

Spire Global, Inc.
Fourth Quarter 2022 Earnings
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Presenters

Peter Platzer, Chief Executive Officer
Thomas Krywe, Chief Financial Officer
Benjamin Hackman, Head of Investor Relations

Q&A Participants

Erik Rasmussen – Stifel
Austin Moeller – Canaccord
Ric Prentiss – Raymond James
Steven Pawlak – Baird
Will Jackson – Credit Suisse
Stefanos Crist – CJS Securities
Elizabeth Grenfell – Bank of America

Operator

Good afternoon, and welcome to the Spire Global Fourth Quarter 2022 Earnings Call. At this time, all participants are in a listen-only mode. A question-and-answer session will follow the formal presentation. If anyone should require operator assistance during this conference, please press star, zero on your telephone keypad. Please note, this conference is being recorded.

I will now turn the conference call over to our host, Ben Hackman, Head of Investor Relations. Thank you. You may begin.

Benjamin Hackman

Thank you. Hello everyone, and thank you for joining us for our Fourth Quarter 2022 Earnings Conference Call. Our results press release and SEC filings can be found on our IR website at ir.spire.com. A replay of today's call will also be made available.

With me on the call today is Peter Platzer, CEO, and Tom Krywe, CFO. As a reminder, our commentary today will include non-GAAP items. Reconciliations between our GAAP and non-GAAP results, as well as our guidance, can be found in our earnings press release. Some of our comments today may contain forward-looking statements that are subject to risks, uncertainties, and assumptions.

In particular, our expectations around our results of operations and financial conditions are uncertain and subject to change. Should any of these fail to materialize, or should our assumptions prove to be incorrect, actual company results could differ materially from these

forward-looking statements. A description of these risks, uncertainties, and assumptions and other factors that could affect our financial results is included in our SEC filings.

With that, let me hand the call over to Peter.

Peter Platzer

Thank you, Ben, and thank you, everyone, joining us on the call today. When we started this company over 10 years ago, we had a very simple mission, to improve life on planet Earth. The human impact on Earth, both from a climate perspective and a global security perspective, has been profound, and it is, therefore, up to us to identify ways to mitigate the negative impact and contribute to building a more sustainable, equitable, and prosperous future.

The markets encompassing climate change and global security are large, global, and growing. Climate change impact to the global GDP, is measured in the trillions of dollars. Mitigating just 10 percent of that is worth hundreds of billions of dollars. Ocean shipping accounts for 80 percent to 90 percent of global trade and was estimated to hit roughly \$25 trillion in 2022. Illegal, unreported, and unregulated fishing causes up to \$50 billion of economic loss a year, and piracy accounts for \$16 billion of annual economic loss.

The global signal intelligence market is estimated to be over \$13 billion currently, with a sizeable and rapidly growing contribution from space-based geolocation and spectrum monitoring capabilities. These are all massive markets, and they are markets we are just beginning to capture share in.

As demonstrated by our increasing net retention rate, our initial foothold in these markets is growing, strengthened by substantial, sustainable, competitive advantages. We believe Spire's addressable market is in the range of \$100 billion, encompassing 150,000 to 200,000 customers. And, while we are immensely proud of growing from 1 million to nearly 100 million of ARR in just five years, we believe there is so much more opportunity ahead of us.

We finished 2022 serving more than 730 ARR solution customers across 65 countries on 6 continents, leaving substantial opportunity right in front of us for continued growth. If you think about our business opportunities, it's obvious to start by thinking of the shipping companies that own around 55,000 merchant vessels, the 800 container ports, or the 5,000 airlines that own roughly 25,000 cargo and passenger aircraft.

However, this is just a small subset of the customers that find value in our solutions. We track hundreds of thousands of vessels and over 60,000 aircraft per day. We are aware of only one other company that has the ability to provide clean satellite AIS data for tracking maritime movements and another one very different company that has the ability to provide clean satellite ADS-B data for tracking global aviation movements and locations and only two, again different companies, with the ability to provide clean satellite weather data via GPS-RO.

And we are not aware of any other company other than Spire to have all of these satellite data and analytic solutions combined under one roof available to help customers solve their most pressing challenges. Our customers include ports, financiers, insurance companies, traders, transportation and logistics companies, renewable energy companies, route planners, sports teams, and asset maintainers, to name just a few. These are each large industries that make up the ecosystem around shipping, aviation, and weather, and they are all part of Spire's target customer base.

For example, Spire provides our customer, Gravity, real-time information and analytics based on global maritime automatic identification system technology. This information allows clients to get precise insights about maritime traffic, including the exact location of a ship carrying what they need and when it will get to where they need it to be. This enhanced visibility of vessels for those awaiting their arrival, like logistics companies, enables organizations to make better data-driven decisions.

This is one example within the \$3.4 billion inventory optimization logistics and reporting market, which is crucially reliant on having access to global, near real-time, precise location and movement data of goods. In another customer example, Shipnext, a freight matching platform covering bulk, oversized, and containerized cargo leverages satellite data from Spire to gain real-time insight into fleet operations.

There are estimated to be over 800 ship brokers and freight forwarders providing services similar to Shipnext to the nearly 20,000 shipping lines across the globe. The collaboration between Shipnext and Spire has resulted in real-time visibility around ports, including congestion management solutions. This powerful data as ships spend on average 40 percent of their time in port waiting to be called.

On the aviation side, Spire was selected to provide ADS-B positional information to myairops so that operators could get an accurate picture of the operational landscape, including aircraft position, weather, crewing, customer requirements, and maintenance. Industry reports estimate that there are roughly 21,000 business jets and a nearly \$3 billion aviation analytics market, a market that is expected to grow double digits and top \$8 billion in 2030.

Our relationship with myairops was expanded when it was announced earlier this year that they will be also integrating Spire weather data into their platform. This is an example of how our weather data is being utilized beyond only generating weather forecasts. It is being utilized as another layer of insight on top of the maritime and aviation data we provide.

In yet another example of how our data is utilized, Blue Pulse combines data and artificial intelligence by integrating Spire's weather data forecast to its refrigerated, or reefer, energy simulation tool. Utilizing Spire's historic weather data of temperature, humidity, dew point, solar radiation, and wind, Blue Pulse ran different alternatives over 70 routes across the Atlantic and Pacific Oceans.

What it found was that by only going 2 percent longer than the shortest possible route, 5 percent to 7 percent of the ship's fuel was saved on roughly 60 percent of the routes, and from 300 to 700 megawatt hours of reefer energy was saved per crossing. This results in over tens of millions of euros saved and tens of thousands of equivalent tons of CO2 emissions saved on an annual basis. This is an exciting area of the business as the maritime industry is poised for a digital transformation. Blue Pulse is part of over 1,000 SME and startup companies in the maritime space, a number that has been growing steadily in the double digits.

In the scientific community, we are continuing to see strong demand for our weather data. We currently provide 3,300 radio occultation profiles to NOAA, but the scientific community has studied the significant impacts and improvements in numerical weather prediction by using 25,000 RO profiles a day, 50,000 profiles a day, all the way to over 100,000 profiles a day. These weather prediction improvements are particularly strong for extreme weather events like hurricanes or heavy snow or rain.

With NOAA satellite, data and information service budget, at roughly \$2 billion for FY 2023, and dozens of similar agencies across the world, these studies are an indication of potential further demand for our data, along with growing broader demand for our commercial weather data.

This past year, Spire was awarded contracts to detect and geolocate certain objects based on targeted radiofrequency, or RF emissions. One such example was an award from Sierra Nevada Corporation for a cluster of four 6U satellites. This is an example of how Spire can compete and win in the \$13 billion and growing signals intelligence market. Spire's spacecraft are equipped with highly sensitive radio signal detection devices, which listen to the slightest changes of these signals.

This capability, for example, allows us to measure the temperature in Earth's atmosphere with incredible accuracy or measure the level of moisture in the soil on the ground. Identifying, characterizing, and, where possible, mitigating ground-based RF and GPS interferences is a critical component of correctly capturing this data. It also can have great importance to national security and U.S. Space Force operations, an organization whose budget has grown to over \$26 billion, up from \$19.5 billion in 2022. RF signals intercepted in open-air space are liabilities that directly threaten on-orbit space assets of civilian, commercial, and military missions.

Spire's solutions are also utilized to protect life and property. A recent agreement with a launch provider has Spire supplying vessel-tracking data for the coasts of California, Hawaii, Florida, and Texas in support of launch-day planning and mission-critical situational awareness. To put this opportunity into perspective, there are over 30 active launch service providers, and we're tracking over 50 new launch vehicles. At Cape Canaveral in Florida alone, there are expected to be 87 orbital class launches in 2023, a sharp increase from the record-setting 57 in 2022. Globally, there has been a rocket launch every two days in 2022. By having better insights on marine traffic around launch operations, lives can be protected, and launch delays can be prevented.

In another example, one of our partners successfully used Spire data to find a lost boat in the Philippines and save the lives of the seafarers. In yet another example, we heard from our customer that our data was being utilized to keep seafarers out of the path of hurricanes. With storms in the vicinity of the vessels, this customer was utilizing our dynamic AIS data to track their vessels and keep their employees out of harm's way and their cargo safe.

With existing business and ample opportunities in front of us, Spire continued to prudently scale the company during 2022. As we celebrated Spire's 10th anniversary, we grew our revenue 85 percent year-over-year and expanded our team by just 10 percent year-over-year, showcasing the enormous operational leverage that our business model has. The amazingly talented teammates at Spire are the fuel for our business growth and the source of immense customer satisfaction, highlighted by a net retention rate of 117 percent for 2022.

Our team members representing over 45 countries bring exceptional diversity of thought and experience to our organization. At Spire, we are continually working to build a company where our teammates can learn, grow, and succeed. This past year, we invested in the employee experience by listening and investing heavily in opportunities for learning and development. These are investments in our team that we're happy and excited to make as we prepare for the opportunities of the next decade.

We continue to make prudent investment decisions to replenish and improve our infrastructure and enhance our technology, consistently adding to our already substantial competitive moat. During 2022, we had three launches, and we had our first launch of 2023 shortly after the new year. In total, we have completed 34 launches with 10 different launch providers over the past decade. We have launched more than 160 satellites and accumulated over 500 years of space heritage.

Only through the experience of operating in space does one understand exactly what it takes to be successful in the space environment, as that environment cannot be replicated on Earth. Our substantial experience on this front further bolsters our competitive moat. With these recent launches, our space services customers were able to bring capabilities to market faster and more efficiently. Customers like OroraTech with its wildfire detection service and Austrian Space Forum's ADLER-1 space debris monitoring satellite are just two examples highlighting capabilities in large, growing markets.

We were also able to continually upgrade our technology in orbit. Spire's in-house developed optical laser-based inter-satellite links are but one example of how Spire's smart investment in R&D continually enhances the value we can deliver to our customers and the competitive moat we enjoy in our business model. We deployed satellites equipped with an antenna and software defined radio tuned to capture signals from L-band satcom, which further improves our geolocation capabilities and increases the type of products and solutions we can offer in the growing market for global security.

We unveiled the 16U satellite bus that allows for more power, volume, and data capabilities as we increasingly see that our customer's missions require buses that offer the performance of a larger satellite but with the agility of a nanosatellite. And we invested in hyperspectral microwave sounders and polarimetric radio occultation to augment weather data and forecasting.

Microwave sounders will enable a higher level of measurement accuracy for both moisture and temperature, which are an essential in numerical weather prediction. This investment was rewarded with a \$4 million contract by NOAA for the development, integration, testing, and demonstration of a hyperspectral microwave sensor payload.

As we look to the future, there are generational trends that provide reliable tailwinds for our business and align with our mission of leveraging data and analytics from space to improve life on Earth. For decades, climate change has been impacting our planet. As populations continue to grow, humans are exacting an ever-larger toll on the place we call home. For the three decades spanning the 1950s, 1960s, and 1970s, there wasn't a year in which the world experienced economic loss from weather-related disasters of more than \$100 billion.

Yet, during the 21st century, the annual economic loss associated with weather-related disasters has averaged over \$300 billion, over three times as much. And, in addition to climate change, we have witnessed a rapid change in our global security environment. And 2022 was a sober lesson in how quickly the world can change. Overnight, a sovereign country was invaded, millions of people were displaced, and the world was reminded of how fragile peace can be.

With these real-time reminders, Spire remains steadfast in our mission of providing critical and actionable intelligence to provide truth and transparency from space. We believe that through the application of insights that can only be captured from space, Spire is making an outsized impact on the world as we increasingly apply AI and machine learning techniques to our data.

Spire has been looking at different ways to detect essential climate variables so companies can reduce their operational weather risk and researchers can understand more about how the Earth is changing. In one such example, GNSS reflectometry, Spire has been using the exceptional RF sensitivity of our space technology to measure and assess different types of sea ice. Sea ice has been explained by scientists as the corner piece of the climate change jigsaw puzzle, connecting atmosphere, ocean, and ice processes.

With the combination of analytics and machine learning, our customers have been impressed by the results. Scientists have stated that the team has successfully distinguished between Antarctic ice and ocean, as well as between first-year and multi-year ice, with 90 percent accuracy, higher accuracy than was hoped for. One customer noted that this is a data resource that we've never really had.

While this is just a single use case of the data that Spire collects, it opens the aperture of what is possible by combining data that is becoming available for the first time, along with AI and machine learning. With robust business prospects and a strategic plan in place to scale the company, we are steadfastly focused on driving the company to profitability. We believe that we have identified the correct key markets for our solutions and remain focused on those markets.

This focus has allowed us to extract a high utilization from our assets. Our constellation supports three sizeable market opportunities, where we collect data once and sell it many, many times. And our expansion into space services further increases that utilization and monetization of the infrastructure and teams we have in place. By leveraging our R&D, our manufacturing and operations teams, and our ground station network, we can provide exceptional solutions to our customers and high operational leverage to our shareholders.

Even as the macroenvironment continues to be challenging, and we see extension in the time to sign customer contracts, while businesses dynamically balance growth and profitability, our high asset utilization allows us to fully stay on track in our drive towards profitability. As our margins have continued to expand, our cash usage has declined very meaningfully over the past two quarters, despite our strong year-over-year growth rate.

We have remained resolute on our projected profitability time frame, which has remained unchanged since the time we introduced it one year ago. We feel this creates exceptional opportunities for those looking at the incredible strength, growth, and trajectory of our business. As we remain heads down on execution, we are focused on what we can control. What inspires us is a tremendous long-term demand for our solutions, demand that is rooted in Spire's mission of improving life here on planet Earth.

And with that, I'll turn it over to Tom.

Thomas Krywe

Thanks, Peter. The fourth quarter ended the fiscal year with results that clearly demonstrate our path to profitability and to positive free cash flow. Q4 revenue increased 49 percent year-over-year to \$22.4 million, once again hitting a quarterly record. For the full fiscal year, we finished at \$80.3 million, an 85 percent year-over-year improvement and within our guidance range provided this past November.

ARR at quarter end was \$99.4 million, up 41 percent year-over-year. We fell a little short of our goal of ending the fiscal year with just over \$100 million of ARR, due to continued pressure from the macroenvironment, such as customer timing delays, funding issues, and slower time to close the seven digit-plus sales deals. However, in February, we received nearly \$20 million in cash from the remaining amount of our existing \$120 million credit facility after achieving the ARR milestone.

We finished the year with 733 ARR solution customers, a 23 percent increase year-over-year and a net add of 135 customers during the fiscal year 2022. Our Q4 ARR net retention rate was 110 percent, and the rolling 12-month ARR net retention rate for fiscal year 2022 was 117 percent, up from 110 percent for the rolling 12-month for fiscal year 2021. Our land-and-expand strategy has continued to serve us well as we once again finished another full fiscal year with an ARR net retention rate at or above 110 percent. These trends represent a healthy future revenue growth, not only from new customers but with our existing customer base.

Now, I'll be discussing non-GAAP financial measures, unless otherwise stated. We have provided a reconciliation of GAAP to non-GAAP financials in our earnings release that should be reviewed in conjunction with this earnings call. Spire has methodically progressed on our strong trajectory towards profitability and achieving positive free cash flow, driven by our leveraged business model and high asset utilization. Our Q4 operating margin improved 40 points to negative 46 percent from negative 86 percent a year ago.

In addition to the significant year-over-year improvement, we executed a 10-point sequential improvement from the third quarter 2022. Our Q4 operating loss was \$10.2 million, an improvement of \$2.7 million from a year ago. For the full year, our operating loss was \$44.5 million, which was over \$1.3 million better than the midpoint guidance we had provided in March of 2022.

Total adjusted EBITDA for the fourth quarter was negative \$7.3 million, an improvement from negative \$10.6 million a year ago. For the full year, adjusted EBITDA was negative \$32.6 million, which was within the guidance range we had provided in March of 2022. We ended the quarter with cash, cash equivalents, restricted cash, and short-term marketable securities of \$70.7 million. We utilized \$8.1 million of free cash flow in the quarter, which was a 66 percent reduction over the same quarter a year ago and an over 41 percent reduction in free cash flow usage from last quarter.

While cash can fluctuate from quarter to quarter, the significant progress in lowering the net cash burn is in line with our objective of generating positive free cash flow in 12 to 18 months. Given the significant improvement in cash utilization over the past six months, along with receiving nearly \$20 million cash from the existing credit facility, we are feeling very comfortable with our balance sheet.

Now, turning to our outlook for the first quarter and full fiscal year 2023, for the first quarter, we expect revenue to range between \$21.7 million and \$23.7 million. Q1 revenue reflects the smaller amount of ARR added during the fourth quarter of fiscal year 2022, along with taking into account the timing of project-based revenue. For the full fiscal year, we expect a range of \$104 million and \$109 million, which represents growth of 33 percent at the midpoint from fiscal year 2022.

Q1 ARR is expected to range between \$104 million and \$106 million, and we expect to finish the year with ARR ranging from \$129 million to \$135 million, which represents a growth of 33 percent at the midpoint. ARR solution customers for Q1 is expected to range between 750 and 760, and we expect to end the fiscal year with 835 to 885 ARR solution customers. For Q1, we expect non-GAAP operating loss to range between \$12.8 million and \$10.8 million, which is a \$1 million midpoint improvement from the first quarter of fiscal year 2022.

For the full fiscal year 2023, we expect non-GAAP operating loss to range between \$34 million and \$29 million, a \$13 million improvement from fiscal year 2022 at the midpoint. The improvement in non-GAAP operating loss reflects further leverage of our headcount and infrastructure across our four solutions. Adjusted EBITDA for the first quarter is expected to range from negative \$9.6 million to negative \$7.6 million, and we expect our non-GAAP loss per share for Q1 to range from negative \$0.12 to negative \$0.11, which assumes a basic weighted average share count of approximately 144.7 million shares.

For the full fiscal year, we expect adjusted EBITDA to range from negative \$19 million to negative \$14 million, and we expect our non-GAAP loss per share to range from negative \$0.36 to negative \$0.33, which assumes a basic weighted average share count of approximately 148.4 million shares.

In closing, Spire had a great year, with bringing in solid top-line growth from new and existing customers, improving margins with scale and leverage, significantly lowering the net cash burn quarter-over-quarter, and improving the balance sheet with additional cash sources. Our 2023 guidance reflects another year of focus and dedication to growing the business while taking further steps towards our path to profitability and being free cash flow positive.

Thanks for joining us today. Now, I would like to open up the call for questions.

Operator

Thank you. And, ladies and gentlemen, at this time, we will conduct a question-and-answer session. If you would like to ask a question, please press star, one on your telephone keypad a confirmation tone will indicate that your line is in the question queue. You may press the star key followed by the number two if you would like to remove your question from the queue. For participants using speaker equipment, it may be necessary to pick up your handset before pressing the star keys. Once again, to ask a question, press star, one on your telephone keypad.

Our first question comes from Erik Rasmussen with Stifel. Please state your question.

Erik Rasmussen

Yeah. Thanks for taking the questions, and congratulations on the lower net cash burn in the trajectory there. I wanted to just, on the guidance for 2023, at the midpoint, you are guiding to 33 percent year-over-year growth, obviously still good growth. But, it is a deceleration from what we saw in 2022. Has anything changed in your business that is impacting your revenue

opportunities? And then, maybe you could just provide some high-level assumptions you have baked into that outlook for the year. And then, I have a follow-up.

Peter Platzer

Of course, Erik, happy to do that. So, nothing has really changed because the driving principle for us is profitability. And so, when we start our process, we start at the bottom of the income statement because at the end of the day, what matters is not what enters the income statement at the top but the cash that falls out at the bottom. And so, that's where we start. We look at the operation improvements, we look at leveraging the infrastructure, the people, the processes that we have.

And then, we end up with a top line that is prudent and meaningful growth. And, yes, we grew 40 percent ARR roughly in 2022, and this is kind of like in the mid-30s. But, you can always drive up your top line, but you're spending more money on sales and marketing, right? But, that is not conducive to the way I think about a business, whose job it is to produce cash. And then, you can use that cash to invest in the business and in sales and marketing and keep on driving your top line.

So, there is nothing really that has changed. Now, we are cognizant of the macroeconomic environment, right? I mean, we, it might now feel normal, but in 2022, we started out the year 12 months ago when we gave guidance, and since then, we had a war, we had almost runaway inflation, we had interest rates growing a few hundred percent, people talking about recession, the stock market collapsed. There has been a lot of stuff that has happened.

And I don't think that it has worked its way through the system completely at this point in time. So, we feel that the prudent way for us to build the business is to continue to stay on our path, on our focus, as we delivered in 2022, which is the bottom end of the income statement. And the top end falls out of that and can always be increased. As you produce more cash, you just invest in more sales and marketing.

Because we have more than clearly demonstrated the demand for our products. There is not a whole lot of companies that can grow their recurring revenue business from \$1 million to almost \$100 million in five years. And you can only do that if there is overwhelming pent-up demand for the products and services that you have.

Thomas Krywe

I think one thing I'll add, Erik, is the one key component that we're heavily looking at for the path of profitability and our, the results in the bottom line is when you look at what the streets put out for the expectations, we are actually slightly ahead of the midpoint on the non-GAAP operating loss for our projections and our midpoint to what's out there.

So, we're feeling very good in where we are, and we're doing that right mix of the top line and getting that path to profitability. As Peter mentioned, we don't want to over-index on sales and

marketing to get the higher number, and we don't get to these goals and achieve the, what the market is thinking and then what we're comfortable with our guidance.

Erik Rasmussen

Very good. And then, maybe just some comments, if you can, on the pipeline, maybe some of the types of deals the team is tracking. Are you starting to see any larger deals emerging? I know we had some seven- and eight-figure deals. But, maybe you could just sort of comment on that. Thank you.

Peter Platzer

Absolutely, Eric. You're absolutely correct that 2022 has seen an increasing number of substantial size, seven-figure, eight-figure deals. And that trend is something that we continue to see, based on the additional products that we have been rolling out. We have released a number of analytics products, leveraging AI capabilities inside Spire, that are really resonating strong with the customer base, broadening the customer base but also broadening the value that we provide to them. The geolocation capabilities that Spire has deployed in 2022 also continue to resonate and continue to find customer interest that is often expressed in deals that are substantially larger.

And then, certainly last but not least, the offering of renting Spire's infrastructure, providing that incredible scale and resilience, and the plannability that allows both government and commercial customers to launch and provide space-based solutions and products and services really resonates and goes from launching one or two payloads in orbit delivering data to whole constellations of payloads delivering data, which, of course, results in substantial-sized deals. And we continue to see that. And we're looking forward in 2023 to see those deals making a solid contribution to our top and bottom line.

Erik Rasmussen

Great. Thanks, and good luck.

Peter Platzer

Appreciate it.

Operator

Your next question comes from Austin Moeller with Canaccord. Please state your question.

Austin Moeller

Hi. Good afternoon, Peter.

Peter Platzer

Good afternoon. How are you doing, Austin?

Austin Moeller

Very good. Hope you're doing good as well.

Peter Platzter

That's correct. I am.

Austin Moeller

Great. My first question here, is there any pressure on the Lemur constellation to get new satellites launched this year, just given the delays with Virgin Orbit? Or does the launch you did in the first quarter and the progress on the root cause analysis make you confident that you can get those satellites launched on LauncherOne this year or move to another provider?

Peter Platzter

Yeah, we are extremely comfortable with the current capabilities of the constellation and the launch plan and manifest that we have, which is, I would say appropriate, conservative, and not overly aggressive or in need of many launch vehicles or launches. I mean, we've done this 34 times, Austin. We have 10 different launch providers.

The team at Spire has exceptional connection to the launch market. And there are a number of launcher providers outside of Virgin, which we have launched with, which we have strong relationships, and which we continue to talk. So, we feel very, very relaxed about that side of the story of our Lemur constellation.

Austin Moeller

Okay, great. And then, just on the dark shipping tracking service, is the Ukraine war driving more government customer demand for that, just given Russia has been out there trying to move its Urals crude oil through a lot of third-party shipping companies?

Peter Platzter

Yes.

Austin Moeller

Okay, great. Thanks for the details.

Peter Platzter

My pleasure, Austin.

Operator

Thank you. And our next question comes from Ric Prentiss with Raymond James. Please state your question.

Ric Prentiss

Thanks. Good morning, afternoon, everyone, long day.

Peter Platzer

Good afternoon.

Ric Prentiss

Yeah. Hey, a couple questions I'd like to, thanks for the update on the cash draw. We were wondering when that was coming. (Inaudible) the interest rate environment, how much interest expense is going to be impacted as we think through this calendar year from drawing down on that?

Thomas Krywe

Yeah. I mean, it's roughly like \$15 million if you keep going at the same pace that we're going for the quarterly amounts that we have to pay, if we're at roughly the same rates.

Ric Prentiss

Okay. And you called out obviously a couple things, focus on what you can control, focus on customers, the macroenvironment. Any FX impact that affected you in 2022 and 2023?

Thomas Krywe

In 2022, we did have some impacts. Obviously, we did really well to get to the guidance that we had put out. So, there was obviously impacts on that front. For 2023, we're doing the best we can to put that into all of our expectations and forecasts, so it's all built in. We've talked to a lot of folks out there in the banks, and so we got as many points and estimates that we could, and that's all been factored into the guidance that you have today.

Peter Platzer

And the other thing, Ric. Sorry. So, the other thing that you see there is that we have been doing a very, very steady and deliberate effort to move more and more of our contracts into a U.S. dollar base, which has a reducing impact and a mitigating impact on the FX risk.

Thomas Krywe

Yeah. And you can see that in our K and in our Qs. The quarter-over-quarter keeps dropping down. We're about down to 30 percent of our deals and revenues coming from currencies not in the U.S. dollar.

Peter Platzer

And don't forget that we have, not all of our cost is in U.S. dollars, so like we don't want to drive the number to zero. But, we're steering it very, very carefully, so that there's a matching impact, which, then, we do see volatility from FX. So, net, I think we are starting the year, 2023, in a better position than we started the year in 2022 with regards to FX risk.

Ric Prentiss

And, obviously, you've kept a resolute focus on the free cash flow path, and certainly March to September of 2024. What variables push you to the March side of that versus the September

side of that? Is it revenues ramping? Is it cost control? Is it CapEx? What kind of drives the higher or lower end date as far as when free cash flow positive?

Thomas Krywe

I mean, you hit all the fronts. It's a mix of everything, right? We're, that's why we've put out the guidance that we have on the top line. We feel it's strong guidance there. We're constantly looking for ways to improve and leverage the business even further, even though you can see in our results, we already have very strong leverage across all four of our solutions. And then, the CapEx front, we're always managing that.

We've been doing a great job year after year after year on the replenished satellites. We've been still sticking with the same amount of money we spend on an annual basis. I think this year, we actually did a little bit less on that front than the normal \$10 million to \$12 million that we do on the replenish. So, yeah, it's actually all of them. And we're constantly looking at how to improve those, but I think we've done a fantastic job on the results in 2022 in all those areas and then the guidance that we put out covering all that.

Peter Platzer

I really wish that you could be part of some of our operational meetings, Ric, and see the relentless drive that we have, right? And we use that word, and it's a common English word, but it is one of Spire's six values. So, it means for us a little bit more than just a word out of the Oxford dictionary in looking to improve things. Just as a small anecdote, there is a reasonably famous book that talks about removing constraints from processes and streamlining them, achieving higher quality, more throughput, with less resources. It's called, The Goal.

And every single one of my senior managers and executives got a personal copy signed by me with a "strong ask" to read it over the holidays because this is what we're about, constantly looking for operational improvements. I don't think you get the operational leverage that you see in our margin improvements unless you're constantly asking yourself, "How can I do more with the same resources, increasing customer satisfaction but decreasing cost and improving our margins?"

Ric Prentiss

Thanks. Appreciate the extra details. Everyone stay well.

Peter Platzer

Thank you.

Operator

The next question comes from Jeff Mueller with Baird. Please state your question.

Steven Pawlak

Hi. Thank you. It's Steven Pawlak on for Jeff. I guess the question around the ARR shortfall in the fourth quarter relative to the guidance, I appreciate the detail, Tom, but I guess the more detail we can get. Was it just some larger contracts that took more time? Was it, was the sales cycle lengthening happening sort of across the market? Is there, I guess, slower upsell, or is it sort of a new business issue? Any more detail we can get on that. Thanks.

Thomas Krywe

Yeah, that would be great. I think one way to think about it is really taking a step back and looking at our ARR for the full year. So, we grew 41 percent year-over-year. But, if you average that out, and I'm making it perfectly linear on a quarter-over-quarter basis, the sequential growth was \$7.2 million, which is really nice progress that we made all year on constantly adding more and more ARR.

If you also look at our land-and-expand strategy that goes along with that, we added 135 net new customers in the year, so we added a nice pool of new customers to the group across all four of our solutions. And then, when you look at the expansion side, we had a 117 percent net retention rate. That's up from 110 percent the year before. You don't get that kind of improvement and those type of numbers if you don't have stickiness in your solutions, if you don't have low churn, you don't have the many use cases that you're solving and the value add that you're giving to your customers.

So, we felt very happy on what we did from a full-year basis. Where, the area that we wish we had done better is the linearity from a quarter-to-quarter standpoint. And, really, the macro environment did hurt us there, where you start the quarter, everything seems great, the pipeline is nice and solid. And then, especially with those seven digit-plus deals that you are talking about, as you're going through the quarter, all of a sudden, they start going, "Well, actually, now I need to get further approval processes," or, "Well, you know what, the funding is getting a little bit frozen at the moment." But then, things free up later, and it might, then, wrap quarters.

Ultimately, we always got these wins, and we got the deals. And that's why our annual numbers came out to where they are, and we were really happy with things. But, the linearity from a quarter-to-quarter, not exactly what we would always perfectly want there. So, we'd love to have it just be more spread out evenly so, but very happy where we ended the overall top-line growth in the numbers.

Peter Platzer

Maybe I'd like a little bit more, dealing with (inaudible) and you're like, I'll give you more color there. If you look at our mix between commercial and government, we always talked about it roughly being equal is kind of like where we want to steer the ship. We've seen such a tremendous amount of growth in our business on the commercial side in 2022 that we ended up the year a bit over-indexed on the commercial side, right?

And so, we have efforts to kind of like move the ship back to like more 50/50-based. And on the commercial side, you see more impact from macroeconomic headwinds than you see on the government side. It wasn't really that people said, "I don't want the solution." They just said like, "I just can't get it done right now. I really still want it. Can we get things done a little bit later?" And that happens more on the commercial side than on the government side.

Steven Pawlak

Appreciate the color. Thank you.

Peter Platzer

Of course.

Operator

Thank you. And our next question comes from Will Jackson with Credit Suisse. Please state your question.

Will Jackson

Hey, guys. Good afternoon. Thanks for taking the call. Tom, looking at adjusted EBITDA for the full-year guide and Q1, it looks like we should expect a pretty sizeable increase after Q1. I'm wondering if you could give any info on either the drivers behind that or maybe the cadence behind it, if you expect a steady progression for Q2 to 4, maybe a more discrete inflection after Q1?

Thomas Krywe

Yeah. No, we do expect the continual improvement as we go throughout the year. Q1 guidance, we did bake in what we know. And just like I was talking about the linearity, all the consideration of what we know in the quarter has been built into the first quarter. The first quarter many times for us, and I'm not sure about the other companies, can't speak on their behalf, but we tend to find, obviously, that's when everybody that's on a calendar year goes through their budgeting processes.

Not everybody gets done perfectly on December 31 and has their budgets. So, we find that our customers tend to come out of that somewhere throughout the first quarter, and then they've got their budget, and then they start working with us. And it doesn't always give us the perfect amount of time to close things in the first quarter.

So, that was built into the Q1 guidance. But then, we expect some really strong movement as we go from the second to the third and the fourth quarter, so you're definitely get that progression as we go. And we saw that this year, right? You constantly saw the progression as we went throughout the year in 2022, and we expect that to continue. Because you can't get to those bottom-line results unless we have that path.

Will Jackson

Got you, makes sense. That's really helpful. And then, one more, if that's okay, for you, again, Tom. It looked like ARR for full-year 2022, or at year end, I should say, was nearly \$100 million. But, your 2023 guidance is only about 4 percent to 9 percent above that. Can you maybe kind of just bridge the gap? I would have thought the full-year 2023 would be higher, given your ARR number.

Thomas Krywe

And so, the ARR number, actually guidance we that we have, the range is 129 to 135. So, 132 is the--.

Will Jackson

--Right, sorry. I'm comparing end of year 2022, where we are right now, versus a full-year 2023 guidance number for ARR right now and regular revenue for full-year 2023. And if that's the wrong way to think about this, let me know.

Thomas Krywe

Oh, yeah, so you're talking about the, well, yeah. You've got to remember, just like we mentioned, if there is a building effect as you go on ARR throughout the quarters, you could, you can get additional ARR, let's just say in Q4 of 2023. You're just not going to get a lot of revenue for that in that particular, right? Because it's a forward-looking measurement rather than an instant output, right?

So, if you have a little bit more in the third and fourth quarter in our guidance, then that revenue is going to really flow in more in 2024. Does that help explain the difference, obviously, from the recognized revenue compared to the ARR? Because the ARR is, you could book a fourth-quarter deal that's ARR, but it's not going to generate a ton of revenue for you in the fourth quarter.

Will Jackson

Got you, makes sense. Okay. Thanks so much, guys.

Peter Platzer

Of course.

Operator

Thank you. And our next question comes from Stefanos Crist with CJS Securities. Thank you. Please proceed with your question.

Stefanos Crist

Hi. I just want to ask about the inter-satellite links, any plans for progression there in 2023?

Peter Platzer

Yeah, absolutely. It is a technology that we consider crucial for our competitive mode. We continue to roll it out. We continue to offer it to customers, make it available to them, to offer

them solutions which have lower latency data. And we feel very encouraged by the progress and the roll-out on both the RF into satellite links as well as the optical into satellite links, which is already the next-generation technology there.

Stefanos Crist

All right. Thanks.

Peter Platzer

Of course.

Operator

Thank you. And a reminder, to ask a question, press star, one. To remove yourself from the queue, press star, two. Our next question comes from Elizabeth Grenfell with Bank of America. Please state your question.

Elizabeth Grenfell

Hi. Good afternoon.

Peter Platzer

Good afternoon, Elizabeth.

Elizabeth Grenfell

Hi. I was hoping we could delve into the balance sheet a little bit. And how should we think about the minimum amount of cash that you need on the balance sheet to operate the business versus your target for being free cash flow-positive?

Thomas Krywe

Yeah. I can answer that. One thing to look at is the last two quarters we had the cash that in usage was about \$11 million, just over \$11 million two quarters in a row. We just got roughly \$20 million from the remaining amount of our credit facility. And then, our, if you also looked at the path that we've been on on the free cash flow, going from negative 25 to negative 13 and change to negative 8.1, we're really seeing that reduction. We're really seeing that leverage. And we're seeing less and less cash usage on a quarter-over-quarter basis.

So, we ended the quarter at \$70.7 million. We added that extra roughly \$20 million of cash. We've been only burning about \$11 million a quarter. It's a good path, right? You can do that math. And it takes us into the period, well past the period that we said we're going to be free cash flow positive. So, we're very comfortable where we're sitting on the balance sheet.

Elizabeth Grenfell

So, what is, like so what is the minimum amount of cash that you need on the balance sheet, though, just to run day-to-day operations?

Peter Platzer

Well, I mean--

Thomas Krywe

--We're only spending 11, so then if we do 11 every quarter, that's the current numbers. But then, of course, we're going to be doing better and better as we go throughout 2023. That number is going to start diminishing as we keep delivering on the guidance that we've got, putting forth on the top line and then what we're expecting to do on the cost front.

Peter Platzer

So, I think using that number, Elizabeth, as like a guidance of what we need to run the business is basically what you hear us saying from a modeling perspective.

Elizabeth Grenfell

Great. Thank you very much.

Operator

Thank you. There are no further questions at this time. I'll hand the floor back to Peter Platzer for closing remarks.

Peter Platzer

Thank you. And as we wrap up, I would really like to thank our customers and employees and the numerous suppliers for partnering with us as we continue in our substantial growth trajectory towards profitability. Without our customers, employees, and business partners, we would not be where we are today.

On a daily basis, the news reminds us that the shocks of climate change and geopolitical events shake the already fragile world we live in, but with our data and solutions, we strive to provide transparency and stability for the world. And I could not be more excited about the prospects for Spire as we work together to create a more sustainable, equitable, and prosperous future right here on planet Earth.

Operator

Thank you. And with that, we conclude today's conference. All parties may disconnect. Have a great evening.