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ATOM.OQ - Q1 2024 Atomera Inc Earnings Call

EVENT DATE/TIME: APRIL 25, 2024 / 9:00PM GMT

## CORPORATE PARTICIPANTS

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## CONFERENCE CALL PARTICIPANTS

**Richard Shannon** *Craig-Hallum Capital Group - Analyst*

## PRESENTATION

**Mike Bishop** - *Atomera Inc - Investor Relations*

Hello, everyone, and welcome to Atomera's first quarter fiscal year 2024 update call. I'd like to remind everyone that this call and webinar are being recorded, and a replay will be available on Atomera's IR website for one year. I'm Mike Bishop with the company's Investor Relations.

As in prior quarters, we are using Zoom, and we will follow a similar presentation format with participants in a listen-only mode. We will open with prepared remarks from Scott Bibaud, Atomera's President and CEO; and Frank Laurencio, Atomera's CFO. Then, we will open the call to questions. If you are joining by telephone, you may follow a slide presentation to accompany our remarks on the Events and Presentations section of our Investor Relations page on our website.

Before we begin, I'd like to remind everyone that during today's call, we will make forward-looking statements. These forward-looking statements, whether in prepared remarks or during the Q&A session, are subject to inherent risks and uncertainties.

These risks and uncertainties are detailed in the Risk Factors section of our filings with the Securities and Exchange Commission, specifically in the company's annual report on Form 10-K filed with the SEC on February 15, 2024. Except as otherwise required by federal securities laws, Atomera disclaims any obligation to update or make revisions to such forward-looking statements contained herein or elsewhere to reflect changes in expectations with regards to those events, conditions, and circumstances.

Also, please note that during this call, we will be discussing non-GAAP financial measures as defined by SEC Regulation G. Reconciliations of these non-GAAP financial measures to the most directly comparable GAAP measures are included in today's press release, which is also posted to our website.

Now, I would like to turn the call over to our President and CEO, Scott Bibaud. Scott, go ahead.

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**Scott Bibaud** - *Atomera Inc - President, Chief Executive Officer, Director*

Good afternoon, and welcome to Atomera's update call covering the first quarter of 2024. The past three months have seen more customer activity progressing to the proposal stage than any in our history. This unprecedented level of interest in our technology as a result of announced customer commercialization, widespread recognition of the efficacy of our MSC technology, and detailed solutions to these issues faced in today's complex transistors. I will talk more about customer progress after a short comment on the semiconductor market.

This year, we see the semiconductor industry modestly growing led by companies executing in the AI space. The pressure on leading-edge logic fabs to advance their latest nodes with higher performance per watt is intense. Most of the growth in the industry is happening here as well as in DRAM, which is snapping back strongly after contracting throughout 2023.

In addition, Consumer Cellular is expected to show modest growth. Automotive, with its associated power and analog component companies, have softened as they work through inventory and see new competition from China, although the consensus seems to be that the outlook for the second half of the year is better.

What does all this mean for Atomera? We are a company that benefits from modest capacity utilization at our IDM and foundry customers so they can run R&D wafers. We continue to see this favorable environment for the medium term, except in the bleeding edge where capacity is tight, offset by a strong desire to improve performance yield and cost of those new manufacturing processes. Right now, industry dynamics and customer interest indicate a strong willingness to invest.

Now let's review customer activity. As you know, our first announced customer on track towards production is STMicroelectronics, who are currently incorporating MST into the design of their next-generation smart power products. We continue to work closely with them on this effort, and their development progress is on track to a production release, which will result in royalty revenue for Atomera.

Smart Power products belong to the analog, power, and discrete MEMS and sensors, our APMS Group, which ST reports publicly. In their recent earnings announcement, ST reported \$2.2 billion in APMS revenue for the first quarter of this year, so the potential of this business is very large.

As I've made clear, our first priority as a company is to help ST get the highest possible performance out of MST and to get it into production as quickly as possible. Our next priority is to put other customers under that same path to production, and I believe we're making long strides in that direction.

In the last three months, we have submitted a historically high number of proposals for licenses and JVAs, and these have been for both Phase 1 and Phase 3 customers. Although none of them have closed yet or they would have been announced, we are currently taking a lot more shots on goal than has historically been the case.

That said, we still haven't found our way into JDA1's net. We have proven and they acknowledge that MST can overcome every challenge they've given us. From past experience, we know the decision by a BU to move forward with MST is often a matter of intersecting with the customers move to a new process or node. So I believe that our continued discussions with JDA1 will ultimately bear fruit.

With JDA2, we have gotten our first peak at data, and it looks good. Although the full battery of testing has not been completed yet, early results look promising, with Atomera providing significant improvements in some of the customers' most critical requirements. If the final results, including a much wider set of specs, look equally good, we hope to put a license in place and start development towards production.

Likewise, at our previously announced fabless licensee, DOE planning and wafer starts are ramping up to determine if MST will be included in their next-generation RF products. If so, this would be another large license and royalty opportunity for Atomera, and we believe it would influence other RF SOI customers to license MST.

Our foundry licensee just completed a new round of MST CAD and is interested in the possible incorporation into one of their next-generation process nodes as well. They're seeking approval to start a new set of wafers as we speak.

As you can tell, each of our licensees is making an effort to incorporate MST into their upcoming technology releases, but we also have proposals out with multiple companies that are not yet licensees. The proposals fall into our four focus areas, except one, which is an entirely new high potential area.

During the last quarter, we've had substantive discussions about working together with almost all the major companies in the advanced node and memory area. In the advanced node segment, we are offering a variety of solutions to the challenges of making the incredibly complex Gate-All-Around structures used at the bleeding edge.

The silicon data and TCAD simulations we are using to validate these solutions are constantly being refined to provide more detail, which is critical to winning these customers. In addition, we continue to secure patents around structures in this quickly evolving area. As an example, just this week, we were notified that our patent titled Gate-All-Around device, including a superlattice, has been allowed and will formally issue next month.

In memory, we are focusing on providing performance upgrades to DRAM to meet the needs of AI while still delivering on the cost requirements that dominate this segment. It's a tricky balance. But in memories, MST not only improves performance, but it also can lower the cost of the chip itself, making the cost benefit analysis very favorable.

In the RF SOI segment, we have customers who are running or planning to run wafers at most of the largest manufacturers. And our collaborations with major players in the power semiconductor space also continues.

I do understand investors' frustration that all the good work happening inside is not generating business announcements on the outside. We believe that will happen in time. Our focus has been on making these proposals turn into revenue, and I think we're making good progress. We expect to make announcements in the coming quarters in several of these areas.

Before I bring this presentation to a close, I want to let you know about a market segment that represents an entirely new source of IP-protected potential revenue for Atomera beyond our main channel of business. As part of our ongoing R&D, we have developed new variations of our silicon lattice films, which have opened additional potential for us in the fast-growing sector of compound semiconductors.

We are exploring a number of potential applications, including those involving silicon carbide, gallium nitride, silicon germanium, and other compounds that could have applications in enhancing AI chips and quantum computing. I will highlight just one we are working on: gallium nitride, or GaN, which is a wide-band-gap material that can be used to produce devices capable of operating at higher temperatures, frequencies, and voltages than those based on pure silicon.

The market for GaN and power electronics is growing rapidly, dominated by mobile and consumer applications and with a very bright future in automotive. Many of you may recently have switched to a much smaller, faster wall charger, and that was likely enabled by GaN. Our recent report by the Yield Group said that the power GaN market grew by 41% in 2023 and will likely increase at a CAGR of 46% over the next five years, potentially exceeding \$2 billion per year by 2028.

Compound semiconductor materials have traditionally been difficult to manufacture due to crystal defects, some of which can be caused by a mismatch with non-native substrates. The mismatch creates stresses at the interface which propagate through the wafer, causing cracks and other defects that have limited both the size and the yield of wafers, making economical manufacturing difficult.

Atomera's MST film can relax or de-strain the interface between two different crystal lattices, and we've been filing a number of patents over the years related to this effect. Recently, we began working with one of the world's leading authorities in compound semiconductor fabrication, Professor Edwin Pinar at Texas State University, to investigate how MST could help solve this dawning manufacturing problem.

A material which can significantly improve the quality of GaN wafers and potentially enable them to be manufactured at a larger size is a game changer that the industry is currently seeking. Early experiments growing GaN wafers using MST have shown very promising results. While we still have work to do, if our current trajectory continues, we should be able to enter the market and generate revenue much more quickly than in our traditional engagements with semiconductor customers, potentially even before the end of this year.

There's a lot happening at Atomera these days. In addition to all the customer commercial activity and the potential expansion into the compound semiconductor space, we have been evaluating a large number of potential R&D foundry partners, recruiting new marketing talent, working on some critical partnerships, and becoming more active in the CHIPS and Science Act.

We are very optimistic about the prospects opening before us, any one of which could take us over the top as a company. Our ST engagement has the potential to form the base of revenue for our company, and each of the areas I've outlined can grow on top of that base. Compound

semiconductors would represent a new segment for us, one with much faster time to revenues; while our traditional business continues to have a massive TAM rich with opportunities for MST.

Although we're advancing on many fronts, our team remains laser-focused on converting these excellent prospects into licenses that will make Atomera into a profitable and diversified technology leader in the semiconductor industry. Thanks for taking the journey with us.

Now, Frank will review our financials.

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**Francis Laurencio** - Atomera Inc - Chief Financial and Accounting Officer

Thank you, Scott. At the close of the market today, we issued a press release announcing our results for the first quarter of 2024, and this slide shows our summary financials.

Our GAAP net loss for the three-months ended March 31, 2024, was \$4.8 million, or \$0.19 per share, compared to a net loss of \$5 million, or \$0.21 per share, in the first quarter of 2023. In Q4 of 2023, our GAAP net loss was \$4.6 million, which was \$0.18 per share.

Revenues were \$18,000 in Q1 of 2024 compared to \$550,000 in Q4 and zero in Q1 of 2023. GAAP operating expenses were \$5 million in Q1 of 2024, which was a decrease of approximately \$148,000 from \$5.2 million of OpEx in Q1 2023. This decrease in operating expense was mainly due to a \$178,000 decline in R&D expenses, reflecting the closure of our outsourced foundry, TSI Semiconductors, at the end of January.

General and administrative expenses increased by \$69,000, and sales and marketing expense decreased by \$39,000. Sequentially, our GAAP operating expenses decreased by \$300,000 from Q4 2023 to \$5 million in Q1, reflecting a \$134,000 decrease in R&D expenses also due to the R&D -- also due to the TSI closure, a decline of \$102,000 in sales and marketing expense due to lower headcount, and G&A expense declining by \$64,000.

Non-GAAP net loss in Q1 2024 was \$4 million and compares to a loss of \$4.2 million in Q1 2023. And as with our GAAP results, this was primarily due to lower R&D expenses. Sequentially, non-GAAP net loss increased by \$228,000 from \$3.8 million in Q4, as lower revenues were partly offset by the decline in operating expenses.

The differences between GAAP and non-GAAP operating expenses in all periods presented are primarily due to non-cash stock compensation expenses, which were approximately \$1 million in both Q1 of 2024 and in Q4 2023 and compares to \$927,000 in Q1 of 2023. Our balance of cash, cash equivalents and short-term investments on March 31, 2024, was \$19.3 million compared to \$19.5 million at the end of 2023.

During Q1 2024, we used \$4.1 million of cash in operating activities. And we sold approximately 510,000 shares under our ATM facility at an average price per share of \$8.06, resulting in net proceeds of approximately \$4 million. First-quarter operating cash flow includes the collection of \$550,000 of fees invoiced after meeting a key milestone in Q4 under our commercial license. As of March 31, 2024, we had 26.9 million shares outstanding.

Revenue in Q1 was approximately \$18,000 and consisted of recognizing three months of revenue under the MST CAD license to a large semiconductor manufacturer that we announced last quarter. We expect to recognize approximately that same \$18,000 of MST CAD license revenue from this customer for the remainder of 2024.

For Q2, we expect our total revenue will be approximately \$50,000 consisting of the MST CAD license and engineering services. As I stated in our call last quarter, the next major revenue milestone under our agreement with ST will be the grant of the distribution license upon completion of the qualification process, which is largely under ST's control. So I cannot provide guidance on the timing for recognizing that revenue.

Moving to our expense guidance. Given the lower operating expenses in Q1 due to the lower outsourced R&D spending, which will not ramp back up until we have a replacement for TSI, I'm reducing our full-year guidance for non-GAAP operating expenses to a range of \$16.5 million to \$17.25 million. We also expect to add several headcount this year in sales and marketing and engineering, and our expense guidance reflects the impact of those planned new hires.

With that, I'll turn the call back over to Scott for a few summary remarks before we open up the call to questions. Scott?

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**Scott Bibaud** - Atomera Inc - President, Chief Executive Officer, Director

Thank you, Frank. I'm proud of the progress we've made in the last quarter, and I hope you get a sense of the momentum we have underway both in development and in new production opportunities. Our team is confident that it's only a matter of time before we can announce license deals that will further solidify the potential of Atomera's business for the future.

In addition, it is great to give you a peek at our early compound semiconductor work, which could form a whole new revenue stream for the company. We are doing everything in our power to get ST to production quickly while simultaneously building a diversified, sustained business around that first deal.

Thanks as always for your support. Mike, we can now take questions.

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## QUESTIONS AND ANSWERS

**Mike Bishop** - Atomera Inc - Investor Relations

Okay. Thank you, Scott. (Event Instructions) Richard Shannon, Craig-Hallum.

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**Richard Shannon** - Craig-Hallum Capital Group - Analyst

All right. Mike, can you hear me?

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**Mike Bishop** - Atomera Inc - Investor Relations

Yeah.

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**Richard Shannon** - Craig-Hallum Capital Group - Analyst

Excellent. Hi, Scott and Frank. Thanks for taking my questions. I guess maybe I'll ask the first one here on a new language you've been using here -- and you put it in your press release as well -- but regarding proposals, record number of proposals this quarter versus last.

I guess, just to understand the significance of this, to what degree are these proposals a push mechanism for you versus a pull mechanism from your customers to get an understanding of true demand here and interest? How do we take that?

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**Scott Bibaud** - Atomera Inc - President, Chief Executive Officer, Director

Yeah, Mike. I'm glad you asked that question because it's important to understand. We don't push proposals out. We don't just generate proposals and send them to people. The only time we make a proposal is when we've gone far enough down the road with a customer in our work that they are interested in receiving a proposal from us.

Of course, we share budgetary ideas about what doing business with us will be from the very first day. But creating a proposal, a term sheet and everything around that is a lot of work. And what we're talking about is that type of proposal, not just a speculative send it out and hope they respond to it type of thing.

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**Richard Shannon** - *Craig-Hallum Capital Group - Analyst*

Okay. That's helpful. I just want to make sure on that. And then any sweet spot of technology areas that are -- where these proposals are going out on? Is it a different mix than what you've had in the past? Obviously, we talked a lot about RF SOI and power.

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**Scott Bibaud** - *Atomera Inc - President, Chief Executive Officer, Director*

No, I think I talked a little bit about it in my script. But the proposals are going out in almost all of our focused areas. Yeah, I would say all of our focused areas and, in addition, in one other area that we haven't talked about before (inaudible) it's something we've done a lot of work in so far, but it's something that we have been hoping to enter for some time. So it's good potential.

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**Richard Shannon** - *Craig-Hallum Capital Group - Analyst*

Okay, that's helpful. Let's see, a question or two on STMicro here. You talked about, I think, the last couple of quarters about -- and one of the next major steps here is getting a PDK frozen. Is this something you have visibility into from STMicro and have any expectations on timing for that?

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**Scott Bibaud** - *Atomera Inc - President, Chief Executive Officer, Director*

Yeah. I think we definitely have a view into their development process. We don't have a very clear view into their exact schedule. And if we did, they've asked us not to share that publicly, so we won't be able to provide guidance on exactly when those things get done. But I can tell you that we're on track.

When we shared in prior presentations a timeline and the process, like we had some graphics that we're showing the process, that's a standard process that people would use in the industry, a standard time line. I still think that that's very reasonable. And one thing that both we and ST have agreed that we can say is that we're on track to that process.

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**Francis Laurencio** - *Atomera Inc - Chief Financial and Accounting Officer*

Okay. All right. Fair enough then. Scott, I probably missed writing down the exact language you had on the topic of RF SOI, but I think you said something along the lines of you're running wafers at most of the manufacturers out there. Maybe if you can repeat that passage and then help us understand the point of that comment, please.

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**Scott Bibaud** - *Atomera Inc - President, Chief Executive Officer, Director*

Yeah. So the RF SOI market has got a certain amount of manufacturers that really constitute the bulk of the capacity that's available in the industry. And today, we're working with the vast majority of them and starting wafers with a lot of them.

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**Richard Shannon** - *Craig-Hallum Capital Group - Analyst*

Okay, okay. Fair enough then. Let's jump over to the large analog player for which you've got a license for MST CAD here. I guess just what do you kind of see as the outcome for this work? I think Frank mentioned [you're expecting] a license -- generate license revenues throughout this year. I'm not sure if that implies stopping after that point.

But what do you expect to be the outcome or hope to outcome here? And when will that happen? And does Frank's comment about revenues lasting through this year imply it's not going into next year? And is that the -- an end point of the work? Or -- just want to correlate those two comments and understand the dynamics there.

**Scott Bibaud** - Atomera Inc - President, Chief Executive Officer, Director

Yeah, okay. I apologize if that was a little confusing. So just our MST CAD tools, we licensed to customers just like Cadence or Synopsys would license their tools to customers. In this case, we have this customer who has signed up for a one-year license with it. It doesn't mean they're going to stop at the end of the year. It just means that that is a contract that we have in place that would be extended as we got closer, just like most simulation model licenses.

And what does that mean? Well, what it means is this large customer is doing work on their next-generation process, and they're adding MST in to see if that makes sense for them. And they're adding it in at the simulation level. And so then it's easy for them to try a bunch of different things.

We can give them advice on different ways of integrating to get different levels of performance improvement. And when they have seen results that they think they like, then our next goal would be to get them to take an installation -- a manufacturing license and install it in their fab and actually start running wafers inside their own fab.

They could actually do demos with us, where they send us wafers and then they run wafers in their fab. But we'd be really encouraging them to install. So the TCAD license is kind of a first step in that direction.

**Richard Shannon** - Craig-Hallum Capital Group - Analyst

Got it. Okay, that's helpful. Maybe moving over to the first JDA partner here. It's obviously been in place for -- I can't remember how many years -- two or three years now. And I think last quarter, you talked about some strong engagement that was slowed down by the holidays, and you seem to -- I can't remember the exact language. I'm looking at my notes here.

It sounds like there's some strong interest from business units here, but no decision made. Maybe you can give us some sense here of some back and forth in more iterations happening that you weren't expecting. Or maybe just kind of help us out relative to what sounded like you're getting fairly close to a next step several months ago.

**Scott Bibaud** - Atomera Inc - President, Chief Executive Officer, Director

Yeah, yeah. I think it's a very frustrating situation. We did a JDA with these guys a couple of years ago. They gave us a set of specifications. We met all of those specifications. And so then they said, okay, we're going to present this to our business units to consider adopting.

We have been working with a number of their business units. And last year, they gave us a whole bunch of other tests and specs that they wanted us to run wafers for and do simulations to prove that we could solve them, and we did by the end of last year. We pretty much provided all of that test data.

They reviewed, they agreed that we had met all of it. And so now, we're in this very frustrating phase where they're saying, yeah, your stuff seems to work well. But until we've identified this timing when we're going to make a change to that particular area, then we'll decide whether we're going to adopt it or not and do a license.

And so we've been going back and forth with them on this for months. It may -- I think there may be an impression because we can't give many updates on it that we're not doing. But we literally are talking to these guys constantly.

And right now, we just haven't gotten to the point where we can announce that we have an agreement. So yeah, it's frustrating for us, and I'm sure it's very frustrating for investors. It looks like we're not doing anything. We're doing a lot. We just haven't gotten it over the finish line.



And I don't think it's that unusual. If you look back at our STMicro engagement, we really -- by, I think, 2020, we had shown them all the data that they needed to do an installation and get started. And it wasn't until 2023 that they finally did a license with us and got started on that. So to a certain extent, we have to be prepared and sitting on the shelf when they're ready to grab something off the shelf and put it into place.

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**Richard Shannon** - *Craig-Hallum Capital Group - Analyst*

Okay. Fair enough.

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**Scott Bibaud** - *Atomera Inc - President, Chief Executive Officer, Director*

And typically, when we do a license with a customer, we ask them to pay an upfront license fee when we sign. So if you're going to need to do -- use the technology in a year, why would you do a license right away, right? So that might be a little bit of a holdup as well.

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**Richard Shannon** - *Craig-Hallum Capital Group - Analyst*

Okay. Okay, fair enough. I will jump out of line here, but probably come back in. But thanks for all the details, Scott.

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**Mike Bishop** - *Atomera Inc - Investor Relations*

Okay, Richard. Thank you. Looking at some of the questions coming in on the Q&A chat. The first one regards STMicro, which is, when ST makes the next milestone, what will the scale of fees that Atomera will receive?

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**Francis Laurencio** - *Atomera Inc - Chief Financial and Accounting Officer*

Happy to take that one. We've said since the time that we signed the -- and announced the signature of the deal that it was consistent with our model for licensing to customers. And we expect the total fees to be in the neighborhood of \$3 million for all stages of licensing. And this is consistent with that.

So you can do the math based on the revenue recognized already, which was \$550,000 last quarter and \$150,000 that we had recognized originally when we did the integration license with them several years ago. So this is pretty significant in terms of revenue.

And when I talked about the inability to give revenue guidance, it wasn't -- I wasn't implying we didn't know how much it would be. But rather, it's not something that I can give guidance on the timing of when it's going to be recognized because we -- our policy has always been to guide only for the next quarter until we have solid visibility beyond that, and we don't have that kind of visibility yet. But when we get closer, we will -- as long as it's consistent with our confidentiality with them, we'll give guidance when we get closer.

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**Mike Bishop** - *Atomera Inc - Investor Relations*

Okay. That -- the next question about timing for ST, you answered that quite well. So another question that came in. Are the record number of commercial proposals for manufacturing and production licenses, are they for manufacturing and production or just integration license?

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**Scott Bibaud** - *Atomera Inc - President, Chief Executive Officer, Director*

Yeah, I'll take that. For the most part, we're trying to push customers to install, and they are -- most of our customers are used to working with the big tool manufacturers. And typically, if a tool manufacturer comes in and says, hey, I've got a new tool that will solve some problems for you. The way that works is they usually ask the tool manufacturer to do a number of demos for them first.

So they -- the tool manufacturer will do demos back at their fab and send them wafers. Some of them have that mindset with us. And for them, we would have to do -- try to do an integration license before we get to manufacturing.

But our goal is to try to get people to install and put it in their fab and start manufacturing those wafers as soon as possible. So I think all of our proposals that are outstanding right now include our for-manufacturing licenses, but I won't preclude the fact that we might have to do some demos before we get there.

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**Mike Bishop** - Atomera Inc - Investor Relations

Okay. Have there been serious talks with wafer suppliers about a deal for blanket MST wafers on RF SOI?

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**Scott Bibaud** - Atomera Inc - President, Chief Executive Officer, Director

Yes. The answer is yes. That's something that we've been talking about with various wafer suppliers for some time. And I think, yeah, we don't have anything to announce on that just yet. But we do believe that when we're in a position where one of our RF SOI customers is ready to make a decision to go to production, which means there'll probably be another year or year and a half at least before they go to production, we will be able to arrange for a wafer supplier to deliver MST RF SOI wafers to them, if that's the path they want to go down.

So that is definitely -- we've done the pre-work for that, and I think we could put that together. Just to be clear, we also make it available to our RF SOI customers that they can buy RF SOI wafers and deposit MST on them themselves, and then they license that from us. So there's lots of ways in which it can work.

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**Mike Bishop** - Atomera Inc - Investor Relations

Okay. And a question. Maybe you can comment on the replacement for TSI. I think you addressed it a little bit in the prepared comments, but has a replacement for TSI been signed?

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**Scott Bibaud** - Atomera Inc - President, Chief Executive Officer, Director

Yeah. I would say we've spoken to almost a dozen companies -- maybe less than that, but a lot of companies. And it seems very clear that we have a lot of good options. We have customers who -- I mean, possible suppliers that have much better process technology that they used to have at TSI. And we have ones with more specialty processes that we want.

So it's -- I think we're getting very close to starting working with one or more of them, and I don't have any doubt that we will end up working with multiple suppliers, not just one. But I think we'll get started with the first one very soon. So yeah, I think the replacement for TSI is well on its way.

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**Mike Bishop** - Atomera Inc - Investor Relations

Okay. Great. And then Richard Shannon had a follow-up question. Richard, if you would unmute and turn on your camera.

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**Richard Shannon** - Craig-Hallum Capital Group - Analyst

Mike, it will not let me turn on my camera. But can you hear me?

**Mike Bishop** - Atomera Inc - Investor Relations

Yeah, we can hear you. Go ahead.

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**Richard Shannon** - Craig-Hallum Capital Group - Analyst

Okay. It's not allowing me to -- oh, there we go. Now, we can do this maybe. Yeah, there we go.

Scott, I wanted to follow up on one of your responses to my earlier questions here related to STMicro. You said you basically showed them all the data that they had requested back in 2020, but they didn't start until 2023 when they pulled it off the shelf. So, I guess kind of applying this to your other set of customers' engagements, how many other customers have you essentially satisfied all of the data that they've asked for and are sitting around?

And do you think it's reasonable to think about a delay between having the technology, like satisfying all the specs, and then waiting x number of years -- in STMicro's case, three years -- before you get to production? Is that something that you expect? Or is that an extraordinarily long time? How would you relate this to your experiences with other customers that we haven't gotten to that point but seem like you've made some good progress?

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**Scott Bibaud** - Atomera Inc - President, Chief Executive Officer, Director

Yeah, it's a tricky one to answer, Richard. To be honest, ST surprised me. I think surprised all of us. We gave them results. They were very happy with them. And then just -- they just never went off the dime.

We kept in conversation with them all the time, like every few months, we would meet with them, and they'd say, yeah, keep waiting. I don't think that we -- so we have a number of other customers that we've run wafers with, and they've seen good results. And they are not currently in the process of going to production. But I couldn't say exactly how many or whether I think that's going to be typical that they pull it off the shelf.

I can say there are a lot of customers who we -- yeah, that we've shown the good results to. And we keep talking to them, and they keep kind of pushing it off a little. But we do think that we'll engage with them sometime soon. And JDA1 is a good example, but we have other examples like that. Actually, we have a lot of examples like that.

So yeah, the frustrating thing is if they could just see the results and pull the trigger, that would be great. And that's what -- normally, in a business like ours, a customer puts out an RFQ. They need a certain type of product, and you go and pitch your product. And when they decide yours is the best, you win it. That's what my experience in semiconductors has been my whole career.

But this business we have is a little bit different. We're going out and proactively telling them, hey, if you used our technology, we can make your product a little bit better. And for the most part, we're putting that into their minds.

So even after we've convinced them that's the case, we sometimes have to wait until the planned change of that process or node is happening for them to implement it. But I can't say whether that would take a long time or a short time. We haven't had enough experience in it.

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**Richard Shannon** - Craig-Hallum Capital Group - Analyst

It seems like in all the conversations we've had on these conference calls and offline as well, it just smells like RF SOI is mirroring STMicro in a way where it seems like you've suggested or outright told us that you satisfied the requirements. And I think once or more than once, you've even talked about some requirements to changing at some point. But it seems like RF SOI mirrors a lot of what you described with STMicro. Is that a fair comparison?

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**Scott Bibaud** - Atomera Inc - President, Chief Executive Officer, Director

Yeah, yeah. And let me just -- so let's say we have a customer. And we don't engage with them -- and we engage with them as soon as we can, right, as soon as we can get them interested enough to start testing out our technology. And that customer had a plan for some process to bring out a new version of it in two years.

And so they're working on that new process. And simultaneously, we're trying to show to them that our technology is good. And maybe even with only one year left, they say, wow, your technology is really good. But it's too late to implement into our other process. We've already been working for it for more than two years.

And so you missed the bus on that one. Now we have to wait for that one to go to production and then be in production for a few years before they make a new version of it. And so sometimes, that's just what we face. But like I say, if we have enough shots on net, we're going to hit the right timing with some of them and the other ones will come back around.

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**Richard Shannon** - Craig-Hallum Capital Group - Analyst

Okay. Fair enough perspective. One last question for me, Scott. Just touching on the topic of leading edge, and I think I've even asked this in past calls here. But it sounds like you've got some long period of engagement with multiple players at leading edge.

I guess my essential question here is, do you think that work is mature enough here that you have the possibility of intersecting with the first generation of a new technology coming out. You're talking about nanosheet or Gate-All-Around here, which I think is being implemented first on the 2-nanometer node with one or more guys out there.

Do you think you're going to be early enough to do that? Or does that seem like it might be more of a follow-on derivative process later in the time frame?

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**Scott Bibaud** - Atomera Inc - President, Chief Executive Officer, Director

Hard to say. I can say that the leading edge guys know about our technology, and they know how it could help them. And so it's -- obviously, if one of them had decided they were definitely going to do that, they certainly would have had to do a license with us.

One of the things about Gate-All-Around and the new nodes, they're so hard to make. They are so complicated that they can't just -- what we call a demo in the industry is when they run some wafers, and they send them to us, and then we put our technology on, and then we send them back.

But for Gate-All-Around, it's so complicated to make these things that we can't do that. We really have to install at the customer site. And so when we do that, they have to sign a license. When they do a license, we definitely will announce it. And obviously, we haven't announced it yet.

But those -- I think we're well positioned to get into one of those. I also think the Gate-All-Around and even the most advanced FinFET nodes still are running at relatively low yields compared to like more mature nodes. And there's room for us to be even incorporated to improve yield in those designs. So fingers crossed that we'll get that done.

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**Richard Shannon** - Craig-Hallum Capital Group - Analyst

Okay. Fair enough. That's all my questions again, Scott. Thank you.

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**Mike Bishop** - Atomera Inc - Investor Relations

Okay. And just one last question here from the Q&A line. And that is, could you describe how the business model for entering the GaN market would be different from your approach to license -- approach to date to licensing of MST?

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**Scott Bibaud** - Atomera Inc - President, Chief Executive Officer, Director

Yeah, yeah. So, the GaN market is very interesting. Actually, this whole compound semiconductor, it's an area that we've been doing research on for a few years. So although this is our first announcement, it isn't something we just started thinking about.

So there's multiple ways that our business model can be used for GaN. We can just license our MST technology, just like we do today with regular semiconductor makers to adopt MST on wafers and then build GaN wafers on top of that. That's one way that we could do it. We will probably license our GaN technology separately from the rest of our licensed technology because it may have very high value.

The second thing we could do is maybe we could become a manufacturer of GaN wafers, at least in modest volumes, and that would allow us to generate revenue. And if it was a very high-value technology, maybe we could make a very nice-looking gross margin there and help to subsidize the rest of our business. We don't have a decision to do that yet.

I mean, we have a very strong philosophy about making a business model that's got a lot of leverage to the bottom line. And so if we were to become a manufacturer, obviously, we'd have to have a lot more CapEx, which might not work well with that. But we could do something on the smaller volume manufacturing side. But I think for our customers who would go into high-volume manufacturing, it's most likely that we've licensed directly to them.

So we've been looking at the GaN market for a while. We've had a lot of marketing studies going on about how to approach it, but we haven't got a final determination about what we do. I can tell you, I think it's a -- it would be a much faster time to market. And I'm pretty excited about the prospects of MST there and the prospects in a few other areas in the compound semiconductor market.

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**Mike Bishop** - Atomera Inc - Investor Relations

Great. Okay, Scott, why -- that concludes the Q&A session, if you could proceed with any closing comments.

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**Scott Bibaud** - Atomera Inc - President, Chief Executive Officer, Director

Okay, sure. Well, I hope today, we've given you a good picture of the compelling prospects which Atomera is pursuing. We will be at the Oppenheimer 9th Annual Emerging Growth one-on-one conference on May 9. If you're planning to attend, I would welcome the opportunity to meet.

Please continue to look for our news, articles, and blog posts, which are available along with investor alerts on our website, atomera.com. Should you have additional questions, please contact Mike Bishop, who'll be happy to follow up. Thank you again for your support, and we look forward to our next update call.

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**Mike Bishop** - Atomera Inc - Investor Relations

Great. Thanks, Scott. This concludes the Atomera call.

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