

NINGI RESEARCH

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List of abbreviations

A.I.	Artificial intelligence
Ambient centers	Walmart's distribution centers
ASRS	Automated storage & retrieval system
Breakpack	Opening packages and storing single items in aisles
C&S Wholesale Grocers	Rick Cohen's privately held grocery wholesale business
DC	Distribution center
Dematic	Industry leader for warehouse automation, Kion Group subsidiary
Each	Single item to be stored at a warehouse facility
FC	Fulfillment center
Knapp AG	Competitor of Symbotic in the warehouse automation industry
MFC	Walmart's market fulfillment centers (micro-fulfillment center)
RDC	Walmart's regional distribution center
SAM	Strategically addressable market
Sono Motors	Bankrupted EV start-up that outsourced its manufacturing
Swisslog	Competitor of Symbotic in the warehouse automation industry
Symbot	Symbotic's mobile robot
Tote	Storage box at a warehouse facility
V-Shares	Non-tradeable shares, convertible 1-on-1 for Common A shares

List of references

All citations, references, and sources are publicly available. Annual reports and other company documents were obtained through the respective issuer's website, regulatory filings, and commercial registries. Documents are cited as follows:

< company name / author > < year of publication / business year >, < document title >, < page >, < url >

All annual reports are quoted with their business year in parentheses instead of publication year as we noticed that it does limit confusion.

Some SEC filings were retrieved through direct URLs within the EDGAR system, and those filings are quoted directly.

The phrase "company data" indicates that we aggregated the specific metrics from one or several respective regulatory filings.

List of figures

If not stated otherwise, all figures are obtained through the quoted references in the footnotes and can be found in the respective source.

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Executive summary

We are short Walmart (NYSE: WMT) and Symbotic (NASDAQ: SYM). **In our opinion, Walmart exposed itself to significant business risk by awarding a \$12 billion contract to a publicly-listed robotics start-up called Symbotic.** Symbotic is a self-proclaimed “A.I.-powered robotic technology platform” that sells warehouse automation and so-called automated storage & retrieval system (“ASRS”). Walmart and Symbotic agreed on retrofitting Walmart’s 42 regional distribution centers (“RDC”) and automating its fulfillment centers. But there is a catch. In fact, there are several. **In our opinion, Symbotic is not the cutting-edge company it claims to be. Its products don’t offer any innovation, lack a competitive edge, and are still in prototype status.** Nevertheless, the prototypes will be rolled out in all of Walmart’s RDC – 28 of 42 are already being deployed at this moment. **We believe the awarding of this contract to Symbotic was ill-advised and it appears that there has been miserliness, a lack of proper due diligence by Walmart, and a major conflict of interest.** On its Investor Day in April, Walmart highlighted that automating the distribution and fulfillment centers is key to growing its revenue and improving margins. It is a key part of the company’s US omnichannel strategy. **For this \$12bn centerpiece Walmart chose a newcomer with no track record of delivering such systems.** Investor’s expectations about the execution of the strategy are reflected in elevated Walmart’s current P/E multiple of around 30x and NTM P/E multiple of about 24x. In addition, we believe the significant share buybacks of the past years support the expansion in multiples. The P/E multiple deviates about 40% from Walmart’s past average of about 17x and is only topped by the 36x P/E multiple during the dot-com bubble. **We think choosing Symbotic will have significant negative consequences for Walmart’s omnichannel strategy.** Therefore, we think that a lower valuation at a 20x NTM P/E multiple is more appropriate for Walmart: **\$124.2 per share.** In addition, we believe that **Symbotic’s stock is uninvestable.**

Walmart Inc.	
Ticker:	WMT
Market Cap:	USD 416.02bn
Share Price:	USD 155.33
Consensus:	USD 169.23

Symbotic Inc.	
Ticker:	SYM
Market Cap:	USD 23.24bn
Share Price:	USD 41.84
Consensus:	USD 34.08

In our opinion,

- Rick Cohen, **the company’s CEO, trash-talks competitors and their products on several occasions,** claims to be a top expert on warehouse automation, and took Symbotic public because of his employees.
- He openly acknowledges that **he is happy that his employees think the stock will go up forever and that they are supposed to make it go up forever.**
- Despite repeated claims, **Rick Cohen is not the founder of Symbotic** but it’s an innovator called John Lert, Rick Cohen bought the company from John Lert, who then founded Alert Innovation which was sold to Walmart in 2022.
- **Symbotic’s products are not as innovative and cutting-edge** as the company claims, most of them are still in field-testing and prototypes, with **management disclosing that there are not finished,** e.g. mixed-case palletization is only at 90% and the company has been working on it since 2014.
- **Prior to the Walmart contract, the company sold only four systems since 2007,** one to Target in 2014, two to C&S Wholesale Grocers in 2016, and one to Giant Tiger in 2018.

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- Despite the innovative technology and claimed economic benefits for Symbotic's customers, no customers rolled out Symbotic's systems in all of their distribution centers.
- **Despite a claim made by Rick Cohen in the Wall Street Journal in 2016, C&S Wholesale Grocer's never installed Symbotic's systems in all 33 distribution centers.**
- **Symbotic's management consists of loyal confederates** of the company's CEO and most of them **lack experience in warehouse automation or robotics**, the current CTO is C&S Wholesale Grocers' former IT head and the only automation-savvy executive, Mike Dunn, has sold two-thirds of his shares over a six-month period.
- **Most experienced employees don't hang around long enough** and most recently Symbotic's head of machine learning quit to go work at Alert Innovation.
- In the past three years, **Symbotic's chief executive officer, chief human resources officer, chief technology officer, head of machine learning and chief accounting officer quit.**
- **Symbotic lacks the expertise to fulfill the Walmart contract** and hired dozens of third-party contractors to develop its products, manufacture them, deploy them at Walmart's distribution centers, and do maintenance support.
- **Symbotic is bankrolled by Walmart and without any advance payments from Walmart, Symbotic would not be able to operate.** The company was never profitable, accumulated a deficit of more than \$1.2 billion, and prior to the Walmart contract had an annualized run rate of \$25 million.
- The company was awarded an alleged \$12 billion contract to retrofit Walmart's regional distribution centers but Walmart never confirmed the size. **However, official documents filed with local authorities indicate that the backlog has a fair value of only \$3.95 billion.**
- Because Walmart accounts for most of Symbotic's revenue and **the company pressuring in a faster rollout** and due to a lack of experience **Symbotic hired third-party engineering companies to fulfill the contract**, all while this raises Symbotic's expenses and lowering the company's margins.
- The first three Walmart systems are online and **warranty claims are already starting to accelerate, in the latest quarter already \$2 million in warranties were claimed.**
- The company claims to use cutting-edge A.I. software but **Symbotic explains its "A.I.-powered software" with its software being enhanced by artificial intelligence.** It's a generic description lacking any depth.
- The company's **head of machine learning quit in January 2023** and started at a competitor
- According to a LinkedIn search, only eight (!) out of 1080 employees at Symbotic are working on artificial intelligence and the company has no full-time position open.
- The alleged **strategically addressed markets ("SAM") of \$393 billion are based on a unobjective market study** researched by a related-party.
- **Independent research estimates the market size at \$41 billion in 2027 and \$58 billion by 2031, that's an 86 percent smaller TAM than claimed by Symbotic.**
- **The current valuation of Symbotic lacks any merit.** It is based on more than dubious claims and wishful thinking.

We think Symbotic is uninvestable.

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In regards to Walmart, we believe,

- Walmart laid out an **omnichannel strategy to grow topline while improving operating margins** and the company's return on investment.
- A **centerpiece of that strategy is the automation of Walmart's supply chains** and the company guided 20% unit costs savings through automation.
- **As part of the strategy, the company will automate most of its supply chain infrastructure with four partners and has hired Symbotic to retrofit its ambient network: the 42 regional distribution centers ("RDC").**
- **Walmart's RDCs are the backbone of its supply chain as an estimated 36% of all sales flow through the regional distribution centers.**
- Instead of choosing an established automation company – most of them already did or do business with Walmart – **Walmart chose a newcomer with zero track record.**
- During conversations and interviews, **former employees and industry experts stated that Walmart lacked a proper due diligence process and believed what Symbotic told them.**
- They said that **Walmart made Symbotic what the company is today** and former employees stated that Walmart invested hundreds of millions of dollars to improve Symbotic's products.
- **Walmart hired an inexperienced newcomer to work on its most critical supply chain infrastructure and Symbotic started outsourcing all the work to third-party contractors.**
- Inherent to awarding the billion-dollar contract is a **significant conflict of interest**: Symbotic, an unknown player with little to no track record, gets a \$12 billion contract **and the Walmart executive in charge of sourcing, planning, and negotiating with the bidders is hired by the winner – less than three months after the agreement was announced.**
- Without Walmart supporting Symbotic's development, funding the venture and without the RDC contract, Symbotic wouldn't be where they are today.
- **Walmart is putting the pedal to the metal** because its management told investors that the omnichannel strategy will yield significant ROI by 2026.
- The accelerated deployment doesn't yield any benefits for any party because **the faster rollout leads to elevated risk for any subsequent system failures, quality problems, and downtimes down the road.**
- The problems will arise as soon as most systems are going live and there will be more like a trickle-down effect of failure, inefficiencies, and glitches through Walmart's supply chain operations.
- **Walmart is stuck with Symbotic and if anything goes south because the RDCs are the centerpiece of Walmart's supply chain, the company will be forced to bankroll the problem-solving.**
- **Symbotic's CFO claims that the contract is non-cancelable but despite that being a lie, doing another RFP process to find a replacement is unlikely.**
- **Walmart will have to invest more capex in the RDC retrofit than currently estimated** and this will lead to a **significantly lower free cash flow.**
- **The lower FCF will dampen value-adding capital allocation like share buybacks.**
- In the last couple of years Walmart massively bought back significant amounts of shares and through that supported the company's share price.

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- The **positive expectations are more priced than the risk of choosing Symbotic as a key partner** in implementing and executing Walmart's strategy.
- Especially as Walmart's management signaled its confidence in executing the omnichannel strategy to its investors all while handing the actual execution duties to Symbotic and Symbotic handed it to dozens of third-party contractors.
- **It's similar to being a patient undergoing spinal surgery.** You constantly faced some small back stabbing pain hindering your performance. Now you're determined to address it, selecting the surgeon you deem most skilled. You anticipate improving your health through this procedure. While lying anesthetized on the operating table and the surgery begins, the hired surgeon brings third-party surgeons into the operating room because 1) he doesn't know how to perform such a complex spinal surgery and 2) to reduce his costs. Prior to the procedure, you were confident that the surgery will go well, but only later did you know whether this is really the case. You don't know anything about the problems, shortcuts, and errors that occurred during the surgery. **But the negative effects will be felt only years later.**

We see significant downside for both stocks.

Merchants are not engineers

Before diving into the issues we've found at Walmart, we would like to provide a little information on Symbotic. **First off, contrary to other statements the company was not founded by self-proclaimed founder Rick Cohen but by innovator John Lert as 'Casepick Systems' in December 2006.** He sold the company to C&S Wholesale Grocers in 2009 and left in 2011.¹ Afterward, he started Alert Innovation, became a prime supplier for Walmart's micro-fulfillment centers in its local stores, and in late 2022 sold the company to Walmart.² To date, the investing public can even see his influence on Symbotic's product designs because his current robotics company's autonomous robots resemble the Symbots in a leaner fashion. Mr. Lert was the original innovator behind and founder of Symbotic.

In the years following the sale and Lert's departure, Symbotic prototyped several autonomous mobile robots and in 2014 was awarded a first contract from Target.³ In 2015, Walmart approached the company. In 2016, Walmart started a proof-of-concept project with Symbotic in its distribution center in Brookeville, Florida.⁴ After five to six years of development, Walmart and Symbotic started rolling out the system at other distribution centers. Initially, the contract was only for 25 of Walmart's distribution centers but then it was amended to retrofit all of the company's 42 regional distribution centers.⁵ In the amended Walmart master agreement Symbotic specifically reports the solutions and products to be delivered to Walmart as '188 modules' and lists several locations at which the roll-out already started.⁶

¹ Alert Innovation, Inc. (2023), About us, <https://www.alertinnovation.com/about-alert-innovation/>

² Walmart, Inc. (2022), Expanding Walmart's Market Fulfillment Center Capabilities Through Automation, <https://corporate.walmart.com/newsroom/2022/10/06/expanding-walmarts-market-fulfillment-center-capabilities-through-automation>

³ Whelan, Robbie (2016), Fully Autonomous Robots: The Warehouse Workers of the Near Future, <https://www.wsj.com/articles/fully-autonomous-robots-the-warehouse-workers-of-the-near-future-1474383024>

⁴ Symbotic, LLC (2022), Capital Markets Virtual Briefing, p. 37, <https://ir.symbotic.com/static-files/5cb94491-a8c5-4683-a50d-544e3fa4d0d5>

⁵ Symbotic Inc. (2022), Walmart and Symbotic Expand Partnership to Implement Industry-Leading Automation System, <https://www.symbotic.com/about/news-events/news/walmart-and-symbotic-expand-partnership-to-implement-industry-leading-automation-system/>

⁶ Symbotic Inc. (2022), Second Amended and Restated Master Automation Agreement, dated as of May 20, 2022, by and among Walmart Inc., Symbotic LLC and Warehouse Technologies LLC., <https://www.sec.gov/Archives/edgar/data/1837240/000119312522156876/d535018dex1032.htm>

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During the period when Symbotic's contract with Walmart was amended, the company experienced significant growth. The value of Symbotic's backlog increased from \$5.6 billion to an impressive \$12 billion. Additionally, Symbotic went public through a Softbank-backed SPAC merger. The merged company was initially valued at just under \$5 billion, with an annualized run rate of \$400 million.⁷

Before the SPAC merger, Symbotic had an annualized run rate of \$25 million and had accumulated a deficit exceeding \$1.2 billion.⁸ However, in the year leading up to the merger, Symbotic experienced remarkable sales growth, soaring from \$25 million in 2021 to \$400 million in 2022.^{9 10} Surprisingly, despite the substantial increase in gross income, Symbotic's net loss more than doubled.¹¹

These figures suggest that while Symbotic achieved impressive sales growth, there were challenges in translating that growth into profitability. It indicates that despite the company's significant expansion, its net losses increased at a higher rate than its gross income.

The company's revenue grew only due to the Walmart contract but that didn't lead to any profitability improvements. **The repeatedly highlighted positive cash flow is only due to the advance payments from Walmart. Without the cash, Symbotic wouldn't be able to pay any bills.**¹²

Symbotic sales from Walmart contract (in thousand USD)	3/25/2023	12/24/2022	9/24/2022	6/25/2022	3/26/2022
Reported revenue	266,854	206,312	244,412	175,552	96,284
Disclosed % of revenue from "Customer A"	89.7%	81.4%	94.4%	96.0%	91.7%
Estimated Walmart contribution to Symbotic's revenue	239,368	167,938	230,725	168,530	88,292

Figure 1 Estimated sales generated by Walmart contract, source: company filings

Symbotic doesn't disclose the revenue derived from Walmart but reports it as "Customer A". We think the undisclosed "Customer A" is in fact Walmart. Symbotic generates significant amounts of its revenue from the retrofitting of Walmart (see Figure 1). Other customers include Rick Cohen's privately-held grocery business C&S Wholesale Grocers which accounts for about 3 to 5 percent of total sales.¹³ Despite that C&S Wholesale Grocers is one of the biggest wholesale distributors and has 33 distribution centers, it appears that the company barely uses Symbotic's solutions and products. C&S Wholesale deployed two systems in 2014 and 2016 and keep it at that since then.¹⁴ In 2016, Rick Cohen boasted in the Wall Street Journal that he will deploy a dozen systems in his warehouses.¹⁵ **In our opinion, it is very telling that the company that "founded" Symbotic out of its own needs hardly uses the products.** Instead, Walmart awarded Symbotic a billion-dollar contract and gave industry leaders like Knapp and Dematic the go-by.

As said, the market is already dominated by established market players like Dematic, Knapp, Witron, Schaeffer, Vanderlande, Honeywells's Intelligrated, and Kuka Group's Swisslog. All competitors have a

⁷ Symbotic Inc. (2021), Symbotic to Become a Public Company in Partnership with SoftBank, <https://www.symbotic.com/about/news-events/news/symbotic-to-become-a-public-company-in-partnership-with-softbank/>

⁸ Symbotic Inc. (2022), Unaudited Consolidated Financial Statements Warehouse Technologies LLC and Subsidiaries, F-40, https://www.sec.gov/Archives/edgar/data/1837240/000119312522185181/d321790ds1.htm#fin321790_16

⁹ Symbotic Inc. (2022), Unaudited Consolidated Financial Statements Warehouse Technologies LLC and Subsidiaries, F-40, https://www.sec.gov/Archives/edgar/data/1837240/000119312522185181/d321790ds1.htm#fin321790_16

¹⁰ Symbotic Inc. (2021), Symbotic to Become a Public Company in Partnership with SoftBank, <https://www.symbotic.com/about/news-events/news/symbotic-to-become-a-public-company-in-partnership-with-softbank/>

¹¹ Symbotic Inc. (2022), annual report, p. 66, <https://www.sec.gov/Archives/edgar/data/1837240/000183724022000049/sym-20220924.htm>

¹² Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

¹³ Symbotic Inc. (2022), annual report, p. 87, <https://www.sec.gov/Archives/edgar/data/1837240/000183724022000049/sym-20220924.htm>

¹⁴ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

¹⁵ Whelan, Robbie (2016), Fully Autonomous Robots: The Warehouse Workers of the Near Future, <https://www.wsj.com/articles/fully-autonomous-robots-the-warehouse-workers-of-the-near-future-1474383024>

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global footprint and ample experience. However, Symbotic was chosen – no track record, no global footprint. **Symbotic is a new player in a legacy industry.**

The industry is already consolidated and matured. Atlanta-based Dematic has been the market leader and its systems are used by retailers and grocery companies around the world.¹⁶ Walmart used Dematic's products and solutions in its Red Bluff regional distribution centers.¹⁷ In addition, a Dematic system was prominently displayed in Walmart's "Global Tech" video televised at the 2023 Investment Community meeting (see Figure 2).¹⁸

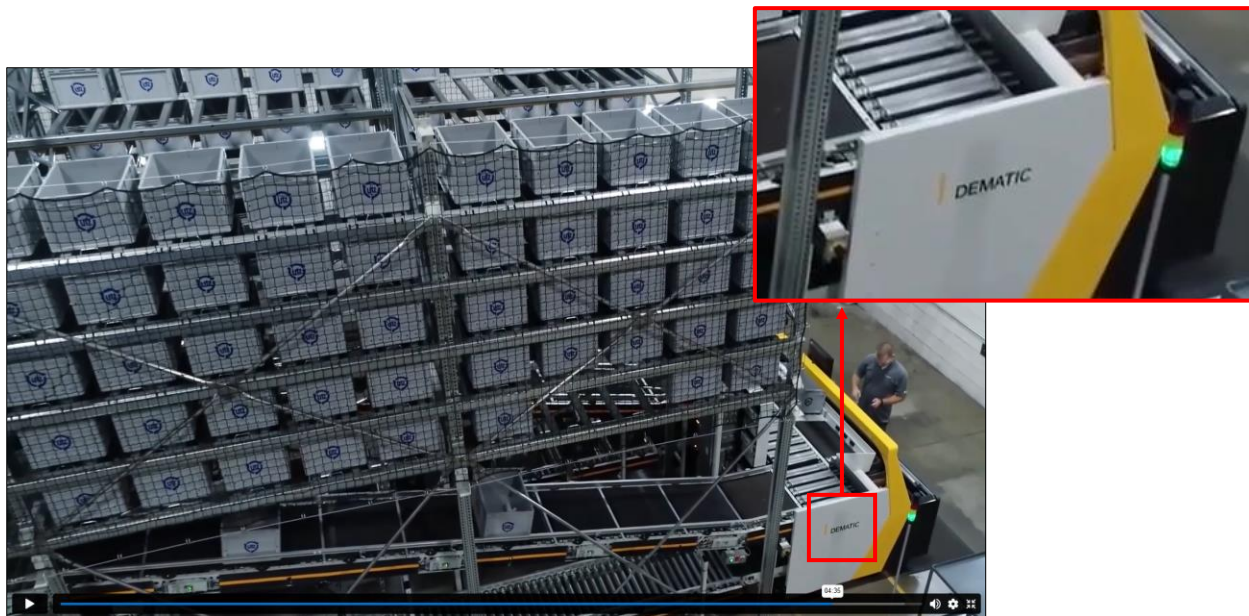


Figure 2 Screenshot of Walmart's Global Tech video displaying a Dematic system, source: NINGI Research, company information

Less than a decade ago, the company entered a product segment that matured during the heights of globalization.¹⁹ Symbotic offers systems and products ranging from mobile robots, to mixed-case palletization and breakpack solutions.²⁰ The company's market entry was accompanied by claims of innovation and above-peer efficiencies of its product suite. **However, Symbotic's products didn't offer a solution to any problem that hasn't been solved twenty years ago by the already established industry players.** Experts noted that while Symbotic's products initially possessed distinct features, its competitors swiftly caught up and incorporated these same features into their product offerings.

Nevertheless, most claims about Symbotic's products seem more than stretched. We believe calling a Symbot an 'autonomous mobile robot' is just a marketing gimmick because it is a so-called Multishuttle within an enclosed storage system. The investing public is consistently presented with a video showcasing Symbots freely navigating what appears to be a space between aisles within a storage system, creating a perception of Symbots roaming the entire open warehouse space. However, it is important to clarify that due to OSHA regulations, the actual operating conditions probably involve enclosed areas as the claimed

¹⁶ Dematic Group Limited (2023), Case studies, <https://www.dematic.com/en-de/insights/case-studies/>

¹⁷ Maruszewski, Max (2020), Red Bluff Walmart Distribution Facility Walkthrough., <https://youtu.be/aT682m47MMU>

¹⁸ Walmart, Inc. (2023), ICM 2023 Global Tech, <https://corporate.walmart.com/newsroom/videos/icm-2023-global-tech>

¹⁹ Symbotic Inc. (2015), Introducing the Symbotic Platform, <https://web.archive.org/web/20150601034247/http://www.symbotic.com/symbotic-platform-automated-warehouse-solutions/>

²⁰ Symbotic Inc. (2023), Symbotic system, <https://www.symbotic.com/symbotic-system/>

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cruising speed of a Symbot is about 20 miles per hour.²¹ Despite our efforts, we were unable to find a video featuring a Symbot roaming around an open warehouse floor. This situation raises concerns about the accuracy and transparency of Symbotic's representation. **Rick Cohen calls competitor's products 'dumb shuttles' but to date, Symbotic's mobile robots don't have collision avoidance – a basic safety feature Symbotic's competitors have already implemented.**^{22 23} Nevertheless, Symbotic had the audacity to compare its product with Apple's innovation in a 2015 blog post announcing Symbot's market debut.²⁴ Contrary to the blog post and seven years later Symbotic's CFO said that the company is still field-testing the Symbot and haven't announced any general release.²⁵ Contrary to the claims, Dematic, Knapp, and Swisslog AMRs offer the same features as Symbotic's Symbot (see Figure 3).^{26 27 28}

There is a notable disparity between the published product specs and information about the company as well as the portrayed and actual operating conditions of Symbotic's products. We question the information provided to potential investors and the public and its substance.

Multishuttle



Figure 3 Product comparison, source: NINGI Research, company information

Major competitors introduced mixed-case fulfillment and palletizing years ago while Symbotic is only 90% finished, as stated by Symbotic's CTO at the company's 2023 Investor Day (see Figure 4).²⁹ Symbotic has been working on the palletization algorithm for 10 years as indicated by a presentation of the project at a conference in 2014.³⁰

²¹ Symbotic Inc. (2023), Symbotic system, <https://www.symbotic.com/symbotic-system/impact/>
²² Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>
²³ Dematic Corp. (2023), Benefits of AMRs, <https://www.dematic.com/en-us/products/amr/>
²⁴ Symbotic Inc. (2015), Introducing the Symbotic Platform, <https://web.archive.org/web/20150601034247/http://www.symbotic.com/symbotic-platform-automated-warehouse-solutions/>
²⁵ Finsight Group, Inc. (2023), Earnings transcript – SYM – Q2, <https://capedge.com/transcript/1837240/2023Q2/SYM>
²⁶ Dematic Group Limited (N/A), Dematic develops the Multishuttle, <http://dematicprodwecd01role01sc349.cloudapp.net/en-au/about/about-dematic/200-years/multishuttle/>
²⁷ KNAPP UK Ltd. (2010), 5000th shuttle delivered by KNAPP, <https://warehousenews.co.uk/2010/07/5000th-shuttle-delivered-by-knapp/>
²⁸ Swisslog Holding AG (N/A), cyclonecarrier: Dynamic shuttle storage and retrieval system for small loads, <https://www.swisslog.com/en-au/products-systems-solutions/asrs-automated-storage-retrieval-systems/boxes-cartons-small-parts-items/cyclonecarrier-shuttle-system-logistics>
²⁹ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>
³⁰ The AnyLogic Company (2015), Symbotic: Disruptive Technology Change in Distribution Center Automation, <https://youtu.be/xCs78zajvAs>

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Mixed case palletizing



Knapp
KiSoft Pack Master
Market entry: 2017

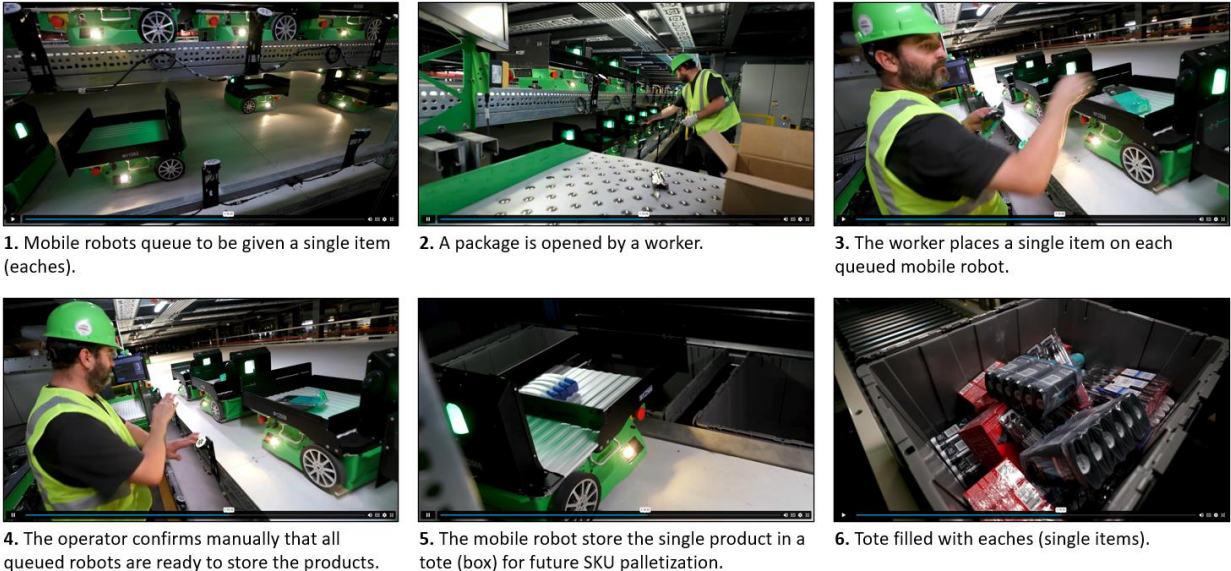
Dematic
AMCAP
Market entry: 2015

Swisslog
ACPaQ
Market entry: 2017

Symbotic
Pallet Builder Assistant
Market entry: tba

Figure 4 Product comparison, source: NINGI Research, company information

Symbotic teased its innovative ‘breakpack system’ to investors and in earnings calls but at the Investor Day its CTO was eager to skip the video displaying the solution.³¹ We believe it is because the video shows that Symbotic’s Breakpack system is no innovation at all (see Figure 5). **Investors should watch the video, it starts at 1:10:11 of the Investor Day webcast replay.**³²



1. Mobile robots queue to be given a single item (eaches).

2. A package is opened by a worker.

3. The worker places a single item on each queued mobile robot.

4. The operator confirms manually that all queued robots are ready to store the products.

5. The mobile robot store the single product in a tote (box) for future SKU palletization.

6. Tote filled with eaches (single items).

Figure 5 Step-by-step process of Symbotic's breakpack solution, source: NINGI Research, company information

The company failed to address the automation challenge in the breakpack process, resulting in a reliance on manual labor, similar to its competitor's approach: opening the packages and putting the single items (called eaches) into boxes (called totes) (see Figure 5). Symbotic’s mobile robots aren’t even smart enough to detect that they have been filled with an item (see Figure 5). The operator has to confirm the process manually by pressing a button for the distinct mobile robot to start its journey (see Figure 5). Rick Cohen states that it’s the first prototype but so innovative that he visions a separate IPO just for the breakpack system.^{33 34}

³¹ Breakpack is the process of opening a packet from a supplier or a breaking up a stored case to separately store the distinct products in the warehouse or fulfill a product order. It involves manual labor because of the product’s properties, for example glass.
³² Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>
³³ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>
³⁴ Finsight Group, Inc. (2023), Earnings transcript – SYM – Q2, <https://capedge.com/transcript/1837240/2023Q2/SYM>

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Symbotic's competitors have been working on the problem for years and even retailers like Walmart hired engineers to optimize the breakpack process.³⁵ We think Symbotic didn't invent anything and the company is just exaggerating. **In our opinion, most product statements are far from the truth and only for the purpose to promote Symbotic's stock.**

But the exaggeration doesn't stop at Symbotic's hardware capabilities. During Symbotic's 2023 Investor Day, its executives stated that Symbotic generated a full digital twin to simulate the entire system and that this was "so uncommon" in the industry.³⁶ We believe Symbotic deceived investors because such simulations and digital twins are common and the groundwork for such ASRS projects. Most industry players use a software called Anylogic and Symbotic's former CTO highlighted the application's benefit for Symbotic at Anylogic's 2014 conference.³⁷

In our opinion, Symbotic tries to sell legacy products by falsely claiming innovative features, overpromising a holistic solution, and exaggerating its capabilities.

However, Symbotic is viewed and wooed by Wall Street as a cutting-edge A.I.-powered robotics company with high growth potential. We don't buy that.

In our opinion, the first red flag is that Rick Cohen calls himself the founder of Symbotic. That is despite the fact that the company was founded by innovator John Lert in late 2006 and sold to Rick Cohen's company C&S Wholesale Grocers in 2009.³⁸ Casepick was funded with capital from C&S Wholesale Grocers but being the capital allocator doesn't make one the founder of a company.³⁹ Otherwise, Silicon Valley would have a lot more "Founders" than VC associates.

The investing public can assess how credible Rick Cohen is by watching his presentation at Symbotic's 2023 Investor Day. He trash-talked Symbotic's competitor Schaeffer, claimed that he invented a wireless warehouse management software before the internet was invented, boasted that he is one of the 10 most knowledgeable warehouse distribution experts in the world, and stated that he took the company public because of his employees.⁴⁰ Rick Cohen is happy that his employees think the stock is going up forever and that the employees are supposed to make the stock go up forever.⁴¹

[...] So one of the reasons we went public is because the folks -- the buzz at Symbotic is, I'm so happy that these people own stock. And I'm so happy that they think it's going to go up forever, and they're supposed to make it go up forever. [...]

He appears to be an altruistic genius. **However, we think it's more like a self-serving stock promotion.**

We believe Symbotic's claims of the "first and only fully autonomous, end-to-end supply chain solution" is a lie. The company was founded 15 years ago and is still working on its flagship product, the Symbot. Executives even disclose during earnings calls that they are still field-testing the product while deploying

³⁵ Brown Greer, Amy; Ponsford, Scott; Martin, Sean (2020), Simulating an automated breakpack system in a Walmart distribution center, <https://www.anylogic.com/resources/articles/simulating-an-automated-breakpack-system-to-improve-warehouse-efficiency-and-operations/>

³⁶ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

³⁷ The AnyLogic Company (2015), Symbotic: Disruptive Technology Change in Distribution Center Automation, <https://youtu.be/xCs78zaJvAs>

³⁸ Alert Innovation, Inc. (2023), About us, <https://www.alertinnovation.com/about-alert-innovation/>

³⁹ Whelan, Robbie (2016), Fully Autonomous Robots: The Warehouse Workers of the Near Future, <https://www.wsi.com/articles/fully-autonomous-robots-the-warehouse-workers-of-the-near-future-1474383024>

⁴⁰ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

⁴¹ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

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the systems at Walmart's RDCs.⁴² The Symbot hasn't been officially introduced and there is no date for a general release.⁴³ The company accumulated a billion-dollar deficit without leading to a competitive edge against its peers like Knapp, Dematic, or others. **A former Walmart employee responsible for warehouse engineering stated that Walmart was a leading force in getting Symbotic where the company is at today.**

Symbotic burned a billion for prototyping technologies that have been introduced to the market more than 20 years ago.⁴⁴ Another Walmart employee stated that established market players like Knapp and Dematic are capable of offering equivalent solutions. Symbotic claims that they offer something new and different but we have seen this scheme at a different company that we exposed. **The same shenanigans of reinventing products that established industry leaders have already introduced decades ago.** Last time, it was an EV company called Sono Motors that went bankrupt and this time we believe it is a robotic company called Symbotic.

The playbook is almost identical. Like Sono Motors, Symbotic operates an asset-light business model by outsourcing the product's manufacturing.⁴⁵ After its initial run-up for the Walmart contract, the company set up in-house manufacturing, only to fire about 100 full-time employees and freelancers months later.⁴⁶ The company – like Sono Motors at the EV highs – chose to outsource most of its manufacturing to deliver on its promise, scale the deployment, and save costs.⁴⁷ **We believe Symbotic's outsourced manufacturing will lead to significant quality problems during the initial running phase.** Dozens of outsourcing companies are hired to do all the work: from manufacturing Symbotic's bots, cells, and lifts to construction and installation.⁴⁹ The third-party companies are even supporting Symbotic in redesigning components, hence doing research and development for the company.⁵⁰

It appears that Symbotic is a hard hat-wearing merchant claiming to be the world's top robotics engineer.

During the latest Investor Day, Symbotic highlighted that they chose an outsourcing strategy to work with several engineering companies at the same time because they believe that frees up capacities to focus on sales, brings in engineering expertise, and lowers overall costs.⁵¹ For us, it sounds like a hard hat-wearing merchant posing as an engineer. However, the costs due to outsourcing have been increasing in the last quarter.⁵² ⁵³ So already one part of the outsourcing equitation doesn't add up.

In our opinion, outsourcing the manufacturing of high-tech industrial products and special machinery leads to poor quality and significant business risks. In interviews, former Symbotic and Walmart employees stated that the systems are still in deployment and most are not running. We think, most mistakes made during the deployment will only become apparent due to problems during the systems'

⁴² Finsight Group, Inc. (2023), Earnings transcript – SYM – Q2, <https://capedge.com/transcript/1837240/2023Q2/SYM>

⁴³ Finsight Group, Inc. (2023), Earnings transcript – SYM – Q2, <https://capedge.com/transcript/1837240/2023Q2/SYM>

⁴⁴ Symbotic Inc. (2023), quarterly report, p. 2, <https://www.sec.gov/Archives/edgar/data/1837240/000183724023000116/sym-20230325.htm>

⁴⁵ Sono Group N.V. (2022), F-1, p. 93, <https://www.sec.gov/Archives/edgar/data/1840416/000110465922070649/sev-20220613xf1.htm>

⁴⁶ Finsight Group, Inc. (2023), Earnings transcript – SYM – Q2, <https://capedge.com/transcript/1837240/2023Q2/SYM>

⁴⁷ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

⁴⁸ Finsight Group, Inc. (2023), Earnings transcript – SYM – Q2, <https://capedge.com/transcript/1837240/2023Q2/SYM>

⁴⁹ Finsight Group, Inc. (2023), Earnings transcript – SYM – Q1 <https://capedge.com/transcript/1837240/2023Q1/SYM>

⁵⁰ Finsight Group, Inc. (2023), Earnings transcript – SYM – Q1 <https://capedge.com/transcript/1837240/2023Q1/SYM>

⁵¹ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

⁵² Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

⁵³ Finsight Group, Inc. (2023), Earnings transcript – SYM – Q2, <https://capedge.com/transcript/1837240/2023Q2/SYM>

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uptime. We believe material issues will occur while the system will be running. In the first quarter of 2023, Symbotic’s customers – hence Walmart – already claimed 2 million dollars in warranty.⁵⁴

Warranty provision (in thousand USD)	3/25/2023	12/24/2022	9/24/2022	6/25/2022	3/26/2022	12/25/2021
Balance at beginning of period	9,990	9,004	5,498	4,390	3,970	3,735
Provision	4,484	2,217	4,379	1,578	452	920
Warranty usage	(2,058)	(1,231)	(873)	(470)	(32)	(685)
Balance at end of period	12,416	9,990	9,004	5,498	4,390	3,970

Figure 6 Warranty provision and usage, source: company filings

Since Symbotic started deploying the systems at Walmart’s RDC warranty usage has been fivefold. It indicates that either the claims are due to the three running systems or because of issues during the installation of the system. **Are Symbotic’s products already breaking?**

Symbotic’s job openings disclosed what hardware the company is using. As it turns out that most of Symbotic’s hardware is from Rockwell Automation, ABB, and Fanuc.⁵⁵ We further looked into publicly available import data from Symbotic. It appears that the Symbot’s parts are from a Chinese ATV and motorbike manufacturing supplier called Dynatek and Thailand-based Beyonics.⁵⁶ Another supplier for Symbotic appears to be a German company called Winkel GmbH which manufactures picking systems.⁵⁷ Looking at the products displayed on Winkel’s website and comparing them to Symbotic’s Symbot, it appears that they took the Winkel picking system, turned it upside down, and strapped it to a greenish Go-Kart.

However, reliable and thought-through products aren’t the only thing that matters when it comes to warehouse automation systems. Industry experts stated in interviews that the success of such complex warehouse automation depends on the experience of the project’s leadership and engineers. We already highlighted Mr. Cohen who self-proclaimed to be one of the most knowledgeable warehouse automation experts in the world. However, Symbotic’s executive management lacks experience and training in automation, robotics, and AI. **We believe the management positions are filled with loyal confederates of CEO Rick Cohen.**



Figure 7 Screenshot of the Q&A session at Symbotic’s investor day, source: NINGI Research, company information

⁵⁴ Symbotic Inc. (2023), quarterly report, p. 20, <https://www.sec.gov/Archives/edgar/data/1837240/000183724023000116/sym-20230325.htm>
⁵⁵ Workday, Inc. (2023), Symbotic, <https://symbotic.wd1.myworkdayjobs.com/en-US/Symbotic>
⁵⁶ Import.report (N/A), Symbotic Inc., <https://import.report/company/Symbotic-L-L-C>
⁵⁷ Import.report (N/A), Symbotic Inc., <https://import.report/company/Symbotic-L-L-C>

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Since 2020, Symbotic's CTO is G&S Wholesale Grocers' former Chief Information Officer.⁵⁸ The previous CTO Akram Zandeh formally left in May 2023 but was never mentioned in any SEC filings.⁵⁹ We believe he informally left the company before Symbotic's SPAC merger. The last true robotics-savvy CTO, Larry Sweet, that headed this position for 8 years quit in 2017 and instead worked for Amazon's robotics division until recently.⁶⁰

The company's chief strategy officer Bill Boyd is currently employed at C&S Wholesale Grocers as its chief legal officer.⁶¹ His formal training consists of a law degree from Duke University. Symbotic's website states 12 years of experience in the distribution and logistics industry but most of the highlighted experience was at C&S Wholesale Grocers – as a lawyer.⁶² An attorney is the strategic thought leader of a robotics company.

Despite Symbotic doesn't disclose its headcount, the company at least employs a Chief Human Resources Officer: Miriam Ort.⁶³ She has extensive experience as an HR executive because Mrs. Ort currently serves as – you guessed it – the CHRO for G&S Wholesale Grocers.⁶⁴ We believe she is another example that top executives at Symbotic are replaced by loyal confederates of Rick Cohen. In May 2022, former Chief Human Resources Officer Iman Abbasi left the company after three years with almost 98,000 shares of V-1 common stock in Symbotic.⁶⁵ ⁶⁶ Were these shares granted in the form of severance compensation?

The only high-level executive with significant experience in the warehouse automation industry we could identify is Michael Dunn, Senior Vice President for Sales, Marketing, and Product Strategy at Symbotic.⁶⁷ He is a trained mechanical engineer and worked at Fortna as well as Manhattan Associates before joining Symbotic in 2017.⁶⁸ **We believe Mr. Dunn is also the canary in the coal mine.** He is the only automation-savvy executive that has been selling shares since his lock-up restriction expired.⁶⁹ Shortly after Symbotic became public, Mr. Dunn filed his first Form 4 and disclosed that he owned 276,400 shares at the time.⁷⁰ In his latest Form 4, Mr. Dunn owned only ~~216,470~~ ~~139,522~~ 79,522 shares.⁷¹ ⁷² ⁷³ In between he exercised some of his stock options, acquiring shares and then selling those immediately.⁷⁴ **He is selling shares faster than we can write this report. Since we started researching Symbotic, he already sold more than two third of his stock.**

We believe that except for Rick Cohen's loyalists, executives don't hang around too long. Symbotic had several CEOs in the last 15 years: from John Lert to Chris Gahagan to its latest Michael Loparco.⁷⁵ ⁷⁶ ⁷⁷ He

⁵⁸ Symbotic Inc. (2023), Leadership, <https://ir.symbotic.com/corporate-governance/leadership>

⁵⁹ LinkedIn Corp. (2023), Akram Zahdeh, <https://www.linkedin.com/in/akram-zahdeh-7777a122/>

⁶⁰ LinkedIn Corp. (2023), Larry Sweet, <https://www.linkedin.com/in/larry-sweet-9923364/>

⁶¹ Symbotic Inc. (2023), Leadership, <https://ir.symbotic.com/corporate-governance/leadership>

⁶² Symbotic Inc. (2023), Leadership, <https://ir.symbotic.com/corporate-governance/leadership>

⁶³ Finsight Group, Inc. (2023), Earnings transcript – SYM – Q2, <https://capedge.com/transcript/1837240/2023Q2/SYM>

⁶⁴ Symbotic Inc. (2023), Leadership, <https://ir.symbotic.com/corporate-governance/leadership>

⁶⁵ LinkedIn Corp. (2023), Iman Abbasi, <https://www.linkedin.com/in/imanabbasi/>

⁶⁶ Symbotic Inc. (2021), S-1, p. 133, https://www.sec.gov/Archives/edgar/data/1837240/000183724022000051/xslF345X03/wf-form4_167062343557438.xml

⁶⁷ LinkedIn Corp. (2023), Mike Dunn, <https://www.linkedin.com/in/mike-dunn-b3232b5/>

⁶⁸ Symbotic Inc. (2023), Leadership, <https://ir.symbotic.com/corporate-governance/leadership>

⁶⁹ Dunn, Michael David (2022), Form 4, https://www.sec.gov/Archives/edgar/data/1837240/000183724022000051/xslF345X03/wf-form4_167062343557438.xml

⁷⁰ Dunn, Michael David (2022), Form 4, https://www.sec.gov/Archives/edgar/data/1837240/000183724022000029/xslF345X03/wf-form4_166094592737162.xml

⁷¹ Dunn, Michael David (2023), Form 4, https://www.sec.gov/Archives/edgar/data/1837240/000183724023000059/xslF345X03/wf-form4_167546215213207.xml

⁷² Dunn, Michael David (2023), Form 4, https://www.sec.gov/Archives/edgar/data/1837240/000183724023000129/xslF345X03/wk-form4_1685048464.xml

⁷³ The strikethrough is for a visual accentuation.

⁷⁴ Dunn, Michael David (2023), Form 4, https://www.sec.gov/Archives/edgar/data/1837240/000183724023000012/xslF345X03/wf-form4_167287033863280.xml

⁷⁵ LinkedIn Corp. (2023), Chris Gahagan, <https://www.linkedin.com/in/chrisgahagan/>

⁷⁶ Symbotic Inc. (2022), Symbotic Names Michael J. Loparco Chief Executive Officer, <https://www.businesswire.com/news/home/20220330005719/en/Symbotic-Names-Michael-J.-Loparco-Chief-Executive-Officer>

⁷⁷ Feldman, Amy (2021), Meet The Billionaire Robot Overlord Reinventing Walmart's Warehouses, <https://www.forbes.com/sites/amyfeldman/2021/12/13/meet-the-billionaire-robot-overload-reinventing-walmarts-warehouses/?sh=68e1d16c78f4>

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was appointed in March 2022 and left 5 months after its SPAC merger.^{78 79} In total, he held the position for eight months and was let go with a \$2 million severance package.⁸⁰ In between the changing chief executives, Rick Cohen, self-proclaimed world’s leading automation warehouse expert, took the realm.⁸¹

As we’ve shown, the turnover of experienced executives is high at Symbotic but not limited to its C-suite. **The latest resignation seems to be Symbotic’s head of machine learning.** A key employee for the company’s A.I. technology, Hussein Al-Mohssen, who is prominently quoted on Symbotic’s website, quit in January 2023 (see Figure 8).^{82 83} He has ample experience in A.I. and machine learning as he already worked in a similar position at iRobot before joining Symbotic.⁸⁴

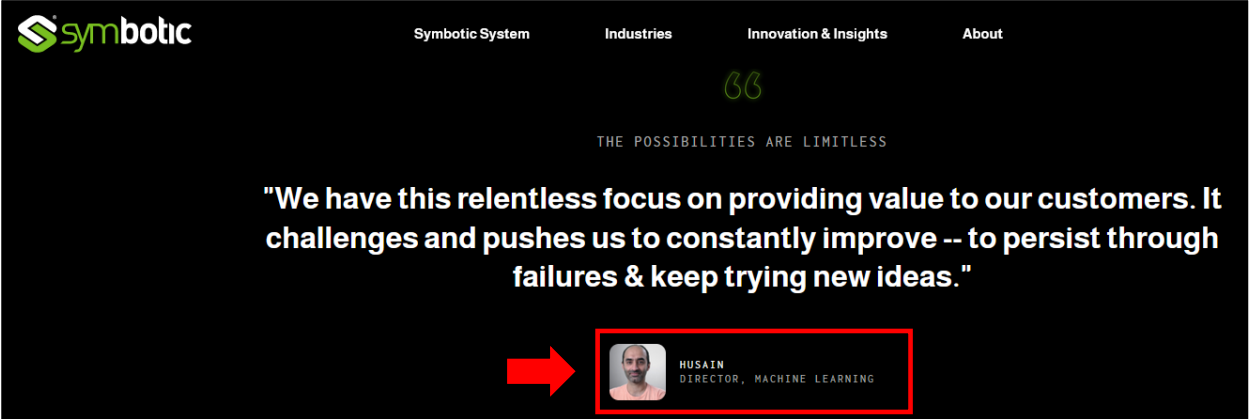


Figure 8 Screenshot of Symbotic’s website with Al-Mohssen quote, source: NINGI Research, company information

However, Mr. Al-Mohssen won’t leave the “Walmart universe” because he became the director for data science and machine learning at Alert Innovation (see Figure 9).⁸⁵ It’s the company that was founded by John Lert, the true founder of Symbotic, and the same company that was bought by Walmart in late 2022.⁸⁶

⁷⁸ Symbotic Inc. (2022), Symbotic Names Michael J. Loparco Chief Executive Officer, <https://www.businesswire.com/news/home/20220330005719/en/Symbotic-Names-Michael-J.-Loparco-Chief-Executive-Officer>
⁷⁹ Symbotic Inc. (2022), Separation agreement and general release of claims, <https://www.sec.gov/Archives/edgar/data/1837240/000119312522289944/d417748dex101.htm>
⁸⁰ Symbotic Inc. (2022), Separation agreement and general release of claims, <https://www.sec.gov/Archives/edgar/data/1837240/000119312522289944/d417748dex101.htm>
⁸¹ Symbotic Inc. (2023), Leadership, <https://ir.symbotic.com/corporate-governance/leadership>
⁸² Symbotic Inc. (2023), Software, <https://www.symbotic.com/symbotic-system/software/>
⁸³ LinkedIn Corp. (2023), Hussein Al-Mohssen, <https://www.linkedin.com/in/husainalmohssen>
⁸⁴ LinkedIn Corp. (2023), Hussein Al-Mohssen, <https://www.linkedin.com/in/husainalmohssen>
⁸⁵ LinkedIn Corp. (2023), Hussein Al-Mohssen, <https://www.linkedin.com/in/husainalmohssen>
⁸⁶ Alert Innovation, Inc. (2022), Alert Innovation signs definitive agreement to be acquired by Walmart, <https://www.alertinnovation.com/in-the-news/alert-innovation-signs-definitive-agreement-to-be-acquired-by-walmart/>

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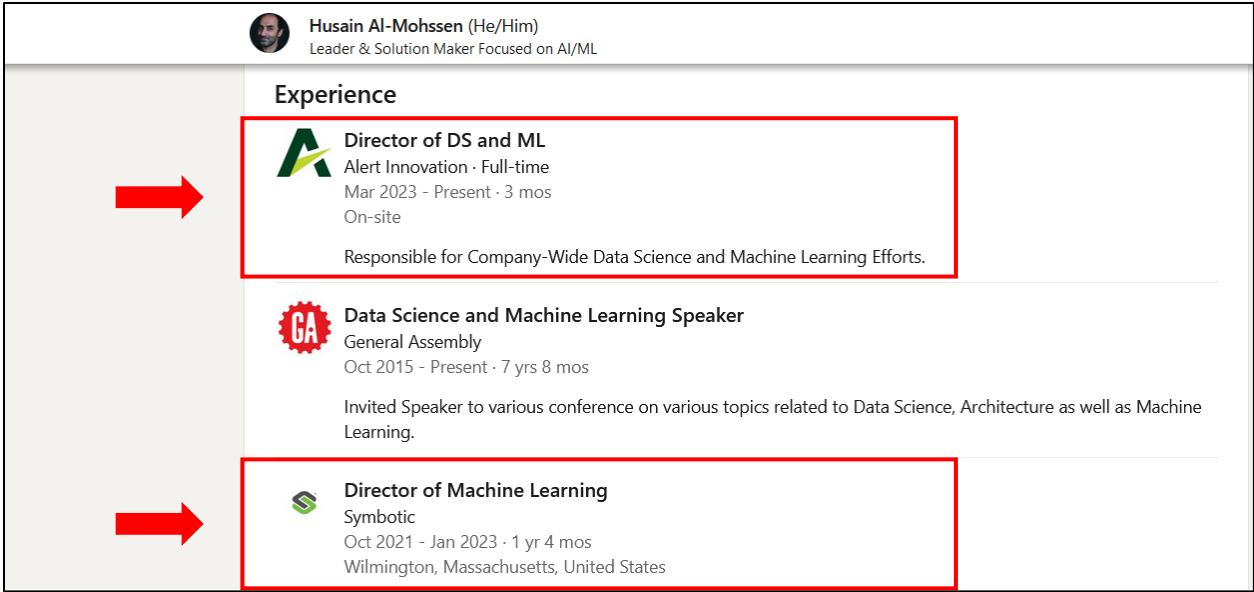


Figure 9 Screenshot of Husain Al-Mohssen CV, source: NINGI Research

In our opinion, Symbotic lacks an industry-experienced leadership team, most of its executives have no experience in the automation industry and talented employees don't hang around long. In addition, long-lasting Symbotic employees consist of former C&S Wholesale Grocers and in some instances are still employed at C&S Wholesale – working at Symbotic and C&S Wholesale Grocers at the same time. We think the lack of automation expertise in its C-suite could be an additional reason why Symbotic started outsourcing its manufacturing but also outsourced the engineering and implementation of its systems to third parties.

We believe the company is nothing more than a merchant that procures all of its products from established industry partners and hires other companies for the promised services. As the investing public knows, project management and engineering companies have significantly different margin profiles and valuation multiples. So why is Symbotic valued at \$20 billion? Four things: low float outstanding, promotional claims of A.I. utilization in its products, a \$12bn contract, and an allegedly twelve-figure dollar TAM.

First off: despite Symbotic having more than 554 million total issued shares, almost 90 percent of that is in non-tradeable V-Shares owned by Rick Cohen and his family.⁸⁷ The current outstanding float is just about 30 million shares. Due to the low float, the demand is higher than the supply. We believe, even market-making to find price equilibrium is affected due to the low float. Most of the company's \$20 billion valuation is locked up in the V-Shares. However, this will change soon. In May 2023 Symbotic updated a filed prospectus for a secondary offering to sell 554 million common shares.⁸⁸ **So legacy shareholders will sell all of their currently non-tradeable V-shares.⁸⁹ On June 7, 2023 all lock-up restrictions expired.⁹⁰** For no apparent reason more than 1.1 million shares were allocated to high-level executives at C&S Wholesale Grocers, that have hold no position at Symbotic.⁹¹ **We believe the float will be almost**

⁸⁷ Symbotic Inc. (2021), S-1, p. 126, <https://www.sec.gov/Archives/edgar/data/1837240/000119312522197214/d321790ds1a.htm#toc>
⁸⁸ Symbotic Inc. (2023), Prospectus, <https://www.sec.gov/Archives/edgar/data/1837240/000183724023000117/symboticincq223form424b3.htm>
⁸⁹ Symbotic Inc. (2023), Prospectus, <https://www.sec.gov/Archives/edgar/data/1837240/000183724023000117/symboticincq223form424b3.htm>
⁹⁰ Symbotic Inc. (2021), S-1, p. 123, <https://www.sec.gov/Archives/edgar/data/1837240/000119312522185181/d321790ds1.htm>
⁹¹ Symbotic Inc. (2023), Prospectus, p. 120, https://www.sec.gov/Archives/edgar/data/1837240/000119312522307396/d411708d424b3.htm#toc411708_18

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twentyfold in the coming months. In our opinion, anchor shareholders like Softbank will be eager to sell its 22 million shares immediately and make a profit.⁹² The Japanese conglomerate has been realizing billion-dollar losses from other investments; selling Symbotic's shares at a premium will lower the pain Softbank felt for the last few quarters.⁹³ We believe C&S Wholesale Grocers executives will sell as well.

Secondly, Symbotic promotes in its marketing materials, press releases, and investor presentations that it is "A.I.-powered" or "A.I.-enabled". In the company's annual report, Symbotic explains its A.I.-powered software with its A.I.-powered software:⁹⁴

A.I.-Powered Software: Our platform is enhanced by our A.I.-powered autonomous hardware and system software.

Figure 10 Extract from Symbotic's annual report, source: NINGI Research, company filings

According to SEC filings, every product is either "enhanced", "enabled", or "powered" by A.I. but the description of the "A.I.-enabled software" just details the solution to a variation of the traveling salesman problem (see Figure 10).⁹⁵ The company allegedly utilizes artificial intelligence but has never filed a patent regarding machine learning or artificial intelligence.⁹⁶ ⁹⁷ As already mentioned, the head of machine learning left the company in January 2023. Based on a LinkedIn search, it appears Symbotic has not filled his position because we couldn't identify anyone heading the team.⁹⁸ **In addition, LinkedIn lists more than 1000 employees at Symbotic but we counted only eight software engineers with 'machine learning' in their job titles.**⁹⁹ ¹⁰⁰ We checked Symbotic's open positions and the company is only looking for an intern for its 'Machine Learning team'. It appears the company doesn't seem to increase its expertise in machine learning.¹⁰¹ ¹⁰² We believe, likewise with the other false statements about its products, **Symbotic is not utilizing A.I. at a level that the company should advertise its product or technology as "A.I.-powered"**. In our opinion, this is pure stock promotion.

Thirdly, it is because of the reported \$12 billion backlog from Walmart. Symbotic disclosed in its filings that the company will retrofit Walmart's 42 regional distribution centers. So, the average retrofit cost is about 285 million dollars per distribution center. **Based on that average, the retrofit is more costly than building a new distribution center.** A newly developed Walmart distribution center located in South Carolina cost about \$220 million in 2022.¹⁰³ We think it is odd that a brownfield construction costs more than a recent greenfield investment. We broke down the backlog based on the amended master automation agreement that lists 188 modules to be implemented.¹⁰⁴ So the average sales price per module is about \$63 million. **We found a remodel plan filed with the Texas Department of Licensing and**

⁹² Softbank Group Corp. (2023), Form 3, <https://www.sec.gov/Archives/edgar/data/1837240/000089924323011135/xslF345X03/doc3.xml>

⁹³ Fujikawa, Megumi and Brown, Eliot (2023), SoftBank Loses \$5.9 Billion in Quarter as Investments Suffer, <https://www.wsj.com/articles/softbank-loses-nearly-6-billion-in-quarter-as-investments-suffer-11675752219>

⁹⁴ Symbotic Inc. (2022), annual report, p. 6, <https://www.sec.gov/Archives/edgar/data/1837240/000183724022000049/sym-20220924.htm>

⁹⁵ Symbotic Inc. (2022), annual report, p. 13, <https://www.sec.gov/Archives/edgar/data/1837240/000183724022000049/sym-20220924.htm>

⁹⁶ Google LLC (2023), Symbotic and machine learning, <https://patents.google.com/?q=machine+learning&assignee=symbotic&num=100&oq=symbotic+>

⁹⁷ Google LLC (2023), Symbotic and artificial intelligence, <https://patents.google.com/?q=Artificial+intelligence&assignee=symbotic&num=100&oq=symbotic+>

⁹⁸ We are aware of the fact that most ML software engineers shy away from LinkedIn. But as a Team lead or head, we would expect the person to be on LinkedIn. At least for recruiting purposes.

⁹⁹ LinkedIn Corp. (2023), Symbotic, <https://www.linkedin.com/company/symbotic/>

¹⁰⁰ LinkedIn Corp. (2023), search results,

https://www.linkedin.com/search/results/people/?keywords=symbotic%20machine%20learning&origin=CLUSTER_EXPANSION&sid=Bpa

¹⁰¹ Workday, Inc. (2023), Symbotic, <https://symbotic.wd1.myworkdayjobs.com/en-US/Symbotic?q=tensorflow>

¹⁰² If one looks just for the term 'machine learning' all open positions will be retrieved because Symbotic uses the term in every job posting's company description.

¹⁰³ Wilson, Marianne (2022), Walmart opens three million-sq.-ft. import distribution center, <https://chainstoreage.com/walmart-opens-three-million-sq-ft-import-distribution-center>

¹⁰⁴ Symbotic Inc. (2022), Second Amended and Restated Master Automation Agreement, dated as of May 20, 2022, by and among Walmart Inc., Symbotic LLC and Warehouse Technologies LLC., <https://www.sec.gov/Archives/edgar/data/1837240/000119312522156876/d535018dex1032.htm>

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Regulation that reported a \$21 million remodel for one of Walmart's oldest distribution centers in New Braunfels, Texas (see Figure 11).¹⁰⁵


	Texas Department of Licensing and Regulation Architectural Barriers Project Details Page
Project #: TABS2023014279	Registration Date: 3/16/2023
https://www.tdlr.texas.gov/TABS/Projects/TABS2023014279	
PROJECT	
Project Name:	Walmart Distribution Center #6016-508 - Remodel/Alterations
Project Number:	TABS2023014279
Facility Name:	Walmart Distribution Center #6016-508
Location Address:	3900 N Interstate 35 Frontage Rd. New Braunfels, TX 78130
Location County:	Comal
Start Date:	6/23/2023
Completion Date:	7/23/2024
Estimated Cost:	\$21,000,000
Type of Work:	Renovation/Alteration
Type of Funds:	This project is privately funded, on private land for private use.
Scope of Work:	Selective demo, new exterior door, installation of new material handling equipment, new electrical service and equipment, fire suppression updates, compressed air updates
Square Footage:	330,498 ft ²

Figure 11 Project details for Walmart's RDC in New Braunfels, source: Texas Department of Licensing and Regulation


	Texas Department of Licensing and Regulation Architectural Barriers Project Details Page
Project #: TABS2023014455	Registration Date: 3/20/2023
https://www.tdlr.texas.gov/TABS/Projects/TABS2023014455	
PROJECT	
Project Name:	Walmart Distribution Center #6036-512 - Remodel/Alterations
Project Number:	TABS2023014455
Facility Name:	Walmart Distribution Center #6036
Location Address:	8660 US Hwy 79 Palestine, TX 75803
Location County:	Anderson
Start Date:	6/23/2023
Completion Date:	7/23/2024
Estimated Cost:	\$21,000,000
Type of Work:	Renovation/Alteration
Type of Funds:	This project is privately funded, on private land for private use.
Scope of Work:	Selective demo, new exterior door, installation of new material handling equipment, new electrical service & equipment, fire suppression updates, compressed air updates.
Square Footage:	287,100 ft ²

Figure 12 Project details for Walmart's RDC in Palestine, source: Texas Department of Licensing and Regulation

The filing states 'installation of new material handling equipment' as the scope of the work and we believe that is the retrofit from Symbotic. **So, what's true: \$285 million or about \$21 million per distribution center? 63 million dollars or \$21 million?** From an economic perspective, it appears reasonable that the retrofit centers cost less than the greenfield construction cost. We found another remodeling plan for a different Walmart RDC in Palestine, Texas that was remodeled (see Figure 12).¹⁰⁶ The remodels included 'installation of new material handling equipment' and the reported project costs were identical – 21 million dollars.¹⁰⁷ **It indicates that the fair value of Symbotic's backlog is around \$3.95 billion rather than \$12 billion.** The question is, where does the difference between \$63 million and \$21 million stem from?

¹⁰⁵ Texas Department of Licensing and Regulation (2023), TABS2023014279, <https://www.tdlr.texas.gov/TABS/Projects/TABS2023014279>

¹⁰⁶ Texas Department of Licensing and Regulation (2023), TABS2023014455, <https://www.tdlr.texas.gov/TABS/Search/Project/TABS2023014455>

¹⁰⁷ Texas Department of Licensing and Regulation (2023), TABS2023014455, <https://www.tdlr.texas.gov/TABS/Search/Project/TABS2023014455>

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The questions could be answered by **Symbotic's principal accounting officer but he handed in his resignation effective as of June 16, 2023.**¹⁰⁸ He left after one year at Symbotic.¹⁰⁹

Fourth: the bull case for Symbotic is the double-digit revenue growth and the claimed total addressable market for Symbotic's products. The company coined it "strategically addressed markets" and categorized it into three phases. and like in most growth companies the potential market is worth hundreds of billions. In its first stage it's \$133 billion, in stage 2 it's \$254 billion and in the final stage \$393 billion. **We believe Symbotic will barely reach 0.5 percent of its "SAM-1" at the sales peak of the Walmart contract.** The company can barely execute on the Walmart backlog, so we highly doubt that it will grow in any sustainable manner. In our opinion, **it should be noted that the SAM is based on market research done by a former employee of Symbotic's CFO Thomas Ernst.**¹¹⁰ We think that it is neither objective nor independent. **Independent market research estimates the global warehouse automation market at \$41 billion by 2027 and \$58 billion by 2031.**^{111 112} That is significantly lower than the proposed SAM-1. Therefore, arguing about Symbotic's SAM is not worth the paper some sell-side analysts will print this report on. We believe those are made-up numbers to suit the growth narrative and promotional claims.

We believe the current valuation of Symbotic lacks any merit. It is based on more than dubious claims and wishful thinking. In our opinion, since Walmart awarded the contract, everyone has stopped asking critical questions. We believe Symbotic won't be able to execute its promise of Rick Cohen's Six Sigma. **After deployment and commissioning, we believe Symbotic will experience significant setbacks and warranty claims.** That's why we think Walmart will experience setbacks in its supply chain leading to shortcomings in the guided topline growth and margin improvements.

We think, Walmart believed what the salesmen told them and hired merchants as automation engineers.

Additional questions for Symbotic and the company's management that are of interest to the investing public:

- What is the proportion of remaining performance obligations for each sales segment?
- What is the module sales price as per the revised master automation agreement with Walmart?
- Can Symbotic clarify the disparity between the reported costs of \$21 million and the average costs per module of \$63 million?
- Why do executives work for both C&S Wholesale Grocers and Symbotic simultaneously?
- How does Symbotic prevent employees of an indirect competitor (C&S Wholesale Grocers) from accessing confidential business information?
- What factors led to the resignation of Mr. Loparco?
- How does Symbotic plan to address the challenges in translating sales growth into profitability?
- Are there any strategies or initiatives in place to improve the company's financial performance?
- What evidence can you provide to support the claim that Symbotic's products are truly innovative and superior to those of competitors?

¹⁰⁸ Symbotic Inc. (2023), current report, <https://www.sec.gov/Archives/edgar/data/1837240/000183724023000132/sym-20230605.htm>

¹⁰⁹ Symbotic Inc. (2023), current report, <https://www.sec.gov/Archives/edgar/data/1837240/000119312522181604/d335288d8k.htm>

¹¹⁰ LinkedIn Corp. (2023), Sujata W. Deshmukh, <https://www.linkedin.com/in/sujata-wasudev-deshmukh/>

¹¹¹ LogisticsIQ (2022), Warehouse Automation Market, <https://www.thelogisticsiq.com/research/warehouse-automation-market/>

¹¹² Saurabh, S. and Onkar, S. (2022), Warehouse Automation Market Research, 2031, <https://www.alliedmarketresearch.com/warehouse-automation-market-A17070>

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- How does Symbotic maintain a competitive edge in an industry where competitors have caught up and incorporated similar features into their offerings?
- Can you provide more details about the A.I.-powered software mentioned in the annual report?
- What specific A.I. techniques or algorithms does Symbotic employ in its operations?
- Has Symbotic filed any patents related to machine learning or artificial intelligence?
- What was the role of the head of machine learning who left the company in January 2023, and how has that departure affected the company's A.I. capabilities?
- Are there any plans to fill the vacant position of the head of machine learning or to expand the machine learning team?
- How does Symbotic plan to enhance its expertise in machine learning, considering the limited number of software engineers with machine learning experience in the company?
- Can you provide examples or case studies that demonstrate the significant impact of A.I. on Symbotic's products and technology?
- Regarding the backpack system, what progress has Symbotic made in automating the process?
- How does Symbotic's solution compare to the solutions offered by competitors, and why should investors believe in the potential of Symbotic's backpack system?
- Can you clarify the discrepancy between the company's claim of being the "first and only fully autonomous, end-to-end supply chain solution" and the fact that the flagship product, the Symbot, is still being field-tested and has no announced release date?
- How does Symbotic plan to achieve a competitive edge in the market without a fully released product?
- Can you provide more information about the manufacturing outsourcing strategy and its impact on product quality and business risks?
- How does Symbotic ensure the reliability and performance of its systems when multiple third-party companies are involved in manufacturing and supporting the product?
- How many third-party companies have been hired to manufacture, deploy, commission, and maintain the systems sold to Walmart?
- What steps is Symbotic taking to address the warranty claims made by customers, particularly the significant increase in warranty usage?
- Are these claims related to the running systems or installation issues, and how does Symbotic plan to mitigate these problems in the future?

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Stuck with it

At Walmart's investor day, Doug McMillon highlighted Walmart's top priorities as topline growth, operating margin expansion, and improvement in return on investment.^{113 114} During the event, executives said that they expect that 65% of all stores will be serviced by automation, 55% of its volume will move through automated facilities and this will lead to approximately 20% in unit cost savings by the end of 2026.^{115 116} This would translate to several billion dollars in additional earnings. Morgan Stanley's Simeon Gutman estimate that the 20% of unit cost savings could lead to a 40 to 80 bps improvement in Walmart's EBIT margin.¹¹⁷ That would be a ten to twenty percent growth based on Walmart's latest FY EBIT margin – or about 2 to 4.4 billion dollars in additional EBIT.

Walmart's focus on enhancing its supply chain was emphasized by hosting the company's 'Investment Community' meeting at the newly retrofitted Brookeville regional distribution center in April 2023.¹¹⁸ The choice of venue serves as a clear message that Walmart is prioritizing improvements in its supply chain operations. Furthermore, during the Q1 earnings call, Walmart's management indicated a preference for capital investments in the supply chain rather than price investments.¹¹⁹ This decision reflects Walmart's strategic shift in optimizing its supply chain efficiency and effectiveness to drive overall business performance. **These actions and statements collectively underscore Walmart's dedication to advancing its supply chain capabilities as a critical driver of operational excellence and long-term growth.** During its Investment Community meeting Walmart's CEO McMillon said that the company had chosen a distinct partner for each of its fulfillment centers ("FC") and he categorizes them the following: 'replenishable food', 'eCommerce FCs', 'market fulfillment centers ("MFC")'¹²⁰ and 'ambient centers'.^{121 122}

In our opinion, Walmart backed the wrong horse for the most important part of its supply chain investment: its ambient network. After the company developed a proof-of-concept with Symbotic for five years, Walmart hired Symbotic in May 2021 to retrofit 25 of its 42 regional distribution centers in its ambient network.¹²³ In May 2022 the automation agreement was amended to retrofit all 42 RDCs.¹²⁴ **We already highlighted the red flags at Symbotic but before Symbotic was commissioned for the retrofit the company had only four systems live and hadn't deployed a new system since 2018.**^{125 126} Despite almost no track record, financial instability, and a team without extensive experience in automation

¹¹³ Walmart Inc. (2023), Presentation by Doug McMillon, https://corporate.walmart.com/media-library/document/walmart-2023-investment-community-meeting-day-2-doug-mcmillon-presentation/_proxyDocument?id=00000187-5325-d9b3-abc7-fb6fd4c20000

¹¹⁴ Walmart Inc. (2023), 2023 Investment Community Meeting, <https://corporate.walmart.com/newsroom/events/2023-investment-community-meeting>

¹¹⁵ Walmart Inc. (2023), 2023 Investment Community Meeting, <https://corporate.walmart.com/newsroom/events/2023-investment-community-meeting>

¹¹⁶ Walmart Inc. (2023), Walmart Outlines Growth Strategy, Unveils Next Generation Supply Chain at 2023 Investment Community Meeting, <https://corporate.walmart.com/newsroom/2023/04/04/walmart-outlines-growth-strategy-unveils-next-generation-supply-chain-at-2023-investment-community-meeting>

¹¹⁷ Morgan Stanley & Co. LLC (2023), What's Not In WMT Stock, p. 2

¹¹⁸ Walmart Inc. (2023), Walmart Outlines Growth Strategy, Unveils Next Generation Supply Chain at 2023 Investment Community Meeting, <https://corporate.walmart.com/newsroom/2023/04/04/walmart-outlines-growth-strategy-unveils-next-generation-supply-chain-at-2023-investment-community-meeting>

¹¹⁹ Finsight Group, Inc. (2023), Earnings transcript – WMT – Q1, <https://capedge.com/transcript/104169/2024Q1/WMT>

¹²⁰ We believe Doug McMillon meant micro-fulfillment centers when he talked about MFC as market fulfillment centers. Premise is that MFCs are located in a Walmart store.

¹²¹ This categorization is different from the official 2023 Walmart Packaging guide for Suppliers but suits the company's procurement purpose.

¹²² Walmart Inc. (2023), 2023 Investment Community Meeting, <https://corporate.walmart.com/newsroom/events/2023-investment-community-meeting>

¹²³ Walmart Inc. (2021), Chain Reaction: We're Partnering with Symbotic to Bring High-Tech Automation to Our Supply Chain, <https://corporate.walmart.com/newsroom/2021/07/14/chain-reaction-were-partnering-with-symbotic-to-bring-high-tech-automation-to-our-supply-chain>

¹²⁴ Symbotic Inc. (2022), Second Amended and Restated Master Automation Agreement, dated as of May 20, 2022, by and among Walmart Inc., Symbotic LLC and Warehouse Technologies LLC., <https://www.sec.gov/Archives/edgar/data/1837240/000119312522156876/d535018dex1032.htm>

¹²⁵ Bennett, Brad (2018), Giant Tiger opens high-tech distribution centre in Johnstown, Ontario, <https://mobilesyrup.com/2018/09/27/giant-tiger-opens-new-distribution-centre-ontario/>

¹²⁶ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

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engineering, Symbotic was awarded a \$12 billion contract to retrofit the RDCs in Walmart's ambient network. The investing public should put the size of the deal in perspective: the contract is about 14.4% of Walmart's estimated total capex until year-end 2028. Another perspective: the contract is more than three times bigger than the industry leader's entire backlog.¹²⁷ **What's more important is that the distribution centers are the centerpieces of Walmart's decade-long success.**

We believe the regional DCs are the link between the bigger supply chain and the local stores – **these centers are the focal point of Walmart's supply chain.** The regional distribution centers are a subcategory of Walmart's ambient network and they process freight either in full pallet quantity, single cases, or breakpacks (see Figure 13).¹²⁸ The freight is either designated for the RDC's inventory or as a flow-through, meaning that freight is shipped through the RDC to a store (see Figure 13).¹²⁹

Walmart Distribution Center Overview

The following pages include information and specifications for Suppliers shipping domestic merchandise through the Walmart Distribution Network. It is the responsibility of the Supplier to follow these requirements to help ensure that all packaging can sustain the distribution environment from the manufacturer all the way to the store shelf.

Walmart Ambient Network

The Walmart ambient distribution network includes the shipment of all items into distribution or fulfillment centers that do not require temperature control.

Regional Distribution Centers (RDCs)

RDCs process freight in full pallet quantity, individual case quantity, and break pack quantity.

- Freight is designated as Staple Stock (held in DC inventory) or Distribution (flow through inventory).
- RDCs take advantage of automation, high speed conveyors, and sorting equipment to move freight from the inbound receiving dock to a specific outbound store trailer quickly and efficiently. This network is designed to ship individual cases via automation from multiple induction points through a central merge station and onto the shipping trailer. Some RDCs utilize a higher level of automation, including robotic handling technology.

Walmart has two basic types of RDCs.

- Batch-processing centers where stores are grouped into batches for shipping.
- Door-per-store centers where a shipping door for each store is designated.

Import Distribution Centers (IDCs)

The IDCs process mainly floor loaded general merchandise freight received in ocean containers.

- Product may be unloaded from the container using clamp equipment. It is critical that the product is packaged properly to withstand multiple instances of clamping between unloading and shipping.

- After receiving the freight, cases are placed on pallets while in storage.
- Cases are cross-docked through the RDCs for shipment to the stores.
- To maximize shipments to the RDCs, cases are removed from the storage pallet and floor loaded to the RDCs.

Fashion Distribution Centers (FDCs)

FDCs combine the latest technology with proven processes to ship both full cases and individual SKUs to the store network via cross-dock through RDCs.

Direct Store Delivery Consolidation (DSDC)

A program developed to provide an efficient channel to replenish stores in less-than-case-pack quantities.

Consolidation Network - The Walmart consolidation network allows Suppliers to ship items for multiple locations to 1 central location for distribution throughout the network. This helps lower transportation costs to empower EDLC and EDLP. There are 3 types of GM consolidation centers.

- ACC (Automated Consolidation Center)** - The Walmart ACC uses advanced automation equipment to help move product to the correct distribution centers. The ACC is a high-speed facility designed to process full truckload quantity national orders. These orders are sorted and distributed to the correct Walmart DC.
- MCC (Manual Consolidation Center)** - The Walmart MCC is a high-speed facility that manually sorts and distributes full truckload quantity national orders to the correct Walmart DC.

- GMC (Traditional General Merchandise Consolidation)** - The Walmart GMC facilities sort small orders from multiple vendors to be distributed in full truckload quantities to the RDC network.
- Jewelry** - The Walmart Jewelry network is designed to efficiently flow small items with high value safely and efficiently from the Supplier to Walmart US Stores.
- RX** - The Walmart Prescription Drug network is a highly regulated supply chain that manages the receipt and distribution of all prescription drugs to Walmart US Stores.
- Optical** - The Walmart Optical network services the entire country to distribute prescription eyewear to Walmart US Vision Centers, Sam's Vision Centers, Walmart Optical Labs (including locations in Mexico), and other global locations.
- Direct Store Delivery (DSD)** - DSD is a method of shipment that allows Suppliers to bypass traditional Walmart Distribution Centers and deliver product directly to stores.

Walmart
Save money. Live Better.

Figure 13 Screenshot from Walmart's packaging guide, source: NINGI Research, company information

Even though investors saw the capabilities of the MFCs at Walmart's latest Investor Day, the investing public should keep in mind that the merchandise that is handled in that market fulfillment center is shipped through the RDCs first. **We think that the RDCs are the most important and strategic backbone of Walmart's supply chain.** Especially for its general merchandise. According to its latest annual report, general merchandise accounted for 28 percent of all US sales in the latest fiscal year but that includes fashion.¹³⁰ That would be handled by the 'Fashion distribution center'.¹³¹ But the RDCs also handle health and dry food products.

¹²⁷ Kion Group AG (2023), Supply Chain Solutions segment, <https://reports.kiongroup.com/2022/ar/management-report/financial-position-and-financial-performance/business-situation-and-financial-performance-of-the-segments/supply-chain-solutions.html>

¹²⁸ Walmart Inc. (2023), Supply Chain Packaging Guide, p. 183, https://corporate.walmart.com/media-library/document/supply-chain-packaging-guide/_proxyDocument?id=00000173-a1ca-d3c5-a7fb-edcbf2400000

¹²⁹ Walmart Inc. (2023), Supply Chain Packaging Guide, p. 183, https://corporate.walmart.com/media-library/document/supply-chain-packaging-guide/_proxyDocument?id=00000173-a1ca-d3c5-a7fb-edcbf2400000

¹³⁰ Walmart Inc. (2023), annual report, p. 80, <https://www.sec.gov/Archives/edgar/data/104169/000010416923000020/wmt-20230131.htm>

¹³¹ Walmart Inc. (2023), annual report, p. 80, <https://www.sec.gov/Archives/edgar/data/104169/000010416923000020/wmt-20230131.htm>

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So, excluding fashion and including health and dry foods, we estimate **the turnover at the regional distribution center accounts for 36 percent** of Walmart's total US sales. **For such an important piece in Walmart's puzzle, the company chose a newcomer: Symbotic.**

At first, we couldn't grasp why Walmart awarded a billion-dollar contract to a new player without any track record. We are aware that Walmart owns about 13.4% of Symbotic's total equity, but this doesn't justify laying the company's future into the hands of an inexperienced start-up.¹³² ¹³³ Established market players offer similar solutions and Walmart has been doing business with such companies for decades.¹³⁴ ¹³⁵ ¹³⁶ **Our research, interviews with former employees, and industry experts indicate that the company's procurement process lacked proper due diligence, Walmart chose aggressive pricing above realistic expectations and the final award implied a significant conflict of interest.**

We tried to understand the about of the contract awarding. One of our findings is that Walmart went with Symbotic because of the system's low sales price. Symbotic disclosed that a system's price sells for an average of \$50 million and experts explained to us that Symbotic's price range around that is significantly lower than that of its competitors.¹³⁷ A purchase price of \$80 million and higher is common for an ARSR system. Rick Cohen himself said that the systems are worth \$100 million.¹³⁸ **The question is whether Symbotic priced itself just to get the contract.** Start-ups are known for aggressive pricing to win business. But at what costs? The company is already reporting sudden margin compression due to the rollout and outsourcing of most of the work. Did Symbotic miscalculate the expected costs or was the low price on purpose?

But what we also came across is – what we believe – general pretense about Symbotic's capabilities and a significant conflict of interest. **Ultimately, this could have severe consequences for Walmart's strategy that was guided to investors.**

Before Symbotic was awarded the amended contract in 2022, the company had four running systems and the last system deployment was in 2018.¹³⁹ ¹⁴⁰ How did Symbotic even succeed in a pre-screen for the RFP watchlist? **Former Walmart executives and employees that worked with Symbotic stated a lack of due diligence during the RFP process and that Walmart believed what they were told without properly validating the claims.** Nevertheless, it appears that Walmart chose to bankroll this venture at all costs. Walmart wanted to make it work.

A former Director of **Supply Chain Automation at Walmart stated** in his LinkedIn CV that **his team helped Symbotic to improve the performance of Symbotic's system (see Figure 14).**¹⁴¹ Walmart spent more than \$100 million in 2018, which would account for one percent of the company's total capital expenditures in that year. Why does Walmart support the product development of a supplier so it reaches industry standards?

¹³² Symbotic Inc. (2022), S-1, p. 130, <https://www.sec.gov/Archives/edgar/data/1837240/000119312522185181/d321790ds1.htm>

¹³³ Symbotic Inc. (2023), prospectus, p. 21, <https://www.sec.gov/Archives/edgar/data/1837240/000183724023000117/symboticincq223form424b3.htm>

¹³⁴ Walmart Inc. (2023), Walmart Knapp next generation fulfillment center, <https://corporate.walmart.com/photos/walmart-knapp-next-generation-fulfillment-center>

¹³⁵ Vanderlande Industries B.V. (2023), Vanderlande to be Key Part of Walmart's Multibillion-Dollar Investment Plans, <https://www.vanderlande.com/us/news/vanderlande-to-be-key-part-of-walmarts-multibillion-dollar-investment-plans/>

¹³⁶ Maruszewski, Max (2020), Red Bluff Walmart Distribution Facility Walkthrough., <https://youtu.be/aT682m47MMU>

¹³⁷ Symbotic Inc. (2023), investor presentation, p. 11, <https://ir.symbotic.com/static-files/8eb0789c-98a9-4401-bd11-c604a6ab78f3>

¹³⁸ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

¹³⁹ Bennett, Brad (2018), Giant Tiger opens high-tech distribution centre in Johnstown, Ontario, <https://mobilesvrup.com/2018/09/27/giant-tiger-opens-new-distribution-centre-ontario/>

¹⁴⁰ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

¹⁴¹ LinkedIn Corp. (2023), Tyler Dunlap, <https://www.linkedin.com/in/tyler-dunlap/>

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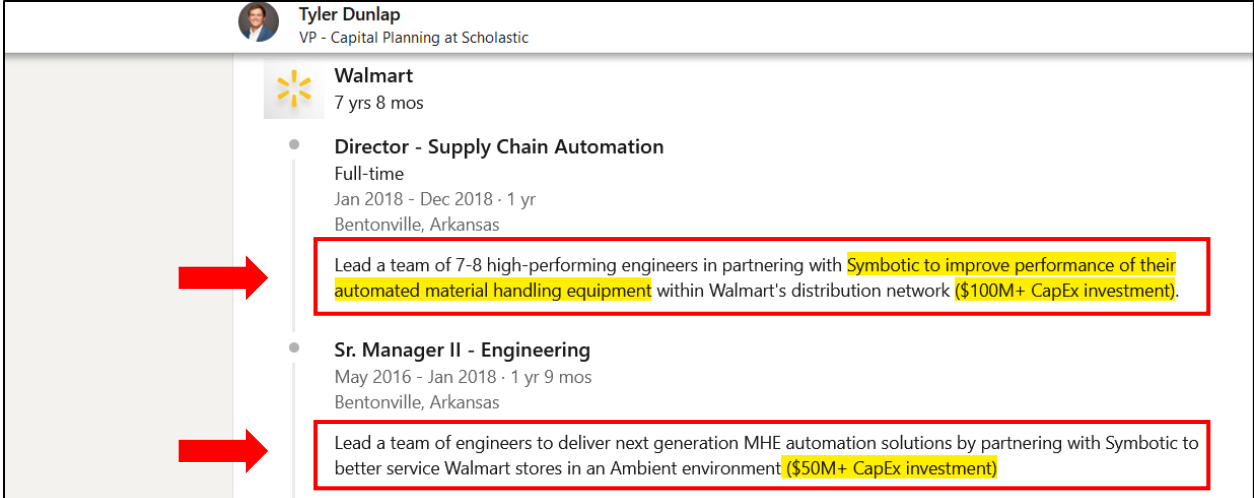


Figure 14 Screenshot from Tyler Dunlap's CV, source: NINGI Research

We've shown that Symbotic's competitors had debuted similar solutions decades ahead and that Symbotic's products are still lacking common industry features to date. Did Walmart believe what Symbotic told them or did they verify the proposals with an independent technology feasibility assessment? Symbotic hadn't deployed or sold a single system in years and wasn't listed in any industry ranking until 2023.^{142 143 144} **Most industry experts reported that Symbotic is treated as a competitor to Knapp or Dematic only because Walmart awarded them the contract.** The company's products neither have been officially introduced nor have a release date, but are in field testing or active development. Therefore, Walmart's decision was viewed as a stamp of approval within the industry. We think that before that, nobody believed in the company's products. Symbotic's three customers, Giant Tiger, Target, and C&S Wholesale, only installed a single system but shed away from a rollout in all of its distribution centers.^{145 146 147} Until Walmart awarded the contract, it took the company five years and a proof-of-concept – a project Walmart financed and improved. **However, we believe the entire project was influenced by an undisclosed conflict of interest.**

We identified the key decision maker at Walmart that was in charge of developing the strategy to transform its supply chain and logistics. His name is Bill Mines and he is an executive at Symbotic.^{148 149} Before that, he was the Senior Vice President for Finance & Strategy in the Supply Chain & Logistics segment of Walmart (see Figure 15).¹⁵⁰ In our opinion, he was the lead in sourcing and awarding Symbotic the \$12 billion contract.

¹⁴² Bond, Josh (2019), Top 20 Worldwide Materials Handling System Suppliers in 2019, https://www.mmh.com/article/top_20_worldwide_materials_handling_system_suppliers_in_2019
¹⁴³ Michel, Roberto (2021), Top 20 Systems Suppliers 2021, https://www.mmh.com/article/top_20_systems_suppliers_2021
¹⁴⁴ Michel, Roberto (2023), Top 20 materials handling systems suppliers 2023, https://www.mmh.com/article/top_20_warehouse_automation_and_automated_materials_handling_systems_suppliers_2023
¹⁴⁵ Giant Tiger Stores Limited (2023), Distribution, <https://www.gianttiger.com/pages/distribution-center-careers>
¹⁴⁶ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>
¹⁴⁷ Whelan, Robbie (2016), Fully Autonomous Robots: The Warehouse Workers of the Near Future, <https://www.wsj.com/articles/fully-autonomous-robots-the-warehouse-workers-of-the-near-future-1474383024>
¹⁴⁸ Symbotic Inc. (2023), Leadership, <https://ir.symbotic.com/corporate-governance/leadership>
¹⁴⁹ LinkedIn Corp. (2023), Bill Mines, <https://www.linkedin.com/in/billmines/>
¹⁵⁰ LinkedIn Corp. (2023), Bill Mines, <https://www.linkedin.com/in/billmines/>

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In his LinkedIn profile, he claims that he developed the supply chain strategy and orchestrated it:

“[...] Conducted road shows to communicate vision, gain buy-in, and sustain a sense of urgency among senior-most leaders and teams at all distribution centers across the US. [...]”

In his closing remarks about his last position at Walmart, Mr. Mines even states that he negotiated the contract for retrofitting the ambient distribution network with robotics.¹⁵¹ Bill left Walmart in March 2022 (see Figure 16). The contract was announced in May 2022 and in July 2022 Bill started as a high-level executive at Symbotic.¹⁵² ¹⁵³ Mr. Mines stated that he was recruited by Symbotic’s founder and CEO Rick Cohen (see Figure 16).¹⁵⁴ ¹⁵⁵

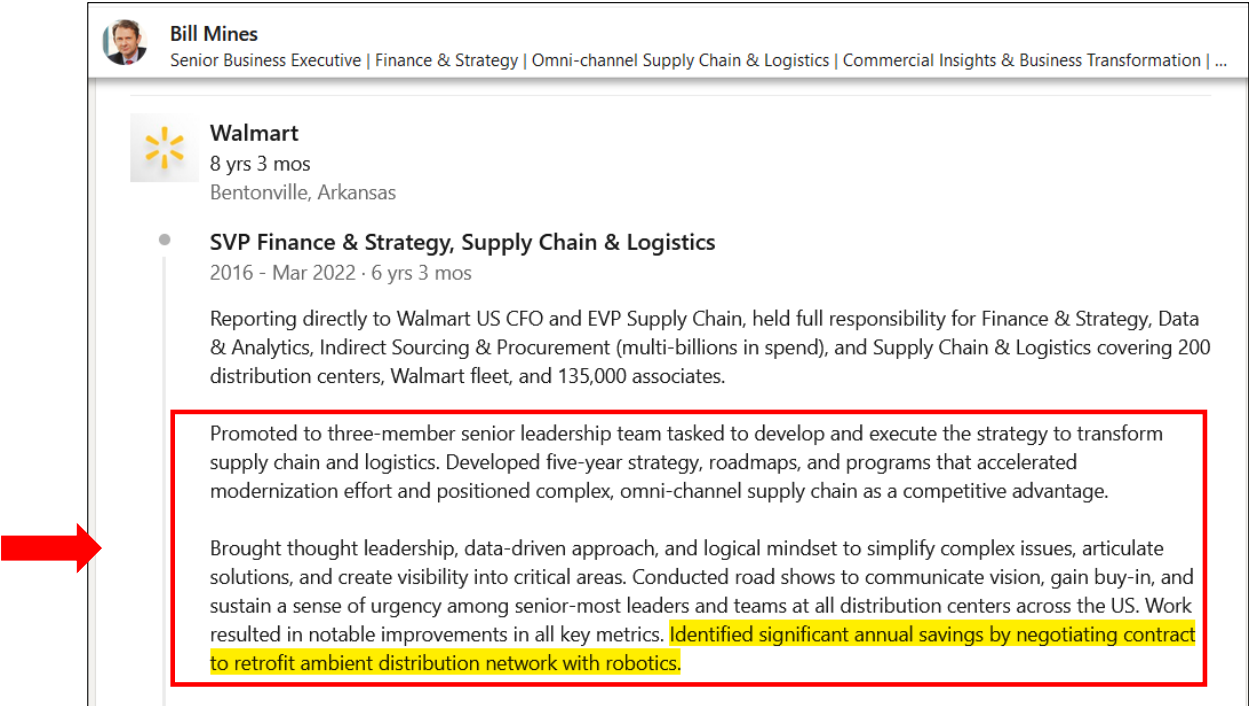


Figure 15 Screenshot from Bill Mines' position description on his CV, source: NINGI Research

We believe another executive in the three-member team for the supply chain strategy was Bill Mines’ boss Joe Metzger. At the time, Joe was the EVP for Walmart US Supply Chain but retired in February 2023.¹⁵⁶ In our opinion, Bill’s promotion to Joe’s position would have been likely, especially because Bill Mines was, next to Mr. Metzger, one of the executives that developed the supply chain strategy. Instead, Mr. Mines left a year before Mr. Metzger retired.¹⁵⁷ ¹⁵⁸ We think Mr. Mines’ decision to leave Walmart

¹⁵¹ LinkedIn Corp. (2023), Bill Mines, <https://www.linkedin.com/in/billmines/>
¹⁵² Walmart Inc. (2021), Chain Reaction: We’re Partnering with Symbotic to Bring High-Tech Automation to Our Supply Chain, <https://corporate.walmart.com/newsroom/2021/07/14/chain-reaction-were-partnering-with-symbotic-to-bring-high-tech-automation-to-our-supply-chain>
¹⁵³ LinkedIn Corp. (2023), Bill Mines, <https://www.linkedin.com/in/billmines/>
¹⁵⁴ LinkedIn Corp. (2023), Bill Mines, <https://www.linkedin.com/in/billmines/>
¹⁵⁵ We would like to note that the company never disclosed its offer letter for Mr. Mines, in which his compensation would be disclosed. That’s in contrast to former hires because the offer letters for Michael Loparco, Thomas Ernst, and Michael Dunn have been disclosed in Symbotic’s SEC filings.
¹⁵⁶ LinkedIn Corp. (2023), Joe Metzger, <https://www.linkedin.com/in/joe-metzger-50857779/>
¹⁵⁷ LinkedIn Corp. (2023), Joe Metzger, <https://www.linkedin.com/in/joe-metzger-50857779/>
¹⁵⁸ LinkedIn Corp. (2023), Bill Mines, <https://www.linkedin.com/in/billmines/>

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was made before the succession for Joe Metzger was internally discussed and decided. A promotion to EVP was possible. Why did Bill Mines leave that behind to begin at a start-up?

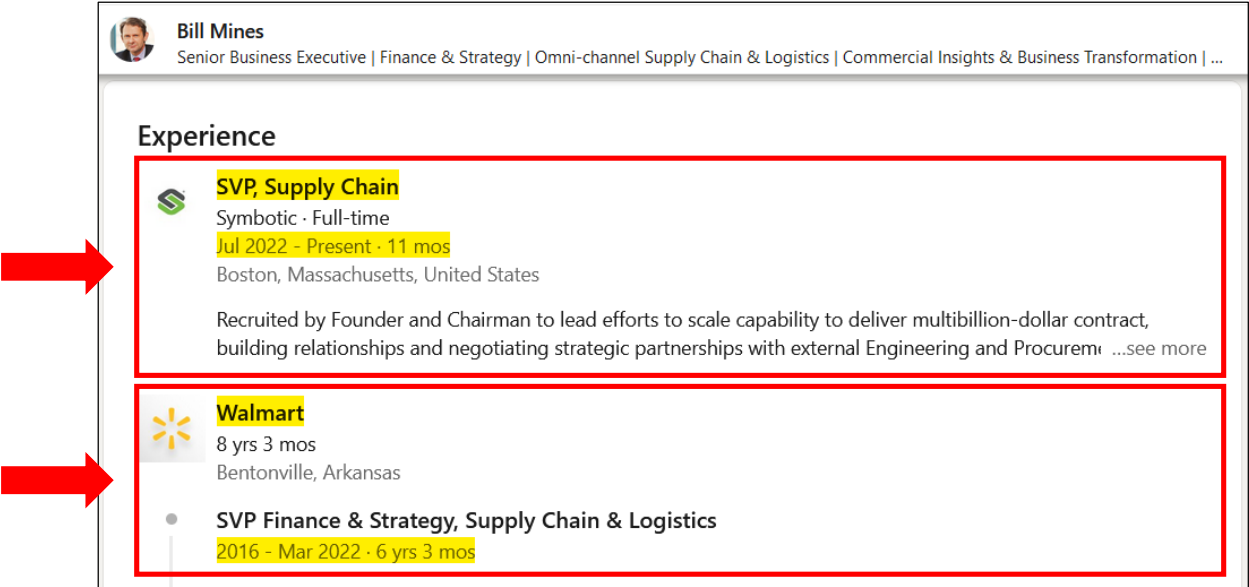


Figure 16 Screenshot of Bill Mines' CV, source: NINGI Research

It appears that there was a significant conflict of interest that was not properly assessed during the final stage of awarding the contract. **An unknown player with little to no track record gets a \$12 billion contract, and the executive in charge of sourcing, planning, and negotiating with the bidders is hired by the winner – less than three months after the agreement was announced.** It's not a good look for any party involved. With Mr. Mines' past role in mind, the fact that Symbotic didn't disclose Mr. Mines' offer letter in the company's SEC filings during its public merger should raise further questions. The offer letters of other high-level executives like Loparco, Ernst, and Dunn have been disclosed and filed with the SEC.¹⁵⁹
¹⁶⁰ ¹⁶¹ Why did Symbotic not disclose Mines' offer letter? Why did the executive switch companies right before the contract amendment? Since 2016, Mr. Mines worked with Symbotic and should have known about the "innovative technology".¹⁶² Why didn't he switch positions earlier?¹⁶²

We believe Walmart's decision to award the contract to Symbotic was influenced by significant information asymmetry. A classic principal-agent problem that – it appears – even Walmart's higher-up executives were not aware of. In the end, John Furner signed it off anyway and Symbotic got the deal.

Symbotic's CFO called the retrofit contract non-cancelable so Walmart seems stuck with Symbotic.¹⁶³ This is a lie because the master automation agreement states that Walmart can terminate the agreement if

¹⁵⁹ Symbotic Inc. (2022), offer letter by and between Symbotic Inc. and Michael J. Loparco, <http://www.sec.gov/Archives/edgar/data/1837240/000119312522115252/d248993dex1028.htm>
¹⁶⁰ Symbotic Inc. (2017), offer letter by and between Symbotic Inc. and Michael Dunn, <http://www.sec.gov/Archives/edgar/data/1837240/000119312522172211/d369444dex1017.htm>
¹⁶¹ Symbotic Inc. (2020), offer letter by and between Symbotic Inc. and Thomas Ernst, <http://www.sec.gov/Archives/edgar/data/1837240/000119312522172211/d369444dex1018.htm>
¹⁶² Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>
¹⁶³ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

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two or more major performance failures occur.¹⁶⁴ Nevertheless, it appears that Symbotic thinks the company is calling the shots nowadays.

At Symbotic's 2023 Investor Day, Rick Cohen answered the question about the competitive response:¹⁶⁵

"[...] Walmart made it clear, don't call on us. And if anything, we're seeing small startups saying, maybe we should be talking to you about, can you help us get into Walmart, which may lead into a discussion of for you just buy us. [...]"

It appears that Symbotic is openly acknowledging its utilization of the awarded contract as leverage against smaller competitors. We believe that such behavior may raise concerns at the FTC. And maybe at Walmart.

In our opinion, Walmart's governance completely failed regarding the \$12 billion contract and it will have a severe impact on the promised business improvements. **We believe Walmart's partnership with Symbotic was full of obstacles and setbacks.** But instead of a thought-out rollout to minimize execution risk, **it appears that Walmart is putting the pedal to the metal.**

Symbotic's CFO Thomas Ernst reported on its Investor Day that they are deploying faster than anticipated and currently have 29 active installations – because of one customer.¹⁶⁶ **They are speeding up the deployment at such a pace that this negatively affects the company's gross margins.**¹⁶⁷ Symbotic hired dozens of third-party engineering companies to be able to scale and deploy.¹⁶⁸ The faster deployment increases Symbotic's COGS. **We believe Walmart's management is pressing hard so they can reach the set goals that they communicated to their investors.** In the latest reported quarter, the company reported an increase of \$900 million in capex to support its growth strategy. We believe it's to accelerate the scaling and execution. Symbotic doesn't have the expertise nor the manpower to scale and deploy 42 systems. We think they lack the capabilities to deploy even more than its competitors' ten systems a year – a size that was made fun of at Symbotic's Investor Day.

In our opinion, the accelerated deployment doesn't yield any benefits for any party because the faster rollout leads to elevated risk for any subsequent system failures, quality problems, and downtimes down the road.

At the same time Symbotic is scaling the rollout, the company tries to lower its costs by delegating the deployments and commissioning to third-party companies. Like the contract award, we see a significant moral hazard. Outsourcing is the principal-agent problem in its purest form. Third-party contractors could be self-motivated to kick the can down the road to meet cost requirements and project deadlines.

We think, if any problems arise Walmart is stuck and they will have to bankroll the problem-solving. Attempting to compel Symbotic to do so using its own funds will be ineffective due to the absence of

¹⁶⁴ Symbotic Inc. (2022), Second Amended and Restated Master Automation Agreement, dated as of May 20, 2022, by and among Walmart Inc., Symbotic LLC and Warehouse Technologies LLC., <https://www.sec.gov/Archives/edgar/data/1837240/000119312522156876/d535018dex1032.htm>

¹⁶⁵ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

¹⁶⁶ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

¹⁶⁷ Finsight Group, Inc. (2023), Earnings transcript – SYM – Q1 <https://capedge.com/transcript/1837240/2023Q1/SYM>

¹⁶⁸ Symbotic Inc. (2023), Symbotic Investor Day 2023, <https://vimeo.com/828141270/8fb0e266a3>

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internally generated positive cash flow.¹⁶⁹ The funding for this endeavor has been sourced from advance payments provided by Walmart, which has been supporting the project for several years.¹⁷⁰

We estimate that about \$779 million from Symbotic sales are from Walmart and about 8.5% of Walmart’s capex was made to Symbotic for the retrofitting of distribution centers in 2022 alone. **In our opinion, Walmart’s capital investments flowing towards Symbotic will be around 9.8% in 2023, 12.5% in 2024, and 16.2% in 2025 (see Figure 17).** The estimate is based on expanding capital investments into Walmart’s supply chain. Lower supply chain capex in absolute terms will expand Symbotic’s concentration.

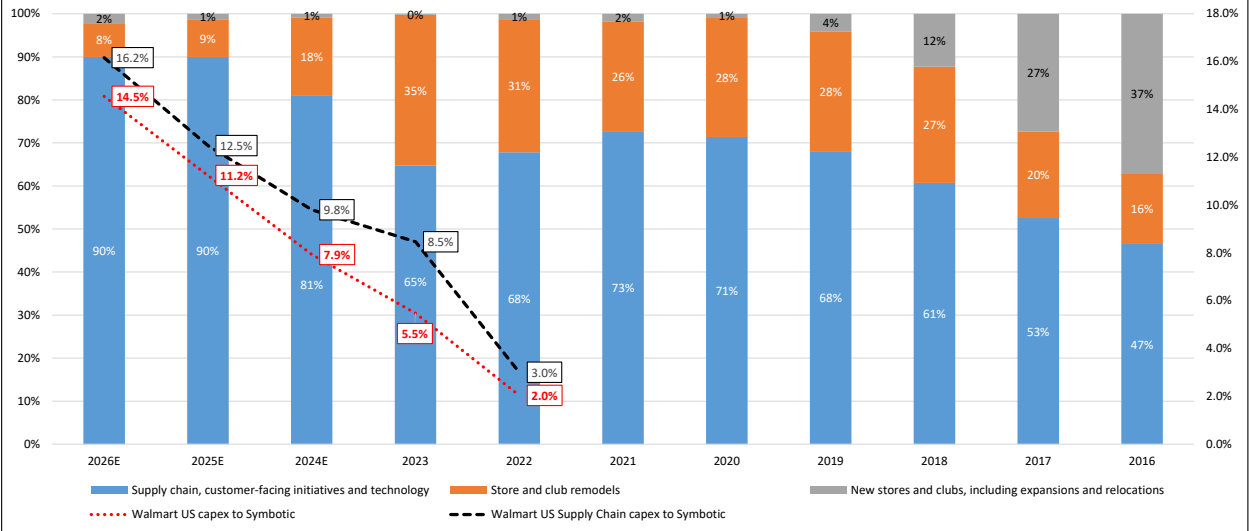


Figure 17 Walmart US capex overall and Symbotic % allocation estimate, source: NINGI Research, company filings, FactSet, Refinitiv

The assumptions are based on current FactSet and Refinitiv estimates for both companies. **However, we believe Walmart will be forced to invest more into the Symbotic retrofit than currently expected.** Our assumption is based on the fact, that Walmart had to “help” Symbotic with its technology so the project would leap forward. In our opinion, Walmart will likely do the same during the deployment and commissioning of the system. **This will lead to higher than estimated capex, hence lower free cash flow for value-adding allocation like share buybacks.** Analysts from JP Morgan associated the lower buybacks in FY23 with “discrete cash needs” from the opioid settlement. We think this will continue in FY24 and this time the “discrete cash needs” will be due to the elevated capex. In our opinion, the higher capex for Walmart’s supply chain already led to the reported lower share buyback in the first quarter. **In the end, shareholders will have to carry the can. Investors have no idea and they think Walmart will prevail.**

Additional questions for Walmart and the company’s management that are of interest to the investing public:

- Can Walmart provide more details about the expected benefits and cost savings from the automation and retrofitting of the regional distribution centers with Symbotic?

¹⁶⁹ Symbotic Inc. (2022), annual report, p. 70, <https://www.sec.gov/Archives/edgar/data/1837240/000183724022000049/sym-20220924.htm>
¹⁷⁰ Symbotic Inc. (2023), Prospectus, p. 33, <https://www.sec.gov/Archives/edgar/data/1837240/000183724023000117/symboticincq223form424b3.htm>

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- How are these estimates calculated, and what measures are in place to ensure the projected savings are realized?
- What due diligence was conducted during the procurement process for selecting Symbotic as the supplier for the retrofit?
- Can Walmart's management explain the criteria used to evaluate Symbotic's capabilities and track record, especially considering the lack of prior deployments and limited industry recognition?
- Can management address the potential conflict of interest involving Bill Mines, the executive who played a significant role in sourcing and negotiating the contract with Symbotic and later joined Symbotic as a high-level executive?
- How was this conflict of interest managed, and what measures were taken to ensure a fair and unbiased selection process?
- How does Walmart plan to mitigate the risks associated with Symbotic's limited experience, lack of proven track record, and potential challenges in scaling and deploying the systems?
- Are there contingency plans in place to address any major performance failures or setbacks that may occur during the rollout?
- Can management provide more information on Walmart's partnership with Symbotic, including the nature of the collaboration and the specific areas where Walmart has been assisting Symbotic in improving its system performance?
- How does Walmart ensure that its own resources and intellectual properties are protected while supporting Symbotic's product development?
- Considering Symbotic's reported margin compression and increased costs due to the accelerated deployment, what measures is Walmart taking to ensure that quality and reliability are not compromised during the rollout?
- How will Walmart address potential issues such as system failures, quality problems, and downtime resulting from the rapid scaling of deployments?
- What is the potential financial impact of the partnership with Symbotic on Walmart's capital expenditures and free cash flow in the coming years?
- How does Walmart plan to manage the increased investment in Symbotic's retrofitting and deployment, and what implications might this have for shareholder returns and value-adding initiatives like share buybacks?
- Can management provide more information about Walmart's governance and oversight processes, particularly in relation to the \$12 billion contract with Symbotic?
- How does Walmart ensure transparency, fairness, and accountability in major procurement decisions, and what measures are in place to prevent information asymmetry or conflicts of interest from influencing such decisions?
- How does Walmart plan to address concerns raised about the Symbotic contract, including the perceived information asymmetry, potential moral hazards associated with outsourcing, and the use of the contract as leverage against smaller competitors?
- What steps will Walmart take to protect its interests and ensure the successful implementation of the automation project?

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Backing the wrong horse

We've been told by investors that Walmart always gets what it wants. However, in this situation, the company exposed itself to a significant business risk. It appears that they didn't consider the counterparty risk. The company could terminate its contract due to a material breach but then it would be stuck with unfinished systems in all of its RDCs. Walmart accounts for 90% of Symbotic's revenue and backlog, so forcing through the agreed-upon price could lead to Symbotic's bankruptcy and leave Walmart with unfinished systems in its RDCs. Walmart made Symbotic what it is today and it is forced to keep it that. If Symbotic doesn't survive, Walmart won't be able to meet its strategic goals for automation and guided unit cost savings. As we have already demonstrated Symbotic's products are not as innovative or cutting-edge as the company claims. The entire company history seems highly promotional and the Walmart contract appears to be the opportunity to monetize the story after 15 years of failures. We believe Symbotic's goal was in getting the Walmart contract. That made investors perceive Symbotic as the leading technology company it always dreamt to be. In the end, it never was or will be.

Walmart's success doesn't rely on its management's capabilities to execute. Walmart's strategy and its execution will be shouldered by Symbotic's management team and plentiful third-party contractors. Even though Walmart's management will reassure that they are confident that they will be executing its omnichannel strategy successfully, it isn't in Doug McMillion's hands. As already mentioned, there is a significant information asymmetry on Walmart's side because two of the three executives that orchestrated the supply chain strategy left Walmart since the deal was signed. At this moment you are reading this, third-party contractors are deploying prototypes in most of Walmart's regional distribution centers. Symbotic is open about the prototype status of its products on its earnings calls. Investors in Walmart should take a closer look at Symbotic. Their failure and missteps will be Walmart's failure and missteps. We believe that problems in Walmart's supply chain investments are variables that investors haven't incorporated in their valuation of the company yet.

Investors are betting that Symbotic is highly overvalued – it appears almost like an overcrowded trade. However, most investors don't see the second-order effects on Walmart's valuation. Most sell-side analysts don't even list any supply chain issues as a risk for their valuations. We expect the sell-side to brush off our findings because they don't have a comprehensive view of it. In our opinion, mainly because the supply chain was a well-run machine in the past and Walmart implemented a well-tested system from established automation companies with decades of experience. Nowadays, Walmart backs a "newcomer" without any track record of running a system this large. We think that there will be more like a trickle-down effect of failure, inefficiencies, and glitches through Walmart's supply chain operations rather than one big event like the fire at an Ocado Group's automated distribution center.¹⁷¹ However, we believe the impact will be felt through higher Capex, lower share buybacks, and slower topline growth. Ultimately, leading to a lower ROIC and ROCE than estimated. As mentioned at the beginning of our report, Walmart trades at an elevated P/E multiple, and in anticipation of the successful execution of its omnichannel strategy, investors value the company at a 24x NTM P/E multiple. In our opinion, execution risk in regards to the omnichannel strategy, the lower share buybacks due to the higher capex, and a slower topline growth translate to a 20x NTM P/E multiple. **We estimate a fair value of \$124.2 per share.**

¹⁷¹ BBC (2021), Thousands of orders cancelled after Ocado robot fire, <https://www.bbc.com/news/business-57883332>

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In addition, we think that Walmart exposes itself to possible attacks from competitors. In our opinion, during the next three years and maybe even longer, Walmart could be encircled by Target and Amazon. Target could start a price war to regain market shares if it turns out that the boycott because of Pride marketing is hurting sales. A price war during recessionary times could yield market share gains for Target as well. Whereas Walmart has to allocate its capital toward its supply chain instead of price investments. We believe Walmart will be focused on fixing the mess Symbotic will be leaving behind. At the same time, Amazon cut back its capital investments in supply chain solutions significantly, enabling the company to either do price investments for market share gains offline and online. This would hurt Walmart's sales growth as well. That's how an uncared counterparty risk leads to a threat for the entire business.

In our opinion, Symbotic investors shouldn't misinterpret the fact that Walmart is stuck, hence Symbotic could use the company as its lemon. The Symbotic systems were sold at a – for industry standards – very low price, so any additional costs will be either paid for by Symbotic's shareholders or by Walmart. The upcoming unlock will dilute shareholders and drive Symbotic's price down. After that, we believe as soon as Symbotic will do a common stock offering to fund the unexpected additional costs for the rollout, the company's share price will be in free fall. If the capital can't be raised, we believe Walmart will put more money to work to make its warehouse automation strategy work. But at a zero gross margin for Symbotic. A key variable to assess the possible impact is the fair value of Symbotic's backlog. Is it \$4 billion or \$12 billion? The lower will be good for Walmart and bad for Symbotic, the latter will be bad for both because based on the competitors pricing an additional 30% to 50% of Capex have to be funded – and that is for both companies bad.

Questions for the investing public to think about:

- Do you believe Symbotic's management will be capable to execute?
- If not: do you believe Walmart will come out of this mess without any damage?

It's similar to being a patient undergoing spinal surgery. You constantly faced some small back stabbing pain hindering your performance. Now you're determined to address it, selecting the surgeon you deem most skilled. You anticipate improving your health through this procedure. While lying anesthetized on the operating table and the surgery begins, the hired surgeon brings third-party surgeons into the operating room because 1) he doesn't know how to perform such a complex spinal surgery and 2) to reduce his costs. Prior to the procedure, you were confident that the surgery will go well, but only later did you know whether this is really the case. You don't know anything about the problems, shortcuts, and errors that occurred during the surgery. But the negative effects will be felt only years later.

For all information herein, we are short Walmart (NYSE: WMT) and Symbotic (NASDAQ: SYM).