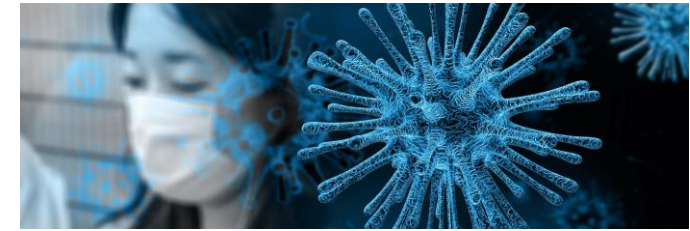




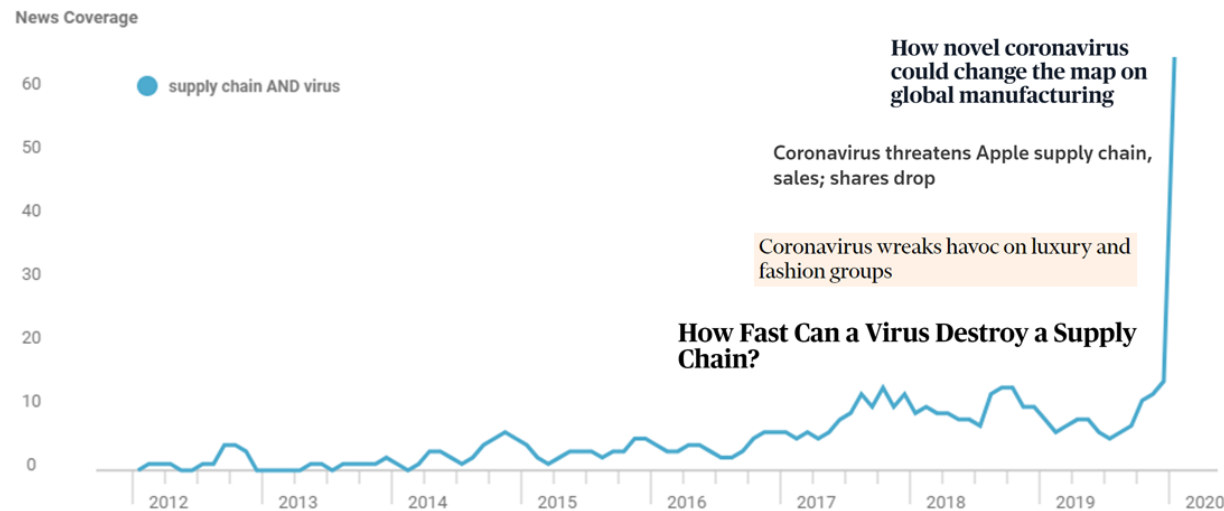
# WELCOME THE **DISRUPTIVE** FUTURE OF RETAIL

*Tony D'Onofrio*

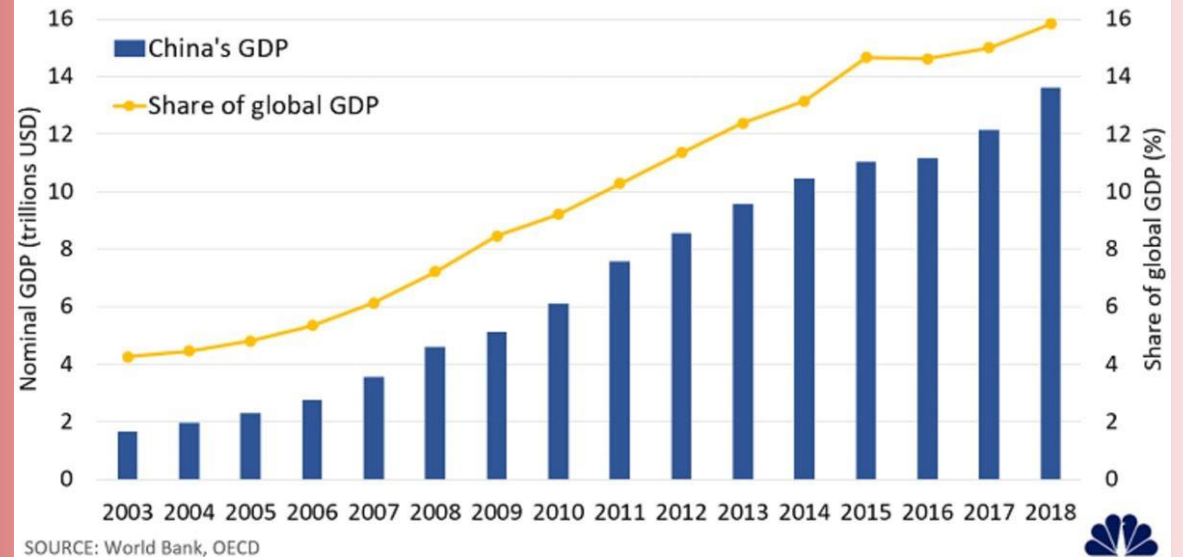
# The Coronavirus



## Media discussion of **supply chain** and **virus** skyrockets

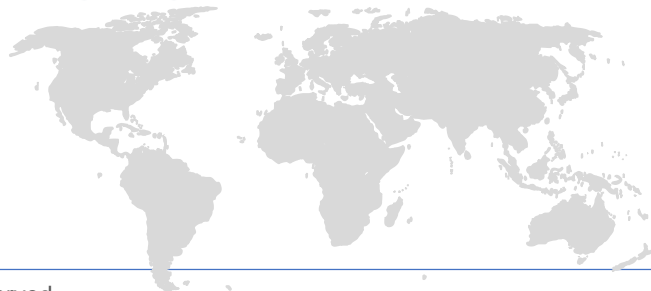


## China's economic growth



CBINSIGHTS

Sources: CB Insights, Bloomberg, Financial Times, Reuters, PBS



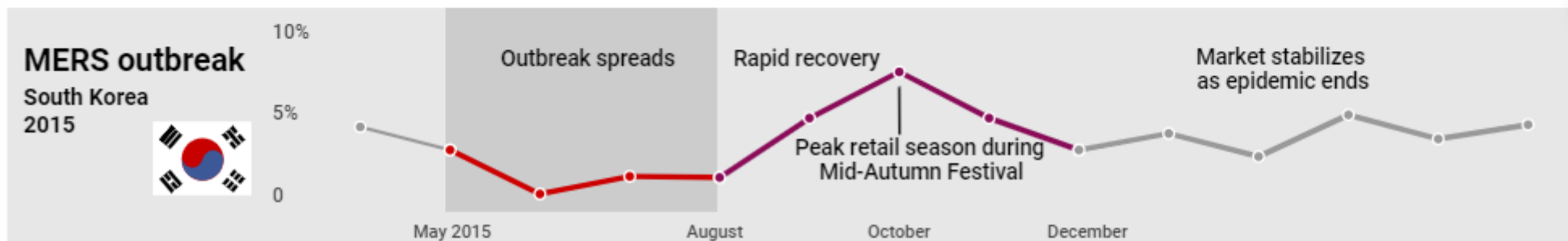
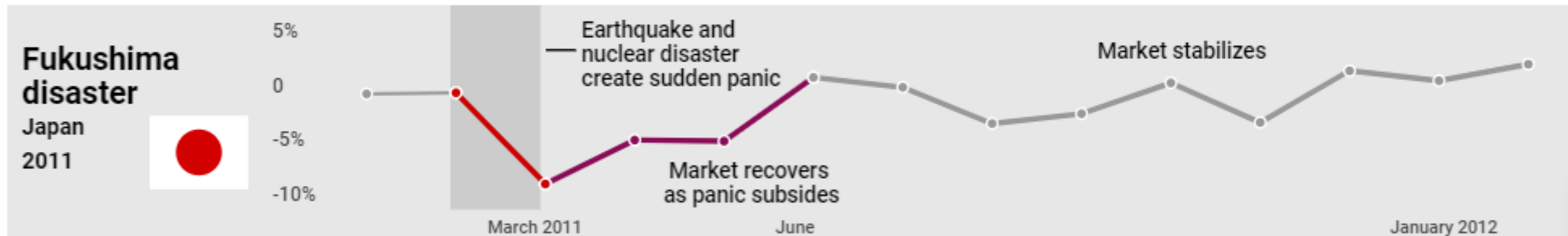
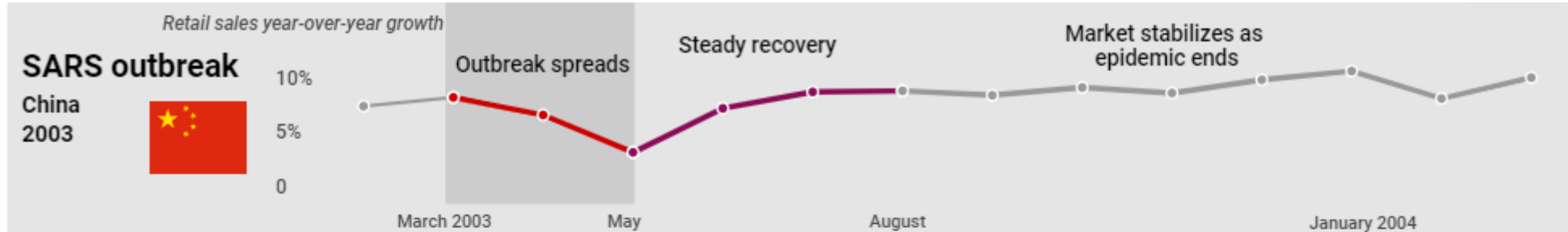
For MORE Visit  
[www.tonydonofrio.com](http://www.tonydonofrio.com)



# The **Coronavirus** and **Retail** Sales



**Retail markets typically dip during a crisis, but eventually stabilize**



Sources: China National Bureau of Statistics; Japan Ministry of Economy, Trade and Industry; South Korea government statistics



For MORE Visit  
[www.tonydonofrio.com](http://www.tonydonofrio.com)

Source:  
Bain & Company, 2020





You are the **Leaders** to *Shape It*.

The **\$30 Trillion** Opportunity

---

Retail **Apocalypse** or **Renaissance** ?

---

Where is the Retail **Shrink** ?

---

Digital Transformation **Wake Up Call**

---

The **Disruptive** Future of Retail





# The *Disruptive* Future of Retail



***“The secret  
to getting ahead  
is getting  
started”***  
~ Mark Twain

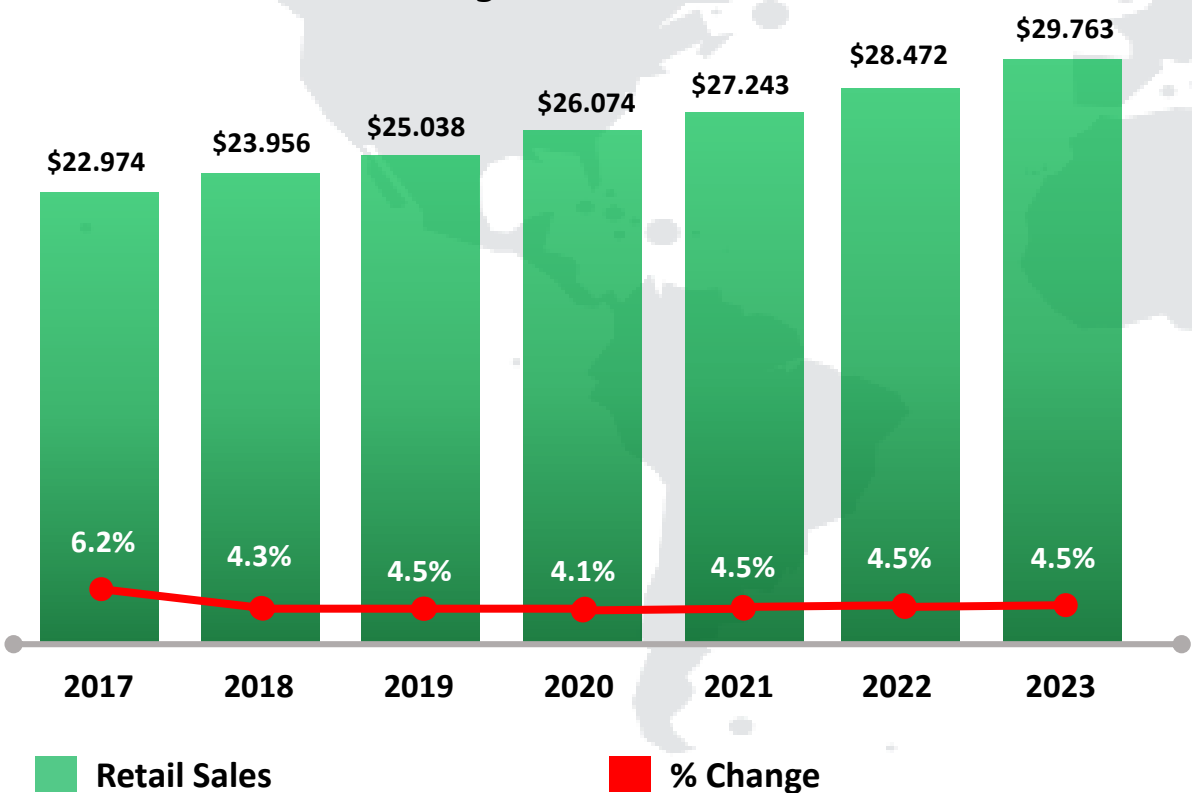




# The **\$30 Trillion** Opportunity

# Global Retail Sales Forecasts

**Total Retail Sales Worldwide, 2017-2023**  
*Trillions and % change*



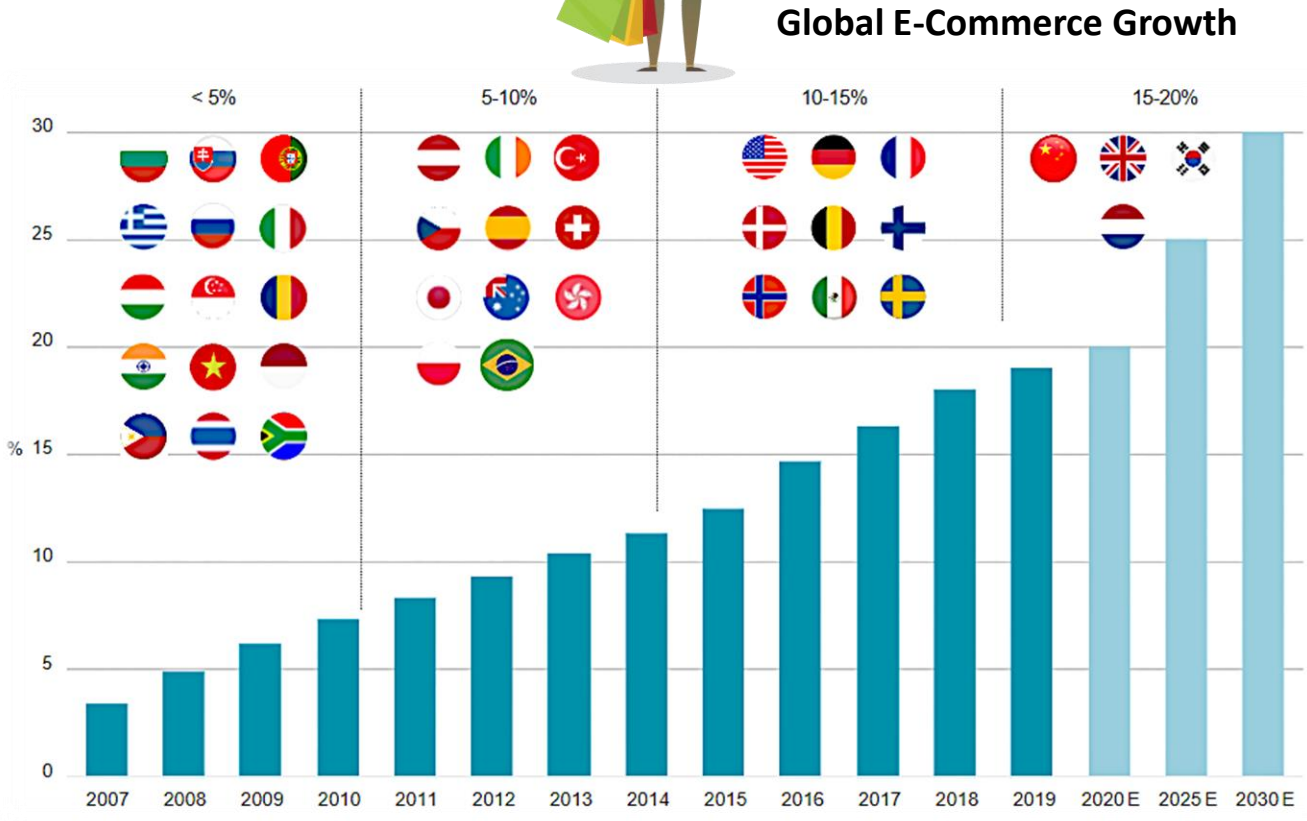
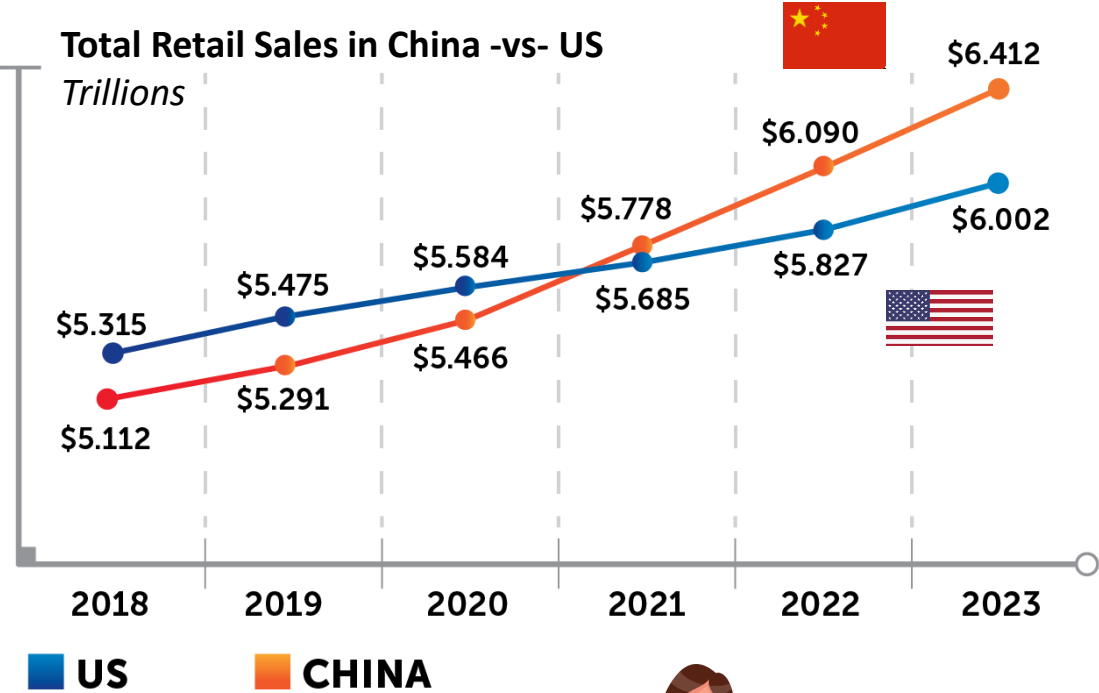
**Retail sales growth, 2020-21 forecasts**  
*(real % change per year)*



Source: E-Marketer 2019 / Economist Intelligence Unit 2020



# China and Global E-Commerce Growth



Source: Cushman & Wakefield, 2019 / E-marketer 2019



# China's ecommerce market is larger than the next 10 markets combined



# USA Retail Apocalypse or Renaissance?





# Despite the News, USA Retail Strong

For every chain closing stores, 5.2 chains opening stores

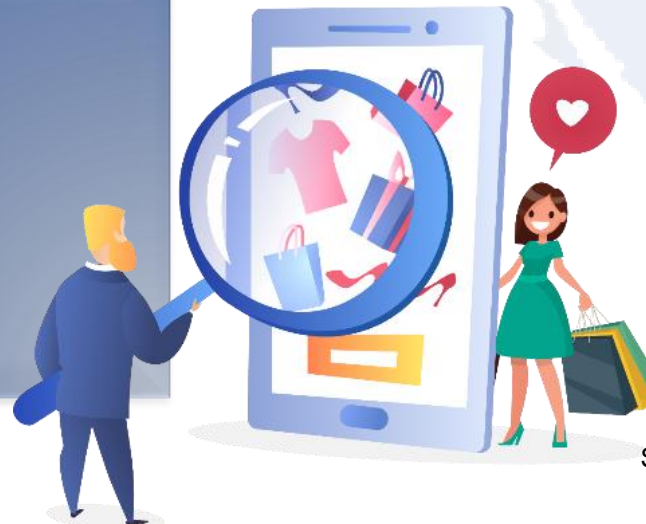
## Retail Continues to be Strong

In last 2.5 years **+8,575** net stores increased  
(in chains with 50+ stores)

Since 1/1/17, Total Retail Sales  
Increased **\$636b**

Number of Chains **adding stores**  
increased 56% in 2019

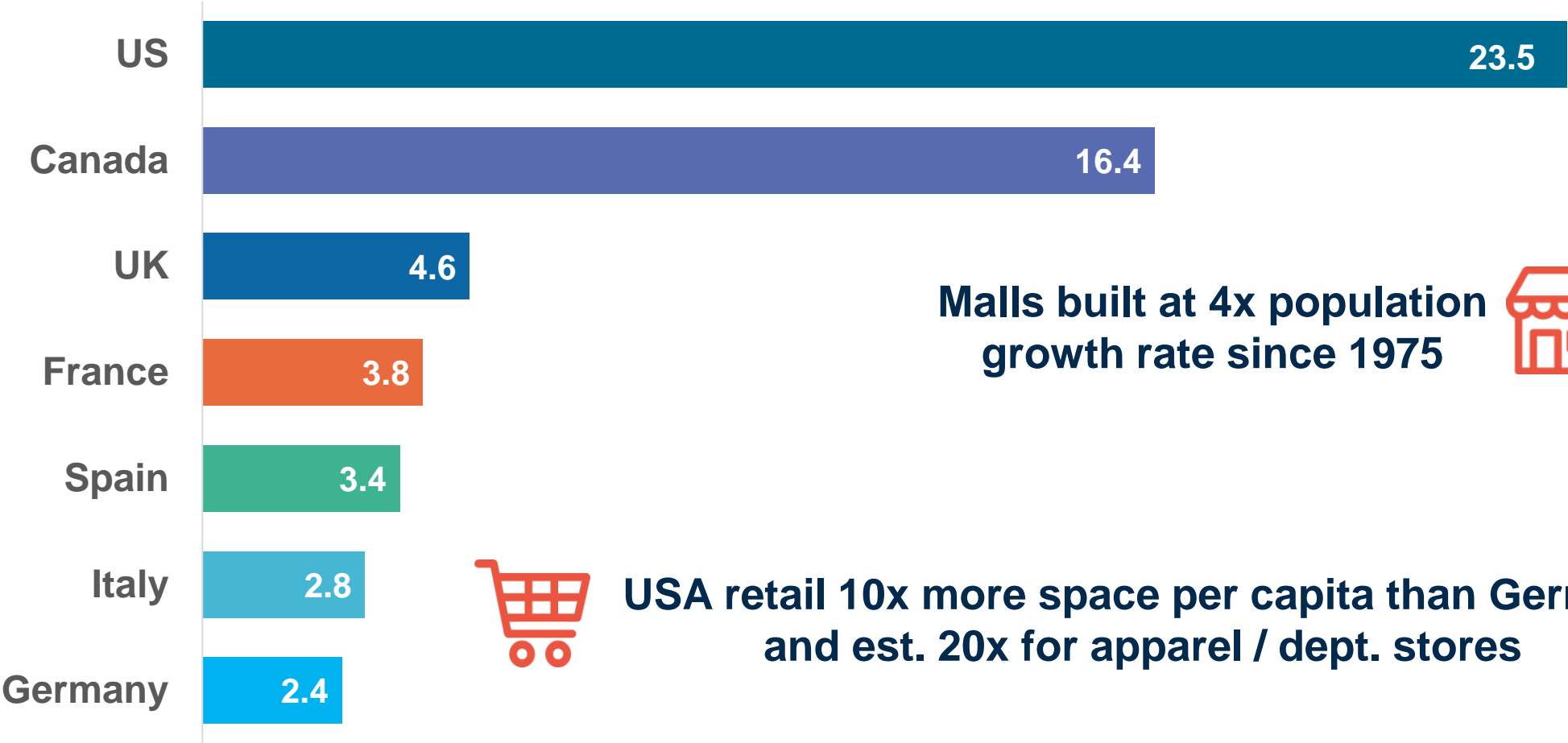
Number of Chains **closing stores**  
decreased 68%





Source: IHL Group 2019

# Over Stored at the USA Mall

## 2016 Total Retail Square Footage per Capita



Malls built at 4x population growth rate since 1975 

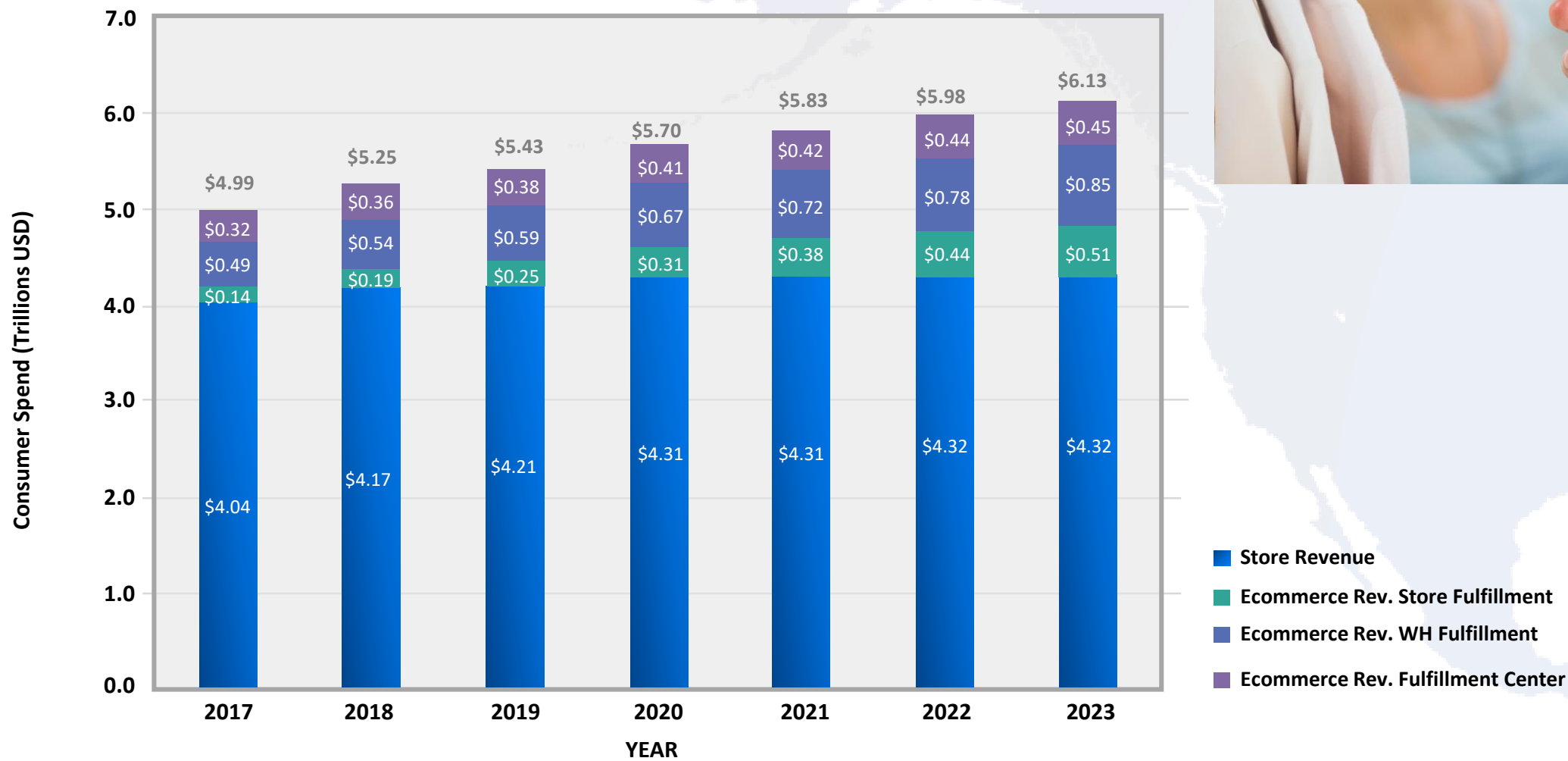
 USA retail 10x more space per capita than Germany and est. 20x for apparel / dept. stores

Source: Cowen Research, IHL Group



# Stores Still and Will Matter in Online Sales

NA Retail & Hospitality Spend by Fulfilment Channel



Source: IHL Group







# Where is The Retail **Shrink**?

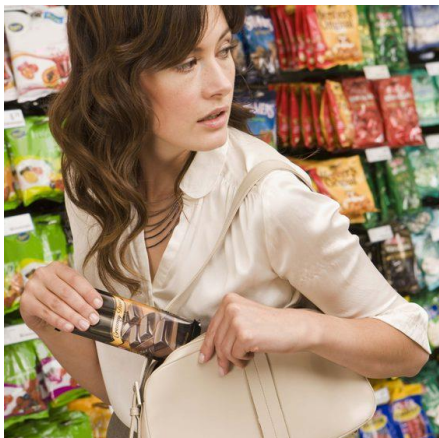
# FY 2018 \$51 Billion USA Retail Shrink Challenge

## Retail Shrink Averages

FY 2018 1.38%

FY 2017 1.33%

FY 2016 1.44%



Last 5 Years	Much more of a priority	Somewhat more a priority	Total
Organized Retail Crime	29%	37%	65%
Ecommerce Crime	18%	48%	65%
Cyber Crimes	30%	33%	63%
Internal Theft	25%	35%	60%
Return Fraud	13%	38%	51%



FY18 \$ Average Loss	
Employees	\$1,264
Shoplifting	\$547
Robbery	\$2,885

Where have you noticed the greatest increase in fraud occurring?

IN-STORE ONLY SALES

42.9%

ONLINE ONLY SALES

30.2%

MULTICHANNEL SALES

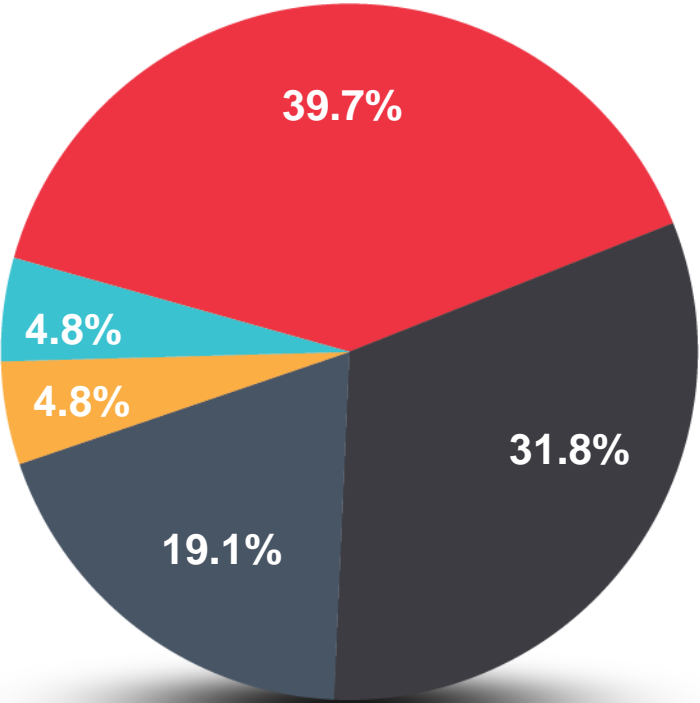
(for example, buy online, pick up in store)

22.2%



Source: NRF / University of Florida, 2019

# USA Loss Prevention Budgets



## LP Budgets

KEY

Increasing significantly	
Increasing somewhat	
Remaining flat	
Decreasing somewhat	
Decreasing significantly	



Is your company allocating additional resources to address risks this year?

Yes, technology resources	55.6%
Yes, other budget resources	34.9%
Yes, staff resources	28.6%
No	31.8%

Source: NRF / University of Florida, 2019





# USA LP Technologies

## Top 5 Loss Prevention Systems In Use

	NRSS 2019	Point Change from NRSS 2018
Burglar alarms	92.1%	+4.8 ↑
Digital video recorders	84.1%	+9.5 ↑
Armored car deposit pickups	68.3%	-6.4 ↓
POS data mining	65.1%	+7.9 ↑
Live customer visible CCTV	61.9%	+7.9 ↑

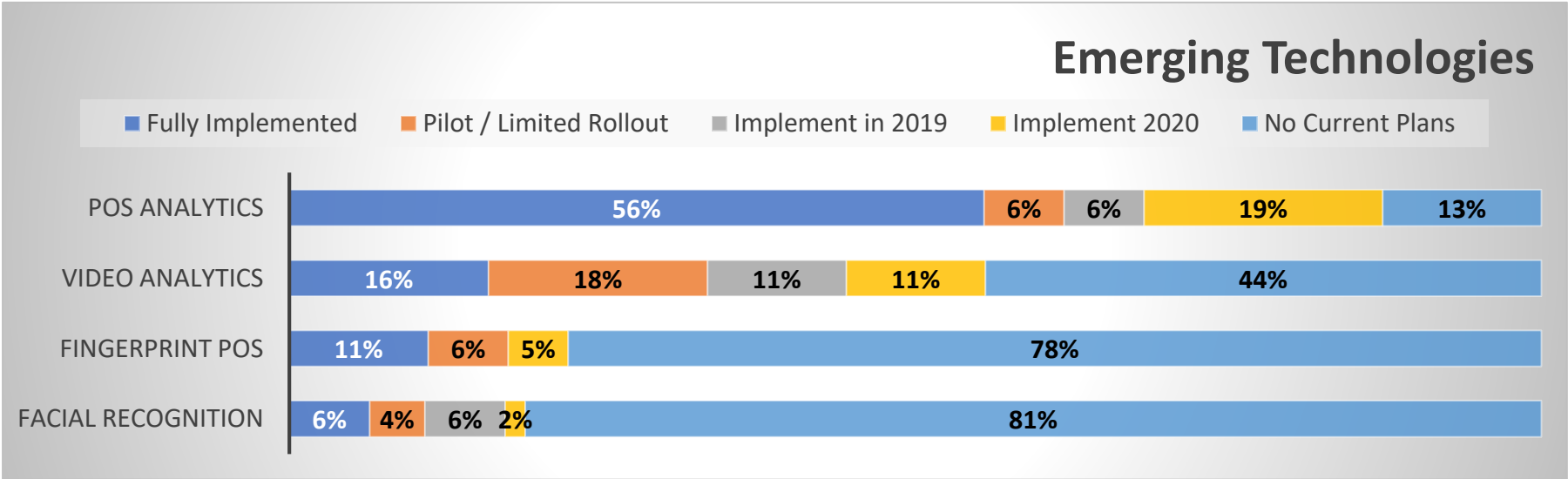
### IN:

	NRSS 2019	% Point Change from NRSS 2018
Merchandise alarms/electronic security tags	46.0%	+25.4 ↑
Acoustomagnetic, electronic security tags	34.9%	+12.7 ↑
Check approval database screening systems	55.6%	+11.1 ↑
Digital video recorders	84.1%	+9.5 ↑

### OUT:

	NRSS 2019	% Point Change from NRSS 2018
Remote IP CCTV monitoring	57.1%	-19.1 ↓
Theft deterrent devices (spider wraps, keepers, etc.)	23.8%	-17.5 ↓
IP analytics	22.2%	-9.5 ↓

Source: NRF / University of Florida, 2019

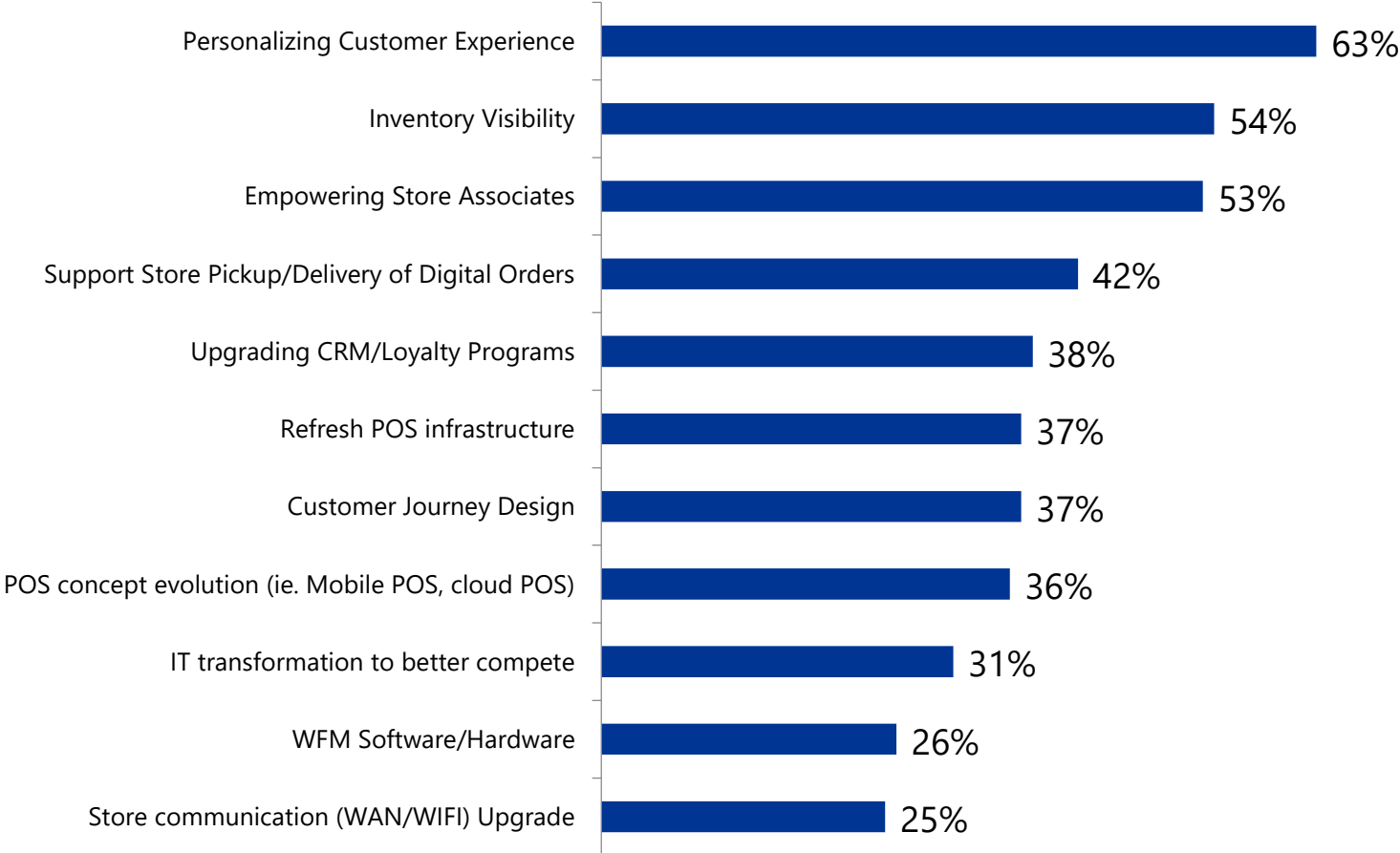




# Digital Transformation **Wake Up Call**

# Store Systems Priorities

## Top 10 Strategic Priorities for 2020



# 3.7%

Average increase  
Store IT spending in 2020

vs. 6.2% last year

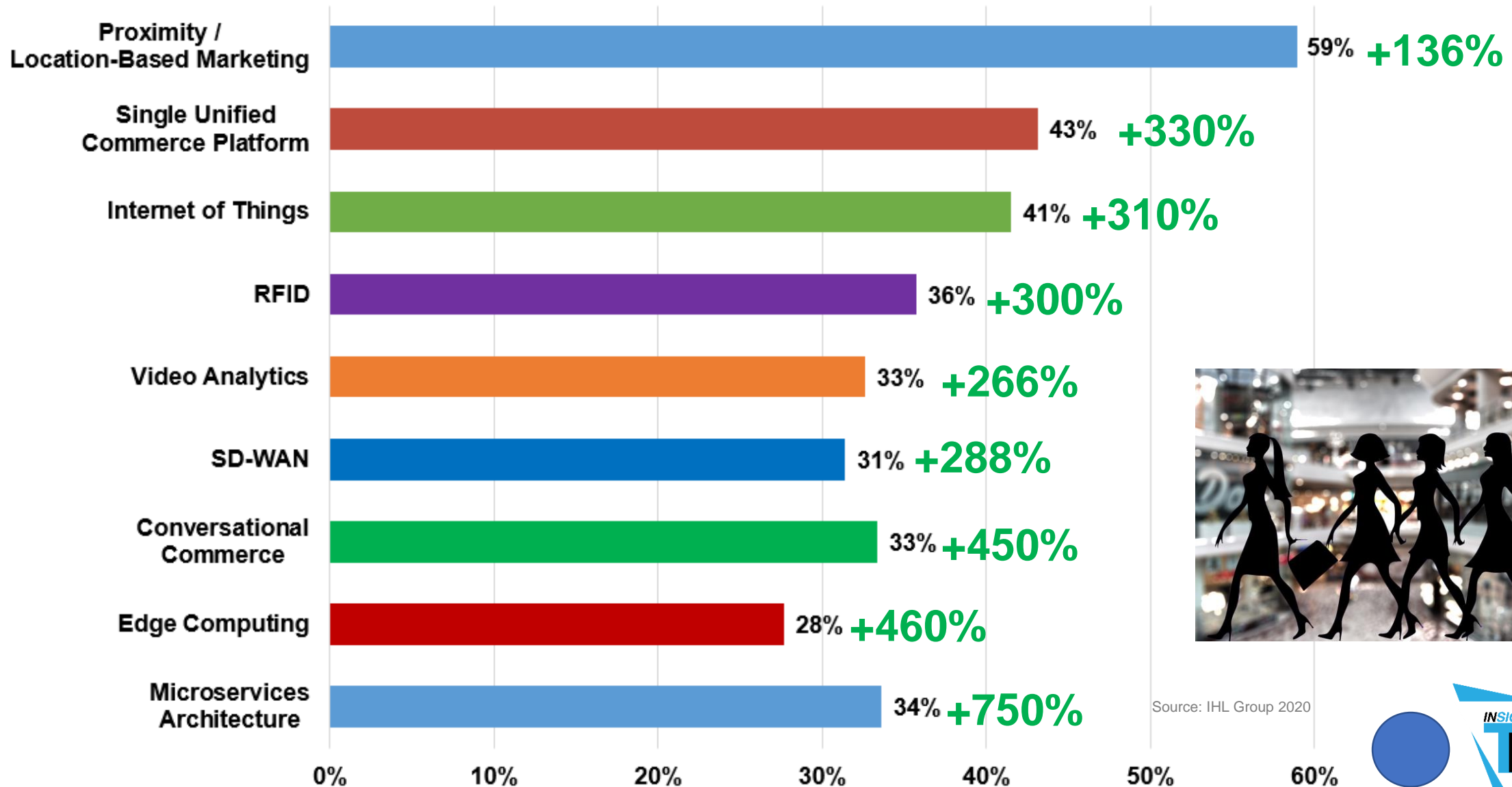


Source: RIS News / IHL Group Study 2020



# Store Transformation

## Within 24 Months

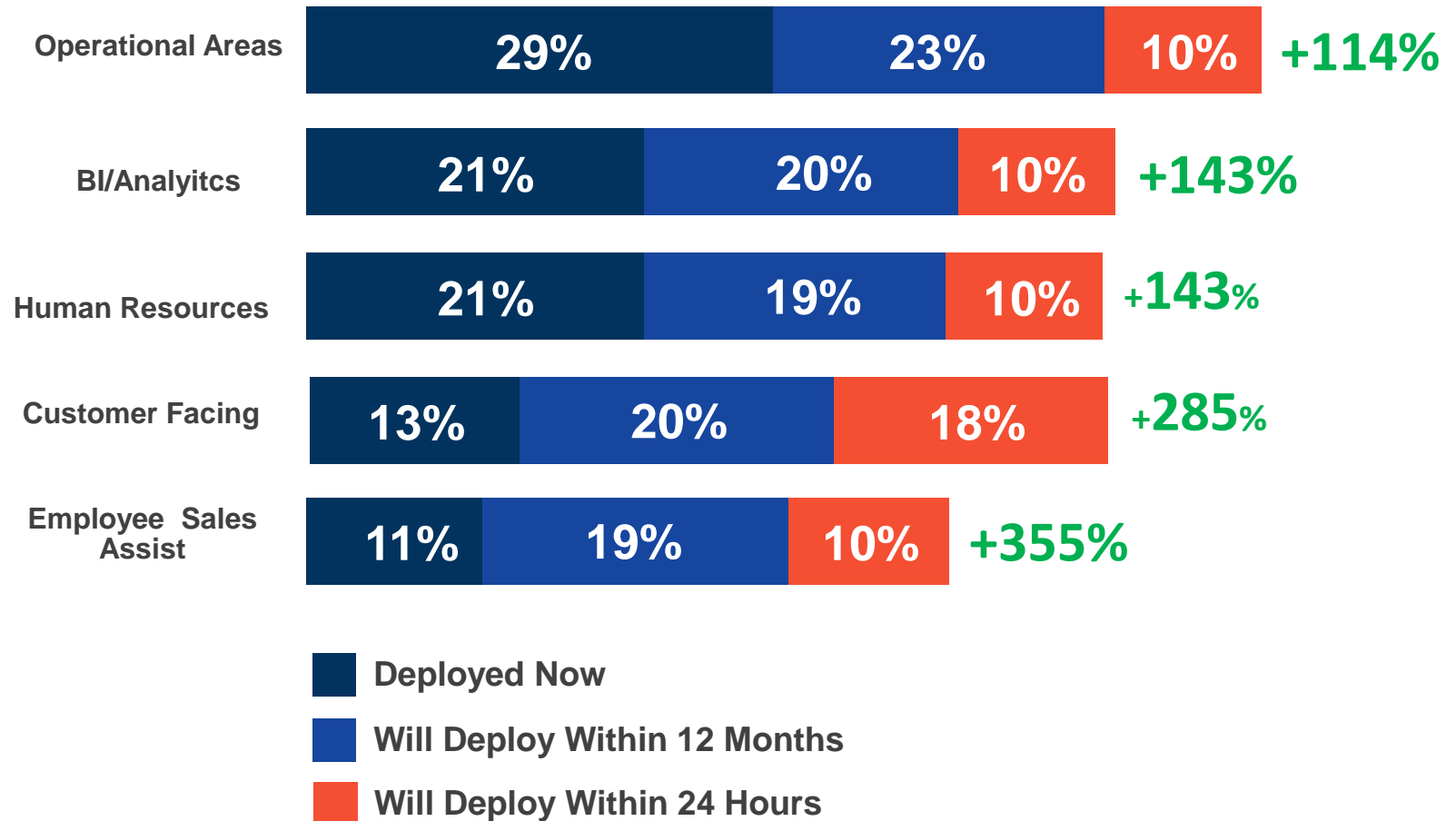


Source: IHL Group 2020



# AI/Machine Learning

## > When and Where for Retail



# amazon



**amazon.com**  
**Prime**

150 Million People

**WHOLE  
FOODS  
MARKET**

**prime video**

 **amazon alexa**

Advertising **39.4%**  
12 Month Growth

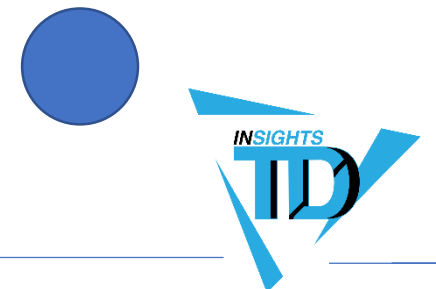
Source: IHL Group, Statista, Bloomberg, US News

## The \$15+ Billion Innovation Challenge



**87% - 237%**

Avg. IT spend increase  
required to effectively compete  
with Amazon





# The **Disruptive** Future of Retail

Technology	Project name	Launched by	Location	Date launched	Size
Self-scanning	Regi-robo	Lawson and Panasonic	Japan	Dec 2016	Similar to a normal CVS
	Bingo Box	Sun Art Retail Group and Bingo Fresh	China	Jun 2017	12.5/15.6 sqm
	Xiao E Shop	Xiao E Daoja	China	End-2016	Shelves and racks
	Eatbox	Easyhome	China	Jul 2017	30 sqm
Just walk-out experience	Amazon Go	Amazon	U.S.	Dec 2016	100-1000 sqm
	Wheelys Moby Mart	Wheelys	China	Jun 2017	n/a
	Tao Café	Alibaba	China	Jul 2017	200 sqm
Palm-vein scanning	7-Eleven Signature	7-Eleven	South Korea	May 2017	Similar to a normal CVS
Facial recognition	Take Go	QuiXmart	China	Feb 2017	n/a



Coresight Research 2017

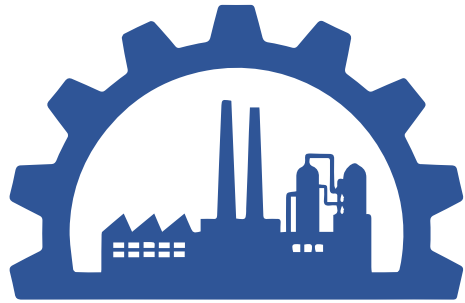




# The *Disruptive* Future of Retail

# Technology Driving Shifts in Retail Power

## FUTURE OF RETAIL



MANUFACTURER

RETAILER

CONSUMER

Pre-1970s

1970s

2010s

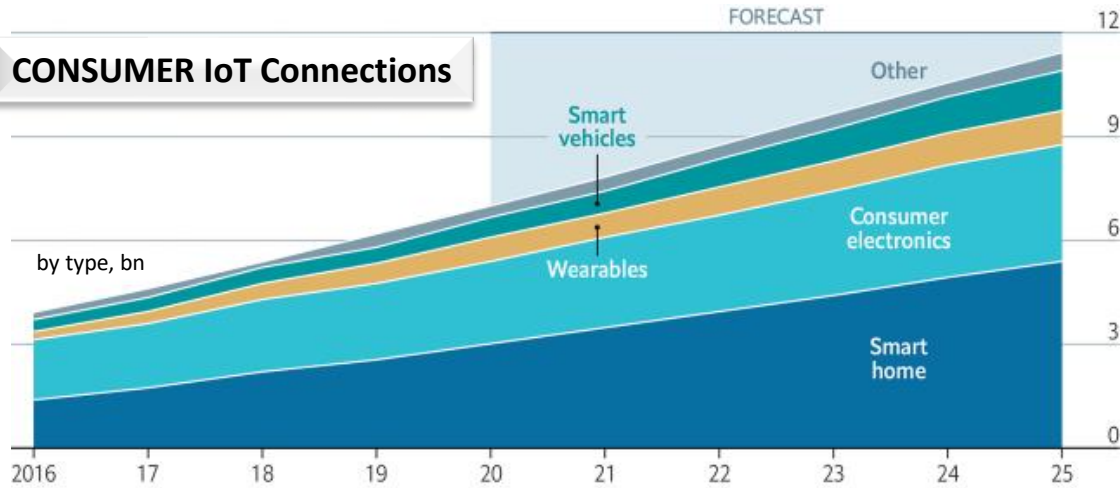




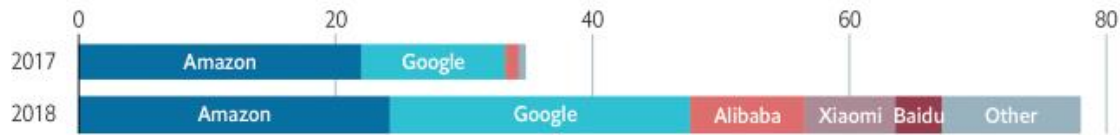
# Innovation *SPEED*



## CONSUMER IoT Connections



## Worldwide smart-speaker shipments, m



Sources: GSMA Intelligence; Canalys  
The Economist

2018

3.6bn

47%

PENETRATION RATE  
(% of population)

61%

2025

5.0bn

4.8%

CAGR

## SMARTPHONES

% of connections\*

2018

60%

79%

2025

## MOBILE INTERNET Users

## Time to Reach 50 MILLION Users



POKEMON GO



ANGRY BIRDS



TWITTER



YOUTUBE



INSTAGRAM



FACEBOOK



INTERNET



TELEVISION



RADIO



TELEPHONE

19 DAYS

35 DAYS

9 MONTHS

10 MONTHS

19 MONTHS

2 YEARS

4 YEARS

13 YEARS

38 YEARS

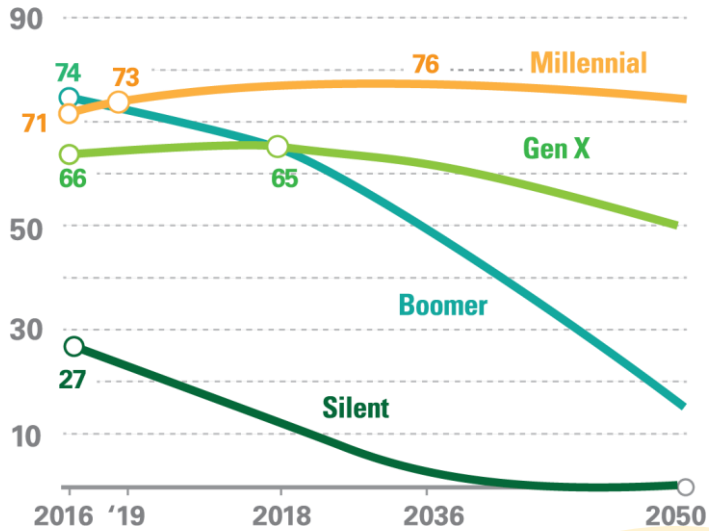
75 YEARS



Sources: Economist 2019, GSMA Mobile Economy 2019, Interactive Schools 2018

# The “Millennials” Have Arrived

PROJ. USA POPULATION BY GENERATION  
In Millions



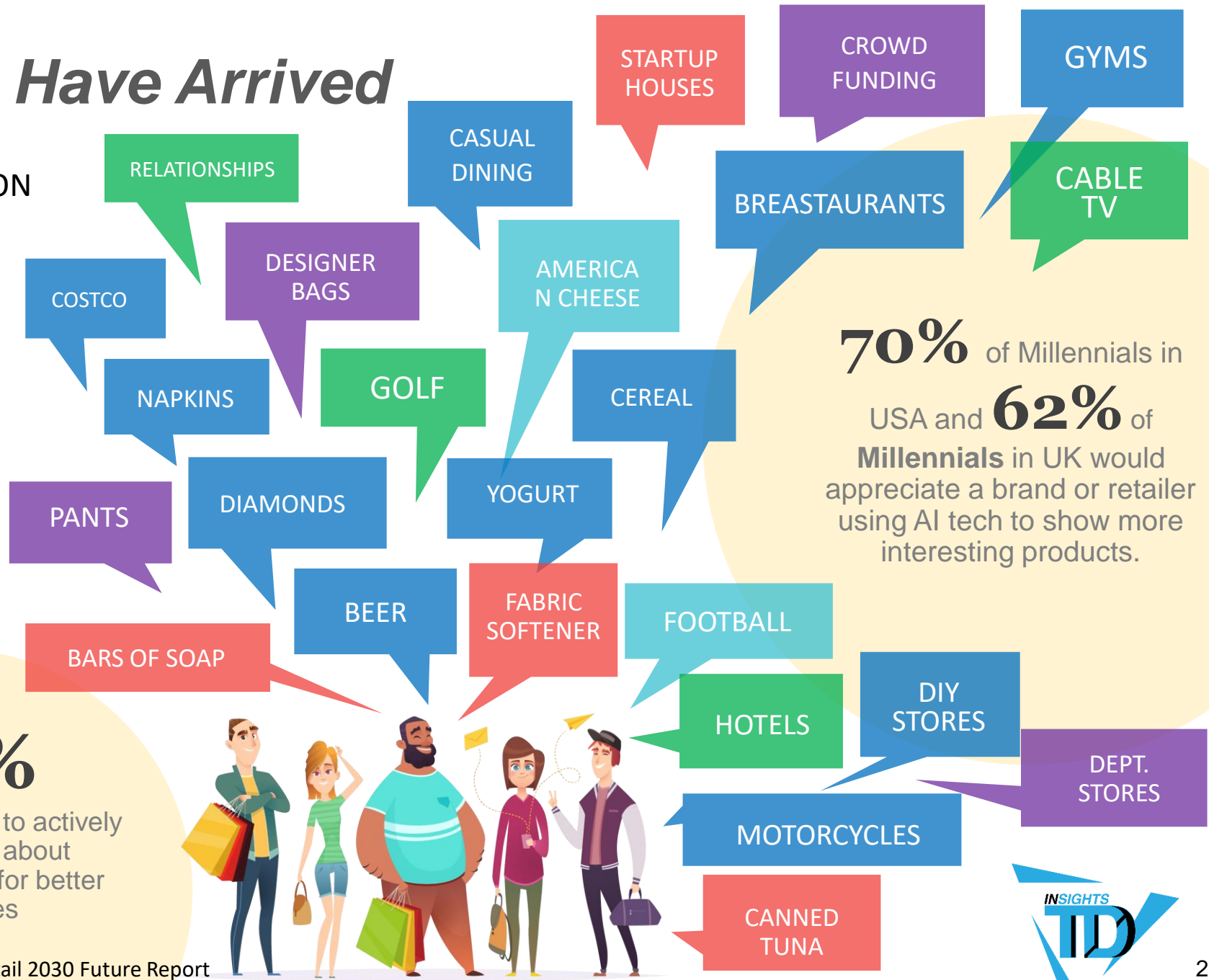
Source: Pew Research, 2018

- Millennial
- Gen X
- Boomer
- Silent

60%

of Millennials willing to actively give away more data about themselves in return for better marketing experiences

Source: Retail 2030 Future Report



70% of Millennials in USA and 62% of Millennials in UK would appreciate a brand or retailer using AI tech to show more interesting products.



# The Digital Omnishopper

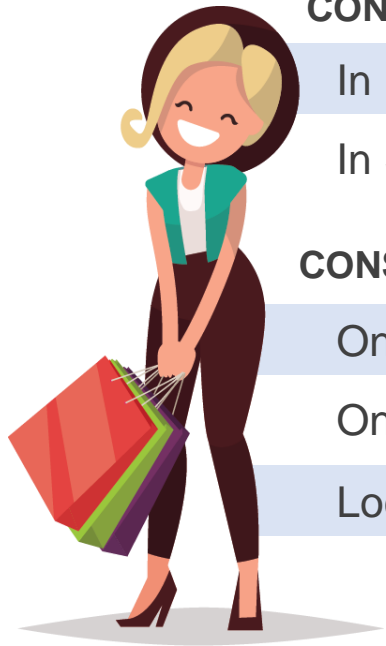
## Today vs. 5 Years Ago

### CONSUMERS SHOP LESS

In Malls	54%
In Stores	31%

### CONSUMERS SHOP MORE

Online	73%
On Smartphones	61%
Local	32%



Sources: RIS Shopper Megatrends 2019, NextWeb.com 2020

67% do  
click-and-collect

71% will allow  
location-based  
alerts while  
in stores

70% use a  
retailer's app  
while in their  
stores

90% who click-and-  
collect make an  
additional purchase  
on pickup in store



## ACTIVE SOCIAL MEDIA USERS

3.8  
BILLION

PENETRATION

49%



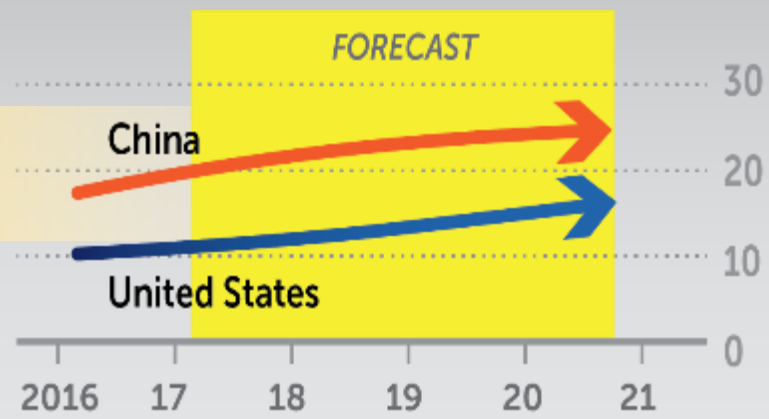
INSIGHTS

TD



# Stores Not Going AWAY

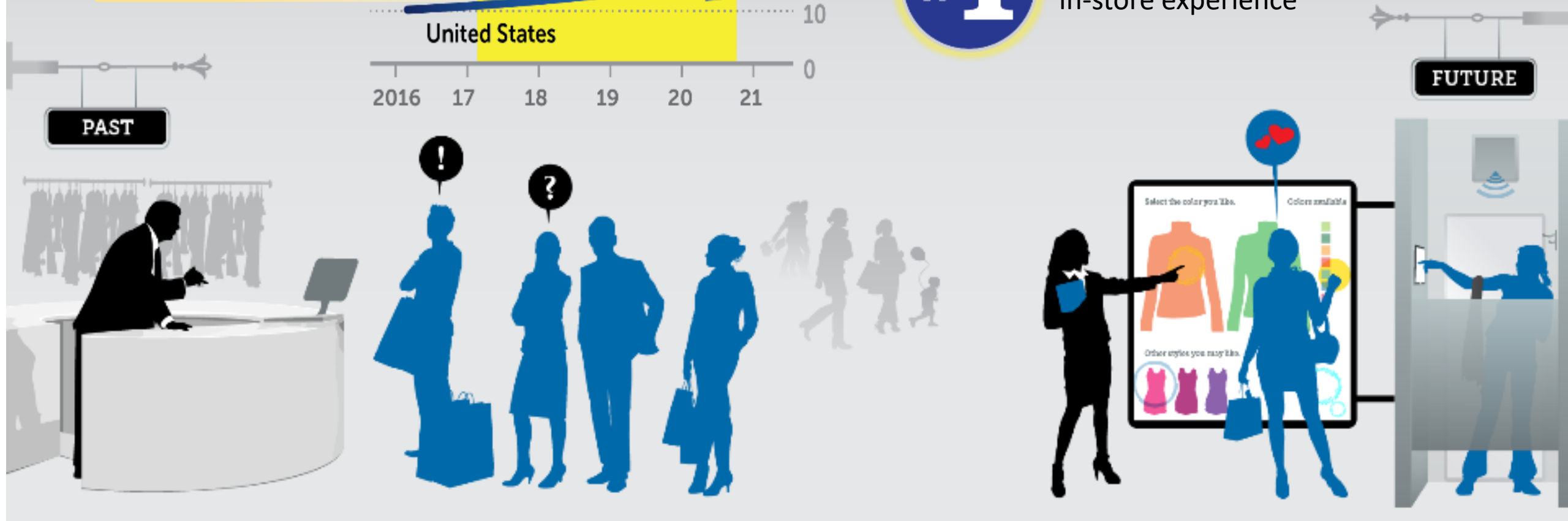
E-commerce sales  
As % of total



Educate & empower in-store employees using technology

#1

Opportunity for improving in-store experience\*



Source: Economist 2017, Cowen & Company 2017 / PSFK / RSR Research



# Why Clicks **NEED** Bricks

## CLICKS Getting Physical

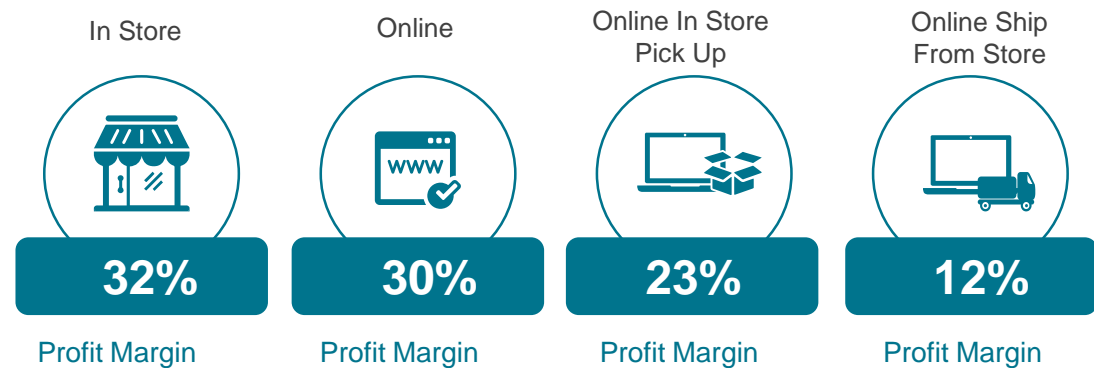
- Amazon > Bookstores > Amazon Go > Whole Foods (\$13.7 Billion)
- Alibaba \$8 Billion in Physical Stores Last 2 Yrs > Fresh Hippo (Hema) Supermarkets

## CLICKS Insights



- The Delivery Last Mile
- **INNOVATION** Differentiation
- Expanding Loyalty Programs
- Return Rate – Online nearly 33% / instore 9%
- The Profit is in the Store

## Where Do Apparel Retailers Make The Largest Profit ?



**“For each additional percentage point of shopping that moves online, a retailer’s margins shrink by about half a point.”**

~ Morgan Stanley

# What Shoppers Want.....Value to Privacy



## WHAT DO CUSTOMERS WANT TO SEE?

### MORE

34%  
Product Customization

31%  
Sales of Previously  
Owned Products

30%  
Special Events In-Store

### LESS

58%  
Shopper Tracking  
Without Permission

56%  
Facial Recognition

55%  
AI Taking Over the  
Shopping Experience



Source: RIS Shopper Megatrends 2019

### PERSONAL INFORMATION

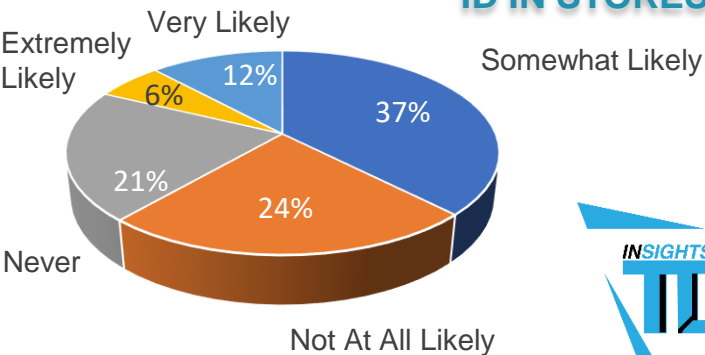
#### WILLING TO PROVIDE

Birthday	39%
Favorite Social Media	38%
Favorite Drinks	35%
Favorite Entertainment	31%

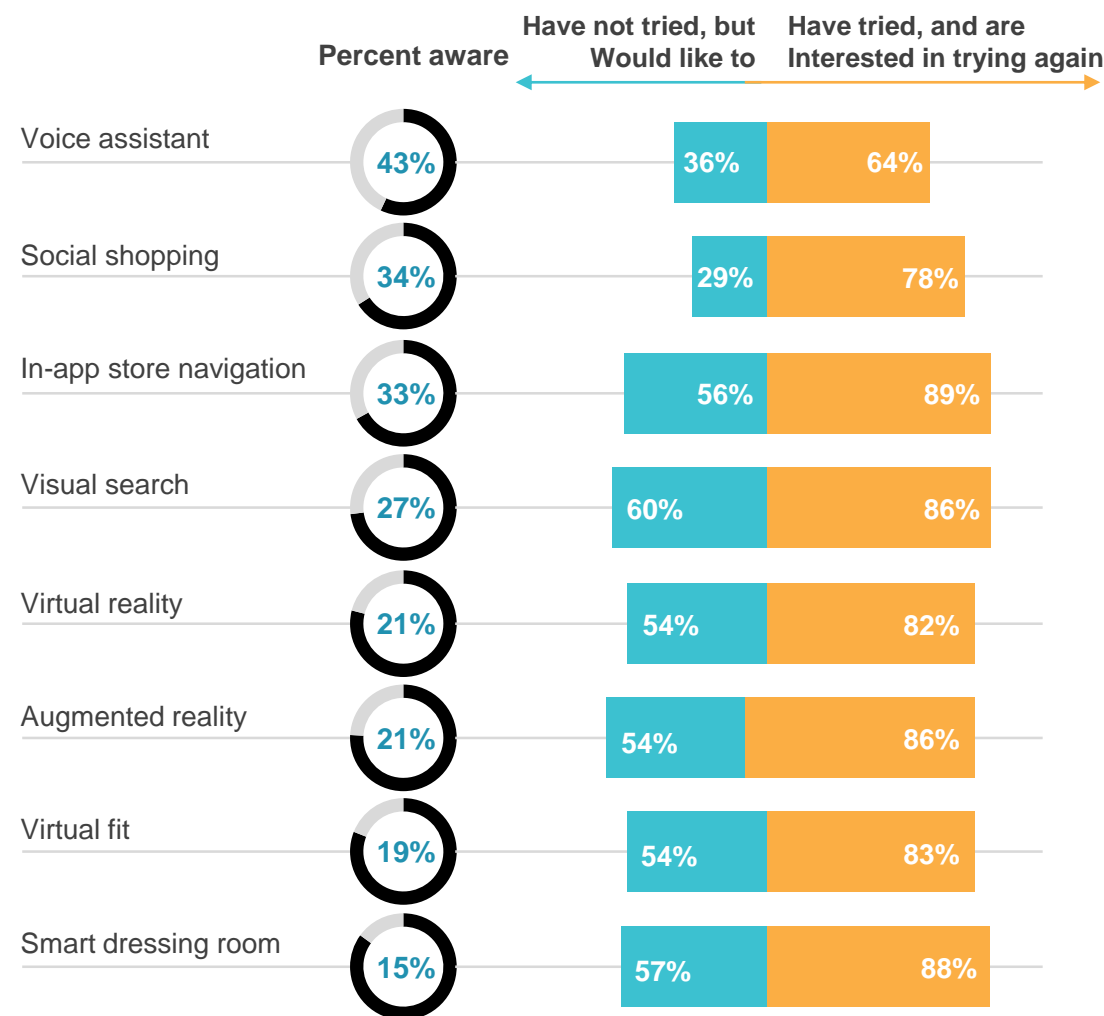
#### NOT WILLING TO PROVIDE

Income	35%
Contact Info	29%
Favorite Social Media	27%
Household Composition	24%

### WILL ALLOW DIGITAL ID IN STORES



# What Shoppers Want...Will Keep Changing



## TOP 5 TECH-DRIVEN RETAIL EXPERIENCES SHOPPERS WANT

1. Order-only stores (products shipped to homes)	73%
2. Grab-and-go stores (self-checkout from own phone)	69%
3. Interactive shoppable screens	58%
4. Digital order buttons for specific products	49%
5. Virtual try-on for glasses, clothing, etc.	47%

## TOP 3 TECH-DRIVEN RETAIL SERVICES SHOPPERS WANT

1. Curbside pickup	69%
2. Pickup lockers or kiosks	69%
3. Subscription orders regularly delivered	58%



Source: NRF 2019, RIS Shopper Megatrends 2019

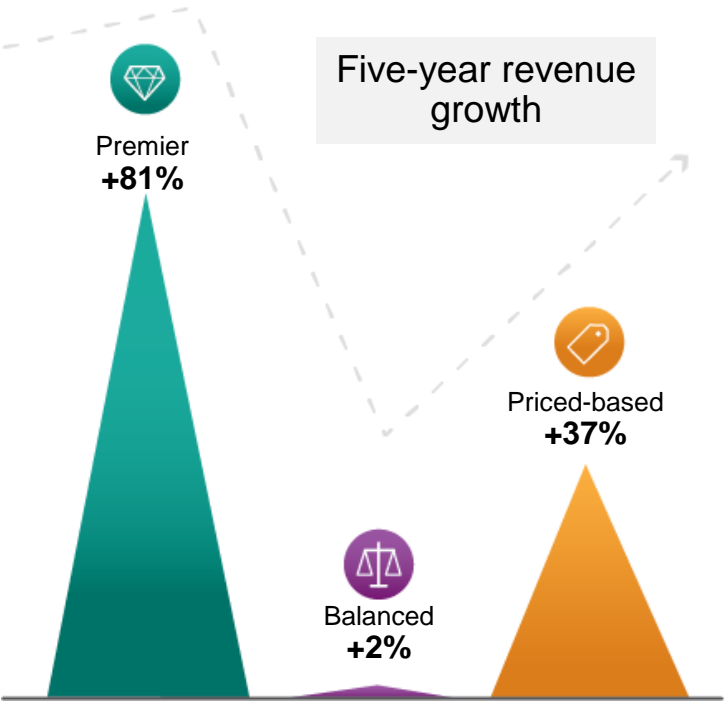


# The Formulas for Retail Success

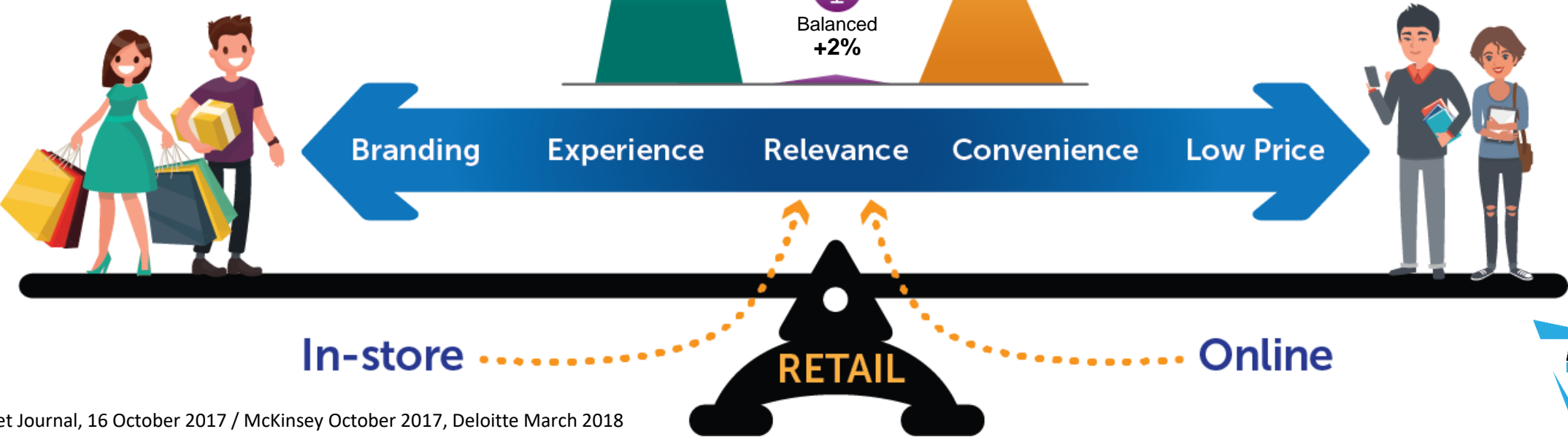
**PERSONALIZED VALUE EQUATION**

$$\text{Value}^* = \left[ \frac{\text{Relevance} + \text{Timeless}}{\text{Loss of Privacy}} \right] \text{Trust}$$

\* To the customer



“  
USA - 1.2 billion hours/week  
driving to mall,  
finding parking,  
wondering around aisles,  
checking out & driving home  
”



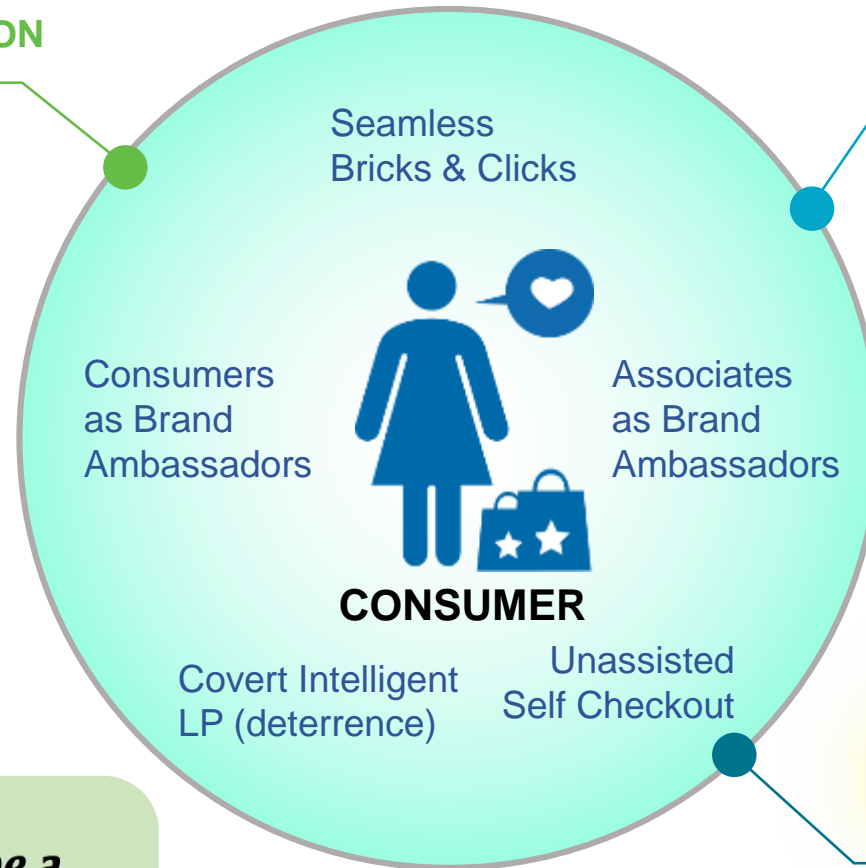
# The Future SMART Store



## STORE DATA EXPLOSION

- POS
- Labor Scheduling
- Planograms
- Store Traffic
- Loyalty Programs
- Video
- RFID
- HVAC
- Internet of Things
- Beacons
- Wearables
- Robots

J  
C



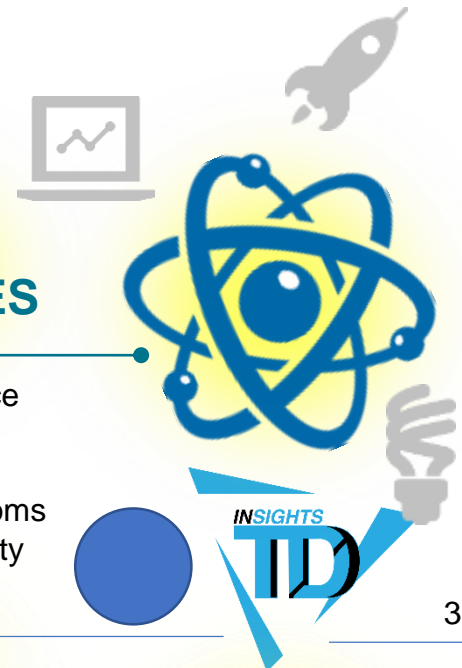
## INTELLIGENT FILTERS

- Video Analytics
- Artificial Intelligence
- Machine Learning
- Big Data
- Facial Recognition



## IMMERSIVE EXPERIENCES

- Unified Commerce
- Smart Mirrors
- Smart Floors
- Smart Fitting Rooms
- Augmented Reality
- Virtual Reality



***“The retailer of the future will likely be a retailer of the past — just the most efficient version therein.”***

~ Goldman Sachs 2017

# The Evolution of Loss Prevention

Visual Intelligence

Data Intelligence

Physical Security

AI / Machine Learning

Data Analytics

GPS

EAS

Video

RFID

Shopper Engagement

Green & Red

Face Recognition





Autonomous Vehicles



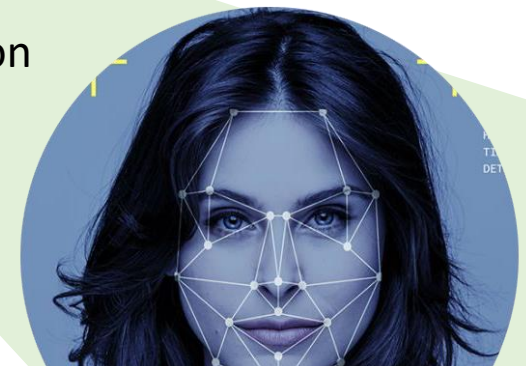
Inventory  
Visibility



Autonomous Stores



Contextual  
Product  
Information



Facial  
Recognition

AI ML

## Computer Vision

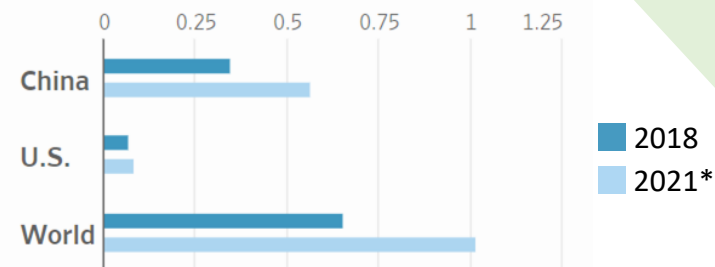


Sentiment /  
Demographics



Theft  
Prevention

Installed base of security cameras, in billions



\*Projection  
Source: HIS Markit



# Retail Loss Prevention Disrupted



## Cxx Focus

Brand Value Differentiation

Real-Time Consumer Loyalty

Immersive Unified Customer  
Experiences

Smart Supply Chains



## LP Cxx Moment

Brand Integrated Security / Video  
Analytics / Machine Learning

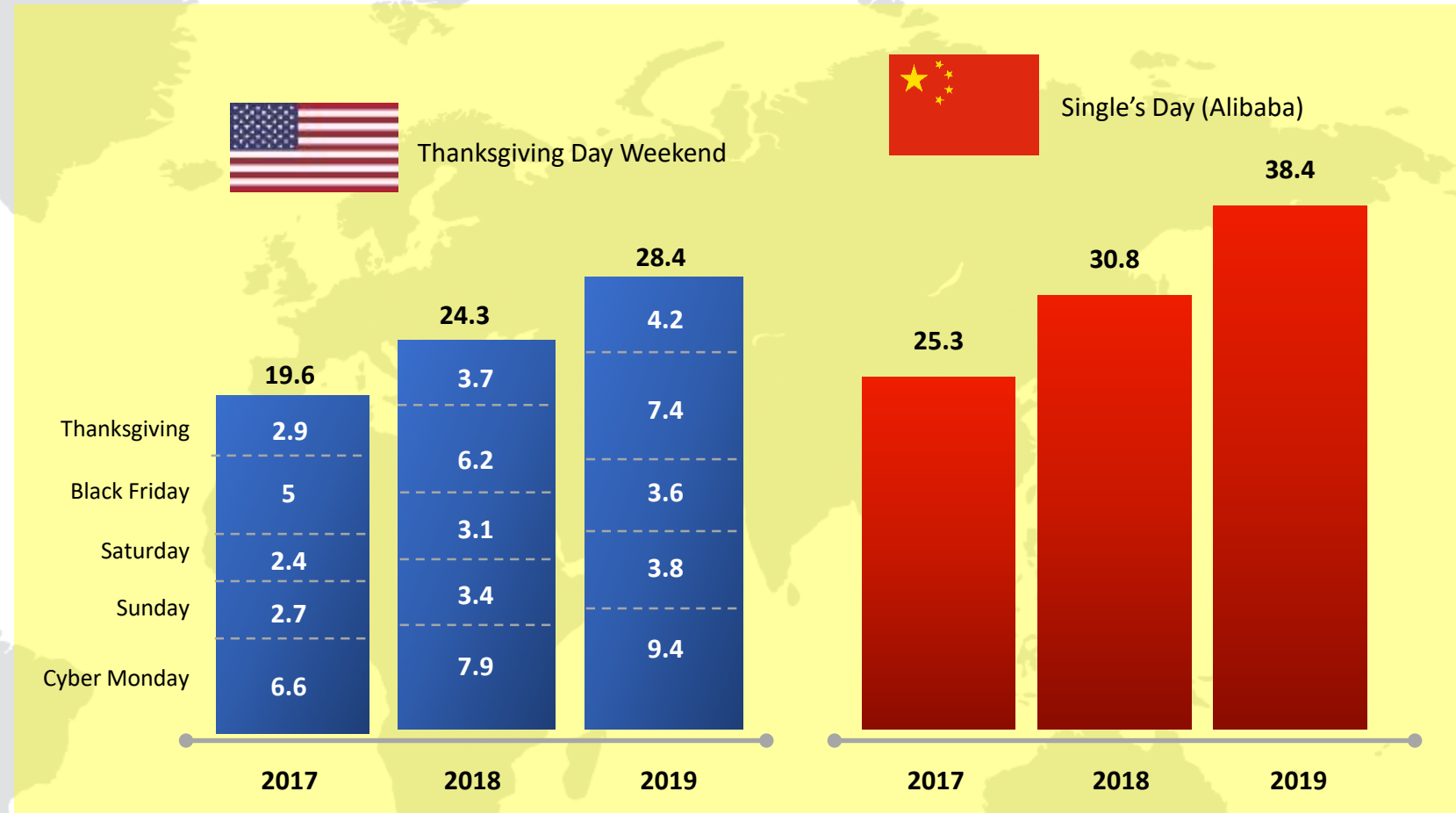
Data / Visual Zone Deterrence

Prescriptive Data Analytics



# The Disruptive Future of Retail

***“Learning and innovation go hand in hand. The arrogance of success is to think that what you did yesterday will be sufficient for tomorrow.”***  
~ William Pollard



# THANK YOU

***“Vision without execution is hallucination.”***

~ Thomas Edison

You are the Leaders  
to **Shape It.**

For MORE Visit  
[www.tonydonofrio.com](http://www.tonydonofrio.com)

## A TECH BOOM AHEAD

\$98.4b annual global artificial intelligence revenue by 2023 – CAGR of 28.5% (2019-2023)

Electric vehicles sold annually



**10m**

2020

**28m**

2030

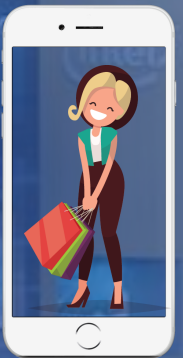
Smartphones  
with a 5G mobile  
subscription

**1.1%**

2020

**30.1%**

2025



IoT: Number of devices connected to the internet

**22b**

2018

**38.6b**

2025

**50b**

2030

Source: Statista 2019

