, security, and commercial missions through enhanced situational awareness.

DATA-AS-A-SERVICE

- We sell data to customers, including analytics and intelligence entities, licensing data on a subscription basis with limited data usage rights.
- Multiple customers can access the same commercial dataset. The DaaS data sets enable the opportunity to monetise the high volume, lower value contract market.
- Higher risk, scalable revenues with unlimited upside potential over commercial areas of interest.

MISSION-AS-A-SERVICE

- We provide dedicated capacity to a single customer for a specific mission / Area-of Interest (AOI); customer tasks the satellites and receives data from the satellites with unlimited data usage rights.
- Each Mission-as-a-Service contract will be tailored to suit the customer requirements with the associated revenue based on the percent of satellite capacity needed, level of taskability required (i.e., how bespoke the mission is) and associated data rights (i.e exclusivity). Pricing is set to achieve the company's goals for profitability and returns. MaaS offering to deliver dedicated, high value contract opportunities.
- Low risk fixed revenues, fixed profitability, long contracts over strategic areas of interest.

BOARD/ADVISORY



PETER ROUND
Chair



ANDY BOWYER
Chief Executive Officer



DAVID CHRISTIE
Non-Exec Director



DAWN HARMS
Non-Exec Director



PADRAIG MCCARTHY
Senior Advisor to the Board

EXECUTIVE TEAM



ANDY BOWYER
Chief Executive Officer



MILES ASHCROFT
Chief Innovation Officer



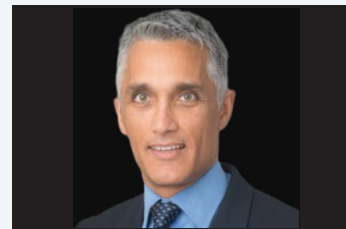
VINCENT FURIA
Chief Technology Officer



ERIC VON ECKARTSBERG
Chief Revenue Officer



HERIBERT KRÄMER
Chief Operating Officer



ALAN KHALILI
Chief Financial Officer

SENIOR LEADERSHIP



KARYN HAYES-RYAN
Director U.S.



MELANIE DELANNOY
Communications Manager



PETER ROUND
Director EMEA



GAVIN BOWYER
Project Manager



GUILLERMO GUTIERREZ
Product Manager



DAN MARTIN
Principal Systems Engineer



DR. MARIS JUKSS
Principal Software Engineer



DR. IDIR EDJEKOUANE
Principal Signal Engineer



DR. RAMI OTHMAN
Senior Signal Engineer



SEAN MCKAY
ISR & Defense Expert



SCOUTING

LAUNCHED NOVEMBER 2021

Four satellites in a 37-degree inclined orbit equipped with AIS & VHF collection payload. Demonstrating and validating the technology

VIGILANCE

LAUNCHED JULY 2021

Four satellites launched into a 510-530km Sun Synchronous Orbit, covering the entire globe. Equipped with AIS & VHF collection payload

PATROL

LAUNCHED APRIL 2022

Four satellites launched into a 508-530km Sun Synchronous Orbit, covering the entire globe. Equipped with AIS, VHF & X band collection payloads

OBSERVER

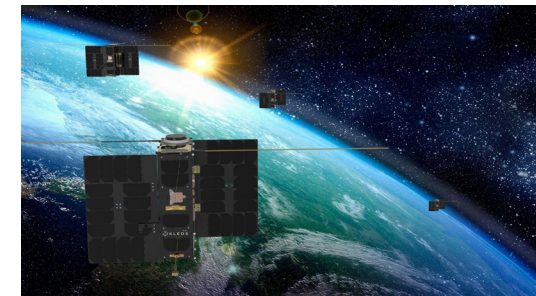
LAUNCHING H2-2022

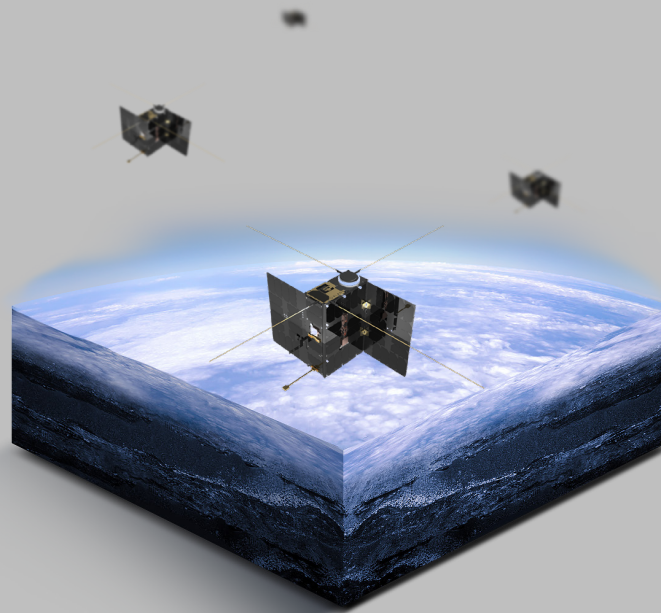
Four satellites launched into a 500-600km Sun Synchronous Orbit, covering the entire globe. Equipped with AIS, VHF & X band collection payloads

FUTURE GROWTH

Targeting a constellation of up to 20 clusters of 4 satellites each, to be launched in the coming years.

Every new cluster provides increased capacity and capabilities.



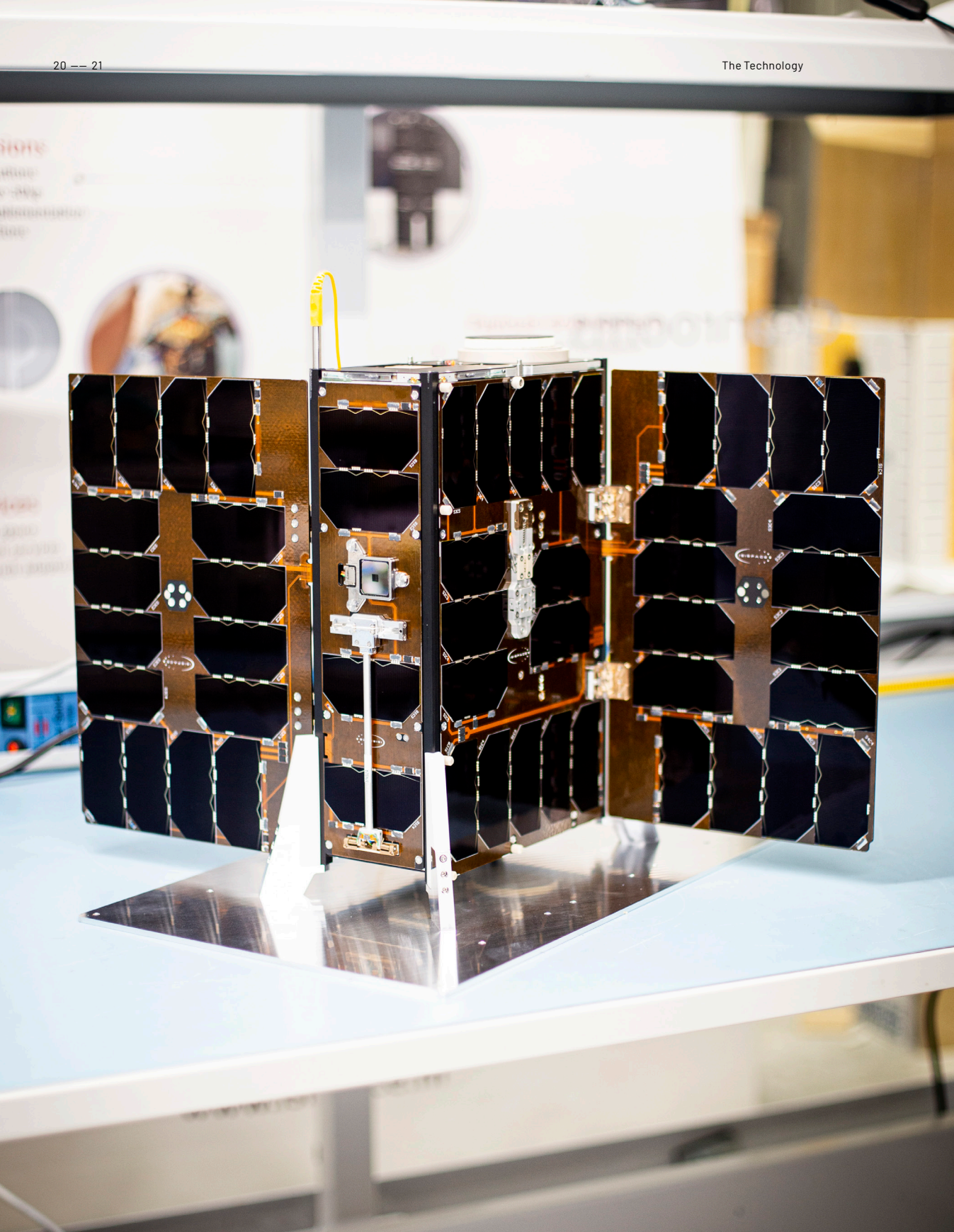


**KLEOS' GUARDIAN LOCATE PRODUCT CONSISTS OF RF
GEOLOCATED DATA DESIGNED FOR MAXIMUM
COMPATIBILITY AND EASE OF INTEGRATION WITH
EXISTING TOOLS AND PLATFORMS.**

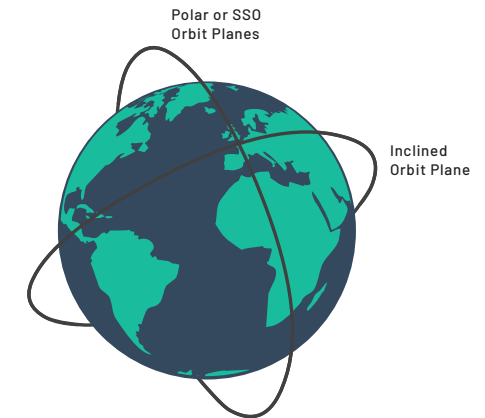
Guardian LOCATE Data is provided in industry
standard JSON format.

Data is made available via secure, encrypted
RESTful API.

Detected signals are delivered as objects consisting
of geolocated points with metadata including
detected frequencies and timestamps. Positional
accuracy expressed as confidence ellipses.



- Kleos is deploying a satellite constellation as a distributed sensing and intelligence gathering capability. Satellites allow for cost-effective, wide area surveillance when compared to terrestrial based assets.
- Kleos' proprietary ground based algorithms deliver analytic-ready and easily ingested data product to users.
- Kleos owns and operates clusters of four satellites flown in formation. Three clusters (12 satellites) in orbit, and more in development.
- The satellites are equipped with sensitive radios that receive RF signals emanating from transmitters commonly used for communication or navigation such as VHF radios or X-band radar.



- The data collected by the satellites is downlinked via Kleos' network of ground station providers, processed by Kleos' Geolocation System, and stored at Kleos' secure data centre.
- With collection by four satellites, Kleos' Geolocation systems precisely geolocate transmissions in three dimensions using advanced multilateration techniques.
- Kleos' geolocation is then transferred to Kleos' customers via API for use in their software, delivering insights that can be acted upon.
- Rapidly deployed technologies reduce risk and enable responsive solutions to evolving customer needs.



TYPES	USE CASES
GOVERNMENT DEFENSE	National Security (intelligence), Counter-Terrorism, Anti-Jamming, Border Security / Immigration, Sanction Prosecution.
GOVERNMENT CIVIL	Illegal Commercial Fishing, Search & Rescue, Piracy, Coast Guard Monitoring & Smuggling/ Exclusive Economic Zone Protection.
INTEGRATOR	Tool & Analytics providers are able to fuse Kleos data with other sources to provide a more comprehensive view of human activity.
RESELLER, CHANNEL PARTNER	Kleos leverages resellers and channel partners to deliver solutions to international and specialized markets.



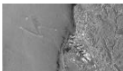

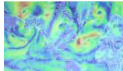
- Increasing global risks and conflicts drive demand growth.
- Delivering data to observe and track unfriendly activities.
- Actively being used by Government end-users in multiple regions.
- Disruptive data to provide new insights to customers.
- Large established addressable defence & security market opportunity.
- Data complements and enhances existing data & analytic products available from other providers.

THE EARTH OBSERVATION (EO) SECTOR IS
PREDOMINATELY SERVICED BY COMPANIES
WORKING IN SENSOR/DATA VERTICALS
DELIVERING TO THE APPLICATION
DEVELOPER/INTEGRATOR LAYER WHERE
DATA SETS ARE LAYERED, CREATING
SOLUTIONS FOR END USERS

Kleos’ data makes other EO and analytics assets more efficient and effective.

KLEOS DATA

- Adds value to other data sets;
- Reduces time for analysts;
- Reduces costs through efficient asset tasking

					
COMMERCIAL OPERATORS	KLEOS Hawkeye360 Unseenlabs	Spire	Capella IceEye	Maxar BlackSky Planet	Spire
DATA SEGMENT	RF Geolocation High Growth	AIS / ADSB Collection Mature Growth	SAR Imagery High Growth	Optical Imagery Mature Growth	Weather High Growth
TYPE OF DATA COLLECTED	Global radio spectrum wide area surveillance. Location of dark transmitters.	Receiving tracking messages from Ships & Planes. Voluntary system not used by illegitimate operators .	Active radar sensing, not restricted by cloud / daylight. Lower resolution than Optical.	Photos/videos in the visible domain. Challenged by cloud cover and light .	Commercial weather services

APPLICATION DEVELOPER: DATA CONSUMER / ANALYST

High Growth
App Developers, Integrators, Intelligence and Analytics Providers – More data means more growth.
i.e. (non-exhaustive): Palantir Orbital Insight Telespazio L3Harris AllSource Maxar etc.

END USERS

Government and Commercial Markets – Increasing global threats creating pull.



EXAMPLE APPLICATIONS FOR KLEOS GUARDIAN LOCATE DATA

Integration customers ingest the data and often layer it with other data sets to find hidden activity creating intelligence. Kleos works with a large number of integrators, commercial entities and Governments around the globe such as: L3Harris, Carahsoft, Sypaq, AllSource, Geollect, MDA, Satellogic and many more.

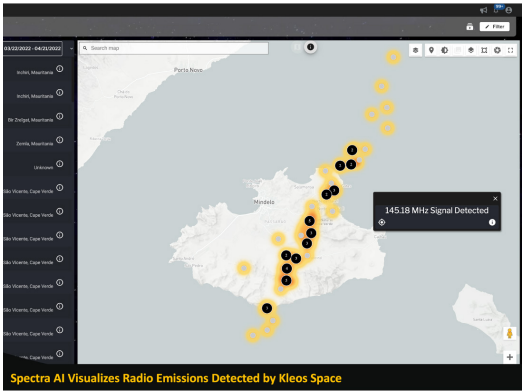
Two example applications are presented with platform partners;

BLACK|SKY

BLACKSKY SPECTRA AI
Tipping & Cueing Scenario

GSTS
Navigate Tomorrow Today

GSTS OCIANA
Risk Analysis Scenario

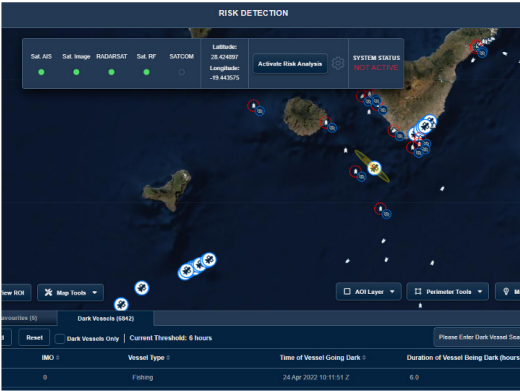


TIPPING & CUEING SCENARIO

A key use case is to help find the ‘needle in the haystack’ and better task (tip/cue) other data sets such as imagery.

In this application; BlackSky ingested Kleos’ data into their AI platform, visualisted the postions when Kleos identified the presence of VHF radio activity and used that information to task one of their satellites to take an image for further analysis.

The image on its own doesn’t show the extent of communication activity in the area. Land-based intelligence is imperative in understanding areas of conflict.



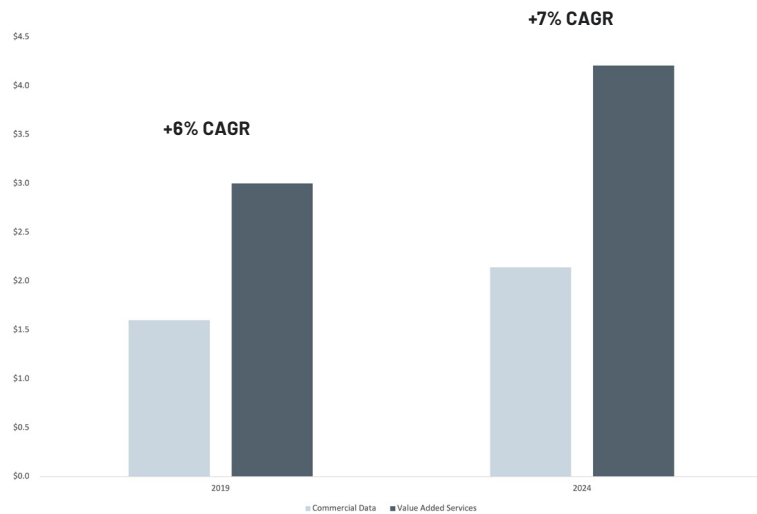
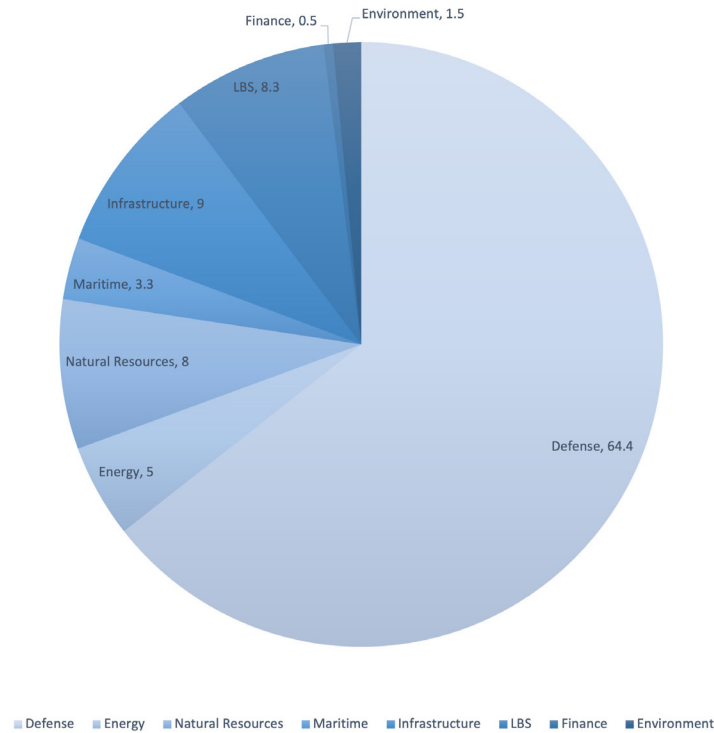
RISK ANALYSIS SCENARIO

A key use case is to help detect illegal maritime activity and reduce risks for insurers and operators.

In this application, GSTS ingested Kleos’ data into their AI platform, to find suspected dark vessels. The detection was corroborated by Kleos Guardian LOCATE detection.

AIS data is used to detect legitimate maritime activity - but doesn’t find hidden maritime activity such as illegal fishing, smuggling etc.





KLEOS HAS A LARGE ADDRESSABLE MARKET FOR EARTH OBSERVATION DATA.

- Commercial market for EO data: ~\$1.6 billion in 2020, five-year estimated forward CAGR of ~5% per year¹.
- Government market for EO data estimated at >2x commercial market.
- Value Added Services (VAS): ~\$3.0 billion in 2019, five year estimated forward CAGR of ~7% per year¹ – many customers are likely to purchase Kleos' data through a VAS.
- Participants in the ~\$550 billion geospatial market² can gain significant benefits from utilizing Kleos' new RF data sets.

DRIVERS OF GROWTH INCLUDE:

- Rapid market adoption of data and analytics by government and enterprises.
- Advancements in AI/ML and Big Data, needed to answer complex problems.
- Expanding number of use cases leveraging space-based data.

THE MOST ATTRACTIVE MARKETS SEGMENTS ARE THOSE SERVICED BY KLEOS:

- Defense / Military.
- Intelligence, surveillance and reconnaissance.
- Land and Maritime applications.

¹ Public Euroconsult articles, e.g. "Towards a \$7.5b earth observation data & service market by 2030".

² Global Geospatial Solutions Market Report 2019-2025 | \$549 Billion by 2025 – ResearchAndMarkets.com.

- i The forward-looking statements relating to targets involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance, and achievements to differ materially from any future results, performance or achievements, expressed or implied by these forward looking statements. Relevant factors may include, but are not limited to, technical and launch delays, satellite health status, foreign exchange fluctuations and general economic conditions, increased costs, the risk and uncertainties associated with space technology, Geopolitical and social risks, Supplier delivery issues, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues, covid 19 or other pandemic impacts, and litigation. For further information as to the risks which may impact the Company's results and performance, please see the risk factors included in the Prospectus lodged with ASX in August 2018.*
- ii A qualified deal is defined as such through detailed communication in some form with the customer, i.e. ensuring that the KSS products can fulfil the customer need and there is a procurement budget available. The negotiations on these deals have advanced beyond the unqualified lead stage, but contracts have not yet been signed, or contracts have been signed but are subject to the delivery of data.*
- iii This target is formed with reference to the current customer base and the satellite capacity that is anticipated to be online by the end of the year, and is subject to the risk factors set out in footnote i.*

 **KLEOS**
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<https://kleos.space>