Reimagining Retail at the Edge

Art Miller

Vice President, Business Development Global Head of Retail IoT Qualcomm Technologies, Inc.



50 years ago

Average community grocery store:

5 aisles40 shelves500 products

5 associates per day100 customers per days

Today

Average community grocery store:

100 aisles1,000 shelvesTens of thousands of products

50 associates per day1,000s customers per day

Reimagining retail at the edge

Enhance customer experiences
Empower store associates
Improve operational efficiencies



Reimagining retail at the edge

Enhance customer experiences
Empower store associates
Improve operational efficiencies





"Walmart is reimagining the retail experience with a digital mindset—developing and deploying technology to help us continually find ways to enhance the experience we provide our customers while at the same time working to increase the enjoyment and productivity of our associates.

Qualcomm is an important strategic partner, bringing next-generation technologies together in support of our mission to help people save money and live better."

DOUG MCMILLON
PRESIDENT AND CEO, WALMART INC.

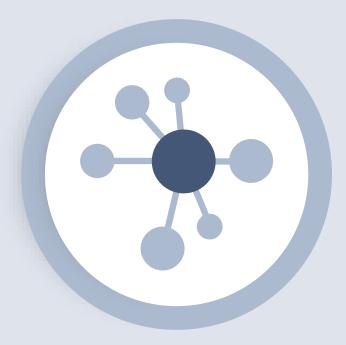
Qualcomm Technologies



Enhance customer experiences

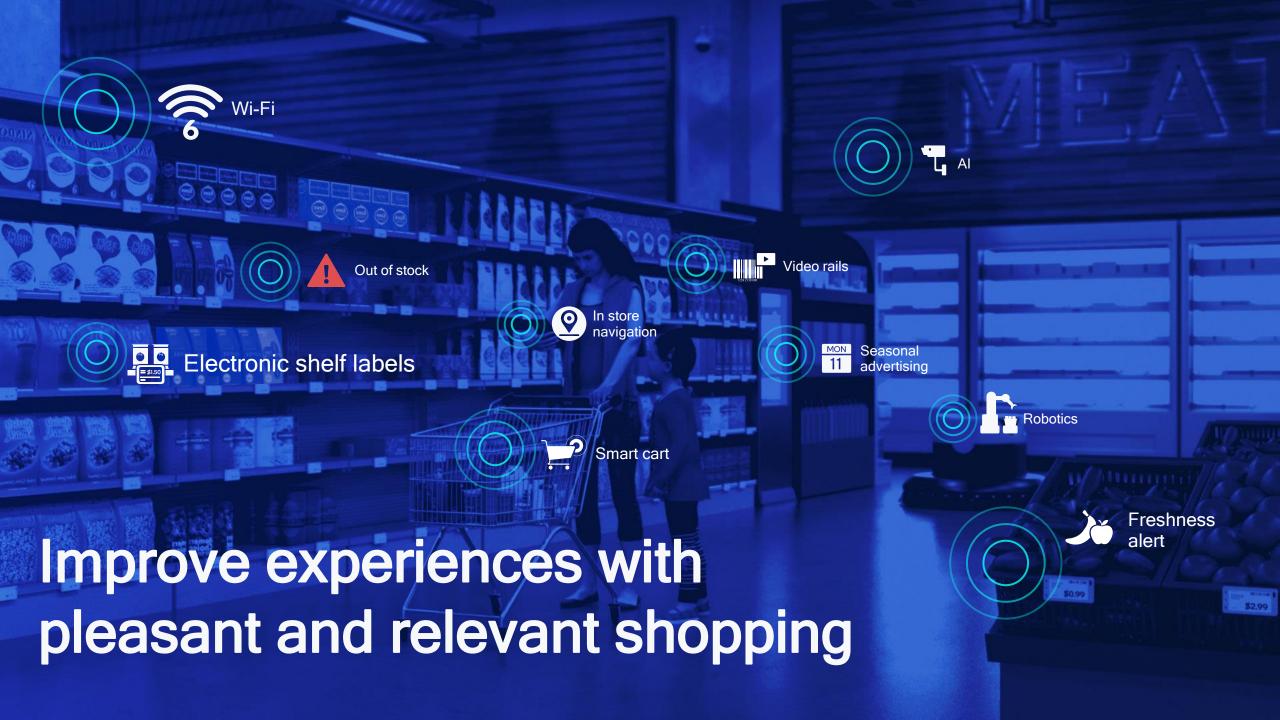


Empower store associates

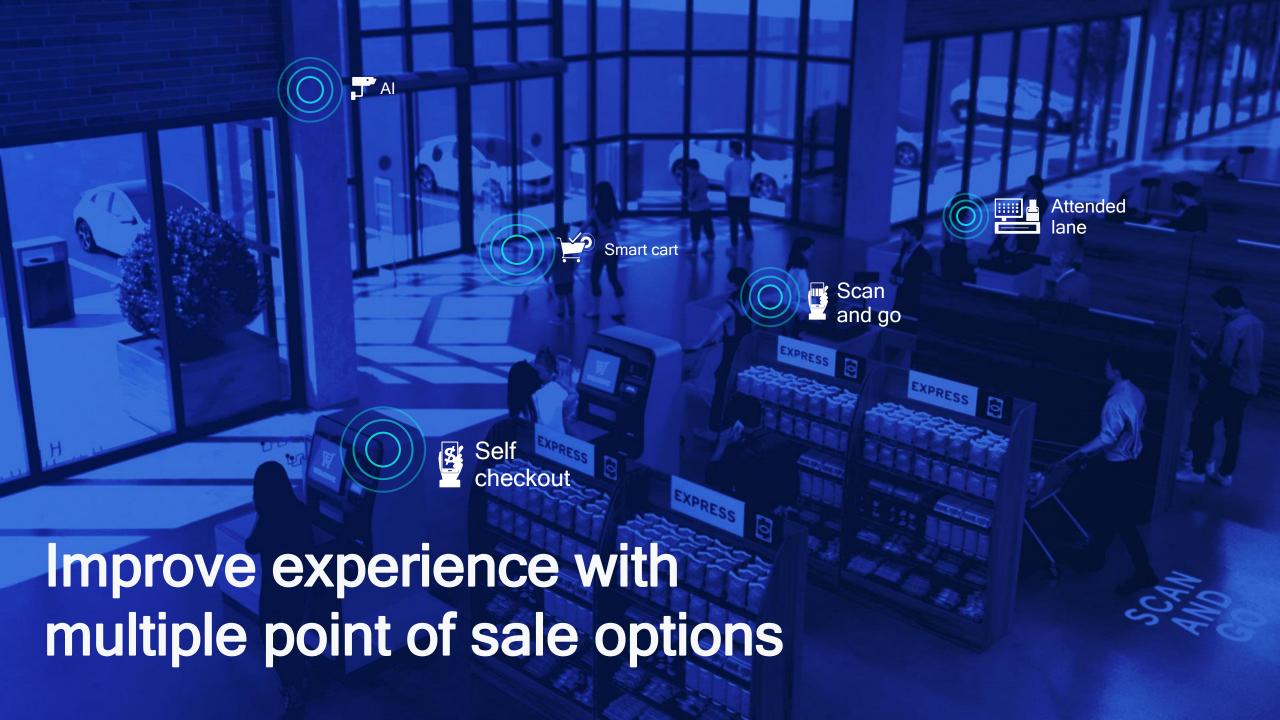


Improve operational efficiencies







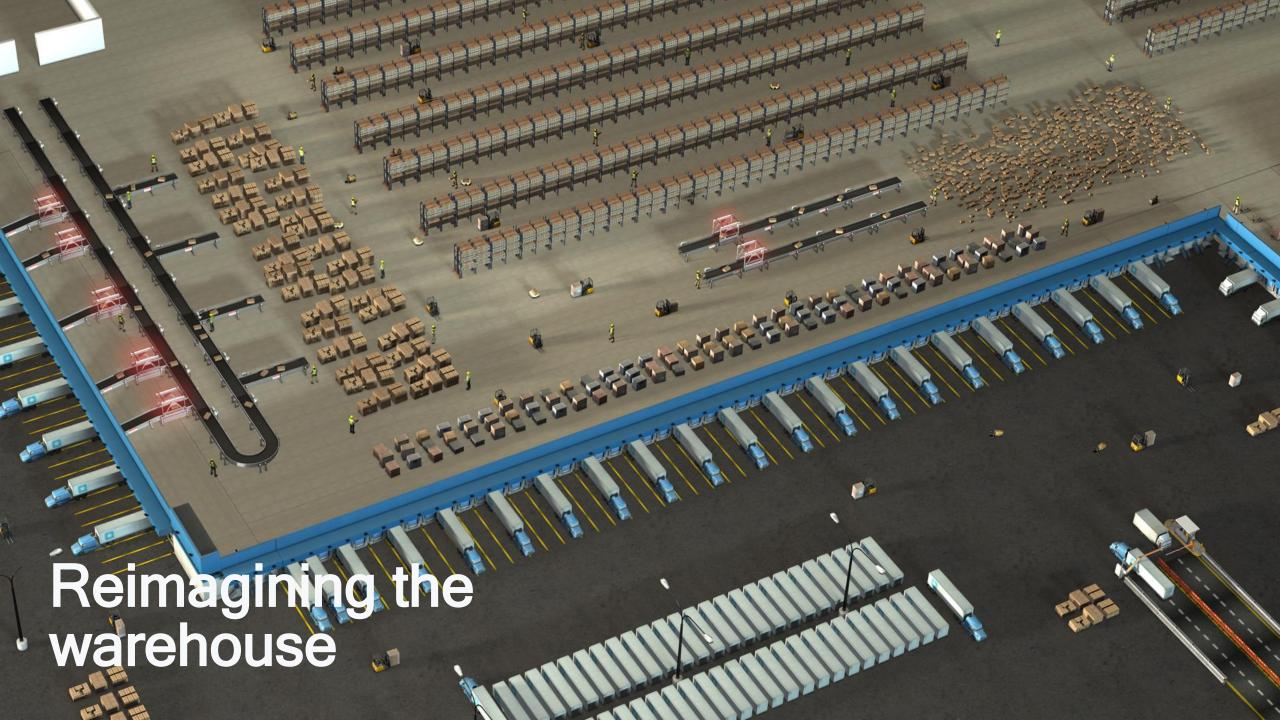














Reimagining Retail at NRF 2022

Qualcomm Technologies

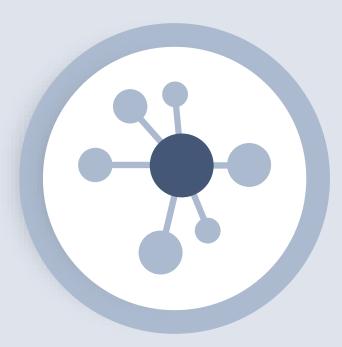
Qualcomm Technologies



Enhance customer experiences



Empower store associates



Improve operational efficiencies



- Customer loyalty
- Temperature measurement & mask detection
- Smart shopping cart
- Personal shopper device
- Product finder/ price checker
- Gesture displays
- Digitize shelf edge

- Smart cameras& store analytics
- Store associate productivity

- Gesture-based food service kiosk
- Service robot

- Biometric face payment
- Line busting payment

Qualcomm Technologies' NRF booth experience

Qualcomm Technologies at NRF with:

16 Collaborators

12 Demos

Many more in ecosystem

Honeywell



































- Customer loyalty Featuring:
- Arima 6125 10" Enterprise
 Display Platform (Qualcomm®
 QCS6125) a biometrics
 enterprise display terminal
 integrated with:
- Redrock Biometrics palm recognition solution
- Temperature measurement & mask detection

Featuring:

- Arima 6125 10" Enterprise Display Platform (Qualcomm QCS6125) integrated with:
- PMD/Infineon time of flight (TOF) sensors
- Cyberlink face recognition solution

- Smart shopping cart Featuring:
- Veea Trollee (Qualcomm[®] APQ8053, Qualcomm[®] IPQ7153)
- Personal shopper device Featuring:
- Zebra PS20 (Qualcomm[®] SDA660)
- Price checker
 Featuring:
- Elo I-series 4 touchscreen signage (Qualcomm SDA660)
- Digitize shelf edge Featuring:
- SES-Imagotag electronic shelf labels
- Clover Mini POS (Qualcomm SDA660)

- Smart cameras & store analytics
 Featuring:
- Convert simple cameras to smart cameras with Thundercomm EB5 multi-channel Al Box (Qualcomm[®] QRB5165 / Qualcomm[®] QCS8250)
- Thundercomm and Pilio.ai Al models
- Store associate productivity long range scanning
 Featuring:
- Datalogic Skorpio X5 mobile computer (Qualcomm SDA660)
- Honeywell CT45 mobile computer (Qualcomm[®] QCS4290/ Qualcomm[®] QCM4290)

- Gesture-based food service kiosk Featuring:
- Ultraleap touchless technology (Qualcomm QCS8250)
- Service robot Featuring:
- Orionstar Delivery Robot (Qualcomm[®] SDA845)

- Biometric face payment Featuring:
- Arima 6125 10" Enterprise Display Platform (Qualcomm QCS6125) integrated with:
- Cyberlink face authentication algorithm
- Ordyx POS SW
- Clover Mini (Qualcomm SDA660)
- Sunmi T2 Lite (Qualcomm[®] MSM8937)
- POS line busting Featuring:
- Elo M50 Mobile Computer (Qualcomm SDA660)
- PHOS SoftPOS

Qualcomm QCS6125, Qualcomm QCS8250, Qualcomm APQ8053, Qualcomm PQ7153, Qualcomm QRB5165, Qualcomm QCM4290, Qualcomm QCM4290, Qualcomm MSM8937 are products of Qualcomm Technologies, Inc. and/or its subsidiaries

Qualcomm Technologies' NRF booth experience



Qualcomm

Thank you

Follow us on: **f y** in **o**

For more information, visit us at:

www.qualcomm.com & www.qualcomm.com/blog

Nothing in these materials is an offer to sell any of the components or devices referenced herein.

©2018-2022 Qualcomm Technologies, Inc. and/or its affiliated companies. All Rights Reserved.

Qualcomm is a trademark or registered trademark of Qualcomm Incorporated. Other products and brand names may be trademarks or registered trademarks of their respective owners.

References in this presentation to "Qualcomm" may mean Qualcomm Incorporated, Qualcomm Technologies, Inc., and/or other subsidiaries or business units within the Qualcomm corporate structure, as applicable. Qualcomm Incorporated includes our licensing business, QTL, and the vast majority of our patent portfolio. Qualcomm Technologies, Inc., a subsidiary of Qualcomm Incorporated, operates, along with its subsidiaries, substantially all of our engineering, research and development functions, and substantially all of our products and services businesses, including our QCT semiconductor business.