Redwire Corporation
Second Quarter 2022 Earnings
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Presenters
Peter Cannito, Chairman and Chief Executive Officer
Andrew Rush, President and Chief Operating Officer
Jonathan Baliff, Chief Financial Officer and Director
Nicole Taylor, Vice President Financial Operations and Investor Relations

Operator
Greetings, and welcome to the Redwire Second Quarter 2022 Earnings Conference Call. My name is Kevin, and I'll be your operator today. At this time, all participants are in a listen-only mode. We will take questions at the end of this presentation. If anyone should require operator assistance during the conference, please press star, zero on your telephone keypad. As a reminder, this conference is being recorded.

It is now my pleasure to introduce for today's call Nicole Taylor, Vice President, Financial Operations and Investor Relations. Ms. Taylor, you may begin your conference call.

Nicole Taylor
Thank you, Kevin, and good morning, everyone. Welcome to Redwire's Second Quarter 2022 Earnings Call. I am Nicole Taylor, Vice President, Financial Operations and Investor Relations. And with me on the call are Pete Cannito, Chairman and Chief Executive Officer, Andrew Rush, President and Chief Operating Officer, Jonathan Baliff, Chief Financial Officer and Director, and Chris Edmunds, Senior Vice President and Corporate Controller.

We hope that you would see our earnings release, which we issued this morning, and it is posted in the Investor Relations section of our website at redwirespace.com. Let me remind everyone that during the call, Redwire management may make forward-looking statements that reflect our beliefs, expectations, intentions, or predictions of the future.

Our forward-looking statements are subject to risks and uncertainties that are described in more detail on Slide 2. Additionally, to the extent we discuss non-GAAP measures during the call, please see Slide 3, our earnings release, or the investor presentation on our website for the calculation of these measures and GAAP reconciliation.

With that, I would like to turn the call over to Pete. Pete?

Peter Cannito
Thank you, Nicole. Starting with our agenda, you can see we will start with a quarterly update from myself, and then I will turn it over to Andrew, who will give some operational highlights

for the quarter, and then he will be followed by Jonathan Baliff, our new CFO, who will be giving the financial highlights. After we end our presentation, we will open the floor for Q&A.

I also like every opportunity, going back to Slide 6, to point out Redwire hardware. So, as you can see, this beautiful picture of the International Space Station. On the right-hand side, you will see our Roll Out Solar Arrays that were deployed last summer, a remarkable technical achievement with our customer at NASA and our partners at Boeing. We're very proud of that.

Slide 7. Starting with the market overview. So, market demand remains strong, despite the broader macroeconomic environment, and this is primarily due to geopolitical competition for dominance across all segments of the space industry. There is a space station that is currently being deployed by China, and we continue to have a geopolitical space race with Russia.

And this is driving a lot of demand in the industry. And it can't be underscored enough that this is a decades-long trend. This is not just a trend that is going on this year and will go away overnight. This is a decades-long race for competition in space. And that is driving a lot of demand across our industry across all of the different segments. And we're going to talk about that further on in the brief.

On the commercial side, commercial space adoption has proven a little bit slower than expected, but the capability development outlook is still very strong. There are a lot of plans on the drawing board for extraordinary space capability. We are partnering with a number of commercial entities.

And although it is proving to take a little bit longer for some adoption rates and for some of these organizations to get their capabilities out, which does have an impact on near-term revenue, the plans are still there, and the capability is still in high demand. So, this will attract future growth. But, in the meantime, our long-term government contracts across the civil and national security segments that are primarily with government entities give us the financial strength required to remain patient while we wait for commercial space to reach its full potential.

And, of course, there are some interesting developments that occurred in the last quarter, most notably the Russians' threat to leave the ISS. That has increased the momentum behind commercial space stations such as Orbital Reef, of which Redwire is partnered on with our partners, Blue Origin and Sierra Space. Again, this is creating many new high-value opportunities for Redwire. Anecdotally, it just so happened that the Russians made this announcement, that they retracted later, during the International Space Station R&D Conference in Washington. And the buzz that it created on the floor was extraordinary. And it really just underscores the imperative for a commercial space station. And so, we're going to see in the next decade, the development of these commercial space stations. And that's a huge demand driver for some of Redwire's unique capabilities.

Moving to Slide 8, a couple of key takeaways that are going to be discussed in greater depth throughout the brief. One is that our demonstrated heritage on early-stage programs is creating much larger opportunity. We are establishing numerous toeholds on very large programs, and this is because of the heritage that we've been able to demonstrate in the past.

I started out the presentation by pointing out our Roll Out Solar Arrays on the International Space Station. That is one example of how that deployment and the proven heritage that we established with that capability has garnered increasing demand for other organizations who need the same capability. The result is that revenue momentum in the second quarter is up 14.2 percent compared to the year prior and is up 11.7 percent sequentially. This is a result of this virtuous cycle that is being created as a result of our performance, leading to more contracts in higher-growth product lines.

We have many high-probability bids in the pipeline, some that are actually equal to or greater than our total revenue for 2021 in terms of total contract value. So, that just underscores the tremendous amount of opportunity there. So, we're executing a classic land and expand strategy. We have deep customer relationships. We have a long history of working with the marquis customers in the industry. We now have proven heritage on a number of really critical IP-protected product lines. And this is leading to more and larger opportunities for our products.

As you can see, our pro forma adjusted EBITDA in Q2 2022 is negative $4.1 million compared to $2.1 million in Q2 2021 and compared to negative $4.7 million in the first quarter of 2022. So, our EBITDA is improving. But, we are making a significant number of investments, and this is having an impact on EBITDA.

Andrew and Jonathan will get into greater detail, but as an example, one contributing factor, is an increase in our R&D spend. In order to support our revenue growth, we are making a number of investments in research and development. And as a result, our research and development has grown from roughly 3 percent of revenue in 2021 to almost 5 percent of revenue year-to-date. But, as a result of these dynamics in the first and second quarter, we are revising our guidance for the remainder of the year, and we now expect revenue to be in the range of $165 million to $175 million for the year. This is compared to our previous estimate of $165 million to $195 million, so we are guiding towards the lower part of the range.

That does still reflect anywhere from 20 percent to 27 percent revenue for the year, which we believe is healthy. And we are estimating pro forma adjusted EBITDA to be in the range between negative $2 million and $3 million, as we continue to make investments, and we work towards achieving operating leverage associated with additional scale. The investments, however, are starting to demonstrate signs of paying off. Our investments in business development, innovation, and scale drove Q2 2022 book-to-bill performance to 1.68. And Redwire expects to achieve positive adjusted EBITDA in the second half of 2022, driven by this increase in revenue as well as a change in a contract mix with higher gross margins.

Moving to Slide 9. This slide gives you a high-level overview of some of the market trends by industry segment. We continue to see strong growth opportunities in the national security segment, in particular, to include 40 percent growth in the Space Force budget requested for 2023, which is growing faster than the DoD budget topline.

So, in national security, which is a growing area, space in particular is an even faster-growing area, so that, of course, gives us additional confidence in the demand for our sector. This is driven somewhat by that geopolitical competition. And that geopolitical competition goes well beyond just the U.S. market. It also is stimulating additional demand in Europe. And we have seen many European nations are also planning to invest heavily in space in the future.

On the civil side, there, we see a trend towards increasing commercial dependency. I already mentioned that there is an imperative on the civil space side for a commercial space station. But, there are also the successes of things such as Commercial Crew that are continuing to drive new public, private partnerships that is increasing demand for commercial services in the civil space segment.

And, of course, on the commercial side, although there is high volatility, we do see accelerated growth potential as many of the new commercial business models prove themselves out. Although it is the segment with the most volatility, compared to the government segments of national security and civil space, it is probably the segment with the greatest and fastest growth potential over time.

Moving to the next slide and diving a little bit deeper into some ties specifically to Redwire, one of the very exciting dynamics that has been occurring over the last two quarters is that Redwire is providing critical components to some of the fastest-growing programs in these national security markets to include working with the space development agency on their tranche strategy.

We have built a history on working on many classified programs, and we continue to make investments in security infrastructure to include investments in personnel, facilities, contracts, and our robust security processes and policies. The important thing to note here is this is a significant barrier to entry for competitors who are also trying to work with these customers.

No organization can just come off the street and immediately start working in the classified domain of the national security sector of space. So, by Redwire having the history and the capability and the supporting infrastructure, this gives us a competitive advantage, and we continue to invest in this area to expand our ability to execute against a very robust national security pipeline.

In the national security sector, we are positioned to capture a number of high-end portions of the market to include the power and radio frequency systems. And our digital engineering sensors and cameras, as well as large, deployable structures, are all high-growth, high-demand areas in fast-moving swim lanes for the national security customers.

So, we feel that our product line in particular is well-positioned for what the national security sector is buying. And as an example of that, we talked about last quarter our recent success in procuring the Link-16 antennas for the SDA architecture. The net result is large, multi-year contract awards in 2022 that have high probabilities of follow-on work.

For those of you who follow the DoD sector, you know that the key is to be baselined and established at the beginning of a program. And once you're established in the baseline, as the program grows and leads further into the production phases, this is a very strong result for multi-year, reliable revenue. So, the DoD will continue to spend in space, and our technologies are being baselined on many of these high-priority programs.

Moving to the next slide. On the civil side, I've already mentioned that plans for commercial stations in LEO are accelerating due to competition from the Chinese and the uncertainty with the Russian partnership on the ISS. Redwire in particular, with our on-orbiting manufacturing and leading space biotechnology solution, is positioned as one of the few companies with actually proven capability to outfit these future commercial LEO destinations.

So, as I mentioned, this is going to be a decade-long development cycle between now and 2030, where organizations are going to be investing in key Redwire capabilities to outfit these future commercial LEO destinations. But, we can be patient because, as we are developing the next-generation technologies, we continue to provide our heritage technologies on the ISS, which will continue on to 2030. This gives us visible revenue streams in the near-term as we await many of the future revenue streams on the commercial side to gain steam.

In addition, on the civil side of the business, we're really excited about the Artemis I launch that is scheduled to occur on August 29th. Of course, Redwire provides the eyes of Orion. We provide the camera systems for the Orion capsule as part of the Artemis program. So, we're very excited to see that launch successful, and we're very proud of our participation in that program.

Additionally, NASA is preparing to award a second human landing system award. And Redwire is positioned to play a major role on multiple teams as a key supplier. So, there is now a race to the moon to establish a permanent presence, and ultimately to Mars. And this is creating additional demand for our capability, where Redwire is an industry leader in such IP-critical-driven technologies like 3D printing in space.

Moving to Slide 12. Of course, in commercial space, we're offering platform-agnostic technologies as a diversified portfolio, and this is allowing us to get a diversified toehold with a number of key commercial entities across the industry. This diversification hedges the volatility associated with the commercial space segment.

And in a very interesting dynamic, Redwire is establishing itself as a key player in the supply chain of many of these key commercial space capability providers. And in fact, we are turning our customers' struggles with supply chain into a positive opportunity for Redwire because they are looking to strengthen their supply base on a number of key technologies.

As a matter of fact, a number of companies have reached out to us to co-invest in developing products that are critical to their future plans, where they feel that the supplier base is weak, which will ultimately lead to additional highly sought-after subsystems and critical components that we will be adding to the Redwire portfolio, based on proven customer demand.

So, we continue to, but in addition to being a key supplier, we continue to demonstrate new potential markets. We announced the first sale of our space manufactured optical crystals. So, in some cases, we are a critical supplier, and in other cases, we are actually market makers. And certainly in the area of space-based manufacturing and biotechnology, we're a market maker.

And we were very excited on the commercial front with our announcement of our biotech, space biotech partnership with our partners at Eli Lilly, a clear demonstration that the future potential for space biotech is being looked at by many stalwart companies in the pharmaceutical industry.

So, we've talked about the imperative for a commercial space station like Orbital Reef, and that is gaining significant momentum. And we have a number of IP-driven products that are absolutely critical to the success of those platforms.

Moving to Slide 13, covering down our strategic positioning. So, where does this leave us? Well, we're increasing our near-term investment in order to achieve higher revenue and profitability as we seek to gain operating leverage. Jonathan is going to cover that a lot in his segment as well. We are focused on operational efficiencies and financial resiliency to endure uncertain economic conditions. Our heritage, deep customer relations, long government contracts, and our ability to work in the classified domain, allows us to be patient as we see the commercial markets develop over time.

We are gaining many toeholds and improving our penetration in large multi-year programs with high production potential. This should lead to more rapid scaling in later phases of those programs. And, of course, customer satisfaction and execution success is a key catalyst for follow-on opportunities. This is part of our land and expand strategy and is leading to significant momentum in our pipeline, which Andrew will talk about in greater detail.

So, at the end of the day, what's very exciting about Redwire is we have many modes. We have our existing flight heritage that just cannot be created overnight. We have deep customer relationships that are leading to co-investment to improve the supply chain. We have diversified products across all the different segments. But, particularly in the commercial segment, this is giving us some resiliency against the volatility.

We have long-term government contracts, which allows us to be patient, unique facilities to include an exciting new facility that Andrew is going to talk about out in Goleta, where we're going to build the largest solar array ever to be deployed, strong IP, particularly in the area of biotechnology and in-space manufacturing, and, of course, that classified security infrastructure. These altogether provide us a unique, sustainable, competitive advantage as part of our positioning as the market grows. So, as you can see, Redwire's products and services of offering our flight-proven, wide-reaching, strategically diversified products position us well for the future.

To further expound on that, I'm now going to turn it over to Andrew, who will cover the operational highlights for the second quarter.

Andrew Rush
Thanks, Pete. We are always proud to highlight missions that we're a partner and an enabler of. So, here on Slide 14, we see the NASA and Johns Hopkins Applied Physics Laboratory mission, the Double Asteroid Redirection Test spacecraft. This was launched this year and is powered by our Roll Out Solar Arrays, and also uses our navigation components, and is on its way to demonstrate the ability to kinetically impact an asteroid and change its trajectory, a really, really awesome mission that we're proud to be a part of.

So, turning to Slide 15, I'd like to walk through some of our many operational highlights and project achievements. These will carry over to the next few slides in more detail. First, in Quarter 2, we continued deliveries of products and services for multiple national security, civil, and commercial space customers, including for multi-year, multi-ship missions, and satellite constellations.

Our operational successes have led to additional projects and expanded work scope via cross-selling of products and services. Our teams increased on-time delivery, including for large solar array programs and navigation component projects. These operational successes have led to increased backlog realization and have driven revenue growth and improved gross margins.

Sales in the quarters have improved. We will spend more time on this in a moment. But, as a preview, as Pete mentioned, our book-to-bill ratio in Quarter 2 was 1.68, which was up from 0.45 this time last year. In order to fulfill our customer needs, now and in the future, we are also continuing to make infrastructure investments to expand production capacity and increase execution efficiency.

Finally, let me point out the image on this slide. Those are members of the Artemis I expanded structure additive manufacturing team, who are presenting a one-third length test print. Flight software and flight-like avionics made this beam, a major assembly integration and test milestone as this first-of-its-kind mission moves closer to launch. We are very proud of the progress that they are making.

Now, moving to Slide 16. As I mentioned, our teams have continued to deliver for our customers throughout this year, enabling a wide variety of NASA, national security, and commercial missions to proceed. We delivered deployable structures and antennas to support national security missions.

We delivered Roll Out Solar Arrays for integration by commercial customers as well as for a NASA mission and turned over multiple satellites' worth of navigation components to a new commercial customer for utilization on several missions. We delivered camera systems and wiring harnesses for human rated and robotic spacecrafts. We also readied our BioFabrication Facility for launch to the International Space Station later this year to continue path-finding commercial 3D bioprinting in space.

In addition to the previously mentioned progress that we're making on Archinaut I, our teams have continued to provide digital modeling and simulation services to satellite constellation operators. Of particular note, on-time deliveries improved in Quarter 2, giving us both more consistency in revenue generation as well as a tailwind for follow-on work.

Quarter 1 of this year faced challenges in vendor performance delays as well as delays in subcontracting. I'm pleased to report that many of those challenges have been overcome, driving increases in Quarter 2 revenue, compared to Quarter 1, as well as setting up a stronger second half of this year.

Now, supply chain pressures do remain, but we continue to explore ways to strengthen our supply chain by expanding our vendor base and building strategic partnerships. Redwire is poised to continue delivering on this momentum in the second half of 2022.

Moving to Slide 17. These operational successes have driven improvement in our performance in Quarter 2 compared to Quarter 1. Specifically, as Jonathan will detail in a few minutes, our revenues were $3.9 million higher in Quarter 2 of this year compared to Quarter 1. And our gross margins increased 3.3 percent over the same period.

In addition to driving those improvements in financial performance, operational successes are leading to expanded opportunities for new orders and programs. New and existing customers are expanding their orders with us. Many existing customers are also increasing Redwire's work share by not only buying products that they have traditionally purchased from us but also engaging Redwire to provide other products and services previously procured from elsewhere.
For some, Redwire is truly becoming a one-stop space shop.

In Quarter 2, we have also been successful in expanding multi-shipset, multi-year programs, and establishing beachheads with new constellations. These are clear signals that our business development and operational success is driving performance and future growth.

Moving to Slide 18. Building on that, I'd like to next discuss in detail our backlog and sales pipeline. Our total backlog is a key business measure, consisting of three elements, contracted backlog, awards and negotiation, and additional scope to complete existing contracts. Our total backlog consists of a diverse set of products and services, protecting against downside exposure from any single product or service.

Between Quarter 1 of 2022 and Quarter 2 of 2022, our contracted backlog grew from $137.3 million to $162.1 million, an 18.1 percent increase. This growth in contracted backlog was driven by our teams doubling bookings made in Quarter 2 relative to Quarter 1. Specifically, in Quarter 2, we contracted $61.6 million in new work compared to $30.4 million in new work in Quarter 1 of this year.

This strong bookings performance led to a reduction in the awards and negotiation element of total backlog as well as an overall reduction of total backlog, from $273.9 million to $251.7 million over the same period. As I will discuss in a moment, our robust sales pipeline provides confidence that our total backlog will grow in the future. Importantly, the percentage of our total backlog that is now fully contracted went up from 50.1 percent to 64.6 percent, increasing our confidence and performance in the second half of this year and into 2023.

As I mentioned, our book-to-bill ratio also improved to 1.68 for Quarter 2 compared to 0.45 this time last year. For comparison, our book-to-bill ratio for Quarter 1 of 2022 was 0.93. This improvement in book-to-bill ratio and increase in contract backlog provides a tailwind for execution in the second half of 2022.

Moving on to Slide 19. Year-to-date, we have booked over $90 million in new work. Turning to our sales pipeline, we believe its robustness will drive increased sales momentum and increased total backlog. Our total pipeline is approximately $3.5 billion across approximately 500 opportunities. Of that total pipeline, $556 million is currently submitted to customers as proposals and awaiting their decision.

This is up from $249 million in submitted bids at the end of Quarter 1 of this year. Now, of these $556 million in submitted bids, $264 million of that, or approximately 47 percent, have estimated selection dates in 2022. In addition to that significant amount of outstanding bids at the end of Quarter 2, our team was working on an additional $83.1 million in proposals, which have selection dates in 2022.

The time between selection and contracting, or authorization to proceed, varies from customer to customer between an average of one month to three months. Our pipeline is a healthy mix of national security, civil, and commercial space opportunities, which increases its resilience to macroeconomic forces while providing many opportunities for accelerating growth. Our high visibility into our near-term pipeline provides us with confidence in seeing growth on our bookings and total backlog in the second half of 2022 and into 2023.

Moving on to Slide 20. I'd like to turn to detailing how we are ensuring we have the capacity to continue to deliver for our customers as we scale. As a high-growth space company, we have made, and are continuing to make, investments in physical and operational infrastructure to increase our operating leverage and profitably deliver quality products and services on time.

In Quarter 2, we commissioned approximately 30,000 square feet of new design and production space. These facilities provide us with expanded capacity for RF antenna production and deployable structure production in Colorado and robotics and mechatronics production in Europe.

Looking forward to Quarter 3, we are on track to complete a new 40,000 square foot facility to provide expanded solar array production capacity for both our Rigid Panel Solar Array lines and our Roll Out Solar Array products. This Goleta, California-based facility will give us both increased through-put capacity for all sizes and types of arrays as well as enabling the construction and test of even larger solar arrays.

In addition to these physical plant infrastructure investments, we are continuing to improve and unify our processes and workflows to enhance our operational efficiencies. Importantly, these investments support proven technologies and product lines and are informed by customer demand signals, giving us high confidence in strong returns on these investments.

They are not "build-it-and-they-will-come" types of investments. Our physical and operational infrastructure investments are currently bearing fruit, as seen in our increased revenue and gross profit. They will enable us to meet increased demand from our sales momentum in the second half of 2022 and beyond.

With that, I'll hand it over to Jonathan to walk through our financial highlights.

Jonathan Baliff
Thank you, Andrew. So, let's review the financial specifics of the second quarter and the first half of 2022. I will help quantify and expound on a number of the themes that Pete and Andrew spoke about. Please turn to Slide 22 in a second. On slide twenty-one I'm going to do the same thing that Andrew and Pete did. These are our excellent team members here with the aforementioned ROSA, the Roll Out Solar Arrays in Goleta. So, we just want to mention that.

All right. Let's turn to slide 22 for some key financial takeaways. As Pete spoke about, our second quarter fiscal year 2022 revenues increased 14.2 percent year-over-year to $36.7

million. Our second quarter net loss was $77 million compared to a net loss of $15.9 million in the second quarter of fiscal year 2021.

This net loss included mark-to-market on our warrants but also an $80.5 million non-cash impairment expense. Let's briefly talk about this non-cash impairment. During the second quarter, there was a decline in the company's market capitalization, driven by general economic conditions, including heightened inflation, rising interest rates, and volatility in the capital markets, which triggered a test of our goodwill tangible and intangible assets. Based on this test, we incurred a pretax impairment charge of $80.5 million. These impairments during the second quarter of fiscal year 2022 did not have any impact on Redwire's revenue or supply chain contracts, our liquidity, or the company's compliance with our credit agreement with Adams Street Partners.

Our adjusted EBITDA loss of $4.1 million in the second quarter of 2022, which adds back this non-cash impairment spent among a number of other non-cash and one-time add backs, are detailed on page 33 of this presentation.   One of the themes of the second quarter is improvement over the first quarter in 2022 in a number of important commercial and operational areas already discussed. And Redwire has also demonstrated this financially with revenues that were 11.7 percent higher sequentially, gross margins that were 3.3 percent higher sequentially. The second quarter adjusted EBITDA loss of $4.1 million is 13.2 percent better than the $4.7 million adjusted EBITDA loss in the first quarter.

Finally, second quarter free cash flow, which we care about a lot, it was a use of $500,000, is markedly better than the free cash flow use of $6.4 million in the first quarter of 2022. And with a book-to-bill of 1.68, which is detailed on page 32 of this presentation, we anticipate this trend to continue, as we expect to achieve positive adjusted EBITDA in the second half of fiscal year 2022.

However, a number of factors we will speak about in the next few pages, including the investments in business development, R&D, and public company costs that have helped expand our opportunities that Andrew and Pete talked about in 2022, have also impacted our adjusted EBITDA for the first half. Correspondingly, management is tightening our previously provided revenue guidance and now expects revenues to be in a range of $165 million to $175 million. And we are also revising the pro forma adjusted EBITDA to be in a range between a negative $2.0 million and positive $3 million.

Please turn to Slide 23. As part of our second quarter call, we want to provide a bit more detail into Redwire's revenue growth by using a year-to-date GAAP comparison shown on the left and also the GAAP sequential quarters shown on the right. For the year-to-date second quarter comparison of 2022 to 2021, revenues increased by $5.8 million, or 9.1 percent, for the six months ended June 30, 2022 compared to the six months ended June 30, 2021.

As you can see from the buildup of customers, the revenue increases are distributed among them with no one class predominant, similar to what was previously discussed by Pete and Andrew. These revenue increases are principally attributed to our deployable and component lines of business.

Their revenue increases were partially offset by certain other lines of businesses year-over-year. But, this is important to note. As in previous years, these other lines of businesses created much of Redwire's previous revenue growth. And they will do so in 2023 and beyond as their TAM is significant. This shows the benefit of Redwire's diversified infrastructure platform.

When looking at the chart on the right, the sequential 2022 quarters show a rebound in our second quarter by 11.7 percent. And again, this is driven by the deployables lines of business. The reason this is significant is one, the fourth quarter of 2021 saw a similar impact from this business line's performance and also our components' line of business; and two, we faced headwinds in certain other lines of businesses in the first half of this year of 2022, and their revenue would have been higher. But, much of that revenue in certain contract work was delayed into the second half, and we'll see that revenue come back in second half 2022 and 2023.

Redwire is not an inherently seasonal company when it comes to revenue recognition. However, our contracts, our organic acquisition of our contracts can be uneven, as the sequential numbers show, and as best predicted by our book-to-bill, which is currently, as we talked about, 1.68. But, a year ago, it was 0.45 in the second quarter of 2021.

Please turn to Slide 24. Similar to revenue, we want to provide a bit more detail concerning Redwire's adjusted EBITDA profile using a first-half year to bridge on, shown to the left, and also a sequential quarter, shown on the right. On the left chart, for the year-over-year comparison of 2022 to 2021, adjusted EBITDA decreased from $2.6 million in the first half of 2021 to an adjusted EBITDA loss of $8.7 million in the first half of 2022, even though revenue increased during that same period.

As you can see from the bridge, our first half 2022 adjusted EBITDA was positively impacted by additional revenue growth: We continue to grow revenue. This was a $1 million positive contribution on a gross margin neutral basis, which was contributed by Redwire's continued strategic positioning in certain lines of business. But, our year-to-date gross margins, which is shown on the next bar, contributed to a negative $4.9 million, as this year-over-year decrease was driven by a contract mix that had lower gross margins and more development costs to complete certain programs.

As you can see on the next bar, the negative $7.4 million contribution demonstrate what Pete and Andrew were speaking about. Redwire continues to make investments in business development, R&D, and public company costs that have helped expand the size of the contract opportunities, but it has impacted our first half of 2022 EBITDA, especially the first quarter of 2022. And this adjusted EBITDA included cost efficiencies that the management actually implemented. However, we've been deliberate about balancing those efficiencies with the investments as one, we expect revenue to come in in the first quarter that was delayed and now will come in in the second half of 2022, and, two, we are purposely investing in Redwire to achieve scale, operating leverage, and profitable growth, with much of the incremental 2022 SG&A costs foundational to this unique and growing space company.

On the right chart, the sequential quarterly adjusted EBITDA improvement from our Q1 to Q2 in 2022 demonstrates operating leverage coming back into the company, due to a number of factors. If you compared the 2022 Q1 bar to Q2, you would see the opposite of what you saw on the left-hand chart. New contract wins, better contract mix, and higher gross margins, much of it in our deployable and components lines of businesses increasing gross margin.

Contracts inherited and past acquisitions, which were priced with lower gross margins and did not have the ONE REDWIRE effect, they are rolling off, meaning that the second quarter of 2022 is an early indication and a better reflection of Redwire's profit potential. Redwire's recent contract wins were priced to reflect the ONE REDWIRE differentiated solutions and have higher gross margins. These contracts will displace the contracts that are rolling off.

Finally, the investments that we made in operating expenses are leveling off, and we're going to be more efficient in the future to bring more operating leverage to Redwire. As an example, absolute SG&A went down sequentially by 14.5 percent and SG&A margin actually went down from 63.7 percent as a percentage of revenue to 47.8 percent as a percentage of revenue in the second quarter of 2022. That is a 25 percent decline.

Please turn to Slide 25. So, to summarize the previous two slides and bring it together for our 2022 guidance, please see these two charts that we introduced on our earnings call on March 31st. Concerning revenue, we assess our 2022 guidance based on one, our actual revenue recognition as the year progresses, we're talking about the first half on today's call, two, our total backlog and backlog quality that Andrew spoke about, and, three, the expanded size of contract pipeline opportunities in 2022, with the book-to-bill trends that we also spoke about. These all help quantify our revenue guidance range in a systematic way.

Some thoughts on 2022 guidance. Continuing Pete's revenue momentum theme and the actual second quarter sequential revenue improvement on a sequential basis, our 1.68 book-to-bill, we believe our second half revenue outlook is markedly better than the first half. However, a number of factors that we already spoke about impacted the first half actual revenue. So, management now is tightening our previously provided 2022 guidance range to $165 million to $175 million.

Turning to adjusted EBITDA. We assess our 2022 adjusted EBITDA guidance on one, the analysis concerning revenue guidance I already spoke about, and, two, our contract mix, especially any accretion or dilution to actual and forecast gross margins, and, three, finally, the investments we made in operating expenses and those trends quarter-over-quarter and what we believe we can achieve in the second half in cost efficiencies.

Again, continuing Pete's revenue momentum theme, the actual second quarter sequential revenue improvement of 1.68 book-to-bill and the contract accretion we expect, our second half adjusted EBITDA outlook is significantly and markedly improved than first half. However, a number of factors that we already spoke about for the first half actual adjusted EBITDA, notwithstanding the second half improvement, management is updating our previous 2022 guidance for pro forma adjusted EBITDA to a range of a loss of $2 million to a positive $3 million.

Please turn to Slide 26. Let's discuss free cash flow for the second quarter and finish it up with liquidity before I turn it over to Pete. So, free cash flow is computed, as we've been doing for the last year, as adjusted EBITDA less capital expenditures and changes in networking capital. And it provides a perspective on our unlevered free cash flow generating capabilities before non-cash items and certain one-off expenses.

This measure was used in last year's S-4, and we want to be consistent with what we've shown because: we do care about this cash measure. And we are improving upon it, and we're working to do even better in the future. Much of the improvement sequentially this quarter is due to the improvement in the sequential revenue and EBITDA that I already spoke about. And we expect the second half of the year to show improvement from the first year for similar factors.

On the right-hand chart, we show our available liquidity as of June 30, 2022, which totaled $25.9 million, comprising $10.9 in cash and $15 million in available borrowings under our credit facilities. And the chart shows that we stayed fairly steady from the previous quarter.

Some points on liquidity are important to note. One, we are seeing excellent support from our shareholders and Adams Street Partners during the quarter. Our August 8, 2022 Redwire entered into the Fourth Amendment to the Adams Street Capital Credit Agreement, which is detailed in our earnings release. The fourth amendment, among other things, suspends the requirement concerning certain leverage ratios as we move into the future and also shows there was a support guarantee, a limited one, from our largest shareholder of $7.5 million. So, they and Adams Street continue to provide support and obviously provide the critical liquidity we need to grow.

So, to finish the earning presentation up, I'm going to turn it over to Pete for any concluding remarks on Slide 27.

Peter Cannito
Thank you, Jonathan. So, in summary, we're building a foundation for near-term improvement

and long-term growth. The first quarter and second quarter of the year were lower than expected. But, Redwire is the kind of company that you measure in years, if not multi-years, due to the lumpy nature of our revenue and the extraordinary pipeline that we have developed as we continue to make investments.

Demand for our products and services is strong, driven primarily by a decades-long geopolitical competition for dominance in space. And our proven technology is not dependent on a build-it-and-they-will-come scenario. We are generating value-added products today. We continue our pace of launches in 2022. And we are supporting flight hardware now in the present.

Redwire, as we mentioned, is continuing to make investments in business development and R&D that have helped expand the size of our programs, but this is having an impact on our adjusted EBITDA for the first half of 2022. However, the investments are paying off.

And our second half revenue growth, underpinned by significantly higher 1.68 book-to-bill and combined with a change in contract mix and higher gross margin, provides for an improved outlook for the second half of 2022. As revenue and operating leverage improves sequentially, Redwire expects our financial outlook to improve. We see positive EBITDA for the second half of the year and great momentum going into 2023.

And with that, we will turn it over to the moderator for questions.

Operator
Thank you. We will now be conducting 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 your line is in the question queue. You may press star, 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 star, one.

One moment, please, while we poll for questions. And once again, that's star, one to be placed in the question queue. As a reminder, that's star, one to be placed in the question queue. If there are no questions at this time, I'd like to turn the floor back over to management for any further or closing comments.

Peter Cannito
Thank you very much, and have a good day.

Operator
Thank you. That does conclude today's teleconference and webcast. You may disconnect your line at this time, and have a wonderful day. We thank you for your participation today.