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PRESENTATION

Operator

Good morning, ladies and gentlemen, and welcome to the Q4 2021 Gogo, Inc. Earnings Conference Call. (Operator Instructions) As a reminder, this conference call is being recorded.

I would now like to turn the conference over to your host, Mr. Will Davis, Vice President of Investor Relations. Please go ahead.

William G. Davis - *Gogo Inc. - VP of IR*

Thank you, Jerome, and good morning, everyone. Welcome to Gogo's Fourth Quarter 2021 Earnings Conference Call. Joining me today to talk about our results are Oakleigh Thorne, Chairman and CEO; and Barry Rowan, Executive Vice President and CFO.

Before we get started, I would like to take this opportunity to remind you that during the course of this call, we may make forward-looking statements regarding future events and the future performance of the company. We caution you to consider the risk factors that could cause actual results to differ materially from those in the forward-looking statements on the conference call. These risk factors are described in our earnings release filed this morning and are more fully detailed under the Risk Factors in our Annual Report on Form 10-K and 10-Q and other documents we have filed with the SEC. In addition, please note that the date of this conference call is March 3, 2022. Any forward-looking statements that we make today are based on assumptions as of this date. We undertake no obligation to update these statements as a result of more information or future events.

During the call, we'll present both GAAP and non-GAAP financial measures. We've included a reconciliation and explanation of adjustments and other considerations of our non-GAAP measures to the most comparable GAAP measures in our fourth quarter earnings release. This call is being broadcast on the Internet and available on the Investor Relations website at ir.gogoair.com. The earnings press release is also available on the website. After management comments, we'll host a Q&A session with the financial community only.

It is now my great pleasure to turn the call over to Oakleigh.

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Thank you, Will, and thanks for joining us this morning. As we highlighted in our press release, Gogo's 2021 fourth quarter marked an outstanding end to a transformative year for our company, our first full year as a pure-play Business Aviation connectivity leader. I'm incredibly proud of all that our team has accomplished and how well positioned we are to create substantial value in the future.

So let me start with a little highlight reel of key '21 achievements that reflects the relentless focus and determination of our world-class Gogo team. Together, we met an intense surge in demand for BA connectivity equipment and data. In the midst of a global supply chain crisis, we scaled AVANCE shipments by 40%, and we successfully introduced Business Aviation's first unlimited data and streaming plans. We had historic financial inflection points, turning in positive quarterly net income and earnings per share for the first time in Q3 and positive free cash flow for the full year 2021.

We completed a comprehensive refinancing that reduced our annualized interest expense by more than $70 million, giving us the financial strength to invest in improving our products and services, to further delever our balance sheet, to secure components in a supply-constrained world and to return capital to shareholders when appropriate. We entered the exciting 200,000 aircraft strong general aviation market with our Cirrus partnership, offering Gogo IFC on the G2+ Vision Jet. We gained traction in the underpenetrated light jet and turboprop markets, as evidenced by our recent announcement that the Pilatus fractional operator PlaneSense is installing our AVANCE L3 on their entire fleet of 46 PC-12s and PC-24s. We executed extremely well in our Gogo 5G project, including most recently completing a test set that sets Gogo up for an on-time, on-budget commercial launch in the second half of 2022. We also signed up Jet Edge and Duncan Aviation to 5G commitments that will help secure a successful commercial launch.

We continued our strategic initiatives to drive penetration of our future-proof AVANCE platform with a 46% increase in installed base in 2021 and AVANCE now representing 39% of our ATG installed base, up from 30% at the end of 2020. We also achieved a 96% equipment retention rate for the year, which raised our rolling average equipment lifetime on an aircraft from 17 years to 18 years.

Each quarter, we exceeded and then raised 2021 guidance, including exceeding Q4 expectations with the performance we announced today. This is evidence of the very strong demand for IFC in the Business Aviation market and our superior performance in meeting that demand. As a reminder, we provided initial 2021 revenue and adjusted EBITDA guidance ranges of $300 million to 320 and $105 million to $120 million, respectively, significantly below the numbers we delivered to date. We also introduced long-term financial targets on our year-end 2020 call, and we raised those targets again today, reflecting our bullish outlook on Business Aviation demand for in-flight connectivity and confidence in our continued ability to meet that demand.

We truly come into our own as a new Gogo and our financial performance this year bears that out. We ended fiscal 2021 with record total revenue, driven by record AVANCE shipments and record service revenue. We ended the year with 6,400 aircraft online, just short of 11% higher than at the end of 2020. We had $3,300 in ARPU for Q4, up almost 8% from Q4 2020, and we grew full year adjusted EBITDA 54% year-over-year.

I'll focus my remarks this morning on the factors that drove our strong fourth quarter performance and that we believe will continue to drive our growth in the future. I'll share progress on our key strategic initiatives, and I'll introduce our 2022 financial guidance and updated long-term targets before turning it over to Barry. Then we'll open up the call for questions.

It's evident from our fourth quarter that demand for BA travel and connectivity remains very strong. We believe the 2 primary tailwinds driving that demand are the growth in high net worth individuals over the last decade and the significant increase in data consumption, driven by growing usage of video-intense social and work-related applications, partly driven by the COVID pandemic. We also believe those tailwinds are sustainable, setting us up for long-term continued success as we execute on our strategy of enhancing our ATG network and driving market penetration of our AVANCE platform.

Growth in the number of high net worth individuals over the past decade has driven significant growth in the cohort of people who can afford to fly privately, either on their own jets or through fractional shares or charters. And not only has that cohort grown, but it's also grown younger. The 67% of the respondents in our recent Gogo brand study are now from generations X, Y and Z and only 32% from mild baby boomer generation. COVID drove that cohort to try private aviation as an alternative to commercial airlines. And now that they've tried it, they're not going back. OEM sales of new jets and fleet sales of fractional ownership are up dramatically, largely driven by new private flyers, indicating that those new flyers are making long-term financial commitments to private aviation.

The second tailwind, the dramatic increase in data consumption is also driven partly by COVID. The pandemic fundamentally changed the way that people of all ages think about connectivity as the work-from-anywhere and the socialize-from-anywhere cultures became the norm and drove demand for highly interactive data-intense applications like Zoom, FaceTime, or Office 365. These 2 trends drove a 78% increase in the data consumed by business aircraft on our network in Q4 2021 versus pre-pandemic Q4 2019. The biggest variables driving that increase were a 38% increase in megabytes consumed per flight and a 29% increase in flights per day. The shift in data consumption drove 2.5x as many customers to request plan upgrades as requested downgrades in 2021 versus a roughly even split between upgrades and downgrades in 2019. We expect this growth in data consumption to continue driving ARPU as video-heavy content becomes more pervasive and ultimately, as the metaverse and connected aircraft applications enter the aircraft cockpit and cabin.

Fortunately, Gogo will have the capacity to meet this demand. Since offloading mainline commercial airline fleet several years ago, we have freed up a lot of capacity in our network and project that we could accommodate roughly triple the number of aircraft we have on our network today. We also expect a number of aircrafts on our network to continue to grow, and that will drive the number of service plans we sell. We finished Q4 with 6,400 aircraft online, up 10.8% year-over-year, and we expect continued strong growth this year.

In Q4, we booked record new equipment orders, and our equipment order backlog already accounts for 90% of the 2022 equipment revenue in our guidance today. In fact, we see that trend continuing for the long term. Today, only 30% of the 24,000 business aircraft in North America have broadband inflight connectivity. We expect that number to grow to 50% by the end of 2025 and a leading Business Aviation trade association project that number to grow to almost 100% by 2035.

Our bullishness on the Business Aviation market is buoyed by what we see in our OEM and dealer distribution channels. OEMs such as Textron, Bombardier and Gulfstream are reporting the highest order flow in 15 years. And since our AVANCE platform is installed on roughly 60% of the aircraft coming off the line [besting] for North American delivery, that is a very positive trend for Gogo. We're seeing even more demand in the dealer channel and are currently predicting a 50% increase in units shipped to dealers this year and projecting that dealers will represent more than 65% of our new shipments in 2022.

Taken together, data, flight and aircraft demand drove outstanding Q4 topline growth for Gogo, with record revenue of $92.3 million, up 19% year-over-year. We hit record service revenue of $69.3 million and very strong equipment revenue of $23 million. Our continued growth demonstrates the virtuous cycle of our business model in action. Equipment sales profitably expand our base of subscribers, generating recurring, sticky, high-margin service revenue, which drives cash flow to invest in improving our network and platform, which in turn attracts new customers, driving more equipment shipments, generating more recurring, sticky, high-margin service revenue, et cetera.

Finally, let me touch on our bottom line. Gogo's ability to translate the powerful demand tailwinds I just described into bottom line value is a testament to the exceptional unit economics of our business. Even excluding our huge Q4 income tax benefit, we delivered positive net income and positive EPS for the second quarter in a row, both of which marked a nice contrast to the losses we ran in Q4 2020. We also more than doubled our quarterly adjusted EBITDA over Q4 2020, and we drove more than $50 million in free cash flow for the last half of the year. We're proud of our results and the momentum we're building, and I'm proud of the Gogo team, which continues to rise to the challenge of meeting exceptional demand and executing on our strategic initiatives in a supply-constrained world.

Now, let me turn to our strategic initiatives for a moment. Gogo has 2 major strategic initiatives aimed at deepening our competitive moat and driving long-term shareholder value. First, enhancing our ATG network to keep pace with customers' on-ground connectivity expectations, and second, driving penetration of our flexible future-proof AVANCE platform. I'll start with enhancing our ATG network. The first step in the successful execution of that objective is the commercial launch of our Gogo 5G network in the second half this year. 5G data speeds and low latency will be a top differentiator for Gogo as business customers increasingly require seamless video conferencing and VPN access, and leisure travelers expect living-room-quality streaming capabilities for accessing video-intense social media.

We previously announced and continue to expect Gogo 5G to deliver 25 megabits per second on average with peak speeds in the 75 to 80 megabits per second range, a significant improvement over the already competitive speeds AVANCE delivers today and leapfrogging both GEO satellite competitors and a potential ATG competitor. As a reminder, our potential ATG competitor is still working toward a 4G network launch that they say will deliver speeds roughly equivalent to what we already deliver with AVANCE L5, and significantly slower than what we will deliver with Gogo 5G. Even if all goes according to the potential competitor's plan, their eventual 4G solution will not be able to compete with Gogo 5G on speed, not to mention many other product and service deficiencies that make a successful launch of their product highly improbable.

As I'm sure most of you know, this potential competitor filed a lawsuit against us on Monday, alleging that our 5G implementation infringes on 4 of their patents; this, from a company that has invested hundreds of millions of dollars over the past 8 years and is now 6 years late on delivering a functioning nationwide network. Our patent attorneys and engineers have studied the entire SmartSky patent portfolio, and we know these 4 patents very well. I can assure you, we do not infringe on those patents, and we will fight this lawsuit with extreme vigor.

Now let me move to 5G advantages over GEO satellite competitors. First, they are limited to the super-mid and heavy jet segments of the market because of the size and weight of their gimbaled antennas and their equipment is more expensive and more difficult to install than ATG. But more importantly, we think 5G will outperform GEO on speeds and on latency. Based on user customer surveys we've conducted, GEO satellites provide speeds of 2 to 17 megabits per second, depending on the provider, a bit slower than our 5G will offer. But more important, due to the 44,000-mile round trip that packets have to travel to reach the Internet and then come back to the aircraft, they suffer very high latency, making interactive video difficult. While our ATG network is limited to the Continental United States and Canada, GEOs have the advantage of near-global coverage. However, 87% of all global BA flight hours are in North America and 77% over in the United States, which gives us a very large addressable market.

In terms of 5G milestones, we've now passed all technical hurdles and are into the deployment and commercial launch phase of the 5G program. We reached a major deployment milestone at the end of last year when we completed a 7-tower test bed on time and on budget. The test bed includes sites in both remote and populated locations in order to validate that the network is operating as designed. We'll complete the other 143 towers at a rapid pace throughout the first half of 2022. Last week, we announced that the Gogo 5G aircraft antenna has received STC and Parts Manufacturer Approval, or PMA, from the FAA. Receipt of PMA is an important milestone as it essentially means that the FAA has greenlighted the mass production of our 5G radio antennas ahead of our 5G deployment.

On the commercial side, we've already signed Jet Edge as Gogo's 5G launch customer. Jet Edge has AVANCE L5 installed across most of its large cabin fleet today and will upgrade 50 of those aircrafts to Gogo 5G, which gives us a really strong headstart on delivering our 5G projections. Additionally, Duncan Aviation, the largest independent MRO in the world, is upgrading all of its existing full equipment AVANCE L5 STCs to include Gogo 5G, which will cover more than 30 aircraft models, including aircraft manufactured by Bombardier, Gulfstream, Dassault and Textron.

As Barry will touch on in a moment, 2022 is a big investment year as we deploy the 5G network, ramp up our sales and marketing and fund inventory to support installation demand. It's worth noting that we expect to fund the entire 5G network out of internally-generated cash flow. In fact, just 1 year of interest savings from our recent refinancing more than covers our entire 5G CapEx costs.

Now, let me move to our other major strategic initiative, AVANCE penetration. AVANCE is a platform, not a product, that runs across multiple form factors and computing platforms and affords us tremendous opportunities to drive profitable growth by improving stickiness, introducing adjacent products and penetrating adjacent markets. AVANCE affords us many opportunities for growth, but for purposes of this conversation, one of the more important features of AVANCE is its multi-bearer capabilities, which allows us to add multiple networks to the aircraft in order to deliver more data capacity for passengers and crew.

For instance, we could partner with a global LEO provider and add capacity from their LEO network to AVANCE's existing ATG capacity to deliver even more data to the aircraft. We could do that by simply developing an ESA antenna that sits on the fuselage of the plane and plugging that into the AVANCE platform inside the plane. That would be it from a hardware installation perspective. The rest of the install would be accomplished with an over-the-air software upgrade. To make the math clear, let's say that in 5 years, we improve ATG to deliver 50 megabits per second. And in that same timeframe, LEO networks are deployed that can deliver 100 megabits per second. If we added the LEO network to the existing AVANCE ATG installation, that configuration would deliver 150 megabits per second, much greater than either the ATG or LEO network could deliver on their own.

The global broadband initiative would allow us to: first, pursue the 14,000 business aircraft outside North America; next, pursue GEO satellite installations on large North American jets that fly global missions; and third, [descend] and drive stickiness in our core North American market of medium-sized and smaller aircrafts by offering LEO capacity if they need more capacity than what ATG alone can offer.

We think that we have some natural advantages over potential LEO competitors in pursuing the global LEO broadband initiative. First, our AVANCE installed base is several times larger than our competitors' installed bases. It will be far cheaper for those aircraft to upgrade with Gogo and leverage the AVANCE system that they already have in place than to rip out AVANCE and install new systems for all the functionality that AVANCE already provides.

Second, our deep and mutually-profitable distribution channel relationships with OEMs and dealers. We're already line-fit in all business aircraft, and we have our 120 dealer network already outfitted to install AVANCE. And adding an ESA to their installations would be relatively simple compared to cutting in a whole new product.

And third, speed to market. We can simply amend the OEM-type certificates and aftermarket supplemental-type certificates that already exists for AVANCE to add the ESA antenna, just like we're doing now for 5G, giving us a speed-to-market advantage over competitors who will be starting from scratch.

In short, we see tremendous upside of the LEO strategy via AVANCE. If we proceed, we expect to accelerate our growth in the latter half of this decade, and we expect our investment would be modest compared to our 5G investment, and it would be spread over several years. Another way AVANCE gives us opportunity to grow is the ability to remix common componentry into new form factors while using the same AVANCE software to address the specific needs of adjacent markets. Our entry into the general aviation market is a good example. We accomplished this by developing the small form factor AVANCE L3 and by lowering our service floor to 3,000 feet with a software upgrade, not an equipment upgrade. And with those changes, we've gained traction both in the smaller fuselage segment of the Business Aviation market and in the 200,000 strong general aviation market, 2 markets where our competitors' equipment is too large to compete. And the beauty of it is that with the same software and using common AVANCE componentry, we can continue to develop new form factors that will further help us penetrate those markets.

So to summarize, AVANCE gives us a lot of opportunities to improve equipment stickiness, introducing adjacent products and going into adjacent markets. And for those reasons, growing the AVANCE installed base is core to our strategy. So far, we've been quite successful with that. AVANCE is the most successful broadband product ever launched in Business Aviation with just over 2,500 aircraft online at year-end 2021, up 46% over prior year, and it's installed in more aircraft than our 2 biggest competitors combined. We reported 105 net AVANCE installs in the -- sorry, yes, we reported 105 net AVANCE installs in the month of December alone and 267 for the quarter. We project at least 25% growth in AVANCE unit shipments this year. As I already mentioned, we've already booked 90% of those orders. We also see demand drivers that lead us to believe we can exceed our 25% unit growth target and are intensely focused on our supply chain to see if we can make that happen.

Now I'll touch briefly on our financial guidance before turning the call over to Barry. Beginning with a few caveats, first, our '22 guidance does not include potential strategic investments like the LEO global broadband product I discussed a moment ago. Assuming we greenlight those initiatives, we'll roll those into our projections and update guidance as appropriate. Second, we've long characterized 2022 as an investment year, focused on finishing our 5G deployment and supporting its launch with all the resources necessary to succeed. That said, we expect to still grow adjusted EBITDA and still have positive free cash flow despite those investments. We're also extending and raising our long-term financial targets, driven by the strong equipment sales we're seeing today and the usage trends I highlighted earlier in the call, both of which will drive sticky, high-margin recurring service revenue for many years to come. In turn, those new financial targets are the springboard for our capital allocation strategy, which Barry will walk you through in a minute. We have our 5G investment well in hand, and we zeroed in on our target leverage ratio. And as soon as we complete sizing our strategic growth opportunities, we can vector in on our approach to returning capital to shareholders.

So let me conclude by saying we believe Gogo presents a unique and compelling opportunity. We serve an underpenetrated market that should provide opportunity for years of profitable growth. We differentiate ourselves based on our deep understanding of that market and our ability to create unique services and products tailored to the specific needs of that market. And on top of that, we see numerous opportunities to deploy modest amounts of capital into adjacent products and into adjacent markets to accelerate profitable growth in the latter half of the decade. We're excited about the future and Gogo's ability to deliver for our customers, employees and shareholders as we execute on that strategy for long-term value creation.

And now, I'll turn it over to Barry.

Barry L. Rowan - *Gogo Inc. - CFO & Executive VP*

Thanks, Oak, and good morning, everyone. We're pleased to have capped off a very strong 2021 by continuing to set new records in the fourth quarter. Our 2022 financial guidance and the increased long-term targets we announced this morning underscore our confidence in the significant value creation opportunity ahead.

Before we talk about our expectations in more detail, I'll walk through our fourth quarter results, starting with the topline. Total revenue for the fourth quarter was $92.3 million, increasing 19% year-over-year and 6% sequentially, fueled by strong growth in both service and equipment revenue as demand continued to exceed our expectations. Gogo's topline growth is a reflection of the accelerating strength of the Business Aviation market and Gogo's unique ability to capitalize on that growing demand.

Our record service revenue of $69.3 million in the fourth quarter represents an increase of 22% year-over-year, driven mainly by more AVANCE units coming online and stronger ARPU. On a sequential basis, our fourth quarter service revenue grew 5%. ATG aircraft online reached record levels of 6,400, up 11% compared to the fourth quarter of last year and 4% sequentially. As Oak highlighted, AOL growth accompanied by our subscription-based service revenue is the biggest driver of our long-term value creation as we are fortunate to operate in an underpenetrated BA market with significant headroom for continued growth.

New customer activations represented 66% of our total activations during the quarter, the strongest ratio in 2 years. As further demonstration of the strength of the demand for connectivity, data usage continues to grow along with aircraft online, growing 78% in the fourth quarter of 2021 over the pre-pandemic levels in the fourth quarter of 2019. ARPU grew to $3,301, representing an increase of 8% year-over-year and 1% sequentially. As Oak mentioned, demand for data by passengers as well as our unlimited streaming plan and other innovative new products we've introduced contributed to this continued ARPU expansion.

Turning now to equipment revenue. Gogo delivered very strong equipment revenue of $23 million for the fourth quarter, an 11% increase year-over-year and a 10% increase sequentially, reflecting strong demand for both our AVANCE L3 and L5 products. We had a record 285 AVANCE product shipments in the fourth quarter, representing 10% growth year-over-year and 8% growth sequentially, with increases in both the aftermarket and OEM channels.

I want to highlight that our 887 total AVANCE shipments in fiscal 2021 represents 40% year-over-year growth. These strong results are based on the robust market demand, which began in late 2020 and increased throughout 2021, ultimately exceeding our original 2021 internal budget by 30%. We exited 2020 by posting an outstanding fourth quarter through a combination of typical seasonal strength, promotional activity and the beginning of Business Aviation's recovery from the effects of the pandemic. The confluence of these factors somewhat masked the fundamental demand driving shifts that solidified and accelerated during 2021 to drive unprecedented demand for Gogo equipment.

Looking to 2022, we are experiencing continued strength in AVANCE shipments and now expect growth at or above the high end of our previous expectations of 20% to 25% growth over 2021 levels. We exited the fourth quarter of 2021 with a very strong order backlog, representing, again, 90% of our expected equipment shipments for 2022. This backlog meaningfully derisks the achievement of the targets we communicated this morning. I'll provide more color on our guidance later in my remarks.

But now turning to profitability. Gogo delivered service margins of 80% in the fourth quarter, ahead of our expectations, largely due to lower-than-anticipated network costs. Excluding the impact of the regulatory surcharge credit that bolstered our third quarter service margins, our service margins increased 250 basis points sequentially. We expect our long-term service margins to trend to the high 70% range throughout our 5-year planning horizon. On the equipment side, Gogo delivered equipment margins of 37% in the fourth quarter, a 400 basis point sequential decrease. This decrease is in line with the expectations we set on previous calls for declining equipment margins in the near and intermediate term as we pursue our strategic objective of increasing AVANCE penetration, which Oak has discussed in some detail. In alignment with this objective, we anticipate equipment margins to be lower for 2022 than they were for 2021. Importantly, from a financial perspective, AVANCE equipment sales are the foundation for high-margin recurring service revenue, which in turn is the engine of our future value creation.

Moving to operating expenses. Fourth quarter combined engineering, design and development, sales and marketing, and general and administrative expenses, excluding depreciation and amortization of $28 million decreased 8% year-over-year. This decrease reflected the increased employee bonus expense recorded in Q4 2020 as we made the decision to shift the form of the annual bonus payment from stock-based compensation to cash.

Now I'll provide some additional detail on our Gogo 5G program and spending profile. I'll start by saying we are on track to deploy our network in the second half of 2022, on time and on budget. As planned, our 5G spend increased in the fourth quarter to $4.6 million, comprised of $1.7 million in OpEx and $2.9 million in CapEx. I'll note that our GAAP 5G CapEx spend came in lower than we expected for this quarter due to a lag in the timing of $4 million in invoices that will be paid and reported in the first quarter of 2022. To be clear, the timing of this reported spend is not indicative of a slowdown in our deployment schedule.

For 2022, we have budgeted external development and deployment OpEx of $11 million, an increase of $7 million over 2021 and additional Gogo 5G-related investments in marketing, production operations and network costs of $6 million. This results in an approximately $13 million increase in total OpEx related to 5G in 2022 versus 2021, and of course, impacts the adjusted EBITDA growth rate for 2022. To reiterate our overall expectations for CapEx, we expect that over 90% of our total Gogo 5G investment will be completed by the end of 2022. We expect 2022 CapEx to be approximately $65 million, with approximately $50 million of the spend tied to Gogo 5G. After Gogo 5G is launched, we continue to expect ongoing capital expenditures in the $15 million to $20 million range annually, supporting very attractive adjusted EBITDA to free cash flow conversion rates in 2023 and beyond.

Now on to our bottom line. As expected, our adjusted EBITDA was slightly lower in the fourth quarter at $39.6 million, down 3% sequentially due to the onetime regulatory surcharge credit in Q3 and higher operating expenses in the fourth quarter as anticipated. On a year-over-year basis, quarterly adjusted EBITDA more than doubled, driven by significantly higher profit from our subscription-based service revenue as we have grown AOL nearly 11% year-over-year. Last year's fourth quarter also included the higher bonus expense I described.

As we mentioned earlier, Gogo generated positive net income from continuing operations for the second consecutive quarter. Our reported net income includes an income tax benefit of $188 million in the fourth quarter due to the partial release of the valuation allowance on our deferred tax assets. Based on our expectations for continuing strong operating performance, additional reversals of our remaining valuation allowance of $111 million may occur within the next 12 to 18 months. Importantly, even excluding the impact of the valuation allowance, Gogo delivered positive net income from continuing operations of $21.5 million in the fourth quarter. This translates to basic earnings per share from continuing operations of $0.18 and diluted earnings per share of $0.17.

As of December 31, 2021, Gogo had $689 million in federal net operating losses. With our substantial NOL position, we do not expect to pay meaningful cash taxes for an extended period of time, though we may pay some cash taxes by the end of our planning horizon.

For the fourth quarter, Gogo generated record free cash flow of $25.7 million, reflecting our strong topline and adjusted EBITDA performance. This also includes the impact of the comprehensive refinancing we completed in April, which materially reduced our annual interest expense and enhances our strategic and financial flexibility. While we expect some shifts quarter-to-quarter, for example, due to the timing of our 5G expenditures, our expectation is to deliver positive annual free cash flow going forward. As you know, we substantially increased expectations for free cash flow in 2023 and 2025 on our third quarter call. As I'll talk about in a moment, we continue to expect a very significant ramp in free cash flow beginning in 2023.

Before I move to a discussion of Gogo's capital allocation priorities and our balance sheet position, I'll briefly summarize our full year 2021 fiscal year results. We achieved significant topline growth due to strong tailwinds driving the Business Aviation market, which by all indications are sustaining, coupled with solid execution. Gogo generated total revenue of $335.7 million, up 24% from 2020 and well above the high end of our guidance range. We delivered service revenue of $259.6 million, up 22% from 2020, with service gross profit also growing 22%, a key contributor to our significant free cash flow growth.

Equipment revenue was $76.1 million for the full year, up 32% from 2020, well above our expectations, as I mentioned. For the full year 2021, we achieved adjusted EBITDA of $151 million, a 54% year-over-year increase and also significantly ahead of our 2021 guidance. And free cash flow of $58 million was well ahead of the more than $40 million expectation we set for the full year on our November 21 earnings call. All in, 2021 was a remarkable year. The strength of the Business Aviation market, customers' increasing demands for connectivity and Gogo's robust business model as a pure-play Business Aviation company, all contributed to this outsized performance. We believe this positions us well for significant future value creation.

Now, let's turn to a discussion of our balance sheet. Gogo is in a very strong liquidity position. We exited 2021 with a cash balance of $145.9 million, and our [$100] million revolver remains undrawn. At the end of the fourth quarter, we had approximately $824 million in outstanding debt, including the $721.4 million Term Loan B and approximately $103 million in outstanding convertible notes. Based on our strong financial performance in 2021, we exited the year with a net leverage ratio at 4.5x adjusted EBITDA. Notably, this is down from a net leverage ratio well into double-digits 4 years ago.

We're tremendously proud of the progress Gogo has made on our debt reduction goals. The sale of our CA business on December 1, 2020, and the comprehensive refinancing completed in April 2021, have enabled us to reduce our debt by nearly 1/3 from the 2020 levels. As a result of our progress, Gogo's balance sheet is now a competitive strength.

As we mentioned on our second and third quarter earnings calls, Gogo committed approximately $10 million in cash for additional inventory purchases during 2022 to ensure we can deliver on equipment orders that already stretch well into 2022. Looking ahead, as previously announced, we expect to settle [any] conversions of the $103 million of convertible notes in stock prior to their maturity on May 15. Given our current stock price relative to the $6 conversion price, we expect all holders of the remaining converts to elect to convert into a total of approximately 17.1 million shares.

As a result of our comprehensive refinancing plan, our annualized cash interest expense will have been reduced from $111 million before April 2021 refinancing to approximately $33 million after the convertible notes mature in May of this year. Our strong balance sheet and operating performance provide us with significant strategic and financial flexibility.

On previous calls, we indicated that we would pursue a balanced capital allocation strategy focused on 4 primary actions in the following order of priority. First is enhancing the capacity and performance of our ATG network through the deployment of 5G; second is reducing overall leverage to an appropriate operating level; thirdly, is making strategic investments in our business, such as the global broadband initiative to capitalize on market opportunities and further strengthen our competitive position; and finally, returning capital to shareholders. We made considerable progress on the first 2 of these actions with Gogo 5G on track and deleveraging ahead of schedule, driven by our strong financial results. We're now actively addressing the latter 2 priorities.

With respect to value-enhancing strategic investments, as Oak discussed, Gogo is seriously evaluating a LEO-based global broadband initiative. This would increase the number of planes in our available served market and further defend our strong market position in North America. While we are also exploring other strategic investments, we would only execute on any of these if they are meaningfully value-enhancing to our business. With respect to our fourth priority, the timing and amount of a potential return of capital will be informed by our capital structure strategy. Our targeted capital structure includes maintaining minimum available liquidity of $125 million, with the majority of this liquidity comprised of cash, but also considering our revolver capacity. And secondly, a targeted net leverage ratio of less than 4x. We expect to achieve this net leverage target in the second quarter of 2022 after the expected equitization of our convertible notes in May. Given our strong cash position and the additional dilution from the expected equitization of our convertible notes, our Board is evaluating capital allocation strategies that may include share repurchases.

Let me add one final housekeeping point related to our capital structure. You may remember that when GTCR exchanged its convertible notes for common stock last April, we entered into a registration rights agreement that gives GTCR customary demand and piggyback rights with respect to shares held by GTCR and its affiliates. The registration rights agreement, as amended, requires the company to have a shelf registration statement declared effective by May 23, 2022.

Now I'll turn to the guidance we announced this morning, starting with some color on our 2022 projections. We continue to expect significant topline growth. At the end of September, we said we expected growth in AVANCE shipments of at least 25% in 2022, and that was on top of the strong 2021 performance we've outlined. I'll reiterate that 90% of the equipment revenue included in our 2022 topline guidance is already in our backlog, which meaningfully derisks our 2022 revenue plan. In spite of our expectations for strong topline growth, we view 2022 as an investment year, particularly for Gogo 5G. And we want to be clear that we don't expect our bottom line to grow at the pace we delivered in 2021. Our priority is to deploy our 5G network and support its successful launch with healthy sales and marketing investments.

We also anticipate higher working capital needs as we meet higher demand for AVANCE unit shipments. Our wider free cash flow range reflects potential additional spending to secure inventory to support that demand. We expect our EBITDA to be weighted toward the second half of 2022, which will set the table for a substantial increase in EBITDA and particularly free cash flow growth in 2023.

Turning to the numbers. We announced the following 2022 guidance in our press release this morning. We expect 2022 revenue in the range of $380 million to $395 million, reflecting double-digit service and equipment revenue growth. We anticipate 2022 adjusted EBITDA in the range of $150 million to $160 million, reflecting a planned increase in Gogo 5G investment, as previously discussed. We expect free cash flow of $25 million to $45 million, including cash interest payments of approximately $36 million and capital expenditures of approximately $65 million, with approximately $50 million of the CapEx spend tied to Gogo 5G.

The 2022 guidance and long-term targets are derived from our baseline budget and recently-updated baseline lock term model, which include Google 5G, but do not include potential strategic investments currently under consideration, including a global broadband initiative. The 2022 adjusted EBITDA and free cash flow guidance and long-term targets do include a preliminary estimate of the defense cost for the SmartSky lawsuit filed against Gogo this week.

Now, turning to our long-term targets. We are updating our baseline long-term targets as follows: revenue growth at a compound annual growth rate of approximately 15% from 2021 through 2026. It's worth noting that we expect to be able to maintain this 15% CAGR target for an additional year in spite of dropping 2021, which represented 24% growth over 2020 as the initial year; annual adjusted EBITDA margin approaching 50% in 2026, up from the low-40s in 2022 and 2023; free cash flow of approximately $125 million in 2023 following the deployment of the Gogo 5G network in 2022, increasing to over $200 million beginning in 2025.

Before we open the call up to questions, I'd like to reiterate our thanks to the entire Gogo team for the outstanding performance this quarter and throughout 2021. Our results are a testimony to your dedication, ingenuity and unwavering focus on delivering for our customers and reaching our strategic goals. Thank you, team.

Operator, this concludes our prepared remarks. We're now ready for our first question.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) Your first question comes from the line of Phil Cusick with JPMorgan.

Amir Reza Razban - *JPMorgan Chase & Co, Research Division - Research Analyst*

This is Amir for Phil. Any update on supply chain for getting the ATG units this year? And at what level of growth might you hit some [issues]? And then beyond that, for the expected revenue growth for 2022, can you break out your expectations for equipment versus service revenue growth?

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Why don't I take the supply chain piece and Barry can take the breakout on growth. Managing supply chain is very tricky these days, as I'm sure you're aware. And we have secured supply with guarantees, et cetera, to meet the equipment budget and the 25% unit growth that we forecast. We are very busy trying to secure more supply. And I think we've made substantial progress on that. We have sort of 2 tiers. We have sort of the natural -- well, I'll say, an increase in demand that we see out there that we'd like to meet, which is one level of target. And I think we're getting very close to being able to say that we've nailed that down. We'll probably have more guidance on that later in the year. And then we have more of a stretched goal for the second half that we're still working hard on trying to secure.

So it's a challenging world, but our balance sheet is helping us out and that we can come in and prepay where we need to. We -- also, I would say that our common componentry strategy where L3, L5 and future form factors use the same components, so they use them in different mixes and different configurations, but they're the same component. So that gives us the ability to have more -- bigger orders and have more sway with our suppliers. So both those things are helping us out right now. And we're optimistic, but we're not to the point where we're going to be raising the equipment guidance.

Barry L. Rowan - *Gogo Inc. - CFO & Executive VP*

And Amir, on your question about the breakout, we aren't providing details on that. I would just say that we are -- as you see, of course, set the expectations for a 15% CAGR over the full planning horizon. And based on the guidance that we're giving for revenue in 2022, you can see that we expect to get out of the gate strongly in that area. So again, we expect that strong growth in both service revenue and equipment. We expect, probably in percentage terms, equipment revenue to growing a little bit more strongly in terms of the higher rate than service revenue because of the demand that we're seeing.

Amir Reza Razban - *JPMorgan Chase & Co, Research Division - Research Analyst*

And one more, if I may. On the CapEx spend in 2022, how should we be thinking about the cadence of that and does some of that CapEx for 5G roll over into 2023?

Barry L. Rowan - *Gogo Inc. - CFO & Executive VP*

Yes. So the CapEx spend, as you know, is largely tied to the tower builds in 2022. So that CapEx spend is going to be primarily over the first 3 quarters but will be spread throughout the year. So it will be loaded in that first 3 quarter time period would be our expectation. There will be some CapEx for 5G continuing into 2023, but 90% of the CapEx spend will be completed by the end of 2022 is our expectation.

Amir Reza Razban - *JPMorgan Chase & Co, Research Division - Research Analyst*

Congrats on the quarter.

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Thanks, Amir.

Operator

Your next question comes from the line of Scott Searle with ROTH Capital.

Scott Wallace Searle - *ROTH Capital Partners, LLC, Research Division - MD & Senior Research Analyst*

Nice job on the quarter, guys. Hey, maybe just quickly to jump in into the service provider revenue and guidance for 2022. I'm wondering how are you seeing ARPUs trend, given the uptake of AVANCE, given the pending 3G -- excuse me, 5G launch? And also starting to see GA contribution, which I assume comes in at lower ARPUs. And then I had a follow-up.

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Yes, Scott. I mean, I think we've guided to sort of 3%, 4% ARPU growth over time in the 5-year guidance. We kind of blew that away this year because we had a lot of upward pressure on ARPU from our streaming -- unlimited streaming and data plan. I think that we still continue to see ARPU and Barry can give you the exact number, but in the 3%, 4% growth range for the 5-year model, and I think that's kind of what we would guide to this year.

Barry L. Rowan - *Gogo Inc. - CFO & Executive VP*

Scott, over time, it's basically 13% is driven by AOL growth and 3% is ARPU growth over the horizon from '21 to '26.

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Scott, sorry, like you point out, I mean, we've got upward pressure at the high end of the market that wants these big unlimited plans. And then as we make more progress in the general aviation market and then the light jet market, those people tend to buy higher rate -- lower rate plan. So there's downward pressure as well. But that's all good for us. I mean, that's all -- in absolute terms, that's all growth.

Scott Wallace Searle - *ROTH Capital Partners, LLC, Research Division - MD & Senior Research Analyst*

And then, Oak, maybe if I could, to dive into the 15% CAGR through 2026, it's a big number, it's a step-up from what you guys have been talking about before. Certainly, there are strong demand characteristics in terms of underpenetration in the marketplace. But I'm wondering why your comfort level is so strong at this current time? And a couple of items and clarifications, what are you thinking about in there in terms of GA contribution? It sounds like LEO contribution or potential LEO contribution really isn't built into that. That comes in the back half of the decade. And maybe if I could throw on top of that, too, the LEO -- potential LEO investment, I'm not sure if I've heard you size the magnitude of what that would require.

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Yes, sure. Scott, let's break that question down into a couple of pieces. I'm sorry, you started with...

Scott Wallace Searle - *ROTH Capital Partners, LLC, Research Division - MD & Senior Research Analyst*

Well, the 15% CAGR, really, the confidence level now -- by now and what are you factoring into that?

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Yes. Sorry. Yes, the great thing about that number, frankly, is that we lost a really high-growth year of 24% at the beginning, the recovery from COVID, we had tremendously strong growth. That came out of the model, and we added another year at the end. And so being able to hang in at that 15% CAGR, we thought was really good. And in terms of projections, we build these models from the bottom up, and we're looking at demand in various segments of the market and how it flows through the distribution channels. So we're pretty confident in those. And a lot of -- like right now, a lot of this growth, we're already booking orders for 2023. So we have pretty good visibility as we look ahead at least over the next couple of years. And when you look at the unpenetrated market and the fact that we're getting traction in some of the less penetrated parts of the market, we're very confident in these numbers barring a massive global recession or this unfortunate war blowing up on us and causing some macro events that come in and impinge on us. So we feel good about that.

In terms of the GA, what we have in the model now are sort of our current GA commitments, and we've got a few other things going that we've factored in that we think are fairly high probability. It's not a big number, frankly, but there is some GA included in there. LEO is not in our vernacular, we call that an overlay. Right now, it's sitting as a long-term financial model that we haven't laid into our long-term projections. When we greenlight it, then we will roll it in. And we haven't really sized it, other than to say it's relatively modest compared to our 5G investment. And I think you know what our 5G investment is. Also, the LEO investment would be spread out and be peanut buttered a little more than the 5G investment as most of the 5G investments this year -- the LEO investment would be -- it's going to take a couple of years of development. And so it's moved over 2, 3 years.

Scott Wallace Searle - *ROTH Capital Partners, LLC, Research Division - MD & Senior Research Analyst*

Nice quarter, guys.

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

You bet.

Operator

And your next question would be coming from the line of Lance Vitanza with Cowen.

Lance William Vitanza - *Cowen and Company, LLC, Research Division - MD & Cross-Capital Structure Analyst*

I had 2. The first is on the long-term financial targets, the meaningful increase in your targeted EBITDA margin. And I'm wondering if you could discuss the factors that are leading to your more encouraging outlook there. And then in particular, as part of that, how does competition -- potential competition figure into that longer-term target, in particular, if we're all wrong, and SmartSky does get it back together, should we expect that would negatively impact your margin target?

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

I'll touch on the end and then Barry, why don't you take the beginning of the question? In terms of our long-term model, we do factor in competition. And we project continuing positive trends for our GEO competitors in the segments of the market they address or starting to address. And then from a SmartSky, we have included them in our projections. We don't project them getting tremendous success, but we -- in order to be conservative, we've assumed that they actually launch at some point and win some portion of aircrafts. So as we watch them and as we learn more about them, and we do deep analysis, we think their odds of success are very low there, to be honest, but we still have them in our models.

Barry L. Rowan - *Gogo Inc. - CFO & Executive VP*

Yes, Lance, to your question about EBITDA margins and why we see those going up, there are a couple of drivers of that. In the next couple of years, we do expect to have lower equipment margins as we invest in the penetration of the AVANCE platform, as we've talked about. So that's a very conscious effort to use that to drive service revenue. So what's really driving the expanding margin over time is the growth in the service revenue combined with operating leverage. So when you look at OpEx as a percentage of revenue over time, we expect that to come down meaningfully. We're seeing that as we drive the kind of G&A reductions that we've talked about for a couple of years, and we're seeing that happen. And so it really is a combination of the mix of strong service revenue and operating leverage without planning to increase the OpEx at the same rate as the revenues are growing over time.

Lance William Vitanza - *Cowen and Company, LLC, Research Division - MD & Cross-Capital Structure Analyst*

And then just lastly for me. Oak, you gave your assurances that Gogo has not infringed on the 4 patents that are identified in that current SmartSky lawsuit. But can you offer assurances that Gogo hasn't infringed on any of their other patents as well?

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Yes. Our lawyers and engineers have reviewed all of their patents, and we do not infringe on any valid patent of theirs, and we've stated that before. I'm not going to get into talking about these 4 in particular, just because from a litigation perspective, we don't want to tip our hand in any way to them and they do listen to these calls. So I'll refrain from talking about the 4 in particular.

Operator

And your next question comes from the line of Ric Prentiss with Raymond James.

Richard Hamilton Prentiss - *Raymond James & Associates, Inc., Research Division - Head of Telecommunication Services Equity Research & Research Analyst*

A couple of questions. Want to follow up, obviously, supply chain is a key item in a lot of industries. It sounds like you're going to try and get some more supply. How should we think about dollar-wise? Last year, you probably spent about $10 million to get in this kind of pre-purchased stuff. How should we think about the magnitude of what you're trying to put to work this year to make sure you've got supply?

Barry L. Rowan - *Gogo Inc. - CFO & Executive VP*

The $10 million, we didn't spend all of that last year. So the $10 million is the amount that we're looking to spend this year. So we have identified the need for a meaningful portion of that, but not all of it. So we'll use that to drive it, in combination with the other things we're doing, Ric, a number of things we're doing, running MRP program with a much longer horizon, 18 to 24 months, so that shows the demand that we can then place orders on, so we can get better allocation. We have designed the products with alternative parts that we can get so that we're not completely reliant on sole-source parts. We've actually helped some of our suppliers source parts when they have not been able to do that. So we're doing a number of things to really drive that supply chain success. And as we mentioned, we feel good about being able to deliver on the expectations for equipment that we've set on this call, but we think the demand could drive higher opportunity there. And so that's really the piece we're working on now is how do we increase the supply chain capacity to deliver on those potentially higher opportunities.

Richard Hamilton Prentiss - *Raymond James & Associates, Inc., Research Division - Head of Telecommunication Services Equity Research & Research Analyst*

Makes sense. Another hot topic is inflation. How are you guys looking at inflation? How is it affecting your business?

Barry L. Rowan - *Gogo Inc. - CFO & Executive VP*

Yes. So we have some inflation built into our plans. We have wage inflation built in. We have cost inflation on our materials. So we have that built into our plans. Interestingly, a meaningful portion of our cost structure is not generally tied to inflationary trends, so like backhaul and the network operations, and we've seen actually some declines in that over time as backhaul costs get more aggressive. So -- and when you combine that with high gross margins, it's not like being in the grocery store business. So with the high gross margins, we're a little less vulnerable to that than we would otherwise be, but it's certainly something that we're mindful of.

Richard Hamilton Prentiss - *Raymond James & Associates, Inc., Research Division - Head of Telecommunication Services Equity Research & Research Analyst*

Last one for me is, over the months of November, December into January, the phrase 5G started taking on a very different connotation to consumers. The press with the FAA going out there kind of scaring people about what could happen with air travel with the C-band, but they didn't actually call it C-band, they were calling it 5G. What have you heard from your OEMs, your dealers and end users about 5G? Are they concerned about what 5G means? Are they concerned about anything with aviation related that way, either affecting your sales or just impacting concept of what 5G means?

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Yes. I think we communicated well with our distribution channels. And I think they all understand the difference between the C-band and the spectrum we're operating in. And frankly, I understand that the media kind of confused C-band and 5G. So 5G, as you know, uses lots of different spectrum. So -- and the spectrum we use isn't anywhere close to the spectrum that was in question. So we haven't seen any impact on our sales as a result of that.

Richard Hamilton Prentiss - *Raymond James & Associates, Inc., Research Division - Head of Telecommunication Services Equity Research & Research Analyst*

That's great. Because obviously, it caused a lot of consternation even inside my own household, people going, can we fly? I said, yes, you can.

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Well, most of that has been cleared up. The FAA has cleared most of the optimeters in question.

Operator

And your next question comes from the line of Landon Park with Morgan Stanley.

Landon Hoffman Park - *Morgan Stanley, Research Division - Research Associate*

I was wondering if you guys -- I think last quarter, you guys said that your backlog lead time had stretched all the way up to like 6 months. I think you referenced earlier that you're already taking orders for '23. So where is that lead time at now versus last quarter? And just any thoughts there on when that might start to normalize?

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Well, we're very creative in terms of how we manage lead time, and we don't want to miss an install if we have the opportunity to get it. So you have to understand in our market, jets come in for their maintenance on very -- in a scheduled manner. So the MROs and dealers would have their floors booked up now pretty well for the year, and we've been able to meet that demand so far. So that's good. So look, if somebody came in and needed a box in 3 months, I'm sure we'd figure out a way to get it to them. We are -- technically, we're booked into the fourth quarter now, but we never want to miss it. And the 2023 orders we've got aren't because of lead time, that's just because of the MROs buying equipment for a specific maintenance event that's going to happen in 2023, not in 2022. And most of the stuff we ship is -- and when it goes to dealers, most of what we ship is booked for a particular customer already.

Landon Hoffman Park - *Morgan Stanley, Research Division - Research Associate*

Great. And then on the capital returns, I think you guys referenced the 4x. Is that -- I think that was a 2Q number. Is that also the long-term level that you're comfortable with when you're considering buybacks or dividends? Or how are you thinking about where that long-term leverage should settle out?

Barry L. Rowan - *Gogo Inc. - CFO & Executive VP*

Yes. We think about it in 2 phases, Landon. The first is that we want to get to a net leverage ratio of less than 4x. And then as -- and that will kind of be the threshold at which we start to really think about when we might consider returning to capital, what that timing might be. As we've discussed, we need to make sure that we finish sizing the strategic investments to inform that decision. So getting to less than 4x is the initial target. And then what we would run the company with beyond that is something that we will look at more carefully as we hit that ratio and see what the right level of debt is on an ongoing basis. But for now, we've put a stake in the ground, less than 4x.

Landon Hoffman Park - *Morgan Stanley, Research Division - Research Associate*

Okay. Great. And then just the last one for me. On the lawsuit, the preliminary injunction, do you have an expected timeline on when you think that matter could at least be settled?

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

No. I mean frankly, this is news that is relatively new. We did anticipate this happening at some point. Frankly, we probably thought it would happen a little closer to our 5G launch than it is. We have actually not even received papers yet, but we factored this into our budget. We have some money already set aside for defense. And I think any guidance on timing now would be premature.

Operator

And your last question comes from the line of Louie DiPalma with William Blair.

Michael Louie DiPalma - *William Blair & Company L.L.C., Research Division - Analyst*

For Barry, can you please repeat the comments that you said about the potential share buyback just because it seems to be a pretty significant contrast relative to Gogo's history, in which I think you previously alluded to how you had 10x leverage and you used to be burning $100 million or more in cash on a quarterly basis? And so what are the different stages and thresholds in terms of leverage and timeline associated with 5G and the LEO broadband initiative that investors should consider as you and your Board of Directors evaluate a potential share buyback?

Barry L. Rowan - *Gogo Inc. - CFO & Executive VP*

Yes. We're in a very different place, Louie, than we were from the time we first started having these conversations with you, as you know. So it's a privileged position to be in and to be able to even think about these things. So what we said is that we expect to achieve this net leverage target in the second quarter of '22 after the equitization of the convertible notes in May and that, given the cash position and that dilution from the equitization that our Board is evaluating capital allocation strategies that may include share repurchases. So it's something that we are looking at kind of the things that inform that will be the amount and timing of the strategic investments in things like global broadband. We want to make sure we're conservative about those and have ample dry powder for those. But having said that, we are going to -- we are in a strong cash position now, and it's something that we are kind of evaluating in terms of what the right time might be in this context. So we're in a privileged position at this stage.

Michael Louie DiPalma - *William Blair & Company L.L.C., Research Division - Analyst*

And for Oak, I was wondering what is the development status of LEO satellite antennas for Business Aviation? Are there any antennas available now that you are currently trialing on aircraft? Or are there any available for other service providers? Or are these antennas still in the development stages?

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

In the development stages, Louie. I mean, there's a lot of debate around antennas that will access LEO constellations. We think the best technology is an electronically steerable antenna. And we are in the process of talking to providers that we would work with in developing one. We're not going to give away our secret sauce in terms of what we think about design on this call. But we know the BA market very well, and our goal is to design something that is very particular to that market and will fit that market. In terms of ESAs for aviation, I mean, they've been used in the military for quite a long time. They're very, very expensive in the military. And they are in development for commercial aviation now, and there are some that I think are in an experimental status at this point and have been put on jets and flown. So -- but those are much larger, frankly, than what would fit on a Business Aviation aircraft.

And the trick is the smaller the antenna, the lower the power. And as the power goes down, the harder it is to maintain the link budget with the satellite. So that's why it's been the challenge in Business Aviation. It's a matter of being able to get enough power and have it work without creating too much heat in the aircraft and burning a hole in the fuselage and get enough power, you've got a good signal and a good product, and that's difficult. So -- but we're working on it, and we are optimistic.

Michael Louie DiPalma - *William Blair & Company L.L.C., Research Division - Analyst*

And one final question. Oak, do you have any estimate for how many days would it take an MRO to install the 5G antenna for a customer that already has the AVANCE L5 system? And how complicated would that upgrade be?

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Well, it's an antenna swap. Initially, it would involve the addition of a small modem box as well. We're looking to simplify this over time. And so we'll have more to say about that later. I'm not going to estimate the exact number of days. I think our dealer partners would like to keep that between themselves and their customers, but it's nowhere near as complicated as installing a new system because all the wiring's in place, the box -- the main box is in place, the cabin has already been installed with wireless access points and all that. So it's a lot simpler than starting with a new system. The other point I was going to make -- sorry, I'm having a senior moment, you had asked about the amount of time, Louie, and what was the other part of your question?

Michael Louie DiPalma - *William Blair & Company L.L.C., Research Division - Analyst*

That was the complexity, and you basically answered it in terms of the swap and the...

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Oh, I'm sorry. The other part -- the other thing I was going to say is that because we're going to be able to start shipping antennas, now that we have PMA, we're probably going to start shipping some of the equipment so people can actually get pre-fitted with the antennas and some of the other stuff when they go in for maintenance this year, even though the 5G product isn't launched. So they'll just be ready for like a box swap when the product actually launches later. So we're giving the people essentially an opportunity, if they have a maintenance event, to sort of preinstall a lot of what you need to actually implement 5G with AVANCE.

Michael Louie DiPalma - *William Blair & Company L.L.C., Research Division - Analyst*

Sounds good, and congrats on the quarter.

Barry L. Rowan - *Gogo Inc. - CFO & Executive VP*

Thanks, Louie.

Operator

I would now like to turn the conference back to the company for any closing remarks.

William G. Davis - *Gogo Inc. - VP of IR*

Okay. Thank you. That concludes our fourth quarter call. We appreciate your participation and talk soon. Have a great day.

Oakleigh Thorne - *Gogo Inc. - Chairman, President & CEO*

Thank you all. Appreciate it.

Operator

Ladies and gentlemen, this concludes today's conference. Thank you for your participation, and have a wonderful day. You may all disconnect.
