HDS Global

HDS Ecommerce



An Online Combination Store

A Robotic Fulfillment System



Our company

HDS Global

HDS Ecommerce

An online combination store that beats brick & mortar in value, experience and selection

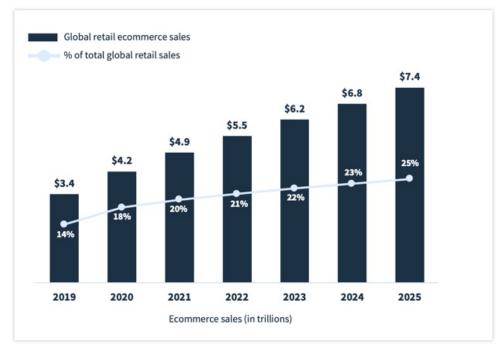
Driving RoboFS vision of end-to-end with 50% lower costs and with the high expectations of a committed user

Driving economies of scale and providing diverse requirements to bring robustness and versatility

RoboF5[®]

A robotic fulfillment system that meets our challenging ecommerce requirements and those of our market-leading customers

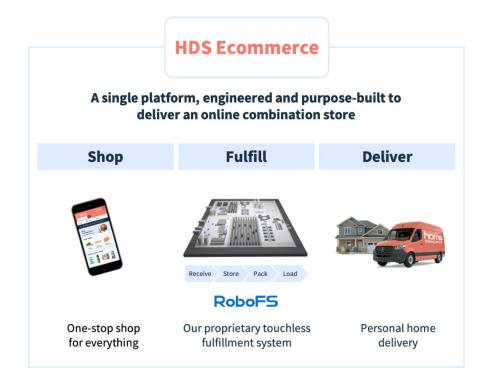
A massive white space opportunity



Source: eMarketer, May 2021.

- Walmart proved in brick & mortar that a combination store with fresh groceries & general merchandise is the path to market dominance
- Our vision of an online combination store that beats brick & mortar in value, experience and selection can do the same in ecommerce and is an unmet opportunity

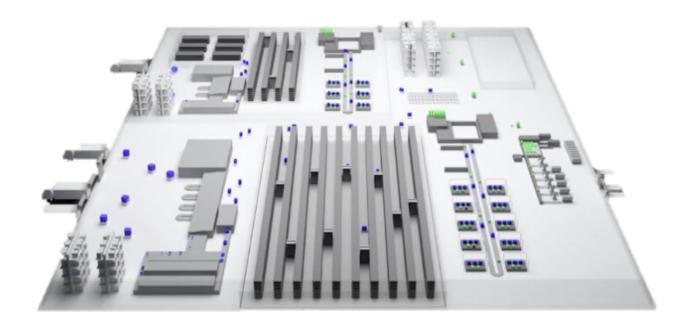




- The gap is today's fulfillment technology and we developed RoboFS, which fills that gap, and we attracted market leaders with large-scale fulfillment operations to help us create a generalpurpose, revolutionary system
- We formed a separate business unit to sell RoboFS installations to these market leaders and to gain a long-term competitive advantage, following Amazon's model with AWS

An end-to-end, touchless fulfillment solution

RoboFS



Our RoboFS business unit has economies of scale which delivers a better fulfillment system for our ecommerce



Our early partners guided us to a more advanced solution

- (High performance
- Modular, factory-built
- Fully configurable
- Superior to competing technologies in labor reduction, throughput and footprint

Founder led, highly accomplished team



Louis Borders Founder & CEO Founder of Borders Books Founder, CEO Webvan to IPO & \$7B market cap



Chris Visnic
President, RoboFS

VP Sales of Seegrid | Led Seegrid to #1 in autonomous mobile robots | Ex Autodesk Multiple successful s/w company exits



Mitchell Weiss
Chief Robotics Officer
CTO of Seegrid | CTO of Brooks
Automation | 3X Founder | 2X Exits
1X IPO | 31 patents



Norm Cook

VP, People & Talent

High performance startup team building

Ex Google, Credit Sesame | Attracted investments by a16z, Kleiner, Google



Abhishek Raman

VP, Engineering

Planning, scheduling, logistics

s/w leader | Ex Apple, IBM

SME in AI, ML, OR | 10 patents



May Chinavanichkit
VP, Business Ops
Tech startup ops leader HR, QA,
Sourcing, Finance & Due Diligence
MPS Food Science Cornell





Ecommerce

Consumers love ecommerce services despite many issues

Shop



Incomplete basket - many orders, many vendors, many packages



Many post-order out-of-stocks, erratic substitutions

Fulfill



Markups from store prices plus subscriptions and onerous fees



Poor quality perishables

Deliver



Excessive cardboard waste, not ESG compliant



Sketchy delivery, returns hassle

Retailers struggle with innumerable supply chain challenges

Shop



Impossible to accurately track in-store inventory



Inflexible, not adaptive to changing consumer demands

Fulfill

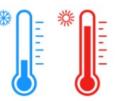


Labor shortage magnified by highly manual processes



High labor costs, little profit even with markups & fees

Deliver



Unsafe temperature control









Many handoffs, poor quality

The combination store is the ultimate in convenience

- No tips, store prices, professional service
- No cardboard, reusable totes
- No private label products
- Unlimited selection, deep brands, no affiliates
- Same day service, one-hour window
- 1-hour premium express service







Pervasive automation positions HDS to be an ecommerce leader

A combination store with rapid home delivery.

Fresher-than-store groceries.

Deep selection of general and brand-name merchandise.

Same as or lower-than-store prices with no fees or tips.

Shop



- One-stop shop
- Personalized produce, meats and prepared foods
- No private label, grey market or counterfeits; a founding principle
- Weekly scheduled orders, add anytime, no more shopping list

Fulfill

RoboFS



- RoboFS a proprietary full-stack solution built on AI and robotics
- 66% less labor, high density, close to customer for low delivery costs
- Validated as a large-scale fulfillment solution by Toyota and Ingram Micro

Deliver





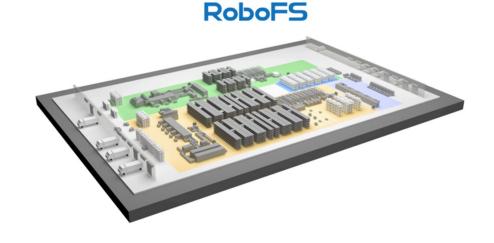
- Personal service by employees with hassle-free returns
- Safe food handling with tri-temp control to the home
- Reusable totes, no more cardboard
- Premium express service

Compelling unit economics, organic market growth

Deep selection of grocery and general merchandise



SKUs stocked SKUs sold but not stocked Gross margins at scale 100,000 Unlimited 31% Low labor, tri-temperature, high-capacity fulfillment centers (FC)



Annual FC revenue Size of facility (square feet) Investment (payback) \$200,000,000 150,000 \$40M (18 months)

Rapid delivery with short drive times



Darker green, more lucrative market

FCs in initial SF Bay rollout
Annual metro revenue
Annual operating profit (op ex) \$16

\$1.2B \$160M (13.6%)

12

The first that can cross the chasm in grocery

Mainstream (better-than-store) in:

Value

Store prices with free delivery and without fees or tips. 20% lower prices than the market leader

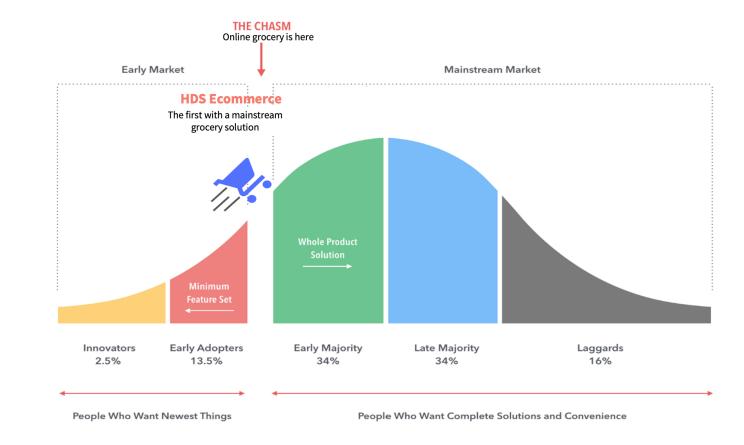
Experience

Avoid store shopping, reliable product availability, fresher perishables, no cardboard, professional delivery by HDS employees, hassle-free returns

Selection

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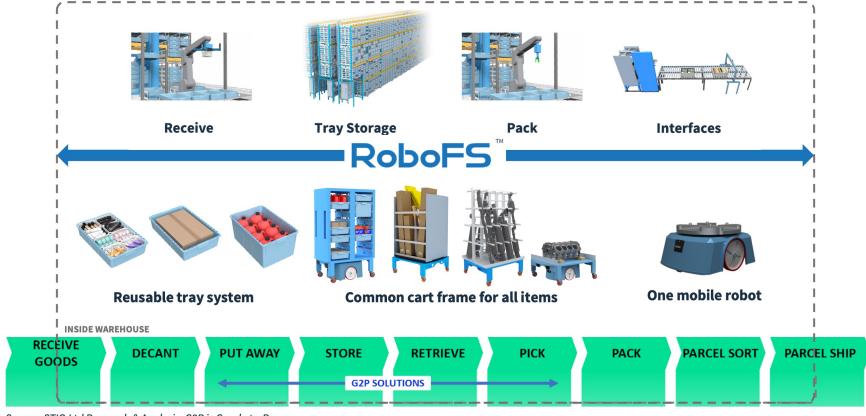
Equivalent to hundreds of stores in one place, all of your grocery and general merchandise needs, long-tail selection, a deeper brand selection than today's mass retailers



RoboFS



RoboFS delivers end-to-end coverage



Source: STIQ Ltd Research & Analysis, G2P is Goods-to-Person

- Reusable tray system with compartments provides high density, and eliminates cardboard
- Our cart is the common interface between modules that holds sorted batches of trays, and its movement is fully automated with our mobile robot
- Our unified design supports automated case and single item fulfillment
- Hardware and software built as one system avoids the brittleness and high maintenance costs of multiple vendor systems



Today's automation buyers have tough choices, RoboFS is a new option

Manual Fulfillment Today's Solutions RoboFS Human performance variation Islands of Automation Single solution, end-to-end **Storage Storage Storage** Retrieval Retrieval Sorting Retrieval **Sorting Sorting** Pick & Pack Pick & Pack Pick & Pack

- **Legacy integrations** have long lead times and create a challenging work environment reflected in high turnover and labor shortages
- **Point solutions** mean disparate systems that are difficult to maintain and provide only incremental benefits
- **RoboFS** is a single technology stack and, by standardizing its mobile transport and container system, has a seamless flow of goods between modules



One architecture to receive, store, sort, convey and pack



Tray systemRemovable compartments,
up to 8 SKUs per tray,
shippable, reusable, palletize-able

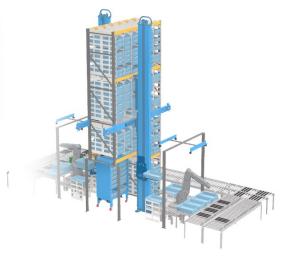


Cart & AMR
A sorted batch of trays,
mobile transport, anytime anywhere,
eliminating sorters and conveyors



Tray storage

Dense, shelf-less storage (RAM),
 high-speed extractor,
sorting and storage in one process

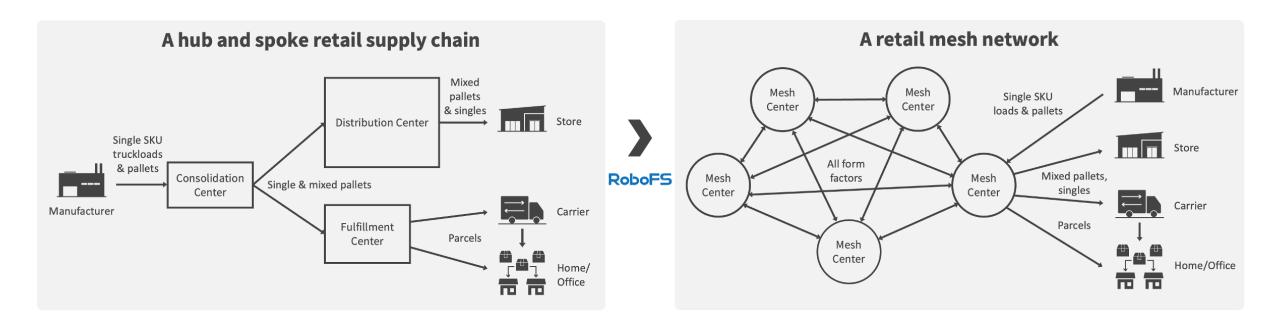


Receiving and Pack

Re-use of the core technology in the tray storage module, high capacity buffer (cache)



RoboFS enables a mesh facility network to transform logistics



A more robust facility

 Each RoboFS facility can perform the functions of consolidation, distribution, and fulfillment by inbounding receipts of all shipment sizes and fulfilling all order types in an interleaved way

Benefits

- Significant reduction in transportation costs
- Retail mesh networks have the same improved resiliency, stability and other benefits that mesh networks of routers have enjoyed for decades



Selling RoboFS to market leaders is a path to excellence

Benefit	RoboFS Customer	HDS and RoboFS Business Unit
Robotics Innovation	Transform fulfillment operations with an AI/robotics-based, end-to-end, turnkey solution	Market leading RoboFS partners drive versatility and enhancements
Cost Savings	We are targeting to reduce the total cost of fulfillment by 50% over today's systems	Increased purchasing power reduces equipment costs and increases engineering investment
Competitive Advantage	RoboFS made available to a limited number market leaders in non-competing verticals	Wider RoboFS usage a better, lower cost fulfillment solution for HDS ecommerce



"RoboFS is the most innovative fulfillment technology that I have seen. Companies such as Toyota and Ingram Micro have invested because they see this technology as their path to the future. Silicon Valley is disrupting the auto industry and I'm expecting RoboFS to do the same to the supply chain industry."

Roy Vasher – HDS Advisor. Author of Toyota's Supply Chain Management: A Strategic Approach to Toyota's Renowned System

Strategy

Similar to Amazon's AWS strategy, provide RoboFS technology to commercial accounts to leverage technology investment and achieve a unique competitive advantage

Summary

At-a glance





Headquarters Palo Alto, CA

Invested Partners





Total Investment

\$46M

HDS Ecommerce

Annual Sales per Sq Ft

\$1,333 vs \$325 average retail

Sales per Fulfillment Center (FC)

\$200M

Number of FCs

10 by Year 5 of operations

Robust Operating Margins

13.6% for FC #1 in Year 5

RoboFS

Targeted metrics when compared to today's systems

Reduced labor hours

67% with higher quality jobs

Improved density

33% less floor space

Reduced cardboard waste

75% less with RoboFS reusable trays

Reduced total cost of operations

50% via reduced labor and miniaturization of equipment

HDS Global

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