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# Embark Technology, Inc. (EMBK)

Q2 2022 Earnings Call

## CORPORATE PARTICIPANTS

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## MANAGEMENT DISCUSSION SECTION

**Operator:** Good afternoon and welcome to the Embark Technology's Second Quarter 2022 Earnings Conference Call. Today's call is being recorded, and all lines have been placed on mute to prevent any background noise. After the speaker remarks, there will be a question-and-answer session.

I will now turn the call over to Bill Ong, Head of Investor Relations. Please go ahead.

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**Bill Ong**

*Head-Investor Relations, Viavi Solutions, Inc.*

Thank you, operator. And thank you, everyone, for joining us today. Joining me on today's call are Co-Founder and CEO, Alex Rodrigues; and CFO, Richard Hawwa. Embark issued its second quarter 2022 press release and presentation, which we will refer to today. It can be found on the Investor Relations section of our website at [investors.embarktrucks.com](http://investors.embarktrucks.com).

Please note this call will include forward-looking statements based on current expectations and assumptions, which are subject to risks and uncertainties. These statements reflect our views only as of today and should not be relied upon as representative of our views as of any subsequent date. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements in light of new information or future events. These statements are subject to a variety of risks and uncertainties that can cause actual results to differ materially from expectations. Please refer to our filings with the SEC including our Annual Report on Form 10-K filed on March 21, 2022, Form S-1 filed on June 1, 2022, and other documents filed with the SEC from time to time.

We will discuss non-GAAP financial measures, which we believe are useful as supplemental measures of Embark's performance. These non-GAAP measures should be considered in addition to and not as a substitute for, or in isolation from, GAAP results. These additional disclosures regarding the non-GAAP financial measures

in today's press release and our filings with the SEC are posted on our company's investor website. Finally, we are recording today's call, and we'll make the recording available this evening on our website.

I would now like to hand the call over to Alex.

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## Alex Rodrigues

*Co-Founder, Chief Executive Officer & Director, Embark Technology, Inc.*

Thank you, Bill. Good afternoon, everyone. I'm going to begin on slide 3, where I'll provide some key business updates since our last call. First, with respect to commercial and operations. The operational and technological milestones for our Truck Transfer Program continue to remain on track, and we're on schedule to deliver the first truck to Knight-Swift by the end of the year. I will share some more detail later in the call, but we are excited about the continued collaborative work with our carrier partners in developing and operating framework and key procedures that cover all facets of running Embark-equipped trucks within the carrier fleet.

Our Partner Development Program, or PDP, continues to expand both in breadth of partners and depth of engagement. Most recently, we added a top 10 less-than-truckload, otherwise known as LTL, carrier with a nationwide footprint of terminals as our newest PDP partner. We're excited to onboard this leading LTL player as we see the defined terminal network of LTL providers to especially well-suited to rapidly adopted autonomous trucks. We continue to emphasize quality over quantity when selecting PDP partners with a focus on organizations equipped to implement autonomous technology at scale. Also on the PDP front, we will be speaking with our existing partner DHL at the FreightWave Future of Freight Festival in early November in Tennessee. Please come check it out.

We continue to methodically expand the Embark Coverage Map. In the second quarter, we worked with Alterra to add four new strategic sites across the Sunbelt. The Embark and Alterra teams have worked collaboratively to help secure optimal sites for Embark in a variety of ways. Two sites were sourced and acquired by Alterra, one site was secured through an Alterra intro to an existing owner, and one site was an already owned Alterra site which was well-suited for autonomous operations. We have been impressed with the resources and flexibility that Alterra has brought to the table and we look forward to continuing the strategic partnership.

Embark also continues to make meaningful progress on the development of our Embark Universal Interface, a standard set of sensors and compute that have been designed to integrate with all four of the major OEM platforms by way of a set of flexible, digital and physical interfaces. We believe this approach across OEM compatibility, which has had us planning for early production through our produce, now positions Embark well to navigate the ecosystem complexities as we begin to see delays across the manufacturing landscape.

Now Embark is not immune to the delays experienced by OEMs and Tier 1s. However, we do expect the strategic decisions we made with Embark Universal Interface over 18 months ago provide us flexibility in navigating the ecosystem over the coming quarters as we prepare for commercial deployment. As our team looks forward in our commercialization plan, we are taking these new manufacturing conditions into consideration and continuing to adapt our staged rollout plan to fit the realities of available capacity and production efficiency. At the end of today's presentation, we'll share a bit more detail about this outlook.

Finally, on the policy side of things, I, along with other leaders in the autonomous industry, collectively co-authored a letter to Governor Gavin Newsom to direct the California DMV to move forward on a rule-making process to create a pathway for legal testing and deployment of Level 4 autonomous trucks in the state. We believe this unified action will help drive support for AD testing in California and ultimately help improve road safety and the supply chain crisis hampered by truck driver shortages.

Next, I want to touch on safety. Prioritizing safety is one of Embark's core company values, which we've highlighted in many of our corporate reports, including our recent ESG report. In June, the National Highway Traffic Safety Administration, or NHTSA, issued its inaugural report on crash data collected from automated driving companies under a Standing General Order. The report identified Embark's perfect safety record, having never been involved in NHTSA or FMCSA reportable crash since its founding in 2016. This perfect safety record is made possible by Embark's high operational standards and unique technical capabilities such as Vision MAP Fusion. This report highlights the industry's focus on safety and Embark as a leader prioritizing safety within the industry.

Now turning to our technology road map. In 2022, we committed to achieving two of the five remaining technological capabilities we believe are required to commercialize Embark driver. I'm proud to report that Embark successfully demonstrated autonomous emergency vehicle interaction, leaving just evasive maneuvers remaining this year. We'll discuss the emergency vehicle interaction milestone in more detail later in the call. We're excited about both the demonstration of technical capabilities and the government collaboration required to successfully achieve this milestone.

And finally, I'm pleased to highlight two engineers from our world-class engineering organization, Taylor England and Rena Lu coinvented a simulation evaluation pipeline and recently filed a patent, which adds to our growing intellectual property portfolio. This cross-functional invention connects Embark's catalog of scenarios, which we captured during years of on-road testing, directly to our simulation environment.

By connecting our extensive scenario database seamlessly to Embark's simulator with a robust querying tool, our engineers can quickly find the most valuable and relevant on-road data and pull it directly into our re-simulation environment. There, they can further [ph] dramatize (00:06:42) the data, allowing for a targeted and rapid feedback loop between development and testing, which results in new features on the road sooner and with even higher confidence. You can read more about the process in a Medium Blog they wrote on the topic, which is linked on this page in the earnings presentation and can also be found on our Investor Relations website.

Lastly, I want to address how Embark is adapting to the current market conditions. Embark's asset-light business model focuses on partnering with major constituents within the trucking ecosystem, including carriers, shippers, real estate partners and Tier 1 manufacturers. This strategy allows Embark to be highly capital efficient by leveraging the resources and know-how of our partners. This is something we've been consistently doing since our founding and we are especially realizing the benefits of this strategy today given the current macro environment. I'll speak to this in more detail a bit later.

If there's one key takeaway about how we operate in our business and why we believe we are set up for success in a challenging macro environment is because we are focused and we are efficient. And as we have consistently said, this provides flexibility to refine key initiatives, key partners and the resources required to execute upon them.

As the macro environment rapidly changed during Q2, we also adapted to ensure we can continue to be positioned for long-term commercial success. As you know, head count is the primary driver of our free cash flow spend and we implemented a more focused hiring effort during the quarter. Richard will speak in more detail on the implications for our free cash flow spend guidance for the remainder of 2022 as a result of this initiative.

What focused hiring means is we're continuing to ensure that we manage head count growth to identify and fill key roles on the team without compromising our ability to commercialize our technology. Fortunately, we feel very

good about the current team that is in place today to continue to advance the technology towards commercialization, while extending the runway.

In that vein, there are three key recent hires that we're excited to welcome to the team that I wanted to highlight today, Head of Manufacturing, Brandon Connors. Brandon has deep experience in the AV sector, most recently as Head of Manufacturing at Matternet, focusing on autonomous drone delivery; and before that, spent four years at Waymo as Head of Manufacturing and Supplier Quality; and before that, worked in Manufacturing Engineering at Apple and Nest. Head of Sensors, Jim O'Keefe. Jim also worked at Waymo, where he spent five years as the Camera Sensor Program Manager. He's an electrical engineer who began his career at NASA, developing data acquisition systems for space mission. Finally, Head of Business Development, Josh Raycroft. Josh previously led Business Strategy and Partnerships at Virgin Hyperloop for seven years. Prior to that, Josh spent six years in engineering at GE Aviation.

Lastly, in mid-July, we filed a proxy statement announcing a special meeting of shareholders on August 15 to vote on a proposal to implement a reverse stock split. As disclosed in the proxy statement, the board will approve the exact ratio just after the shareholder vote. The exchange ratio will be set between 15:1 to 30:1. We expect Embark share price to begin trading with the effect of the reverse stock split as of August 17. The objective of the reverse stock split is to ensure we meet the listing requirements for Nasdaq, as well as effectuate a share price and float that meets investment criteria for many institutional investors.

Now turning to slide 4, as we have done throughout the year, I want to reiterate the objectives that we laid out during our Q4 earnings call in March and that we plan to deliver on in 2022; first, to deliver the first truck into the fleets of carrier customers through our Truck Transfer Program; second, to accomplish two of the remaining five capabilities in our technological road map, bringing the total capabilities accomplished to 13 of 16 by the end of 2022; and third, to launch the backbone of the Embark Coverage Map across the Sunbelt region. I just touched on the continued expansion of the Embark Coverage Map and we'll provide a more in-depth review of our emergency vehicle interaction accomplishment, as well as the progress we've made across our TTP initiatives in the next few slides.

Turning to slide 5, Embark's partnership with Knight-Swift and our joint work through the Truck Transfer Program is paving the way for the industry's first deployment of autonomous trucks within a fleet's operations. We're excited to report that the program is currently on track to begin delivering Embark-equipped trucks starting in December. We're on pace to have Knight-Swift drivers, maintenance personnel and dispatch operators trained and ready to deploy the trucks within their regular operation, supported by the Embark Guardian software and associated support center.

To-date, we've made significant progress across both technology and operational milestones for TTP. On the technology front, we've refined our Embark Universal Interface, or EUI, to optimize for the uptime requirements of daily in-fleet operation. Specifically, we've hardened our compute stack to ensure sufficient reliability under the range of environmental conditions we expect the trucks to encounter, as well as simplifying our sensor packaging to optimize for serviceability by minimizing mounting points to the trucks. We're currently running these updated trucks through the latest preproduction testing.

On the operations front, Embark and Knight-Swift have completed a detailed 40-page concept of operation, outlining the intricacies of how Embark-equipped autonomous trucks will operate within Knight-Swift operations. Alongside this detailed plan, we've jointly finalized a set of standard operating procedures for pre-trip inspection, truck dispatching and remote monitoring through Guardian. These procedures will have Embark and Knight-Swift staff working together to ensure the consistent and safe dispatch of Embark-equipped trucks.

In an effort to prepare Knight-Swift sites to receive, store and launch Embark trucks, the two parties have defined requirements for facilities that will have automated trucks [ph] over at Knight. (00:11:53) Looking ahead, as we progress towards project completion, Embark and Knight-Swift will focus on finalizing tech integration, executing training for relevant drivers, maintenance and dispatch personnel, and executing the handover of trucks beginning in late Q4. We believe these key real-world learnings will allow us to support being able to deploy our technology at scale in the near future.

Next, we'll move on to slide 6. We successfully demonstrated our emergency vehicle interaction milestone through collaboration efforts with the Texas Department of Public Safety and the Travis County Sheriff's Office. I'm sure many of you have seen the videos of self-driving cars in San Francisco appearing to be pulled over and then unexpectedly started driving again. This sometimes resulted in situations that were surprising and even potentially dangerous for authorities. To commercially deploy self-driving trucks, we need to operate safely, not just in day-to-day driving, but in all these long-tail road situations with other road users. And that's why Embark has been working closely with law enforcement to ensure our trucks react in a safe and predictable way for authorities.

I want to highlight two key components of our emergency vehicle work. First, Embark's engineering team built the technical functionality, allowing Embark-powered trucks to identify emergency vehicles via lights and other cues and then respond accordingly by pulling over safely onto highway shoulders. Second, Embark developed an interaction protocol with input from law enforcement that can enable any law enforcement officer to safely stop, approach and receive information from an autonomous truck intuitively by utilizing a scalable process, including communication with a remote Guardian support technician and a built-in lockbox on the truck.

Importantly, this process is safe and allows for seamless interaction with law enforcement without the presence of a driver. This represents the first ever public demonstration of an autonomous truck participating in a routine traffic stop on a public highway. With this engineering breakthrough, Embark has now achieved 12 technical milestones on our road map and is a step closer to commercial deployment. A video of the capability in action and more detail on the accomplishment can be viewed on Embark's Investor Relations website.

And with that, I will turn it over to Richard to discuss the financial details.

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## Richard Hawwa

*Chief Financial Officer, Embark Technology, Inc.*

Thanks, Alex. On slide 7, I'll highlight some of the key financial metrics that support our business progress. Our cash and cash equivalents were approximately \$220.4 million as of June 30, 2022. Our free cash flow spend for the quarter was \$24.7 million versus last quarter at \$19.9 million. This brings our total free cash flow spend to \$44.7 million for the first half of the year. We continue to feel very good about managing our free cash flow spend, continuing to grow the business, while working to find efficiencies that can help continue to extend our runway, under the presumption we could be in a prolonged challenging macro environment.

As Alex mentioned earlier and as we've consistently spoken about, one of the benefits of having an asset-light business model is we're able to be highly capital efficient. And in this current macro environment it's proving to really be beneficial. I'll add some additional detail on this point a bit later. With that backdrop, we are revising our full-year free cash flow spend guidance from \$125 million to \$140 million to \$100 million to \$115 million. We're also revising our stock-based compensation expense guidance for the full year from \$70 million to \$75 million to \$60 million to \$65 million.

I'll provide some additional detail on the next slide as it relates to the revised guidance. As we stated, head count is the primary driver of free cash flow spend. Even in a focused hiring environment, we did see sequential increase in our head count by 38 team members in Q2 to end the quarter with 340 team members. Our staffing remains engineering focus where our R&D employees at the end of June represent about 80% of the overall head count.

Going through the rest of the P&L, second quarter net loss was \$14.3 million. Second quarter adjusted EBITDA loss was \$23.9 million compared with adjusted EBITDA loss of \$13 million in the prior-year period and \$23.1 million for Q1 2022. We've provided a non-GAAP reconciliation in the appendix for your reference.

Turning to slide 8, I want to provide a deeper dive as it relates to our updated free cash flow spend and stock-based compensation expense guidance for 2022, as you can see on the left-hand side of this slide. In addition to identifying process improvements by continuing to focus on finding efficiencies, we were able to manage the free cash flow spend accordingly. As Alex mentioned earlier, we do not believe this reduced level of spend will impact our ability to commercialize or achieve our objectives for 2022, but rather ensure we have flexibility to extend the runway and commercialize in a focused manner, while de-risking the business plan.

As we have said, Embark's business model is differentiated from other AV companies as we're an asset-light Software-as-a-Service company. As such, we have the ability to define and refine our key initiatives, key partners and the resources required to execute upon them. Coupled with our ability to flex operating expense structure, this reflects our disciplined approach to direct our efforts in developing a leading technology that can be utilized commercially in a capital-efficient manner.

As you know, during the last quarter, we had already guided that we would be at the lower end of the initial range of free cash flow spend of \$125 million to \$140 million. With six months behind us, cumulative free cash flow spend at \$44.7 million thus far in 2022 and with the implementation of focused hiring, we feel this revised guidance of \$100 million to \$115 million is a better reflection of where we expect to end the year.

You can see on the right-hand side of the page, the key areas we expect savings are related to personnel expense, primarily as a result of focused hiring effort, related process efficiencies and additional cash savings as a result of the head count we expect for 2022. And lastly, continued favorable net working capital we anticipate.

With respect to stock-based compensation, we had expenses of \$29.0 million for the first six months of the year. Our revised guidance is better aligned with focused hiring over the remainder of 2022, taking into account the methodology for its stock-based compensation expenses calculated depending on the type of award, and lastly, incorporating the impact on the fair market value as a result of stock price volatility.

I'll now turn the call back over to Alex to reinforce how we are able to deliver our technology in conjunction with the actions taken to extend our operating runway.

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## Alex Rodrigues

*Co-Founder, Chief Executive Officer & Director, Embark Technology, Inc.*

Thank you, Richard. Moving on to slide 9, one of the things I want to highlight in this call is how we've been able to be much more capital efficient relative to our competitors. Executing an asset-light business model to achieve our objectives is in our company DNA. Early on in the AV industry, it was less clear if hardware development would accelerate quickly enough to be able to support the software. And as such, many companies became dependent on in-house solutions for certain components, which is more costly and much less capital efficient.

At Embark's founding, we had the hypothesis that by focusing on world-class software development and partnering with industry leaders for various complementary hardware components, we could accomplish a lot more with a lot less resources. When you fast forward five years to today, there are industry partners who are able to provide those complementary components that meet or exceed Embark's system requirements. And because of Embark's decision to partner with best-in-class component suppliers and focus solely on software development, we believe that we have done more while spending less than anyone in the AV industry.

Carriers and investors are usually quite impressed when they do a ride along in one of our trucks. And one of the most common questions I get afterwards, if someone has been in multiple AV trucks, is how is Embark able to deliver such an industry-leading software stack when some of our competitors are outspending us by \$1 billion or more. The answer I always give is that most of our competitors are trying to do a lot of different things at the same time.

When you zoom in on Embark's one area of focus, building the software layer of the stack specifically for AV truck, we have a very competitive level of investment. What has allowed us to be so efficient is that, unlike our in-house-focused competitors, in addition to the hundreds of millions of dollars that we are spending directly, we're able to build on top of technology partners with a lifetime technology investment estimated to be over \$1.2 billion.

I want to talk about three of these key technology partners in more detail. These all represent components that one or more of our competitors develops in-house today and where Embark has been able to be much more efficient by leveraging the hundreds of dedicated R&D employees from our partners. First, LiDAR, instead of designing or building a custom LiDAR, Embark has chosen to work with an industry-leading partner who has nine years of experience in developing a high-quality LiDAR product that is designed to be automotive grade and meets Embark's performance requirement. This allows a small number of Embark machine learning engineers to deliver differentiated value by developing industry-leading segmentation algorithms on top of proven hardware.

Second, autonomous domain controller, on the compute side, instead of designing and building our own compute board in-house, Embark has partnered with a leading supplier who has 24 years of experience and has developed these types of boards for others, while meeting exacting military-grade hardware, reliability and performance standards. By collaborating with an experienced partner, a small team of Embark engineers is able to develop the qualification and specifications for an autonomous domain controller that meets our needs at a fraction of the costs.

Third, simulation, simulation is known to be a resource-intensive part of the self-driving problem. One of the ways that Embark has been able to achieve significant efficiencies relative to our competitors is by working with a partner that can provide base simulation infrastructure for perception, planning and controls. These are the types of resource-intensive physics engines that other AV companies have hundreds of engineers working on because they choose to do everything in-house. Even though this doesn't create differentiated value, by partnering on simulation infrastructure, Embark is able to have a smaller simulation team that focuses on truly value-added simulation IP, like the patent-pending recorded data to simulation pipeline we talked about earlier in the call.

In each of these examples, the results speak for themselves. We have been able to leverage significant technology investment by others and benefit from years of know-how from hundreds of specialized engineers outside our organization, which represents an estimated lifetime technology investment of more than \$1.2 billion. This allows us to be flexible in how we deploy Embark's resources to align against our initiatives in a capital-efficient manner.

I would like to conclude on slide 10 by taking a closer look at the \$730 billion US trucking market and how Embark is planning on commercial rollout within this larger ecosystem. We often think about the trucking market as 53-foot dry vans moving consumer goods in a truckload model. However, in reality, this market is far more diverse and is composed of many different segments. For example, you can think about it by cargo type. While we commonly think of consumer goods being shipped, there's also agriculture, mining, logging, and oil and gas products being transported, often in rather remote locations. Similarly for trailer type, there are also reefers, flatbeds, car hauls and so on, each with their own complexities.

And for the operating model, while we hear a lot about single truckload, goods are moved through many operating models, including dedicated, LTL and relay, with each of these operating models providing differing levels of control over where the truck must go. For each of these various sub-segments and applications within the broader market, the opportunity to utilize AV technology is driven by simplicity of ODD, value created per truck and market size. Focusing on the high ROI trucking sub-segments that possess a simple ODD, high value per truck and sufficient size will serve as an effective starting point for our rapid scaling.

One of our key insights when we founded Embark in 2016 was to simplify the problem, leading us and leading much of the AV industry to trucking. We're now doubling down on this insight to deeply assess the sub-markets within trucking to identify opportunities to pull forward commercialization in a capital-efficient manner and demonstrate our technology working in a commercial setting by focusing the problem.

I'll now turn the call over to Bill.

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## Bill Ong

*Head-Investor Relations, Viavi Solutions, Inc.*

Thank you, Alex. As we turn to slide 11, Embark will hold a special meeting with shareholders on August 15 to vote upon the reverse stock split. We'll be participating at the Cowen Global Transportation & Sustainable Mobility Conference virtually on September 8. Embark is also presenting during the September 27 through 28 at the MOVE American Conference in Austin. And on November 1 to the 3rd, we will have a joint presentation with DHL at Future of Freight Festival in Chattanooga, Tennessee.

During our 1Q earnings call, we announced our second annual Embark Day event to be held in September, which was to take place at our new 50,000-square-foot headquarters in San Francisco. However, due to construction delays beyond our control, we will push back this late summertime event. Once we have an updated time line, we will provide more details.

Operator, let's begin the question-and-answer session.

## QUESTION AND ANSWER SECTION

**Operator:** Thank you. We will now begin the question-and-answer session. [Operator Instructions] Today's first question comes from Chris Wetherbee at Citi. Please go ahead.

**Chris Wetherbee**

*Analyst, Citigroup Global Markets, Inc.*

Q

Hey. Great. Thanks. Good afternoon, guys. Thanks for taking the question. I wanted to maybe start with the free cash flow guidance, the free cash spend guidance. Wanted to get a sense of, as you see the landscape now and some of the efficiencies that you've been able to generate on the cash spend side, what do you think your sort of runway of cash is from here? And maybe if you can help sort of put that in context of your path to commercialization?

**Alex Rodrigues**

*Co-Founder, Chief Executive Officer & Director, Embark Technology, Inc.*

A

Yeah. I can take that.

**Richard Hawwa**

*Chief Financial Officer, Embark Technology, Inc.*

A

Yeah. I can take that – oh, go ahead, Alex.

**Alex Rodrigues**

*Co-Founder, Chief Executive Officer & Director, Embark Technology, Inc.*

A

Sure. So we obviously haven't given the 2023 guidance yet. We'll be going through the budgeting process for next year fairly soon here and we'll look forward to sharing those specific numbers when we have them. That said, I think you can look at the spend that we're forecasting for this year and expect that we're going to be on a path where we feel like we have most of the pieces in place to be able to get to commercialization and we're going to be really having a pretty focused level of growth between here and there.

And so I think what you'll see this year is relatively reflective of what you'll see next year, although we haven't given the guidance yet. And the way that we see that fitting into the bigger picture is that we think that this level of spending really is sufficient to deliver the things that we've planned out for this year but also the rest of the capability road map and then ultimately to be able to get that commercialization started with our partners.

**Chris Wetherbee**

*Analyst, Citigroup Global Markets, Inc.*

Q

Okay. That's helpful. And then the Truck Transfer Program, could you just sort of walk us through what are the next sort of key steps? It sounds like there's a potential to start begin to delivering trucks to later in the fourth quarter. So you have a few months ahead of you before that happens. So what are the key milestones, key things you need to get done, so you're ready to do that? And any sense of what the scale of truck count moving over to Knight sort of towards the end of the year would look like?

**Alex Rodrigues**

*Co-Founder, Chief Executive Officer & Director, Embark Technology, Inc.*

A

Yeah. So the focus is going quite well so far. The focus between here and the end of the year is really on finalizing a lot of the integration pieces. So I think what's really exciting about this program is that it's taking trucks out of the lab and really putting them into a fleet. And that's something that we haven't really seen before in the industry. And so what we've been doing is going through all the little snags that you hit as you try to actually do that. How do we train all the relevant maintenance staff now that they no longer work at Embark? How do we get the systems to be dispatched by dispatchers as part of regular fleet daily operations?

And so we're really excited about that because these are clearly necessary steps and we think that it's really laying the groundwork for Embark to be able to deploy trucks at scale and have all of these problems solved already. The size of the initial TTP deliveries is going to be relatively modest. The way that us and our partners have been talking about TTP is it's very similar to the early deployments that you see sometimes with new technologies, whether that's EVs or its new brake components, where really fleets want to take a small number of trucks, be able to actually have their hands on them, kick the tires, so to speak, and do that for 6 to 12 months before they really start to take large deliveries. And so we have this sequencing here to be able to do that.

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**Chris Wetherbee**

*Analyst, Citigroup Global Markets, Inc.*

Q

Okay. And just one follow up on that. Is there anything – you mentioned supply chain earlier in the prepared remarks. I just want to make sure, is there anything from a supply chain perspective that might either limit or sort of potentially reduce the amount of vehicles or the timing in terms of transferring those over to Knight?

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**Alex Rodrigues**

*Co-Founder, Chief Executive Officer & Director, Embark Technology, Inc.*

A

Yeah. We've certainly had the engineering team hard at work dealing with our fair share of suppliers that had trouble over the last couple of quarters. But we still feel like we're on track for the TTP program.

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**Chris Wetherbee**

*Analyst, Citigroup Global Markets, Inc.*

Q

Okay. Thanks very much for the time. Appreciate it.

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**Operator:** And our next question today comes from Todd Fowler at KeyBanc Capital Markets. Please go ahead.

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**Todd Fowler**

*Analyst, KeyBanc Capital Markets, Inc.*

Q

Hey. Great. Thanks and good afternoon. I mean, maybe sticking a little bit with what Chris was just asking about, as we think about kind of the path to revenue generation, Alex, is the PDP and the truck transfer with Knight, is that the first step of that? And does that lead to a revenue generation event into 2023? And then can you maybe speak to just how quickly, once you've gone through that process, you can start to ramp and scale additional vehicles?

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**Alex Rodrigues**

*Co-Founder, Chief Executive Officer & Director, Embark Technology, Inc.*

A

Yeah. So really I think you should think about the bulk of the revenue starting in 2024. As I mentioned, these TTP things are really about making sure that there is readiness in the fleet acceptance as opposed to being of themselves a huge source of revenue. And so I really think that the bulk of that ramp is going to be in 2024.

**Todd Fowler**

*Analyst, KeyBanc Capital Markets, Inc.*

Q

And then just what about the scalability? I mean, so if you're able to put a handful of vehicles into service, once you're kind of understanding the requirements, can it ramp pretty quickly after you're through kind of the initial phase with a handful of vehicles, supply chain constraints aside, I guess?

**Alex Rodrigues**

*Co-Founder, Chief Executive Officer & Director, Embark Technology, Inc.*

A

Yeah. I was going to say, our view and really the way that Embark has been approaching this problem is to get all of the pieces ready to go, so that at the time that you're starting to scale it, you're able to really stamp out a large number of vehicle. And that's why you see us talking about things like emergency vehicle interaction on our capability road map, stuff that you haven't really seen from competitors. It's a little bit of a different approach.

And so I would definitely agree with what you said there that the objective is to have the system at the point that we're starting to hand it over. It's really ready to be stamped out in a scalable way. I do think that as we look into 2024, the ability to get your hands on the components for that will be a factor in how about big you can ramp and how quickly. But I do think that Embark Universal Interface positions us well to manage that where we're working with our fleet partners to determine which platforms they're making individual orders on and making sure that there's some diversification there.

**Todd Fowler**

*Analyst, KeyBanc Capital Markets, Inc.*

Q

Got it. And one last one on the PDP side. Are you currently working with any other carriers where you can do a close follow-on after Knight? Or is this something that we should expect to see kind of the results and the transfer with Knight and then there's going to be a period where there would be kind of working with another carrier to go through all the things that you went with Knight? I'm just kind of trying to get an understanding of how quickly you can dual track with other carriers to get trucks into their hands?

**Alex Rodrigues**

*Co-Founder, Chief Executive Officer & Director, Embark Technology, Inc.*

A

Yeah. So, we have a number of top carriers in the PDP. They're 5 of the top 25 truckload carriers in the country that work with us in the PDP. And each carrier, we spend time really focusing on specific areas with them, with the idea that the collective work across the PDP program ends up creating that master playbook that can be used by everybody. And so the work that we're doing with Knight-Swift I think is really important work and particularly unique work in the space. And the goal is that that's being done in a way that can be cross-compatible where we're not needing to redo a bunch of work when you start sitting down with the next fleet.

**Todd Fowler**

*Analyst, KeyBanc Capital Markets, Inc.*

Q

Great. Good. One last one and I'll turn it over. Richard, I don't know, from the listing requirement standpoint, is the only thing that really needs to happen is the shareholder vote on August 15, or is there anything else from a listing standpoint from the exchanges?

**Richard Hawwa**

*Chief Financial Officer, Embark Technology, Inc.*

A

Yeah, that's correct. And you'll see by the end of the month, upon effectuation, we will receive a notice knowing that we've cleared and remedied the potential delisting considerations with Nasdaq, but we don't anticipate any issues.

**Todd Fowler**

*Analyst, KeyBanc Capital Markets, Inc.*

Q

Yeah. Okay. That's what I thought. Just wanted to make sure. Thanks for the time tonight.

**Operator:** [Operator Instructions] Our next question comes from Jeff Kauffman of Vertical Research Partners. Please go ahead.

**Jeffrey Kauffman**

*Analyst, Vertical Research Partners LLC*

Q

Hi, guys. Wow, a lot going on. Congratulations. So, two questions. Rich, you gave guidance on this lower level of free cash burn and attribute a lot of it to some operating efficiencies, but also being more selective with personnel. Is this a newer level of spend that we should think about as more of a go-forward rate? Or is this something where when we get to the end of the year, you may have some of those expenses come back a little more aggressively in 2023?

**Richard Hawwa**

*Chief Financial Officer, Embark Technology, Inc.*

A

Yes. Good question. So I think as Alex mentioned earlier, we obviously haven't finalized our 2023 budgeting process, but I do think looking at the current level of spend, it's probably a fair barometer of how we see more of a constant or a run rate on a go-forward basis.

**Jeffrey Kauffman**

*Analyst, Vertical Research Partners LLC*

Q

Okay. Great. Thank you. And just a detail question, can you break out the stock-based comp between G&A and R&D?

**Richard Hawwa**

*Chief Financial Officer, Embark Technology, Inc.*

A

Yeah. So we haven't broken out in our filing which will be filed tomorrow. So maybe you'll see that disclosure when our 10-Q is filed. And maybe that's probably the best way to – I'll point you to that for now until we have that finalized in the SEC filing.

**Jeffrey Kauffman**

*Analyst, Vertical Research Partners LLC*

Q

No, that's fine. Thank you. And then one question for Alex. Alex, so there's three remaining technology milestones that we're still looking to solve. Do you have any thoughts about the time line in 2023 to approach the remaining three items?

**Alex Rodrigues**

*Co-Founder, Chief Executive Officer & Director, Embark Technology, Inc.*

A

Yeah. So there is one more item for this year, evasive maneuvers. And then there's three that we have scheduled for 2023. We haven't given additional guidance beyond the 2023 time line. But I will say that I actually have been

on a number of calls this week and there's a lot of work already underway to get some of these things off the ground. So we'll share more of that as we get into sort of laying out our plan for 2023. But there's a lot of work and I actually wouldn't be surprised if you guys saw some stuff at least in terms of progress additionally before the end of the year.

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**Jeffrey Kauffman**

*Analyst, Vertical Research Partners LLC*



All right. Well, congratulations and thank you.

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**Operator:** Thank you. There are no further questions at this time. So I'd like to turn the conference back over to Bill Ong for closing remarks.

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**Bill Ong**

*Head-Investor Relations, Viavi Solutions, Inc.*

Thank you, operator. This concludes our earnings call for today. Thank you, everyone.

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**Operator:** Thank you. This concludes today's call. You may now disconnect. And have a wonderful day.

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