STARSHIP + KAUPAT

CASE STUDY

From Tradition to Innovation:

How S Group Embraced Starship's Autonomous Robots to Lead Finland's E-Commerce Grocery Revolution

ABOUT

KAUPAT

S Group is Finland's largest retail company and service sector employer, consisting of SOK and it's subsidiaries, comprising over 2000 outlets spanning supermarkets, department stores, hospitality, travel, fuel and service stations, car dealerships, hardware stores and financial services via the S-Bank.

Known for its strong market presence and customer-driven approach, S Group serves over 2.6 million loyalty members, making it a dominant force in the Finnish retail landscape. With a legacy spanning over 120 years, S Group continuously adapts to changing consumer needs, investing in e-commerce, sustainability and technological innovation to enhance the shopping experience.

STARSHIP

Starship is the global leader in autonomous delivery, transforming the way goods move in cities worldwide. Using cutting-edge robotic technology, we help businesses deliver groceries, hot food and industrial supplies efficiently, reliably and sustainably. Since 2014, we've been redefining last-mile delivery with real-world solutions for top universities, grocery chains, and logistics providers across 270+ locations worldwide. With a fleet of 2700+ autonomous robots, we make deliveries daily - reducing car trips, cutting carbon emissions and making urban logistics smarter and more cost-effective.

SUMMARY

Introduction 3
The Challenge 4
The Solution 5
The Results 6
Beyond the Metrics 7
Overcoming Challenges 8
Conclusion 9

INTRODUCTION

One Small Step for S Group

When Starship Technologies approached S Group in 2022 with the idea of autonomous grocery deliveries, Finland's largest retailer reacted with measured enthusiasm. It was an audacious proposition in a market where reliability is key.

> "Introducing a fleet of self-driving robots? It felt like a moonshot."
>
> **Aatos Paloheimo**
> Business Development for Quick Commerce at S Group

"We'd built a reputation on trust and reliability," says Aatos Paloheimo, Business Development for Quick Commerce at S Group. "We're no stranger to innovation, but introducing a fleet of self-driving robots into our operations? It felt like a moonshot."

But the grocery landscape was evolving rapidly. As competitors raced ahead offering express delivery, S Group knew that standing still risked losing ground. With dark stores and minute-delivery services on the rise, S Group decided to act.

Fast forward to today, and the 120-year old retailer has become a trailblazer. Starship's robots are now an everyday sight in 82 towns and cities across Finland, autonomously delivering groceries from 165 stores. They've revolutionised how Finns shop, strengthened S Group's brand appeal and helped to nurture a new generation of loyal customers.

This is the story of how a retail giant took a leap into the future - and landed firmly ahead of its competitors.

CLIENT	LOCATION	GROCERY BRANDS
STARSHIP + KAUPAT	Finland	alepa, Sale, SOKOS, S MARKET

INTEGRATION	FLEET SIZE	STORES WITH DELIVERY
KAUPAT	650+	165+

THE CHALLENGE

Shifting Customer Expectations

Before 2023, S Group's e-commerce model relied on van deliveries and the ever-popular store 'pick-up', reflecting Finland's preference for planned grocery shopping. Customers could schedule their groceries in advance but there was no option for rapid, on-demand delivery.

S Group had tested express delivery solutions in the past, knowing flexibility and choice were key to customer satisfaction. Starship's robots seemed to fit this vision, offering hyper-local convenience, allowing customers to order top-up shopping in minutes - whether from their homes, their offices or even the side of a football field.

> "Robot deliveries offer a new level of flexibility for refilling their fridge, rather than a full grocery haul."
>
> **Emilia Ala-Kurikka**
> Product & eCom Supply Chain Lead at S Group

"Many customers want a quick solution for refilling their fridge, rather than a full grocery haul," explains Emilia Ala-Kurikka. "Robot deliveries offer a new level of flexibility, one which provides more choice to customers and compliments our existing services."

S Group also wanted to attract a new generation of customers to their mobile app.

"We wanted to stay relevant with younger, digital-first users. We had a major goal to increase app downloads and usage, and the robots felt like a great innovation story to activate customers."

MISSION

Offer a fast, on-demand delivery solution
to stay ahead of the competition.

Increase activations
in the S-Kaupat mobile app.

Refresh the brand's image
to attract new digital-first users.

THE SOLUTION

Autonomous Delivery at Scale

Starship is the global leader in autonomous delivery.

Robots learn with every journey, and Starship robots have completed millions more deliveries than competitors (8 million, to date). Consuming as little energy as it takes to boil a kettle, their robots transport groceries within a three-kilometer radius in minutes, at a fraction of the cost of human delivery.

S Group decided to start small. **In 2022, 10 Alepa stores in Espoo** became the testing ground for Finland's first-ever autonomous grocery delivery service. Students from a nearby university were keen to try the new technology, and orders quickly gained momentum.

> "Customers loved the convenience. They loved the technology and fell in love with the cute robots that sang to them."
>
> **Jukka Ranua**
> Development Director of eCom and Digital Services at S Group

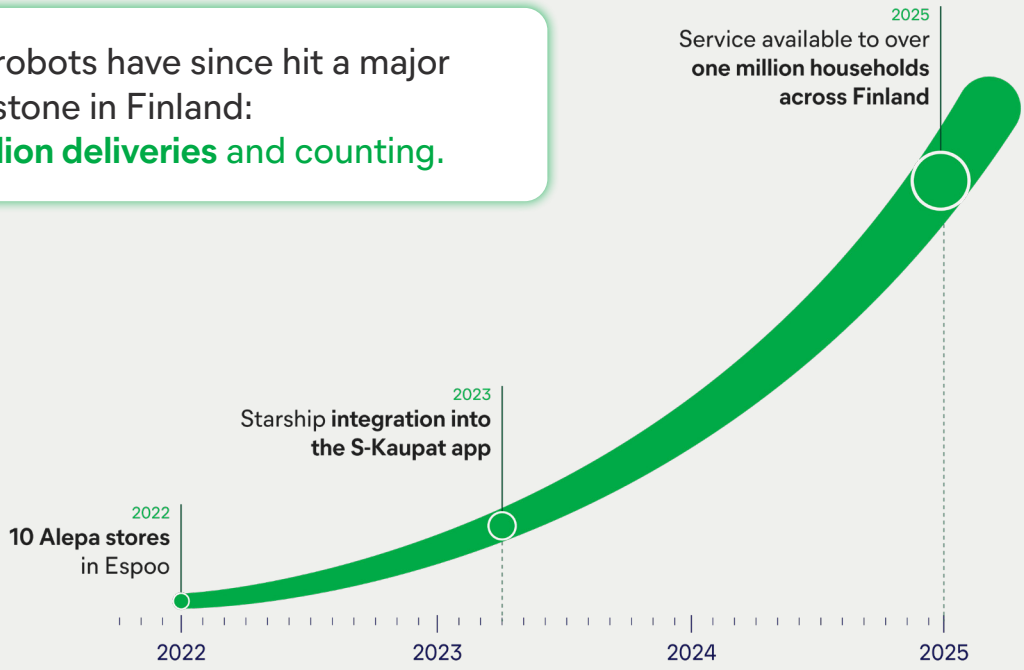
"It was clear some sort of emotional bond had been created and when the pilot ended, customers missed the robots".

By April 2023, S Group had integrated Starship into the S-Kaupat app, launching the service in cities **at a rate of up to eight new stores per week**. The service is **now available to over one million households across Finland**, making it the fastest national deployment of autonomous delivery in history.

"This was our first-ever integration of robots into a grocery partner's platform," says Anti Veeranna, Senior Project Manager at Starship. "We were introducing on-demand delivery into an app originally built for scheduled orders, so we had to tackle all sorts of challenges - from creating friendly maps to help customers meet their robot, to clear notifications to let them know when the robot arrives. And since our robots love interacting with people, they also had to learn Finnish. Luckily, mastering a new language takes them less than 20 seconds."

AUTONOMOUS DELIVERY AT SCALE

The robots have since hit a major milestone in Finland:
1 million deliveries and counting.



THE RESULTS

Reinventing Retail

The numbers speak for themselves...

1 million
robot deliveries now complete

640%
YoY growth in robot deliveries

22 minutes
Average delivery time

240 tonnes
of CO_2 saved as fewer shoppers relied on car journeys

1M Km+
Distance travelled

85/100
Customer satisfaction

49%
App downloads surged in 2024 helped by the buzz surrounding robot deliveries

The decision to expand robot deliveries beyond the pilot phase was driven by customer demand, but there are broader industry trends to acknowledge. The global autonomous last-mile delivery market is expected to grow from $9.98 billion in 2018 to $45.27 billion by 2027 (Research and Markets, 2021), signaling a long-term shift toward automation.

S Group saw the opportunity to integrate autonomous delivery into its wider e-commerce strategy. By leveraging Starship robots for short-distance deliveries, SOK was able to offer new shopping experiences without disrupting its core logistics model.

The robots also proved to be a powerful marketing tool, lowering customer acquisition costs. In 2024, S Group gamified its marketing by launching an interactive 'S-Kaupat robot delivery' game. Hosted on the S-Kaupat website, the game was distributed via paid ads and saw app downloads surge - with a cost-per-click 50% cheaper than standard campaigns.

> "For us, this was more than just a delivery experiment."
>
> **Emilia Ala-Kurikk**

"For us, this was more than just a delivery experiment," says Emilia Ala-Kurikka. "It was a way to connect with customers in a fresh and engaging way, bridging the gap between e-commerce, technology and brand storytelling."

Beyond customer convenience, robot deliveries also offer a sustainability advantage. Research shows that cities could experience a 32% increase in emissions and 21% more congestion by 2030 without intervention (McKinsey, Transinfo). By contrast, Starship's battery-powered robots provide a greener alternative to jumping in the car to collect groceries. To date, Starship robots have saved an estimated 240 tonnes of CO2 from entering the atmosphere in Finland, helping to decongest local traffic and emissions.

BEYOND THE METRICS

The Human Impact

It wasn't just about logistics. The robots have transformed lives.

"Robot delivery truly makes my family's life easier - it can be so busy sometimes!"

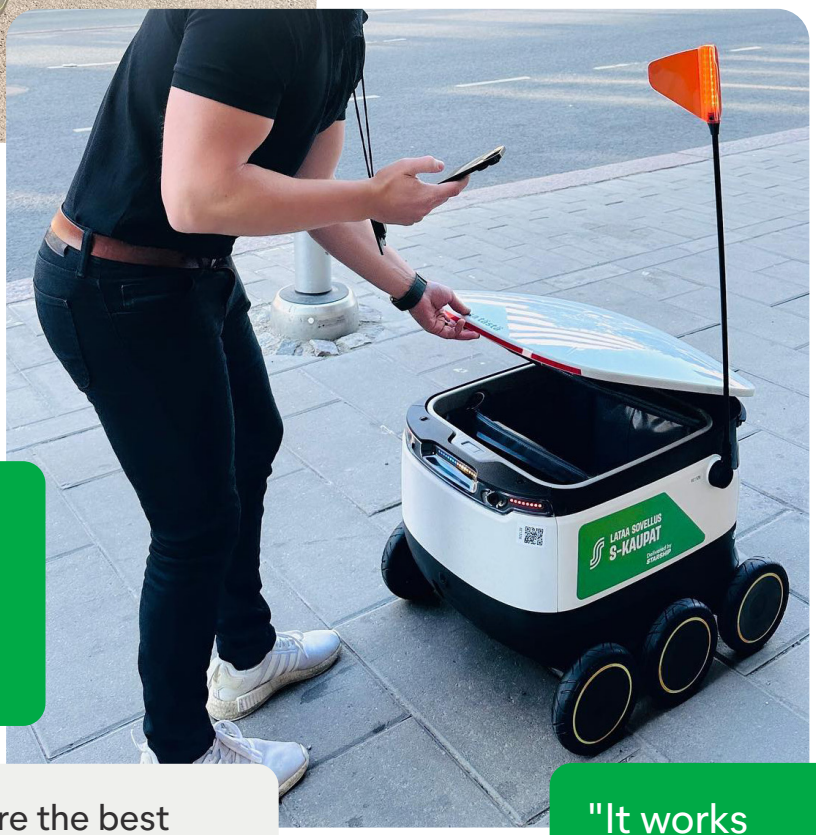
Alepa customer

"The best moment of the day with my child was when the robot arrived, we petted it and listened to the music it played. The robot also brought spontaneous smiles to the faces of the people around us."

S-Market customer

"No need to go to the store while feeling a bit under the weather."

S-Kaupat customer



"Just 7 minutes after picking, our groceries have already arrived."

Alepa customer

"To me, the delivery robots are the best thing in the world. They create hope for the future in a chaotic world."

Alepa customer

"It works brilliantly"

S-Kaupat customer

Scaling at Speed

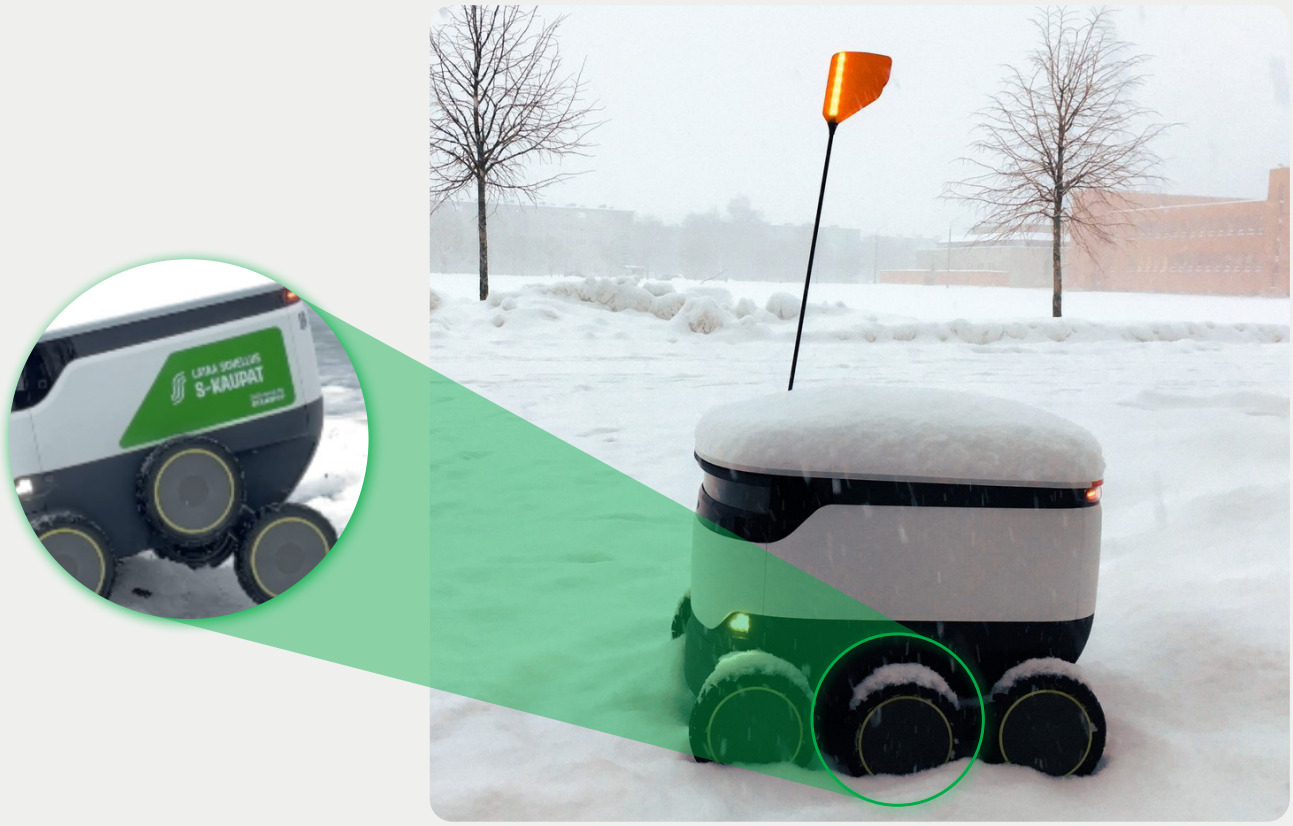
> "Scaling so quickly to 165 stores has been no small feat, with over 650 robots distributed across Finland."
>
> **Carmit Proper Livni**
> Customer Success Director at Starship

"Under SOK there are multiple separate coops, and multiple brands sitting under those coops in different regions of Finland," says Carmit. "This presents a unique level of complexity. From maintenance and support, to communication between Starship and stores, we've had to devise entirely new processes, with an ongoing roadmap, listening and fixing as we go. We've now built a partner platform to give S Group greater oversight across all levels of the business."

Starship also had to contend with Finland's famously harsh winters. In December 2023, heavy snow nearly halted deliveries, with order volumes dropping by 40% in just one month. Starship engineers had to respond with new winter tires and a 'snow mode' driving system to help robots navigate piles of snow. By December 2024, a year later, orders dipped by only 5%.

> "Scaling has been no small challenge. But Starship's support team work around the clock. They didn't just provide a product - they provided a partnership."
>
> **Aatos Paloheimo**
> Business Development for Quick Commerce at S Group

SNOW MODE



CONCLUSION

A Giant Leap for the Future of E-commerce

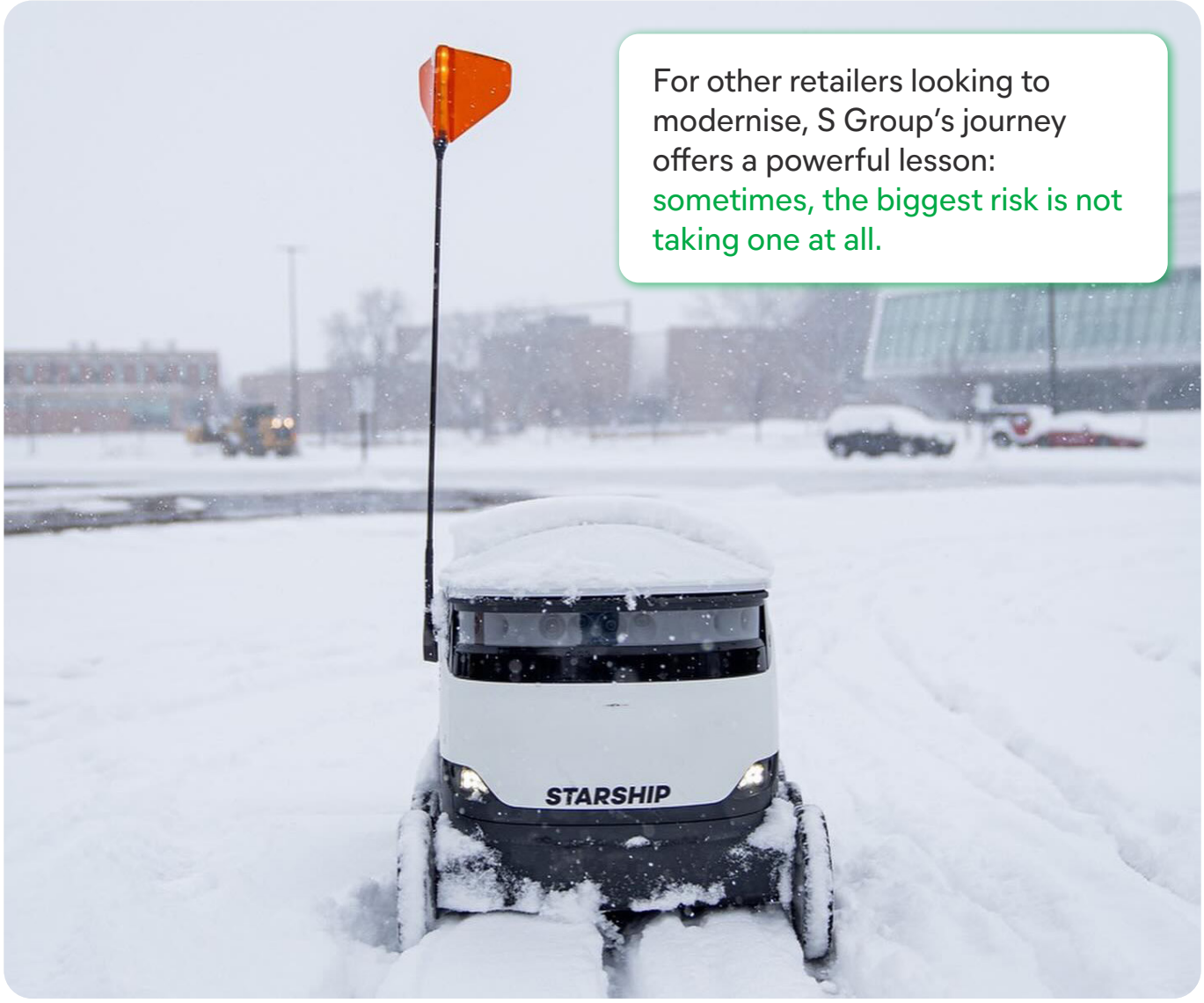
As the autonomous delivery market expands, S Group's success stands as a model for retailers worldwide looking to integrate technology, sustainability and customer experience into their e-commerce strategies without disrupting their existing business models.

At a time when last-mile delivery accounts for 53% of total shipping costs, autonomous solutions like Starship robots offer a scalable, cost-effective way forward. Customers, in turn, are embracing the change - over 61% of consumers say they would pay more for autonomous delivery (Transportation Research Part D, 2022).

What started as a small experiment has turned into one of the most successful tech integrations in S Group's history.

By embracing autonomous delivery, S Group has:

1. **Secured its position as an industry innovator.**
2. **Expanded its digital customer base.**
3. **Pioneered a sustainable alternative to traditional grocery shopping in Finland.**



For other retailers looking to modernise, S Group's journey offers a powerful lesson: sometimes, the biggest risk is not taking one at all.

STARSHIP

CONTACT

Learn how Starship robots can help your business.

David Ringer
Sales Director, Europe
david.ringer@starship.co

For more information visit
www.starship.xyz