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RESEARCH

Company: Serve Robotics Inc.
Industry: Delivery Robots
Price (December 4, 2024 close): US\$ 8.68/share

Nasdaq: SERV
URL: <https://www.serverobotics.com/>
Market Cap: ~US\$ 400 million

Serve Robotics Inc. (“SERV”, “Serve”) generates revenues by charging clients for the use of its sidewalk robots to facilitate food deliveries, primarily for Uber Eats in Los Angeles California. On November 7, 2024, Serve announced it would acquire Vebu Inc. (“Vebu”) (fka “Wavemaker Labs”), an automation incubator founded by Serve’s director James Buckley Jordan (“Buck Jordan”). We were surprised by the deal because Vebu has a history of launching failed prototypes, and its primary commercial robot is used to cut and peel avocados rather than delivering food. To us, Serve’s business failed to generate commercial interest so Serve used the Vebu acquisition to unjustly enrich insiders at the expense of SERV shareholders.

- 1. VEBU DEAL UNJUSTLY ENRICHED RELATED PARTIES:** We believe Buck Jordan established a playbook where he crowdfunded to launch robots which would revolutionize various food categories. He then siphoned funds back to affiliated entities through service agreements and other related party dealings, but the ventures ultimately failed to deliver. **Buck Jordan raised at least US\$ 150 million across ~10 different robotics businesses and each one failed to generate commercial interest.**

A key hallmark of these failures had been pilot deals with marquee, related-party customers which tout huge upside that never comes to fruition. In one of the most egregious examples, Buck Jordan’s pizza robot company, **Piestro, claimed it had US\$ 580 million in pre-orders for 4,200+ units. Piestro is now defunct after never generating revenues.** Miso Robotics (“Miso”) was a failure, having deployed only 15 units after promising hundreds. We found online reviews where investors labeled Buck Jordan’s ventures as “scams” suggesting participants in his crowdfunding campaigns had caught on to the playbook and left him searching for another exit – Enter Serve...

We believe that Vebu’s marquee investor and customer, Chipotle, was the result of an undisclosed relationship between Buck Jordan and the executives running Chipotle’s venture fund. A former Vebu employee who worked on all phases of the Autocado explained to us that Vebu had significant challenges when prototyping with Chipotle and struggled to scale commercially. This has been marked by Vebu’s declining revenue from Chipotle with only one store deployment since the partnership was announced in July 2023. Meanwhile Buck Jordan had reduced his SERV holdings by 20% since the Vebu deal was reported.

- 2. SERVE TRACKING AT LESS THAN 3% OF GUIDANCE FOR ROLLOUT DEPLOYMENT:** Serve’s CEO Ali Kashani (“Kashani”) repeatedly told investors that 2,000 robots would be deployed by end of CYE’25 and would generate annual revenues of US\$ 60-80 million. **As of 3Q’24, Serve had 59 daily robots, less than 3% of its guidance.** We spoke with several industry participants who agreed it is unlikely that Serve will reach its target robot unit count by CYE’25. Additionally, our analysis indicated that Serve’s revenue guidance is only possible if unrealistic utilization and delivery fees are assumed. As a reality check on Serve’s claims, we highlight videos of pedestrians mocking Serve’s robots as they run red lights, get stuck, and topple over themselves while performing basic maneuvers.
- 3. LARGEST INVESTOR UBER EATS USING COMPETITORS IN THE US AND ABROAD:** We view **Serve’s largest investor and delivery customer, Uber Eats, signing sidewalk robot deals with Serve’s competitors, Avride and Coco Robotics as a clear reflection of Serve’s shortcomings.** Other food delivery platforms that are not Serve customers, such as DoorDash and GrubHub, opted for competitor robots or in-house solutions. **We believe that these platforms are choosing competing sidewalk robots because the competing offerings cost are 90% less than Serve’s robots.**
- 4. FAILED PARTNERSHIP WITH MAGNA:** Historically, the bulk of Serve’s revenues were generated from a software licensing deal with related-party Magna International (“Magna”). To encourage Magna, Serve gifted Magna over US\$ 15 million in \$0.01 warrants and paid US\$ 5.3 million in contract manufacturing costs to Magna. **Meanwhile the arrangement generated less than US\$ 1 million in revenues for Serve, with revenues declining by 95+% as of 3Q’24. Bad deal for SERV shareholders. Good deal for Magna.**

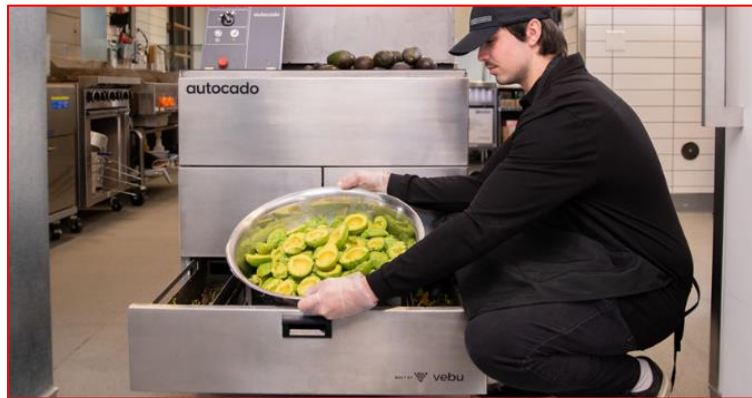
Serve faces significant competition for last-mile delivery and falls behind on its hyped competitive advantages. Serve’s largest investor opted to use alternative competing sidewalk delivery robots. Serve’s software is no longer of interest to its exclusive manufacturer. Serve failed to achieve commercial interest from other third-party food delivery services. With little/no commercial interest (including from related parties), a significant cash burn and a low probability of scaling up to 2,000 robots by CYE’25, we are short SERV and think its stock is going significantly lower.

THIS RESEARCH REPORT EXPRESSES SOLELY OUR OPINIONS. WE ARE SHORT. WE ARE BIASED. DO YOUR OWN WORK. Use Bonitas Research LLC’s research opinions at your own risk. You should do your own research and due diligence before making any investment decisions. We have a short interest in SERV and stand to realize significant gains if the price of such instrument declines. Please refer to our full disclaimer located on the last page of this report.

VEBU DEAL UNJUSTLY ENRICHED RELATED PARTIES

On November 7, 2024, Serve announced it would acquire Vebu (<https://www.vebulabs.com/>), an automation start-up incubator founded by Serve director Buck Jordan. Terms of the deal were not disclosed. Upon announcement, Serve's CEO Kashani stated that Vebu brings an “*exciting product... a deeper partnership with national chains, and a potential new revenue and cash flow stream.*”¹

Vebu incubated several failed robots over the years. Currently, Vebu's only product is the “Autocado”, an automated machine that peels and pits avocados into halves. Considering Serve's core business is sidewalk delivery robots, we fail to see the similarities with Vebu in technology or products. Instead, we believe there are sinister incentives behind the acquisition.



Source: <https://www.serverobotics.com/> ; <https://www.vebulabs.com/>

While Vebu is a puzzling strategic fit for Serve, the lack of commercial success for the Autocado makes it an even more perplexing acquisition. The sole customer Vebu landed since the product's inception is its lead investor, Chipotle. We spoke to a former Vebu employee who was involved with all phases of the Autocado's development, including liaison with Chipotle. The former Vebu employee described that Vebu failed to transition the Autocado beyond the prototype stage due to cash flow challenges and lack of scalability which resulted in several rounds of layoffs.

As a clear indication of the fledgling relationship, it took 15 months for Chipotle to announce it had begun initial testing of the Autocado at a single location in Huntington Beach, California.² Our understanding is that the Autocado has several challenges. One critical issue described by the former Vebu employee was that the Autocado's size effectively puts it at odds with Chipotle's model of operating small footprint kitchens. **In general, the former Vebu employee observed that kitchen automation was not a near-term priority for Chipotle, as evidenced by Chipotle substantially reducing its purchases from Vebu in 2024.**³

Chipotle's 3Q'24 10-Q disclosed that “*We are an investor in Vebu Inc. (“Vebu”), a developer of restaurant automation technology... **During the nine months ended September 30, 2024 and 2023, purchases from Vebu were \$545 and \$991, respectively.***”⁴

Such an underperformance begs the question: Why would Chipotle invest US\$ 7.5 million into Vebu?⁵ We believe the answer lies in an undisclosed relationship between Buck Jordan and the Head of Chipotle's Cultivate Next Fund, Christian Gammill (“Gammill”).

¹ SERV 3Q'24 earnings call

² <https://newsroom.chipotle.com/2024-09-16-CHIPOTLE-DEBUTS-AUTOCADO-AND-THE-AUGMENTED-MAKELINE-BY-HYPHEN-IN-RESTAURANTS>

³ <https://www.sec.gov/ix?doc=/Archives/edgar/data/1058090/000105809024000050/cm-g-20240930.htm>

⁴ <https://www.sec.gov/ix?doc=/Archives/edgar/data/1058090/000105809024000050/cm-g-20240930.htm>

⁵ <https://www.sec.gov/ix?doc=/Archives/edgar/data/1058090/000105809023000030/cm-g-20230630x10q.htm>

The Cultivate Next Fund is operated by General Partners, Gammill and Alexander McRae (“McRae”) through several entities such as Nextwave X Partners, NXP Management, and NXP Founders.^{6,7,8,9}

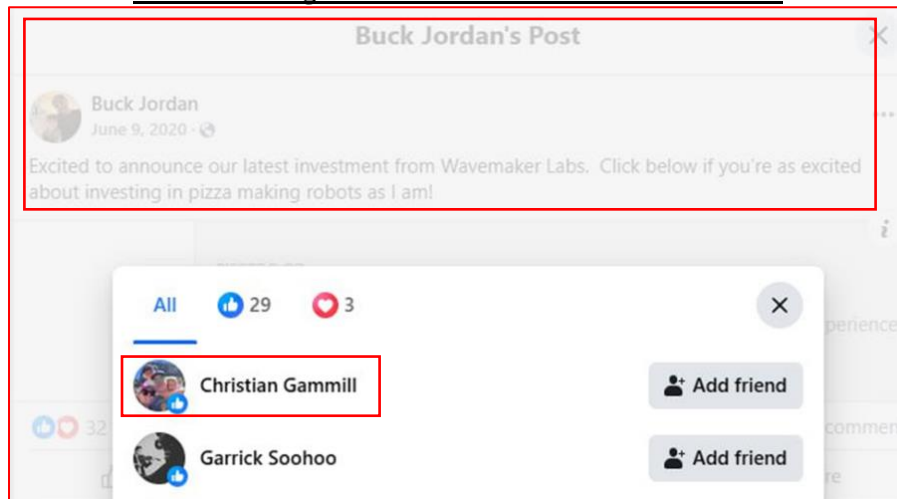
Per legal filings, these entities are based at the same address as Vebu: 1661 E. Franklin Ave, El Segundo, CA 90245, USA.^{10,11}

SEC filings disclosed that Gammill’s entities used Vebu’s address both before and after Chipotle’s investment in Vebu. A former Vebu employee corroborated this and **told us that Gammill maintained “an office in the back [of Vebu’s headquarters] that they rented out from Buck.”**

The former Vebu employee also explained to us that Buck Jordan and Gammill were friends long before Chipotle’s investment in Vebu. We found clear evidence from Buck Jordan’s Facebook page confirming their friendship, including several posts where the two interacted as far back as June 2020.¹²

Gammill and McRae were also pre-IPO investors in Serve via Industrious Ventures.¹³

Gammill Liking Buck Jordan’s June 2020 Facebook Post



Source: Facebook

This personal relationship may explain why Chipotle was willing to anchor Vebu’s July 2023 venture round where they attempted to raise US\$ 18 million but only raised US\$ 9 million.¹⁴

In our opinion, Vebu’s failing business should lead investors to wonder why Serve’s leadership portrays Vebu as a game-changing acquisition. Once again, we believe Buck Jordan’s personal network provides the answer. A former Vebu employee told us that Buck Jordan has known Serve’s CEO Ali Kashani for a long time and that Serve consulted with Vebu over its crowdfunding efforts a few years ago. **Now, Kashani is coming to the rescue for Buck.**

This exit plan is already working for Buck Jordan. Within a week of the Vebu acquisition announcement, Buck Jordan’s entity sold 20% of its shares.¹⁵ Other insiders have been selling as well.

⁶ <https://www.linkedin.com/in/gammill/>

⁷ https://www.linkedin.com/company/nextwave-x-partners?trk=public_profile_topcard-current-company

⁸ https://www.sec.gov/Archives/edgar/data/1912930/000191293024000001/xslFormDX01/primary_doc.xml

⁹ <https://radiantanalytics.com/firm/adv/nxp-management-llc-321246>

¹⁰ https://www.sec.gov/Archives/edgar/data/1916117/000191611722000003/xslFormDX01/primary_doc.xml

¹¹ https://www.sec.gov/Archives/edgar/data/1912930/000191293024000001/xslFormDX01/primary_doc.xml

¹² <https://www.facebook.com/share/p/1DRVkAEFzX/>; <https://www.facebook.com/JamesBuckJordan>

¹³ <https://www.industrious.vc/industrious-portfolio>

¹⁴ https://www.sec.gov/Archives/edgar/data/1984426/000198442623000002/xslFormDX01/primary_doc.xml

¹⁵ <https://www.sec.gov/Archives/edgar/data/1832483/000095017024127088/xslF345X05/ownership.xml>



Source: Bloomberg

a. Buck Jordan: Multiple Failed Robotics with No Commercial Successes

While it’s normal for companies to leverage connections to raise capital, generate business, develop technology, etc., we take issue when these relationships are unjustly used to enrich executives at the expense of shareholders. In our view, this has been Buck Jordan’s venture capital playbook for almost a decade.

In 2016, Buck Jordan founded Vebu as a start-up incubator focused on Big Data, AI and Robotics.¹⁶ Vebu marketed various “innovative” robotics start-ups to retail investors to secure crowdfunding. Its robot concepts promised to revolutionize everything from burgers to pizza to bubble tea to Michelin Star quality meals. A former Vebu employee we interviewed told us that the company raised over US\$150 million in total for its various robotic ventures. In February 2022, Vebu launched multiple campaigns within 24 hours, seeking over US\$100 million across its various robotics ventures including Miso, Piestro and Abundant/Future Acres.¹⁷

As we explain, most of these robots failed and saw their operating entities go bankrupt. Buck Jordan, however, made off handsomely by siphoning the crowdfunded money through exorbitant management and administrative fees paid to his affiliate entities. Buck Jordan’s bio from Miso Robotics’ Offering Circular in March 2024 lists him as an officer or director for 13 different companies.¹⁸

Entity (USD)	Incorporation Year	Total Capital Raised to date	Robot Type	Corporate Address	Current Status
Vebu Inc	2011	9,000,000	food automation machinery	1661 East Franklin Ave El Segundo, CA 90245	Serve Acquired
Nommi	2017	700,000	Kitchen Automated Food Bowls	1661 East Franklin Ave El Segundo, CA 90245	Commercial Failure
Bobacino	2020	5,000,000	Automated bubble tea bar	1661 East Franklin Ave El Segundo, CA 90245	Commercial Failure
Future Acres	2017	2,000,000	Farming Automation	1661 East Franklin Ave El Segundo, CA 90245	Out of Business
Abundant Robotics	2015	15,000,000	Robotic Apple Picking	1661 East Franklin Ave El Segundo, CA 90245	Commercial Failure
Piestro	2017	12,000,000	robotic pizza system	1438 9th Street Santa Monica, CA 90401	Commercial Failure
Graze	2017	5,000,000	Automated Lawn Mower	1438 9th Street Santa Monica, CA 90401	Commercial Failure
800DegreesGo	2021	4,500,000	Quick-Serve Pizza Concept	1438 9th Street Santa Monica, CA 90401	Commercial Failure
Miso Robotics	2016	100,000,000	autonomous robotic kitchen assistant	680 East Colorado blvd Suite 330 Pasadena, CA 91101	Commercial Failure

Source: SEC Filings, Former Employee Interviews, Media Coverage; Pitchbook

¹⁶ <https://www.linkedin.com/company/wavemakerlabs/>

¹⁷ <https://www.ottomate.news/p/wavemaker-triples-down-on-equity>

¹⁸ https://www.sec.gov/Archives/edgar/data/1710670/000110465924039588/tm2333647d8_253g2.htm

We believe investors in the crowdfunding campaigns have gradually been catching on as negative press has exposed the playbook. In January 2024, Hubtas Media published an article titled, “The Rise & Fall Of Wavemaker Labs: Piestro, Bobacino, 800 Degrees Go, Future Acres and More Shut Down After Raising Tens of Millions” which highlighted Buck Jordan’s historical business failures and their reliance on startup crowdfunding as a source of capital.¹⁹ Our sense is that this has led Buck Jordan to find an alternative exit: Serve’s acquisition of Vebu.

b. Miso Robotics

Miso Robotics (“Miso”) was founded in 2016 by Buck Jordan, alongside Ryan Sinnet, Rob Anderson, and John Miller.²⁰ Miso focused primarily on developing a robotic arm called the “Flippy” for fast food kitchens. Buck Jordan was Miso’s Chairman, President and Director up until October 2024, Buck Jordan when he resigned.²¹

Miso raised US\$60 million via crowdfunding. In a Forbes article profiling the crowdfunding campaigns, Miso’s former CEO, Mike Bell, outrightly stated that one of the principal benefits to crowdfunding was the reduced investor scrutiny: “*The second benefit: the ways crowdfunding differs from seeking venture investors. **Crowdfunding doesn’t use the extensive due diligence scrutiny a traditional venture firm employs. Crowdfunding only requires the company to prove the value of its product (to non-accredited investors).***”²²

Similar to Vebu, Miso promoted pilot deals for Flippy with multiple large restaurant groups, but has little to show for these arrangements. In 2018, they signed a deal worth up to US\$11 million to deploy 100 Flippys at CaliBurger locations. But the deal with CaliBurger was a failure. **In classic Buck Jordan fashion, the SEC flagged the relationship and asked Miso to amend its disclosure to reflect that fact that CaliBurger was a related party.**²³ Miso also landed pilot programs with large brands like Jack in the Box, Buffalo Wild Wings, Panera and Chipotle.²⁴ In early 2022, the company signed a deal with White Castle to deploy up to another 100 Flippys.²⁵ Most of Miso’s pilot programs were completed by October 2023, with only 15 units leased to partners as of September 2024.²⁶

The following entities are currently participating in (or recently completed) initial pilot programs on various products:

NAME OF ENTITY	START DATE	PILOT PROGRAM END DATE
Chipotle	October 22, 2021	October 5, 2023
Inspire Brands (Buffalo Wild Wings)	April 1, 2021	October 20, 2023
Jack in the Box Inc.	July 27, 2021	Ongoing
Kuwait Food Company (Wimpy)	February 14, 2022	Uninstall Coordination Still Ongoing
Panera LLC	June 30, 2021	October 25, 2023

Source: Miso Robotics Offering Circular – March 27, 2024²⁷

In 2023, Miso generated revenues of ~US\$ 492,000 while burning US\$ 23 million in cash.²⁸ In 1H’24, Miso generated revenues of ~US\$ 192,000 while burning US\$ 7.7 million in cash. As of September 2024, Miso had only 15 units leased to partners.²⁹ As of CYE 2023, Miso’s auditor raised substantial doubt about Miso’s ability to continue as a going concern by CYE 2024. As of CYE 2023, Miso had an accumulated deficit of US\$ 122 million.³⁰

Miso’s crowdfunding investors appear to be catching on to Miso’s false promises. An investor made a detailed post in the Miso Robotics sub-reddit called: “**I checked out Miso’s 2023 SEC filing and OH MY GOD it’s full of red**

¹⁹ <https://media.hubtas.com/2024/01/30/the-rise-fall-of-wavemaker-labs-piestro-bobacino-800-degrees-go-future-acres-and-more-shut-down-after-raising-tens-of-millions/>

²⁰ <https://media.hubtas.com/2024/01/30/the-rise-fall-of-wavemaker-labs-piestro-bobacino-800-degrees-go-future-acres-and-more-shut-down-after-raising-tens-of-millions/>

²¹ https://www.sec.gov/Archives/edgar/data/1710670/000110465924113409/tm2427327d1_1u.htm

²² <https://www.forbes.com/sites/allbusiness/2023/03/17/how-one-founder-raised-60-million-using-crowdfunding/>

²³ <https://www.sec.gov/Archives/edgar/data/1710670/000000000019015767/0000000000-19-015767-index.htm>

²⁴ https://www.sec.gov/Archives/edgar/data/1710670/000110465920039557/tm2013936d1_253g2.htm

²⁵ <https://foodondemand.com/02172022/white-castle-set-to-roll-out-100-flippy-robots/>

²⁶ https://www.sec.gov/Archives/edgar/data/1710670/000110465924103721/tm2425059d1_1sa.htm

²⁷ https://www.sec.gov/Archives/edgar/data/1710670/000110465924039588/tm2333647d8_253g2.htm

²⁸ https://www.sec.gov/Archives/edgar/data/1710670/000110465924054254/tm2412978d1_partii.htm


²⁹ https://www.sec.gov/Archives/edgar/data/1710670/000110465924103721/tm2425059d1_1sa.htm

³⁰ https://www.sec.gov/Archives/edgar/data/1710670/000110465924103721/tm2425059d1_1sa.htm

flags".³¹ A YouTube review titled "*We Would NEVER Invest in Miso Robotics. Here's Why*" highlighted various Miso Robotic deficiencies.³²

In March 2024, Miso initiated another Regulation A offering for US\$ 25 million through the sale of ~5 million shares at \$4.97 per share. If completed, Miso would have 48 million shares outstanding for an implied valuation of US\$ 238 million.³³ Miso's March 2024 raise was a 50 % lower "down-round" as compared to Miso's 2022 implied valuation of US\$ 500 million.³⁴

Crowdfunding investors on Reddit have made their opinions heard.³⁵

 r/MisoRobotics • 6 mo. ago
BusinessAgreeable806

Corrupt Board + Inept Management

If you are curious about what's happening at Miso and how they are performing with our investment, simply go to LinkedIn, search past employees, reach out, and brace for impact. There is no shortage of fury.

The "AI Kitchen" is a total scam.

- It's not even a real restaurant chain. The brand is owned by a board member/insider. With thousands of actual restaurant brands in the world today, they couldn't find a real one—or they couldn't find one dumb one.
- It's a ridiculously slow burger cooking demonstration that has zero feasibility in the real world. It's straight out of a circus act - half snake oil/half bearded lady.
- It uses about as much artificial intelligence as my garage door opener. It computes cook time and handles orders via voice recognition. Wow. Maybe if they call it "AI" they can be like Nvidia.

No news is the sound a corpse makes

- No new brands, rollouts, pilots - nothing. Well, let's focus on the "Revolution". Yea, I'm pumped. Here's some more of my money.
- The number of Flippys working in restaurants is less than 10 and is **decreasing**.
- Revenue? Why speak of such silly concepts? Really - we're in the middle of a revolution!

****Amazing management team ***cough***

- Near 100% turnover in headcount in the last year, including all C-level people (again) and co-founders.
- The board is full of inside-dealing, crooked old-boys with zero restaurant or robotics experience.

The new CEO, clearly bullied in high-school, is in so far over his head its actually becoming hard to watch.

Source: Miso Robotics Reddit Thread

c. Piestro and 800 Degrees Go

Piestro was another Buck Jordan venture formed to revolutionize pizza making via automated vending machines. Piestro claimed that its "robots" could make pizza at a fraction of the cost of traditional pizzerias.³⁶ They touted pre-orders for more than 4,200 units, representing over US\$580 million.³⁷ Piestro leveraged this "order book" to raise a just over US\$12 million across 3 different crowdfunding campaigns (US\$1 million in 2020, ~US\$5 million in 2021, and US\$6 million in 2022).

³¹ https://www.reddit.com/r/MisoRobotics/comments/15fujpa/i_checked_out_misos_2023_sec_filing_and_oh_my_god/?rdt=56991

³² <https://www.youtube.com/watch?v=XDQViWqNdIs>

³³ https://www.sec.gov/Archives/edgar/data/1710670/000110465923130560/tm2333647d1_partiandiii.htm

³⁴ https://www.sec.gov/Archives/edgar/data/1710670/000110465922012145/tm222587d2_ex13-1.htm

³⁵ https://www.reddit.com/r/MisoRobotics/comments/1d4gekz/corrupt_board_inept_management/

³⁶ <https://piestro.webflow.io/>

³⁷ <https://roboticsandautomationnews.com/2022/07/23/automated-pizza-machine-maker-piestro-receives-580-million-in-pre-orders-and-finds-new-partner/53352/>

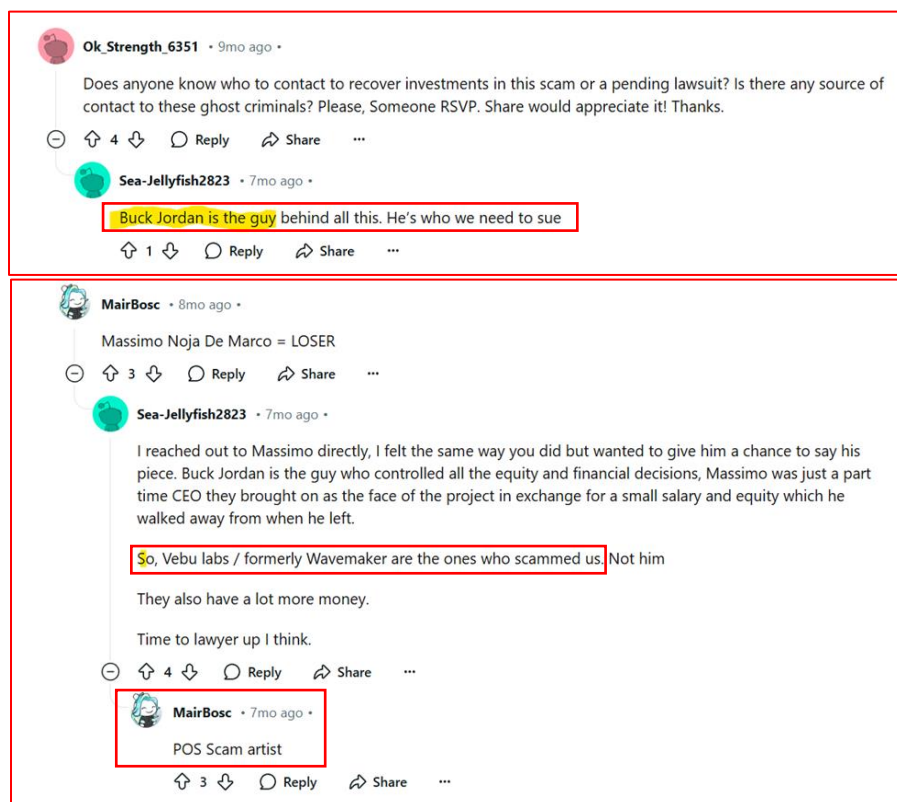
Piestro launched a JV with 800 Degrees called “800 Degrees Go” to build out a network of fully autonomous pizzerias.³⁸ They also struck their own Buck Jordan deal with Serve to deliver artisanal pizzas.³⁹ To no surprise, **both of these ventures failed.**

Piestro’s most recent SEC filing from September 2022 revealed that as of 1H’22, Piestro had not commenced any commercial activity nor generated any revenue while its accumulated deficit reached US\$ 13 million. Piestro’s auditor cited a going concern doubt.⁴⁰ 800 Degrees Pizza Go opened at one location in Burbank. As of May 31, 2023, this location had been closed permanently. A few days later, 800 Degrees Go terminated its agreement with Piestro, explaining to investors that Piestro suspended their efforts to develop a fully automated robotic pizza machine.^{41 42}

In August 2023, Vebu Labs (subsidiary of “Vebu”) sued Piestro for failure to remit payment in full for engineering and product development services that Vebu agreed to provide to Piestro.⁴³

“Beginning June 30, 2020, and extending through the beginning of 2023, [Vebu] billed Piestro a total amount of \$21,511.417.19. During this period, Piestro remitted payments with a total value of \$21,472,764.52... The value of payments remitted by Piestro to [Vebu] included the issuance of Warrants to Purchase Common Stock (the “Warrants”).” By September 2023, Piestro relinquished its assets to creditors.⁴⁴

We found a reddit thread where investors who lost money in Piestro shared comments, with highly critical views expressed about Buck Jordan and Vebu.⁴⁵



Source: Piestro Reddit thread

https://www.reddit.com/r/Piestro/comments/15mr4q5/what_is_going_on/?rdt=34431

³⁸ https://www.sec.gov/Archives/edgar/data/1880820/000110465921134068/tm2126861d2_partiiandiii.htm

³⁹ <https://www.serverobotics.com/piestro-partnership>

⁴⁰ https://www.sec.gov/Archives/edgar/data/1734242/000110465922103250/tm2226704d1_1sa.htm

⁴¹ https://www.reddit.com/r/Piestro/comments/18iifin/800_degrees_go_termination_agreement_with_piestro/?rdt=52085

⁴² https://www.sec.gov/Archives/edgar/data/1734242/000110465922103250/tm2226704d1_1sa.htm

⁴³ <https://unicourt.com/case/ca-la23-casear5ae425b68cfc-1068793>

⁴⁴ https://www.reddit.com/r/Piestro/comments/19dpbby/received_a_piestro_email/

⁴⁵ https://www.reddit.com/r/Piestro/comments/15mr4q5/what_is_going_on/?rdt=34431

d. Bobacino

Buck Jordan made a push into automation for the growing bubble tea market by launching Future Pearl Labs, (dba “Bobacino”).

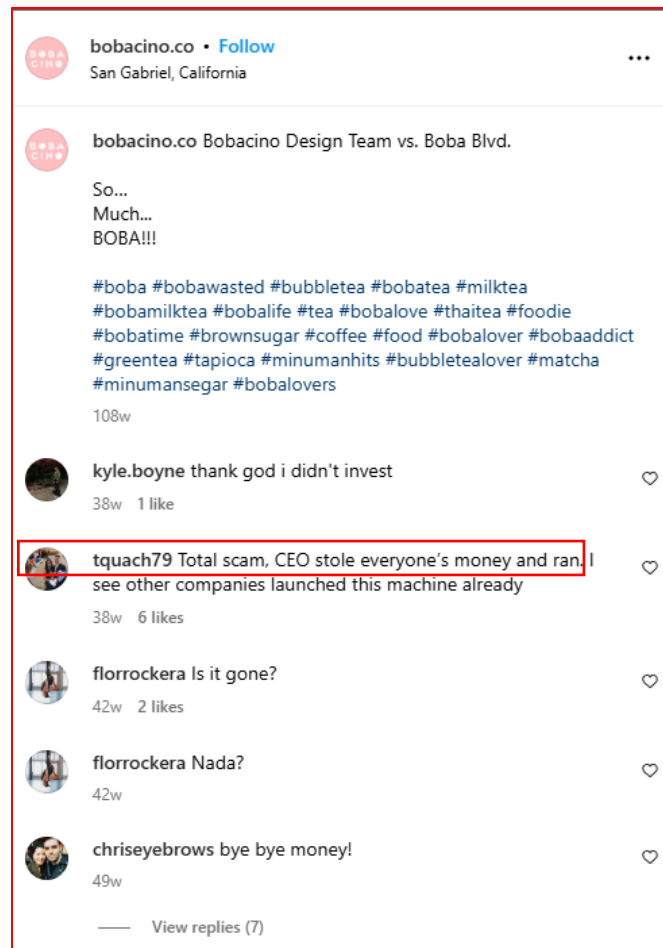
Bobacino described, “The main attraction within the machine is a 6-axis robotic arm which steals the show by orchestrating the whole process.”⁴⁶

Bobacino raised ~US\$ 5 million (US\$ 1.35 million on Start Engine and US\$ 3.7 million from WaxInvest). Bobacino’s offering document revealed limited revenues and 100% of its accounts receivable were owed by related parties in 2019. For 2020, Bobacino reported no revenues and no accounts receivable.⁴⁷

Bobacino’s last reported 1H’22 SEC filings revealed a cash balance of just ~US\$ 36,000 with an accumulated deficit of ~US\$ 2.7 million.⁴⁸

Bobacino is now defunct.

On Instagram, individuals labeled Bobacino a “scam” (we suspect the author was someone who lost their investment in Bobacino via crowdfunding).⁴⁹



Source: <https://www.instagram.com/bobacino.co/?hl=en>

⁴⁶ https://www.sec.gov/Archives/edgar/data/1830113/000110465922002197/tm2135982d1_partiiandiii.htm

⁴⁷ https://www.sec.gov/Archives/edgar/data/1830113/000110465921070060/tm2114403d2_partiiandiii.htm

⁴⁸ https://www.sec.gov/Archives/edgar/data/1830113/000110465922103669/tm2226752d1_1sa.htm

⁴⁹ <https://www.instagram.com/bobacino.co/?hl=en>

e. Other Failed Buck Jordan Wavemaker Labs Ventures: Noomi, Graze, Future Acres

It appears that after some of Buck's more notable failures, investors were catching on to his schemes.

Noomi

Noomi was a Buck Jodan venture which sought to build a robotic kitchen that could prepare Michelin Star meals for a fraction of the cost.

The project allegedly caught the attention of Michelin Star chefs such as Masaharu Morimoto.

Noomi attempted to raise US\$20 million at an implied valuation of US\$80 million from a crowdfunding campaign.⁵⁰

Noomi's auditor included a "going concern" note in Noomi's 2019-2020 financial statements.⁵¹

In September 2022, Noomi filed its latest financial statements that showed no revenue and that Noomi had raised only US\$ 63,000 of its US\$ 20 million campaign goal.⁵²

Graze

Graze, Inc. ("Graze") (<https://www.grazemowing.com/>) is a robotic lawnmower. Graze's 2023 annual report disclosed zero revenues and its net losses were primarily a result of the fees paid to Vebu via related party dealings.⁵³

Buck Jordan was Graze's Chairman of the Board.⁵⁴

*"[Graze] entered into agreements with Vebu Labs, Inc., a related party under common control, for consulting, technology, general support activities, and product development services. During 2022, the company incurred \$6,881,599 of fees under these agreements... Total charges to the company more than the cost incurred by Vebu Labs, NC. was \$3,163,149 and \$4,982,550 in 2022 and 2021, respectively, due to the markup on labor and material."*⁵⁵

Future Acres

Future Acres was an agricultural robot that raised over US\$ 2 million on SeedInvest from 2019 to 2021.

As of June 30, 2022, and December 31, 2021, Future Acres had \$1,645,127 and \$470,678, respectively, in accounts payable with related parties under common control.

In October 2022, Future Acre's CFO resigned.⁵⁶

As of today, Future Acre's Twitter page is inactive and the business is no longer in operation.⁵⁷

To us, Noomi, Graze and Future Acres were all failures for investors that ultimately enriched Buck Jordan et al.

⁵⁰ <https://foodondemand.com/11162021/nommi-robotic-kitchen-gears-up-with-big-partnerships/>

⁵¹ https://www.sec.gov/Archives/edgar/data/1733874/000110465922003655/tm222159d1_partiiandiii.htm

⁵² https://www.sec.gov/Archives/edgar/data/1733874/000110465922103819/tm2226754d1_1sa.htm

⁵³ <https://www.sec.gov/Archives/edgar/data/1734237/000164460024000094/GrazeAuditedFinancials.pdf>

⁵⁴ https://www.sec.gov/Archives/edgar/data/1734237/000110465924047423/tm249923d1_partii.htm

⁵⁵ <https://www.sec.gov/Archives/edgar/data/1734237/000164460024000094/GrazeAuditedFinancials.pdf>

⁵⁶ https://www.sec.gov/Archives/edgar/data/1733855/000110465922120245/tm2230965d1_1u.htm

⁵⁷ <https://x.com/futureacres>

SERVE TRACKING AT LESS THAN 3% OF GUIDANCE FOR ROBOT DEPLOYMENT

We found that Serve’s CEO Ali Kashani (“Kashani”) made numerous misrepresentations to investors regarding deployment and construction costs for Serve’s sidewalk robots. We find it highly unlikely that Serve will be able to achieve both its CYE’25 deployment targets and related revenue guidance of US\$ 60-80 million annual run-rate.

In August 2023 and November 2024, Serve’s investor presentations both guided 2,000 robots to be deployed by CYE’25.⁵⁸ On August 14, 2024, Kashani told Yahoo Finance that once 2,000 robots are deployed and fully utilized, the robot fleet would generate US\$ 60-80 million in annual recurring revenues.⁵⁹

Yet, as of 3Q’24, Serve had 59 daily robots, less than 3% of its guidance for sidewalk robots.⁶⁰

- 2,000 robots launched on Uber Eats has the potential to generate over **\$60m** in ARR
- We expect to be in a position to manufacture and deploy all 2,000 robots by year end 2025

Source: SERV August 2023 PPT investor presentation

We have signed one of the largest contracts in the AV industry with Uber Eats.

Full 2,000-robot deployment expected by the end of **2025**. Our fleet is already integrated into Uber, helping grow to new markets more efficiently and achieve high utilization

- Los Angeles (expansion):
 - At least 250 robots by end of Q1 2025
 - New neighborhoods include Downtown LA, Sawtelle and Westwood
- Expansion markets (new deployment):
 - Entering Dallas-Fort Worth by end of Q2 2025

Source: SERV November 2024 PPT investor presentation

We spoke with several industry participants who agreed it unlikely Serve will reach its target robot unit count.

Expert 1: “*So them claiming they're gonna get to 2000, I mean honestly, we all in the industry find it funny. It's just complete nonsense, right? Because, and so firstly, just kind of evidence has shown that they haven't got anywhere near a thousand. But secondly you have to ask yourself like, where are they gonna put 2000 robots?*”

Expert 2: “*Never gonna happen. I'm sorry, it's, I'm sorry to but in, it's just so, it's so optimistic and I, and I love the optimism, but it took Starship so long with lower cost hardware to, to go from a hundred to 2000. So you just said a hundred to 2000 in a year. Let's put the manufacturing issue to one side, which is a huge issue, right? Guess what the bigger issue is? Where's the market? You've gotta have the market to help to be able to do deliveries for 2000 robots.*”

We find Serve’s revenue guidance preposterous. Assuming 2,000 units that generate annual revenues of US\$ 80 million, each Serve robot would need to be in service all day, every day, and deliver between 27 and 110 times per day (assuming \$4 and \$1 per fee delivery). Alternatively, if Serve robots maintained its current 10 deliveries per day, Serve would need to charge over US\$ 10 per delivery, both metrics we find highly improbable.

⁵⁸ https://www.sec.gov/Archives/edgar/data/1832483/000121390023068297/ea183596ex99-9_serverrobotics.htm

⁵⁹ <https://www.youtube.com/watch?v=dzmEyu3AVo>

⁶⁰ <https://www.sec.gov/ix?doc=/Archives/edgar/data/1832483/000183248324000029/serv-20240930.htm>

<i>Management Guidance</i>	
Guidance Units	2,000
Guidance Revenues	\$ 80,000,000
<i>Calculations</i>	
Days used in a year	365
Guidance Daily Revenue (fleet)	\$ 219,178
Guidance Daily Revenue (per robot)	\$ 110
<i>\$4 per delivery</i>	
Deliveries Per Day	10
Revenue Per Delivery	\$4
Guidance Daily Deliveries (per robot)	27
Needed Delivery Count Increase	174%
<i>\$1 per delivery</i>	
Deliveries Per Day	10
Revenue Per Delivery	\$1
Guidance Daily Deliveries (per robot)	110
Needed Delivery Count Increase	996%

Source: SERV SEC filings, Bonitas Calculations

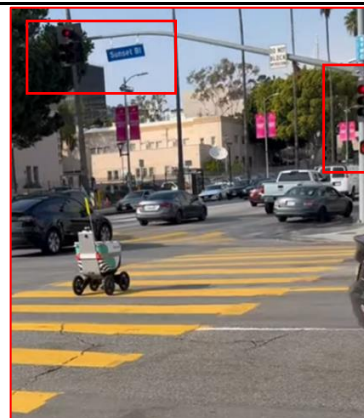
Since 1Q'24, Serve's revenues declined by 50% sequentially each quarter primarily due to Magna no longer paying Serve for its software services.

Key Performance Metrics						
	2021	2022	2023	1Q'24	2Q'24	3Q'24
Daily Active Robots	-	28	34	39	48	59
Daily Supply Hours	-	211	260	300	385	465
Software Service Revenues	-	-	-	851,101	296,035	38,767
Delivery Service Revenues	-	54,423	146,462	51,760	75,540	112,288
Branding Fee Revenues	-	53,575	45,250	43,850	96,800	70,500
Other Revenue	-	-	15,833	-	-	-
Total Revenues	-	107,998	207,545	946,711	468,375	221,555
<i>sequential revenue growth</i>					-51%	-53%

Source: SERV SEC Filings

On November 12, 2024, Kashani stated "We are going to be one of the largest autonomous fleets in the country, if not the world next year".⁶¹ We think these ambitions are laughable considering Serve' robots are struggling with basic maneuvers. Various YouTube channels showed Serve robots running red lights, getting stuck and flipping themselves, and question the speed of delivery as compared to humans "How the hell are these robots faster than humans?"^{62 63}

Delivery Robot Knocks Itself Out – Stopping in the Middle of the Street While Running a Red Light



Source: <https://www.youtube.com/shorts/XfWJ1wzinFk> ; <https://www.youtube.com/shorts/YKYP0ebpT0g>

⁶¹ <https://www.youtube.com/watch?v=BbrLNdlh8C8>

⁶² <https://www.youtube.com/watch?v=b0qVNpYTAFE>

⁶³ <https://www.youtube.com/shorts/YKYP0ebpT0g>

⁶⁴ <https://www.youtube.com/watch?v=-2v9ZDNyvl8>

LARGEST SERVE INVESTOR UBER EATS USING COMPETITORS IN THE US AND ABROAD

In what we view as a clear reflection of Serve's shortcomings, Serve's largest investor and delivery customer, Uber Eats, signed sidewalk robot deals with Serve's competitors, Avride and Coco Robotics. Other food delivery platforms that are not Serve customers, such as DoorDash and GrubHub, also opted for competitor robots or in-house solutions.

In 2022 Cartken (<https://www.cartken.com/>) completed a successful pilot of autonomous deliveries with Uber Eats in Miami, Florida.⁶⁵ In April 2023, Cartken and Uber Eats expanded their sidewalk delivery service to Fairfax, Virginia.⁶⁶ In March 2024, Cartken and Uber Eats expanded its sidewalk delivery services to Tokyo, Japan.⁶⁷

In August 2024, Coco Robotics (<https://www.cocodelivery.com/>) and Uber Eats announced a partnership to expand autonomous sidewalk delivery in Los Angeles. Coco Robotics said it's currently operating in LA neighborhoods such as Santa Monica, Venice, West LA, Westwood, West Hollywood, Hollywood, Downtown LA, Koreatown, and University Park.⁶⁸ As of August 2024, Coco Robotics purportedly had a fleet of over 1,000 robots deployed in Finland and Los Angeles.⁶⁹

On October 3, 2024, Avride (<https://www.avride.ai/robot>) signed a deal with Uber Eats for robot delivery in Austin Texas, Dallas, Jersey City and New Jersey.^{70 71}

As of August 2024, Starship (<https://www.starship.xyz/>) offered robot delivery across more than 50 U.S. college campuses, while Kiwibot (<https://www.kiwibot.com/>) had reached over 30 campuses as of August 2024.⁷² Grubhub uses Starship.⁷³

DoorDash announced it would pursue an in-house solution.⁷⁴

In 3Q'23, when CNBC correspondent Andrew Ross Sorkin specifically asked about Serve's robot production costs, **Kashani claimed that the cost was significantly less than US\$ 50,000 per robot.**⁷⁵ However, **SERV's 2023 10-K listed Serve's robot construction costs per unit at US\$ 63,654.**⁷⁶ When we disclosed the cost to one expert, his response was: **"Oh my god, that is so scary. That is very scary. I mean, \$63,000 is, is so, is so high. Yeah, it's very difficult to make that work and scale that up with a thousand robots without having hundreds and hundreds of millions of dollars investment, which will not be returned in a long, long time."**

We believe that these platforms are choosing competing sidewalk robots because the competing offers cost up to 90% less than Serve's robots. In 2018, Starship commented that its robot cost was US\$ 5,500.⁷⁷ In 2021, Kiwibot commented its robot cost was less than US\$ 5,000.⁷⁸ In April 2022, an Associate Professor at the Center for Entrepreneurship, College of Business and Economics, Qatar University, highlighted that sidewalk robots cost on average between US\$ 2,500 – 5,000.⁷⁹

One would think that with such a high cost, Serve Robotics must have some unique technology as part of its robots. We were not surprised to find that the company lacks any real intellectual property. The company has just 5 granted patents in the US. 3 of these are design patents for how the robot looks.

⁶⁵ <https://www.cnn.com/2022/12/15/tech/uber-eats-robots/index.html>

⁶⁶ <https://www.therobotreport.com/cartken-uber-eats-begin-deliveries-in-virginia/>

⁶⁷ <https://www.youtube.com/watch?v=GZhDsGegUEk>

⁶⁸ <https://www.therobotreport.com/uber-eats-rolls-out-coco-sidewalk-delivery-robots-in-la/>

⁶⁹ <https://www.prnewswire.com/news-releases/uber-and-coco-announce-strategic-partnership-to-launch-cocos-sidewalk-robots-on-uber-eats-302230641.html>

⁷⁰ <https://www.statesman.com/story/business/2024/11/15/avride-uber-eats-austin-tx-food-delivery-robots-shopping/76272667007/>

⁷¹ <https://investor.uber.com/news-events/news/press-release-details/2024/Uber-and-Avride-Announce-Autonomous-Delivery-and-Mobility-Partnership/default.aspx>

⁷² <https://retailwire.com/discussion/is-sidewalk-robot-delivery-ready-to-roll/>

⁷³ <https://www.youtube.com/watch?v=ujzjZuhE92g>

⁷⁴ <https://www.therobotreport.com/door-dash-building-own-delivery-robots/>

⁷⁵ <https://www.youtube.com/watch?v=BE86eFGdS-U>

⁷⁶ <https://investors.serverobotics.com/static-files/a9dbfa3d-3026-4edb-9291-1b3f62e5b373>

⁷⁷ <https://www.technologyreview.com/2018/01/30/145935/why-sidewalk-delivery-robots-still-need-safety-drivers-too/>

⁷⁸ <https://medium.com/headlineasia/move-over-wall-e-the-future-of-delivery-is-kiwibot-fe6d6e7b97a1>

⁷⁹ <https://cmr.berkeley.edu/2022/04/self-driving-robots-a-revolution-in-the-local-delivery/>

For internal technology, Serve does have a patent on a “*Light Projection System*” and “*Self Sanitizing Storage of a Delivery Robot.*” Serve received a final rejection for a patent of its full Delivery Robot (US17/309,582). Serve also received a final rejection for a patent titled: “*Safe Traversable Area Estimation in Unstructured Free-Space Using Deep Convolutional Neural Network.*” This patent application describes a sidewalk robot system for determining safe traversable areas using LIDAR sensors and machine learning.

In 2018 Caterpillar Inc. (CAT) filed a patent with Marble Robots that was approved for a sidewalk robot.⁸⁰

Otonomy, a Los Angeles based competitor, offers a multi-compartment sidewalk robot that, to us, seems way more practical with broader delivery market capability than a single compartment for delivery.⁸¹

Otonomy Robot



Cartken Robot



Kiwi Robot



Starship Robot



Source: <https://otonomy.io/in-the-news/get-your-beer-from-an-app-connected-roving-robot-with-the-otobot-brew/> ; <https://www.magna.com/company/newsroom/releases-archive/release/2022/09/07/news-release--magna-and-cartken-to-collaborate-on-autonomous-delivery-robots> ; <https://www.kiwibot.com/> ; <https://www.starship.xyz/>

⁸⁰ <https://patents.google.com/patent/US11200532B2/en>

⁸¹ <https://otonomy.io/>


FAILED PARTNERSHIP WITH MAGNA

Historically, Serve's largest source of revenue was from a software services licensing deal with related-party Magna New Mobility USA, Inc., a subsidiary of Magna International Inc. (<https://www.magna.com/>) (collectively "Magna").

To encourage Magna, Serve gifted Magna over US\$ 15 million in \$0.01 warrants and paid US\$ 5.3 million in contract manufacturing costs to Magna. Meanwhile the arrangement generated less than US\$ 1 million in revenues for Serve, with revenues declining by 95+% as of 3Q'24.

In February 2024, Serve entered into a strategic partnership with Magna under which Serve granted Magna a non-exclusive license to its technology in support of Magna's autonomous mobile robot ("AMR") projects.^{82,83} Magna is Serve's exclusive contract manufacturer and a license technology partner whereby Magna supplied Serve with hardware while Serve supplied Magna with software technology.⁸⁴

Magna International has licensed our technology to accelerate development of its new robotic products



As a leading urban robotic delivery company, we believe we are well-positioned to become a platform of choice for companies building new non-competing robots and services for complex public spaces. We believe this provides us with an additional monetization opportunity.

2. Contract manufacturer 

Magna Int'l (tier 1 auto supplier) is Serve's exclusive contract manufacturer



20

Source: Serve November 2024 PPT investor presentation

According to Serve's July 2024 S-1, "Revenues increased \$0.91 million to \$0.95 million for the three months ended March 31, 2024 from \$0.04 million for the same period in 2023. The increase is due primarily to the \$0.85 in revenues generated from the Company's software services contract with Magna."

In connection with the strategic partnership with Magna Serve issued Magna warrants to purchase up to 2,145,000 shares of SERV common stock at an exercise price per share of \$0.01, valued today at US\$ 15+ million. Magna also received a manufacturing contract to supply Serve with robots, which in 3Q'24, Serve paid Magna over US\$ 5.3 million. Serve's 3Q'24 10-Q revealed that revenues from Magna declined by 99% from 1Q'24 to 3Q'24 because Magna did not continue with Serve's AMR Technology.

As of 3Q'24, Serve generated less than US\$ 1 million in revenues from Magna in exchange for over US\$ 20 million in benefit (US\$ 15 million in warrants and US\$ 5.3 million in robot construction costs). Bad deal for SERV shareholders. Good deal for Magna.

Serve has not announced any additional orders for its software services from any related or independent third parties, which suggests to us that there is limited commercial value in Serve's robotic software platform.

⁸² https://www.sec.gov/ix?doc=/Archives/edgar/data/0001832483/000121390024018566/ea0200355-10k_serverobot.htm

⁸³ https://www.sec.gov/Archives/edgar/data/1832483/000121390024016482/ea0200460ex10-1_serverobo.htm

⁸⁴ <https://www.thebotreport.com/magna-to-manufacture-more-serve-robotics-last-mile-delivery-systems/>

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