

# 2017 Holiday Outlook: Innovation and Change Create Positive Momentum

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# Consumer Technology Industry Outlook

## 1. Premium focus growing with retailers and OEMs and among products

1. More and more interest on revenue and higher ASPs
2. Mature markets with heavy installed bases must look to ASP improvement to deliver growth

## 2. Innovation returning to the tech cycle

1. NPD forecasts better results in 2017/2018 as new category opportunity begins to offset continue challenges driven by the first point
2. But even in mature categories new technology/new opportunity (Mesh, 4k, 2inOne, Wireless Headphones) is available to offset the strain of a mature market place

## 3. Early stage innovation can be bumpy for consumers, OEM and channels

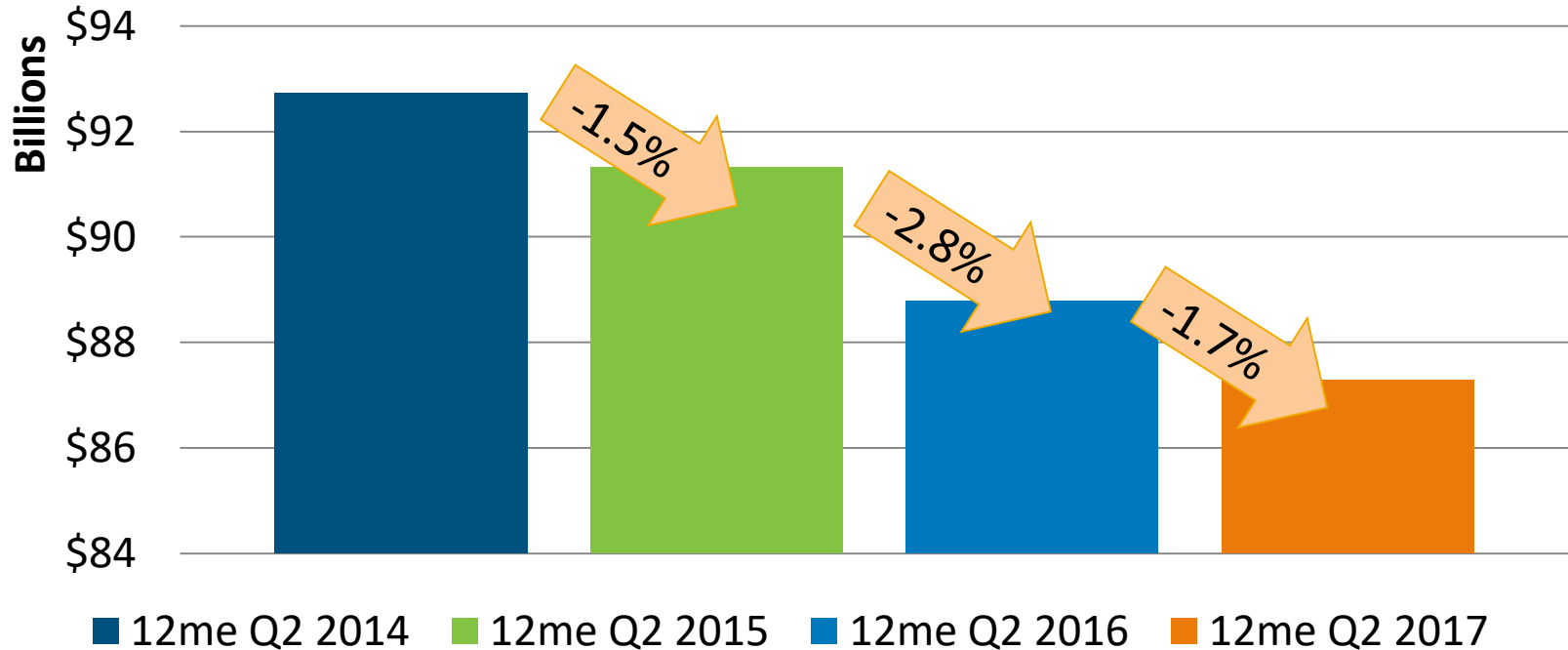
1. More complicated, unfamiliar technology opens doors for more high touch, more solution oriented sellers and brands
2. Rapid change in product sales type and mix can be especially difficult for retail

## 4. Future growth in tech categories seems more poised for personal tech vs shared

1. Growth in tech more likely to be around individual products owned and used by one person vs shared household tech
2. One exception is Smart Home, which crosses the line between tech and home, making it more accessible to traditional home demographics as opposed to tech ones

# Improvement over 2016 continues as market adjusts to new opportunities

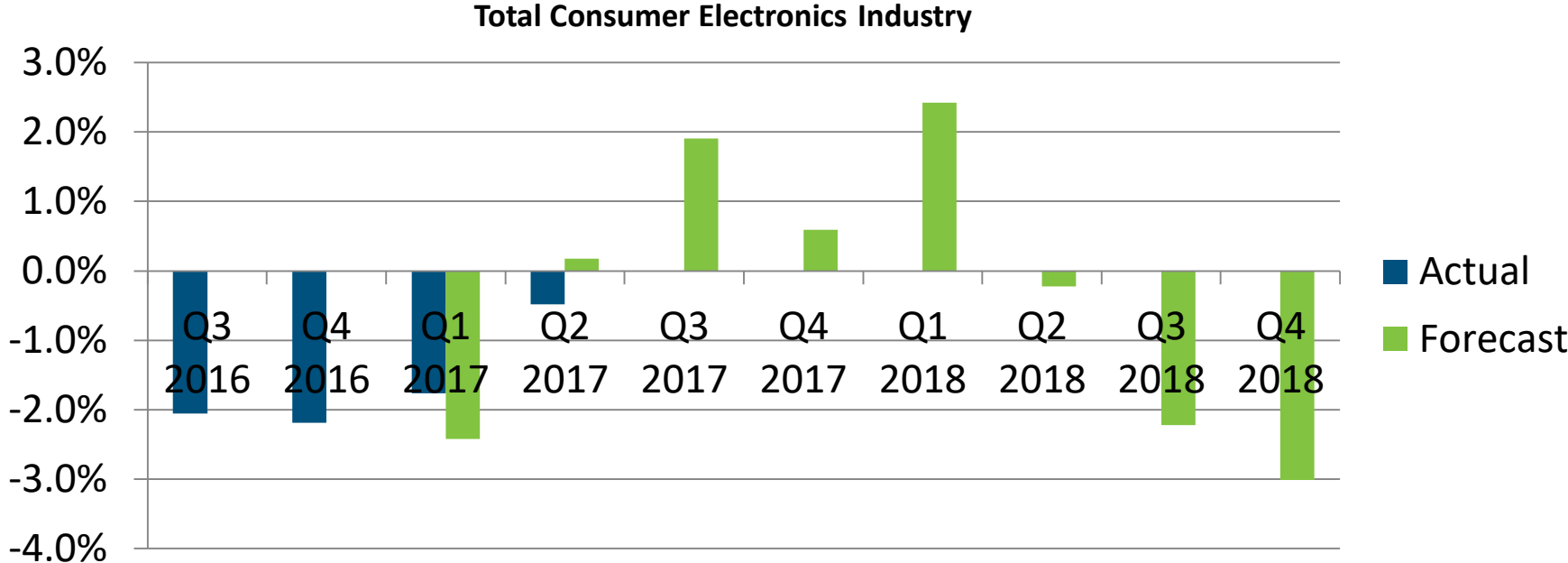
## Total US CE Industry Sales



Source: The NPD Group, Inc./Retail Tracking Service,

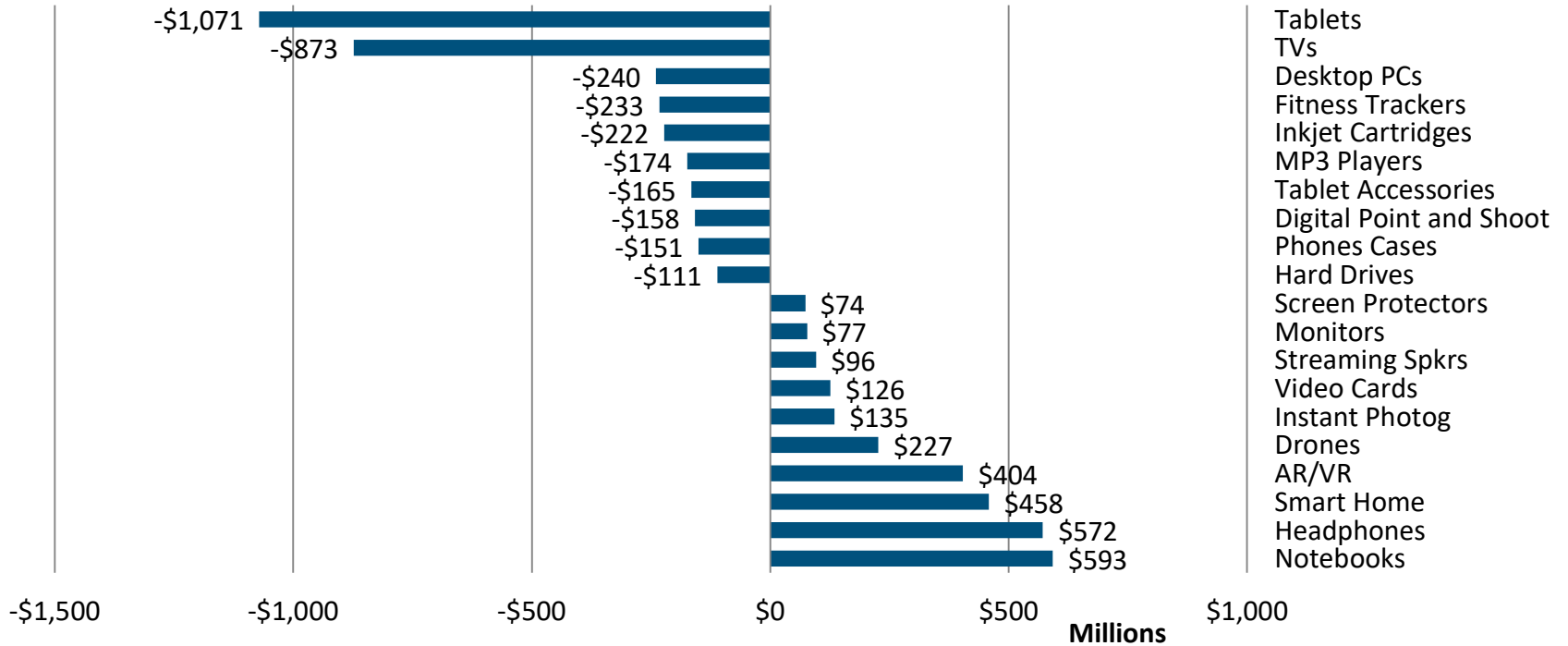
Data doesn't include mobile phones, VG HW, Amazon Brand HW Devices, Surface (from MS stores), Apple Watch, VR HW

# Forecast for holiday 2017 remains positive with 2018 forecasts struggling against tougher comparisons



# Innovation leads market up, older categories in decline hold business back

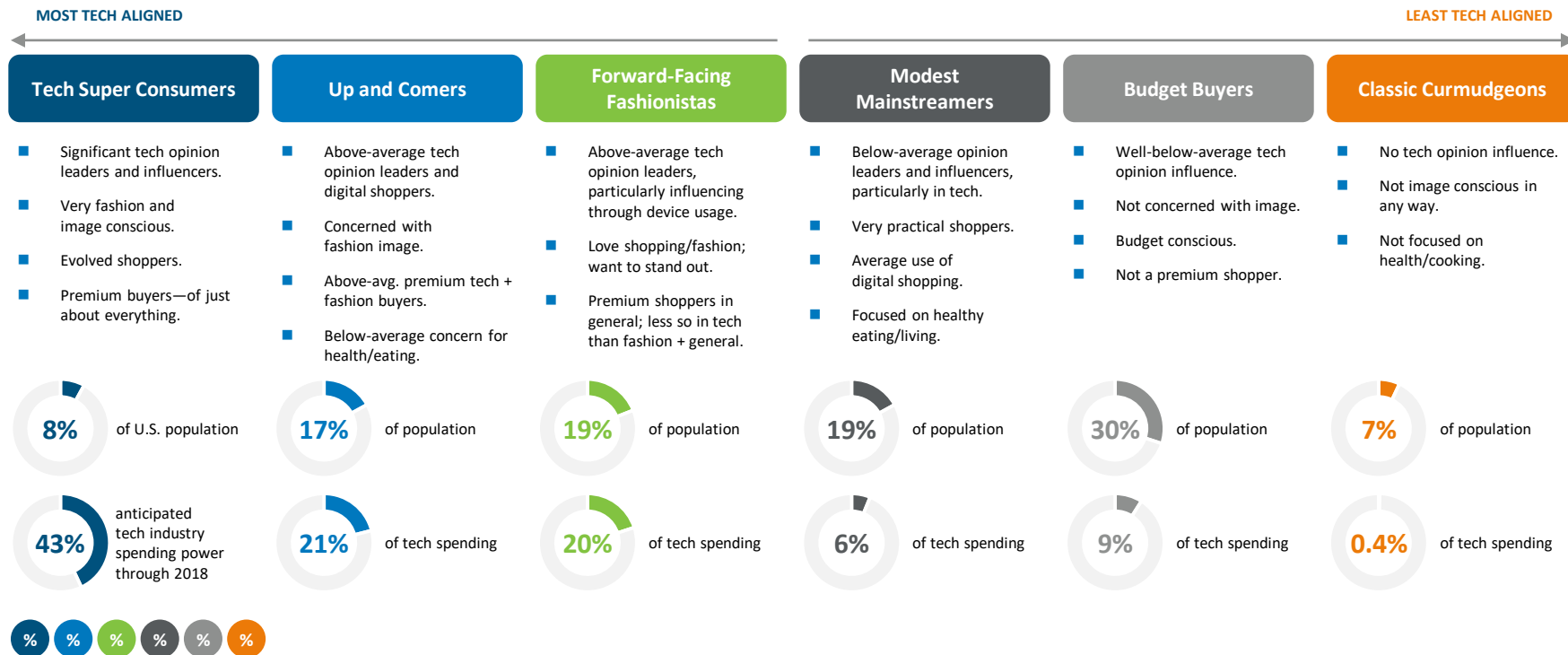
Core Category Revenue Change 12me Q2 2017 vs 12me Q2 2016



Source: The NPD Group, Inc./Retail Tracking Service, Positive = \$50m+ and negative = -\$100m+

# Techies drive a huge percentage of CE value

Our tech consumer segments (and their potential industry value through 2018):



# Tech super consumers deep dive

**8%**  
of population

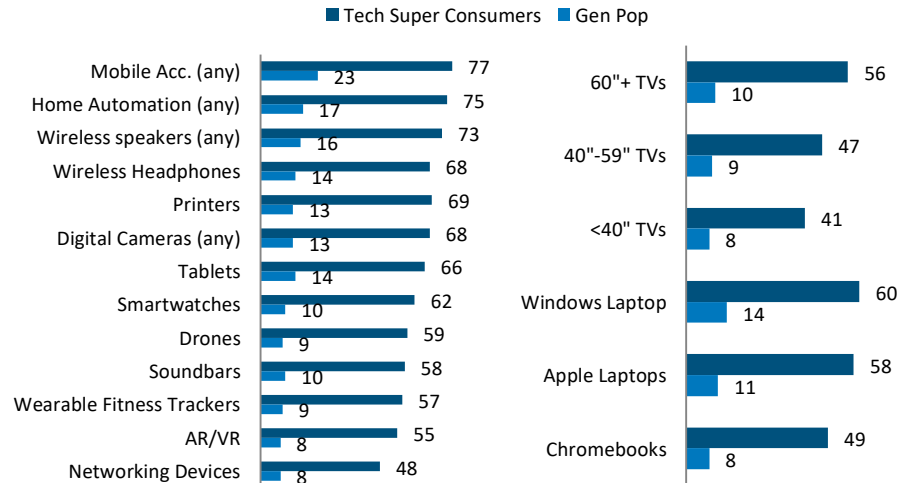
Whether it's tech or fashion, I'm the first in the door for the hot new products. Others know this and look to me for product guidance. I like to stand out and I believe that you get what you pay for, so I'm willing to pay more for premium products boasting higher quality and high-end features. Though I buy plenty with my smartphone and use social media as part of the shopping experience, I also love the in-person experience of shopping in high-end stores.

**\$49B** Est. Value 2017-2018

Total Sample	Tech Super Consumers	
48%	78%	Male
34%	79%	25-44 years old
35%	77%	Kids <18 in HH
53%	68%	Married
46%	66%	HH income \$75K+
33%	58%	College Grad+
12%	31%	Post-Grad
25%	30%	Minority
28%	52%	Market size 5MM+

Demographic Fast Facts

## Intended Purchases (Next 12 Months)



# 2016 Holiday Overview and 2017 Outlook

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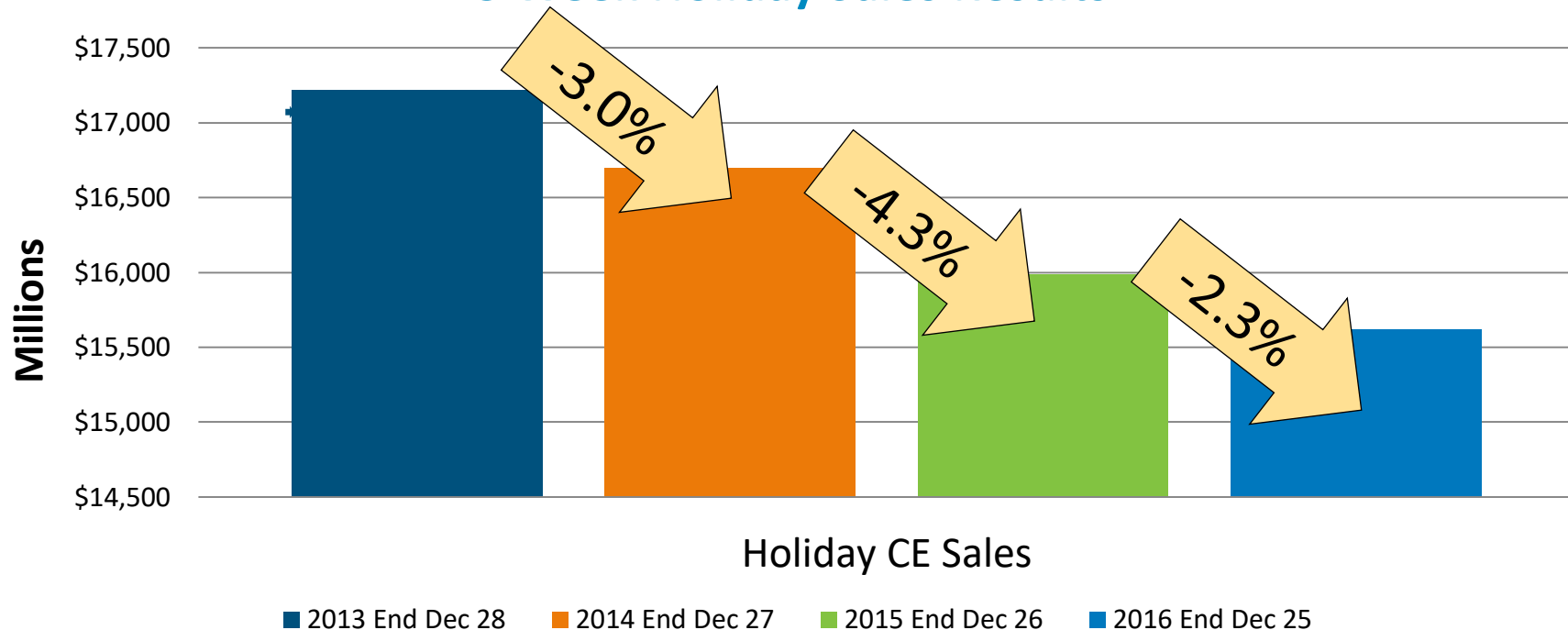


# 2017 Holiday Outlook

- Better results on stronger selling prices, despite weaker unit trends overall
  - But downside is substantial as largest categories continue to carry significant risk
  - Weaker entry level pricepoint TV sales could be an anchor to Thanksgiving week sales
- New innovation categories see strong growth rates as markets rapidly develop during 2017
- eCommerce volume continues to grow, likely topping 1/3 of revenue in Q4 2017
- Market still overly focused on early sales trends and not end of season
  - Thanksgiving week will continue to grow at the expense of early November volumes

# Stronger results on a richer product mix

## 5 Week Holiday Sales Results

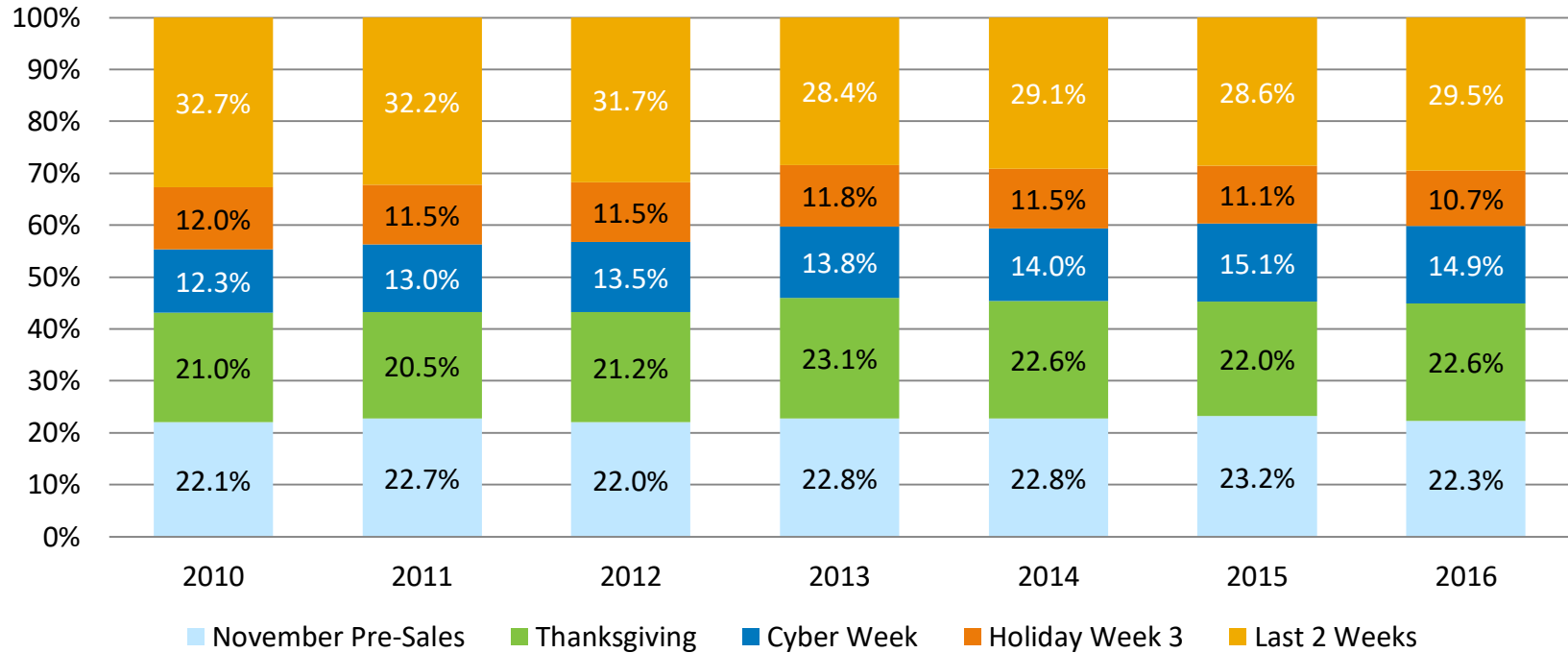


Source: The NPD Group, Inc./Weekly Retail Tracking Service, 5 week holiday period

Data doesn't include mobile phones, VG HW, Amazon Brand HW Devices, Surface (from MS stores), Apple Watch, Drones

# While Cyber week gains (and Thanksgiving remains steady) biggest share shifts driven by calendar

Period Revenue Share for 8 Week Holiday Period

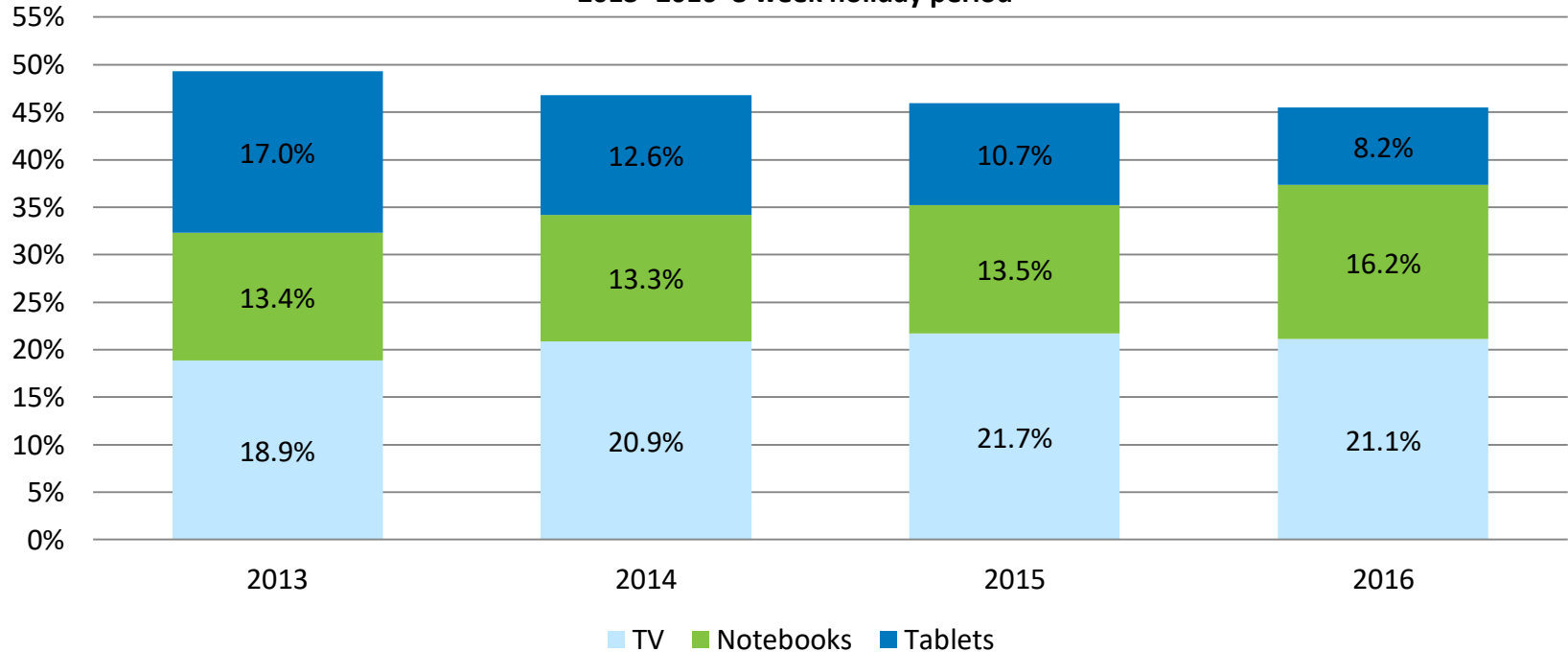


Source: The NPD Group, Inc./Weekly Retail Tracking Service,

Data doesn't include mobile phones, VG HW, Amazon Brand HW Devices, Surface (from MS stores), Apple Watch, Drones

# Hard for Tech Hardware to Divorce Itself from the Largest Revenue Generators

Revenue Share for Top 3 Categories  
2013 -2016 8 week holiday period



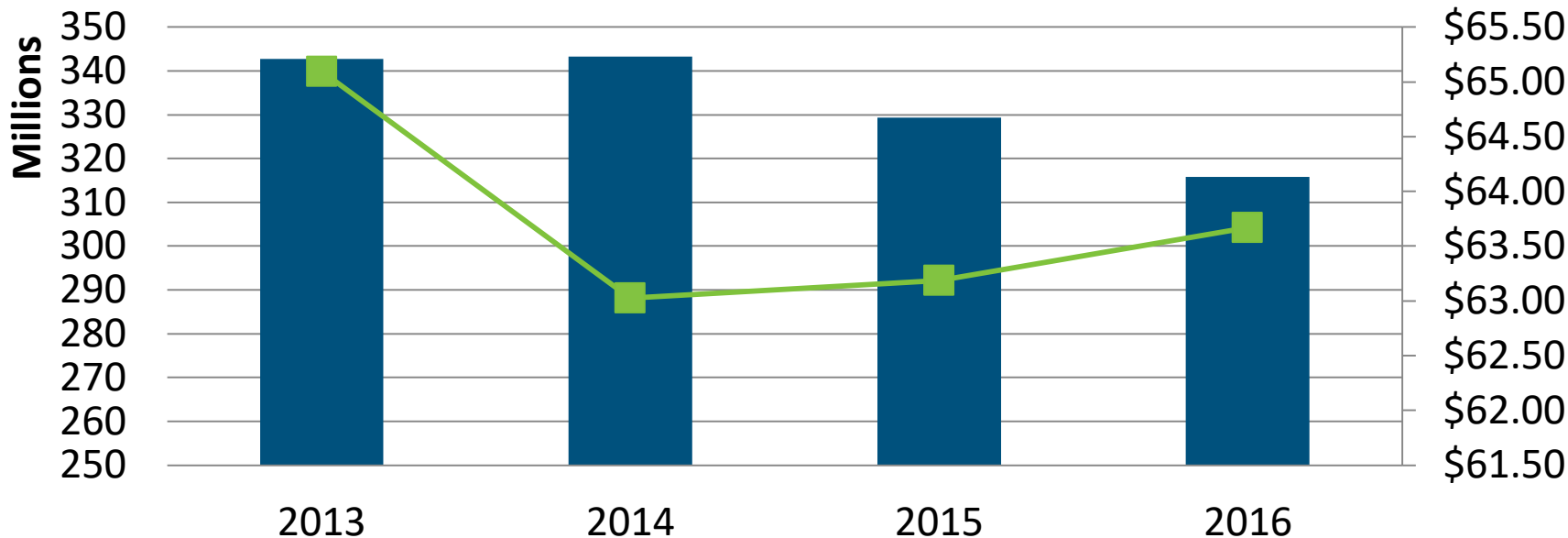
Source: The NPD Group, Inc./Weekly Retail Tracking Service, 8 week holiday period

Data doesn't include mobile phones, VG HW, Amazon Brand HW Devices, Surface (from MS stores), Apple Watch, Drones

# Declining volumes point to the core of the CE market sales challenges

Items Sold and ASP

8 Week Holiday 2012-2016

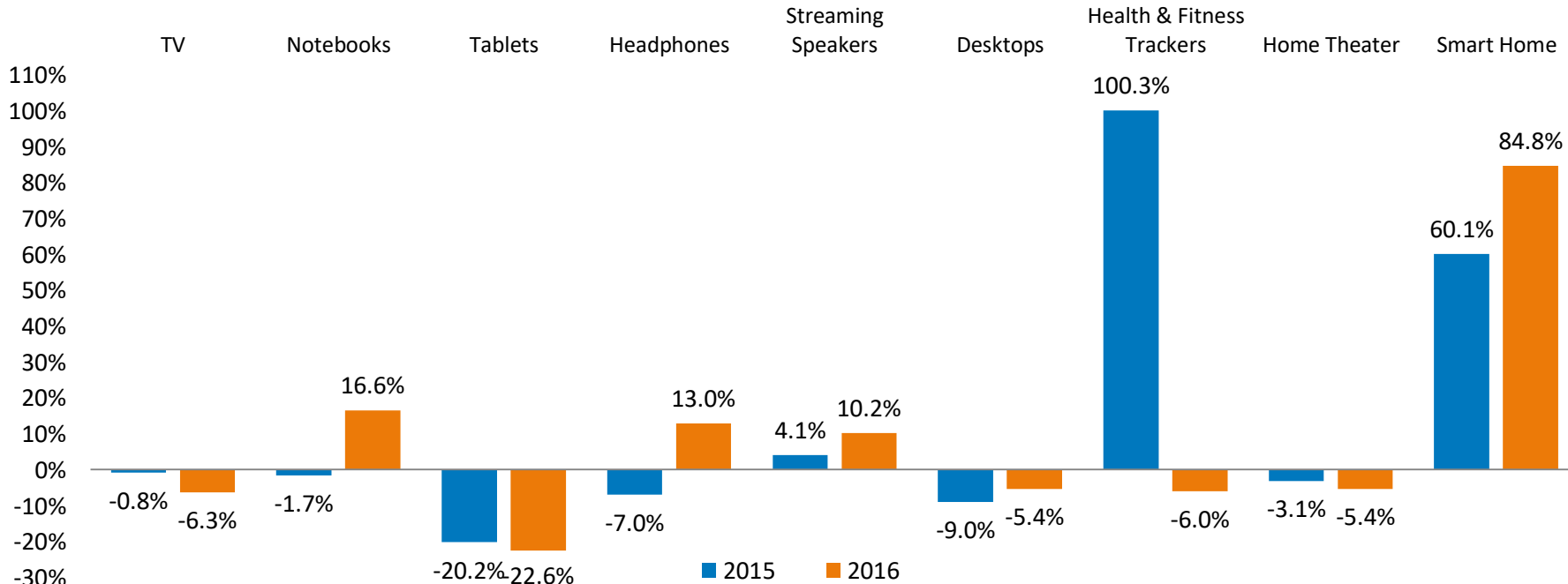


Source: The NPD Group, Inc./Weekly Retail Tracking Service, 5 week holiday period

Data doesn't include mobile phones, VG HW, Amazon Brand HW Devices, Surface (from MS stores), Apple Watch, Drones

# 2016 Holiday Growth propelled by a narrow range of large categories

## Holiday Revenue Growth Trends by Largest Segments



Source: The NPD Group, Inc./Weekly Retail Tracking Service, 5 week holiday period

Data doesn't include mobile phones, VG HW, Amazon Brand HW Devices, Surface (from MS stores), Apple Watch, Drones

# Category Industry Outlook

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# Overview of Category Trends

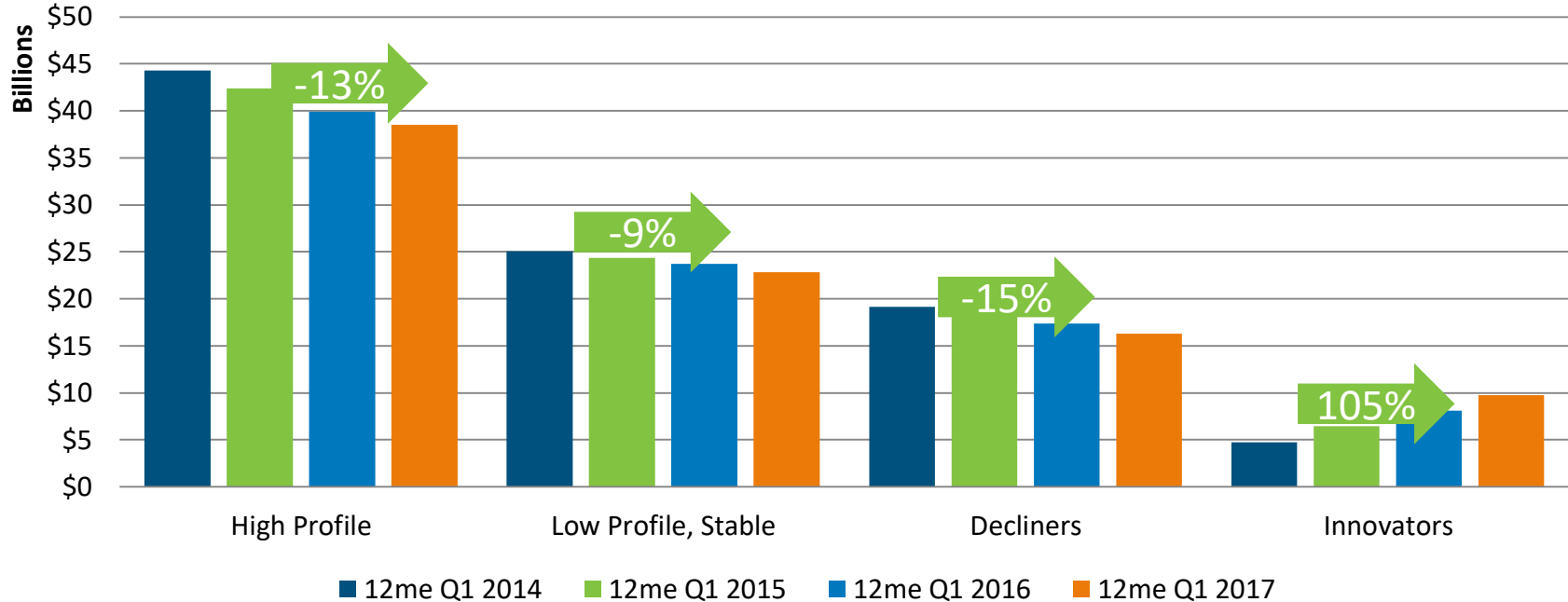
## 1. Industry broken into 4 segments

1. Big volume, high profile categories. PCs, TVs Tablets and Phones.
  1. While there are some segmented opportunities in general ASP increases are the only route to growth as these categories approach mass penetration
2. Stable, mostly low ASP categories, lower profile, lower customer interest level. PC Accessories, Home Theater, Mobile Accessories, Cabling.
  1. Intriguing growth opportunities available within the stagnation
3. Old high profile categories in secular decline. Cameras, printers
  1. Not much value here, aging technology delivery platforms while the tech remains core
4. Innovative, interesting and high profile. Drones, Smart Home, VR/AR, Headphones
  1. Future of tech. Personal and compelling. Changes consumer interaction of tech. Harder to sell but likely higher long term rewards



# Revenue and mix issues challenge the industry's growth hopes

CE Revenue by Category Segment



Source: The NPD Group, Inc./Retail Tracking Service,

Data doesn't include mobile phones, VG HW, Amazon Brand HW Devices, Surface (from MS stores), Apple Watch,

# High Profile

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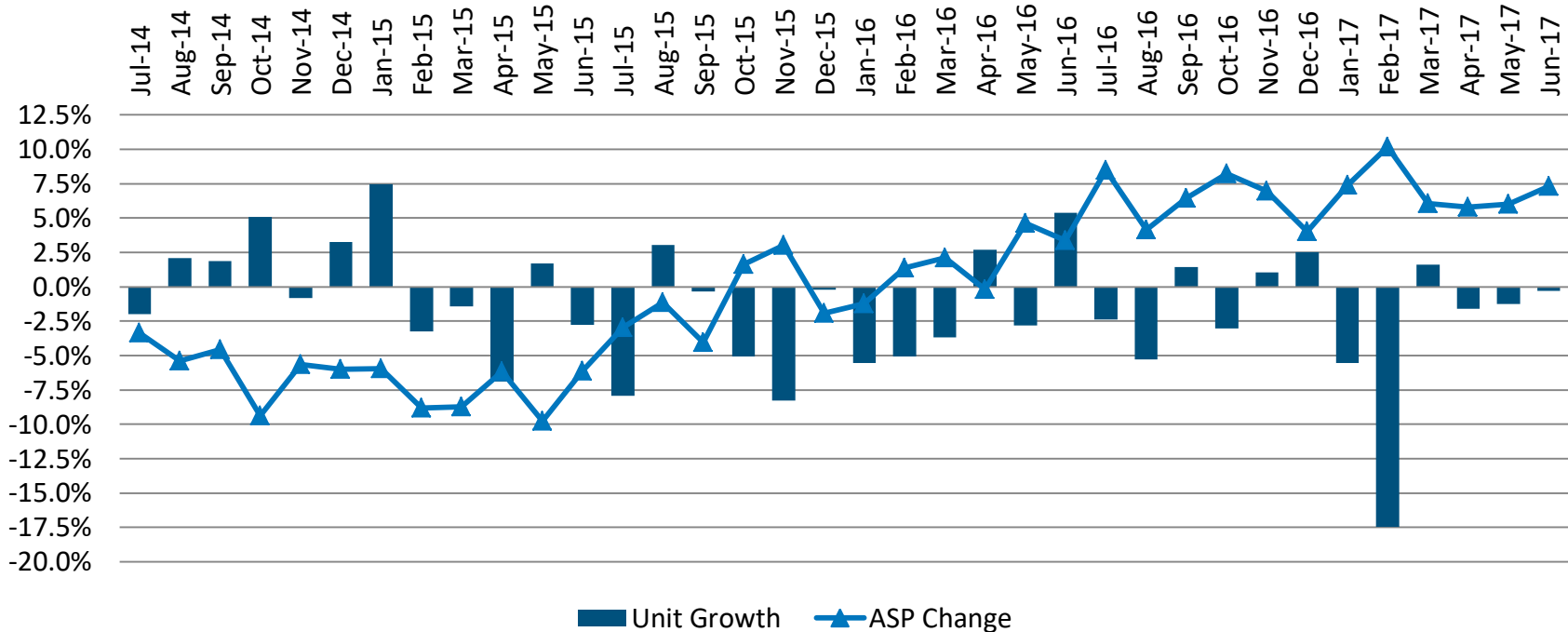


# High Profile Holiday Outlook Overview

- These categories are traditionally high profile holiday traffic drivers, but weaker results and potentially higher prices putting some of that in jeopardy
  - PCs have become much less of a high profile holiday category, although this years pricing activity may leave room for some holiday deals
  - TVs remain the premier holiday traffic product but slowing volumes and rising costs threaten holiday promotions, especially in high volume entry-level pricepoints and sizes
  - Tablets face an uncertain future outside iPads (which are transforming radically to less of a consumer product ) but there is inventory for 2017 holiday promotion available. Amazon's pricing impossible to compete with. Non-Amazon Android will be a non-starter in 2017.

# Stable volumes and significant ASP increases point to a healthier holiday

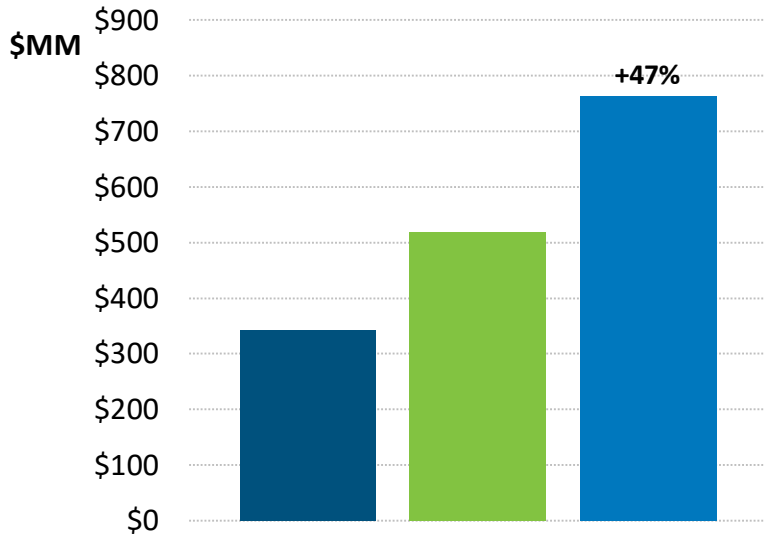
## Unit, ASP Change for Windows Notebooks



Source: The NPD Group, Inc./Retail Tracking Service, Notebooks does not include SP4

# Gaming Notebook Growth Provides a Holiday Opportunity?

## Dollar Sales

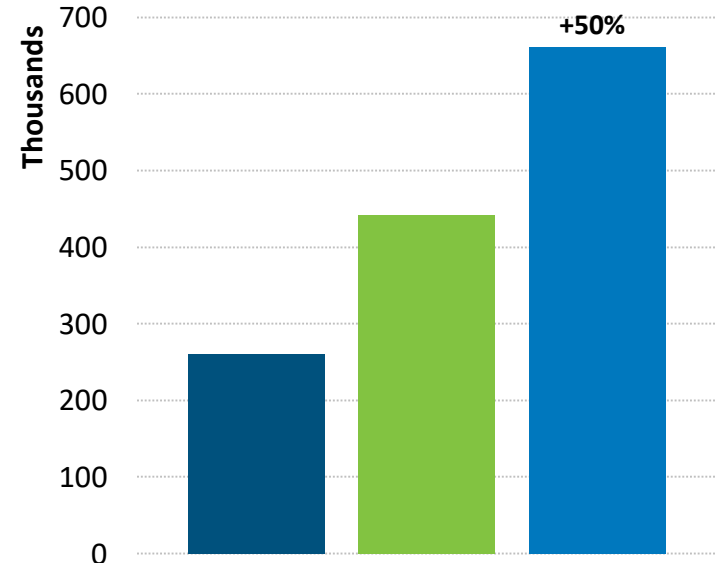


■ May'14 - Apr'15 ■ May'15 - Apr'16 ■ May'16 - Apr'17

## ASP

May'14 - Apr'15	\$1,316
May'15 - Apr'16	\$1,175
May'16 - Apr'17	\$1,157

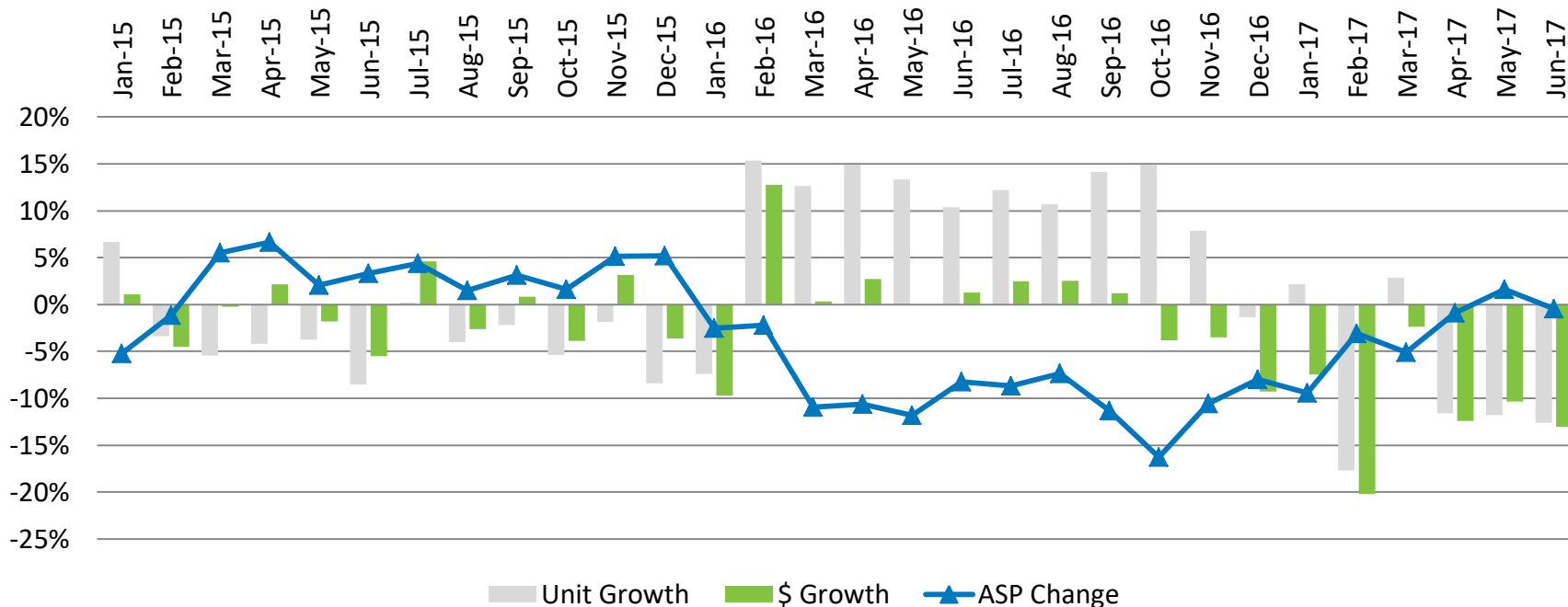
## Unit Sales



■ May'14 - Apr'15 ■ May'15 - Apr'16 ■ May'16 - Apr'17

# Prices beginning to strengthen but with an accompanying decline in volume

Unit ,Dollar and ASP Change in TV

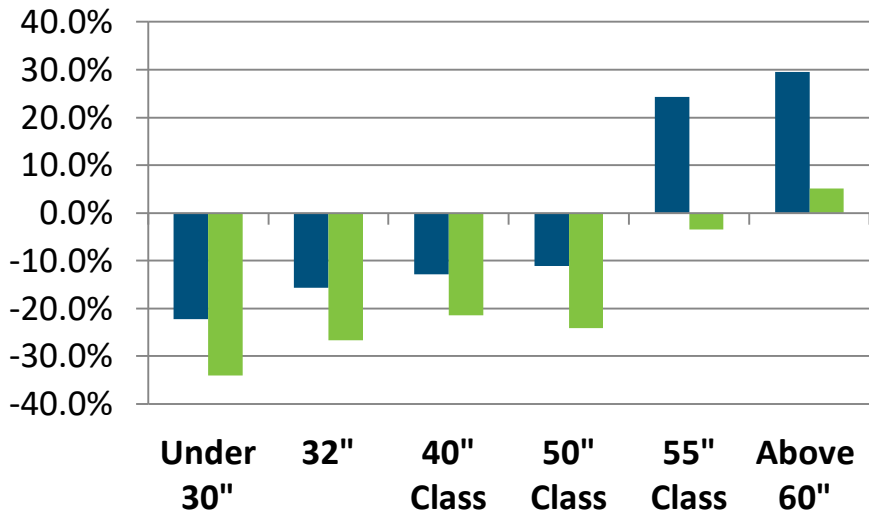


# Big screens drive unit gains but without much related revenue growth

## Flat-Panel TV Screen Size Unit/Dollar Year-over-Year Growth

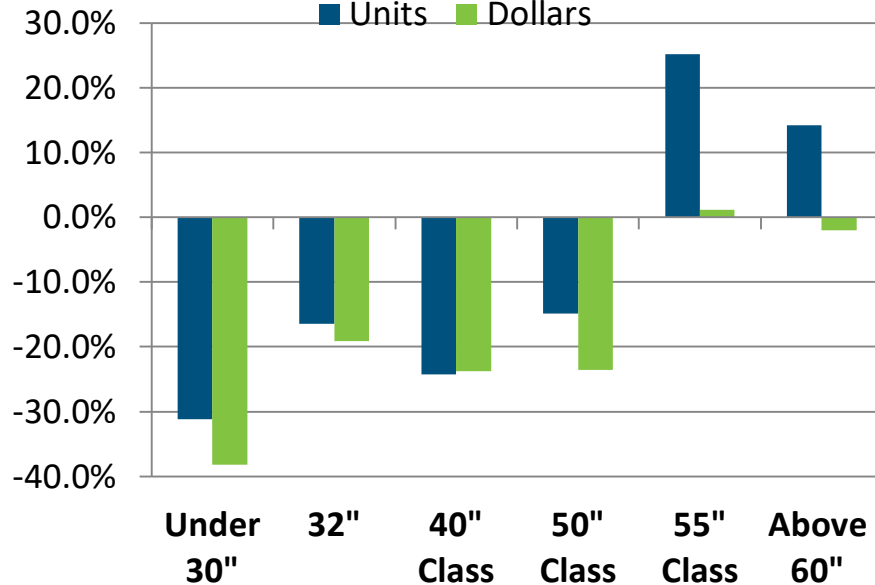
Q1 2017 vs Q1 2016

■ Units ■ Dollars



April/May 2017 vs April/May 2016

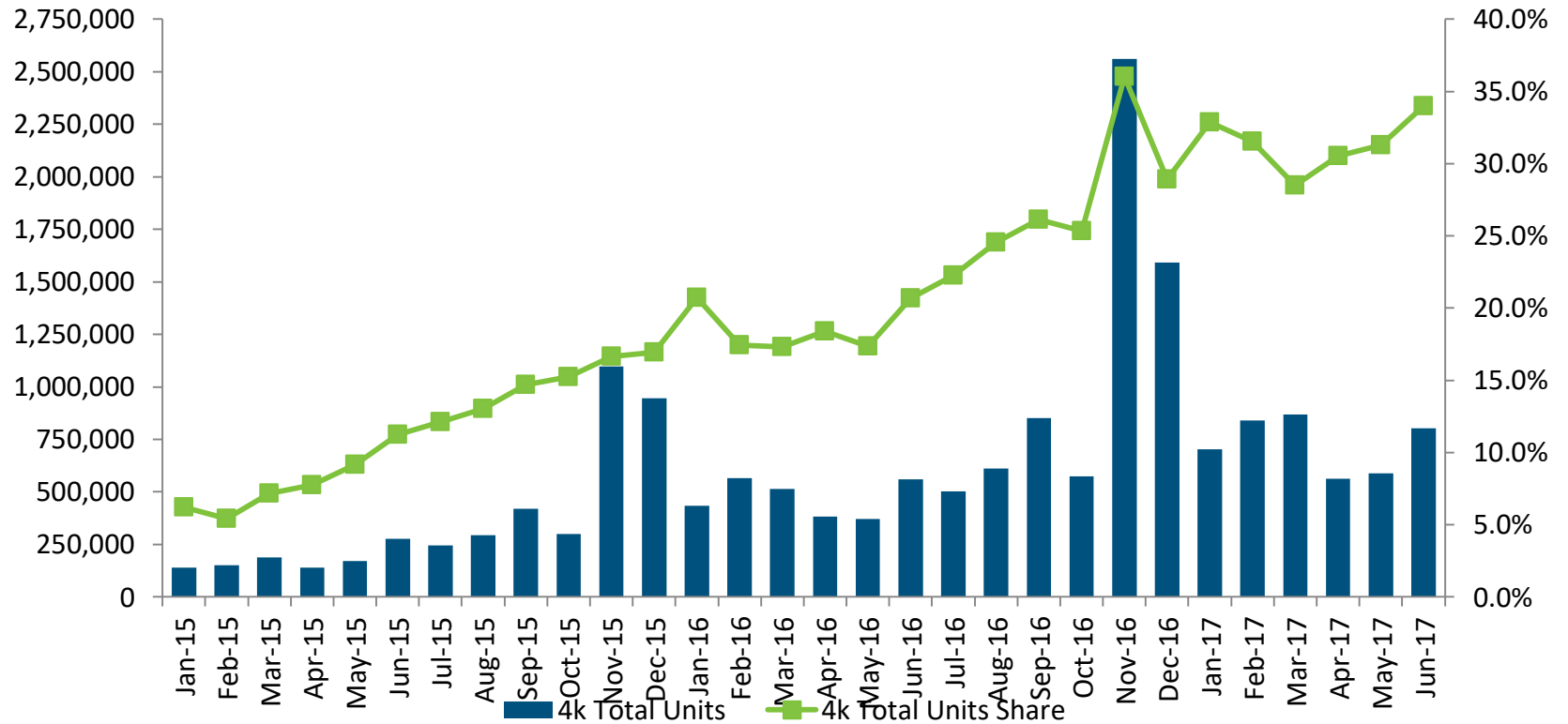
■ Units ■ Dollars



Source: The NPD Group/Retail Tracking Service

# More than 33% of TVs are 4k

Unit Share of 4K TVs



Source: The NPD Group/ Retail Tracking Service



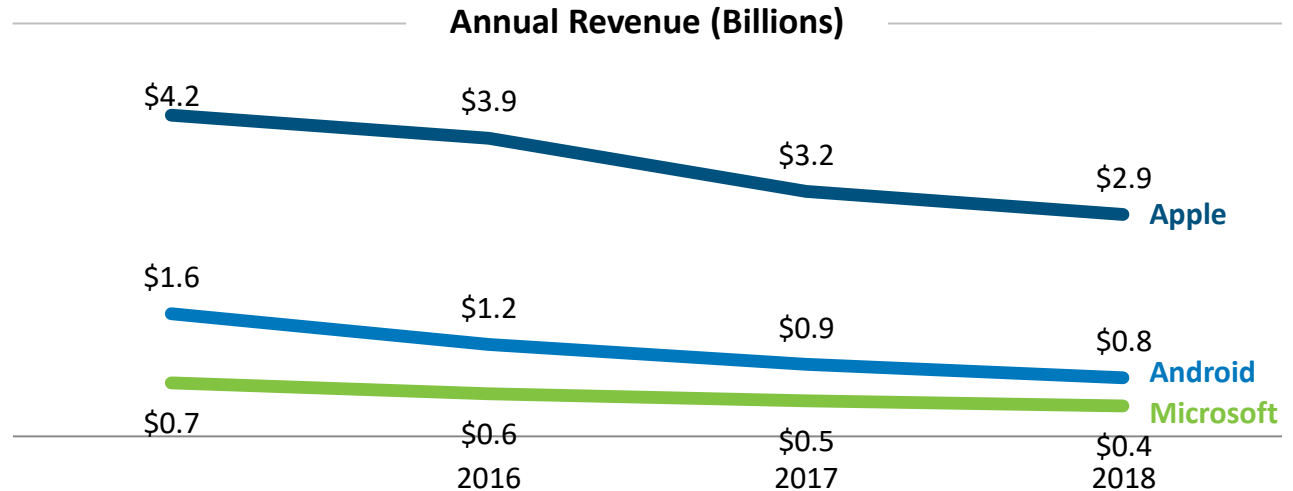
# Squeezed from both sides, tablets down \$3.4B



**Stephen Baker**  
Vice President,  
Technology

“ Pricing is decimating the smaller screen tablet segments. Specifically, Amazon’s lower-priced Kindle Fire offerings are killing the budget end of the Android market. ”

Faced with multiple challenges, tablets will account for 36% of the total CE industry’s losses over the next two years.



# Stable

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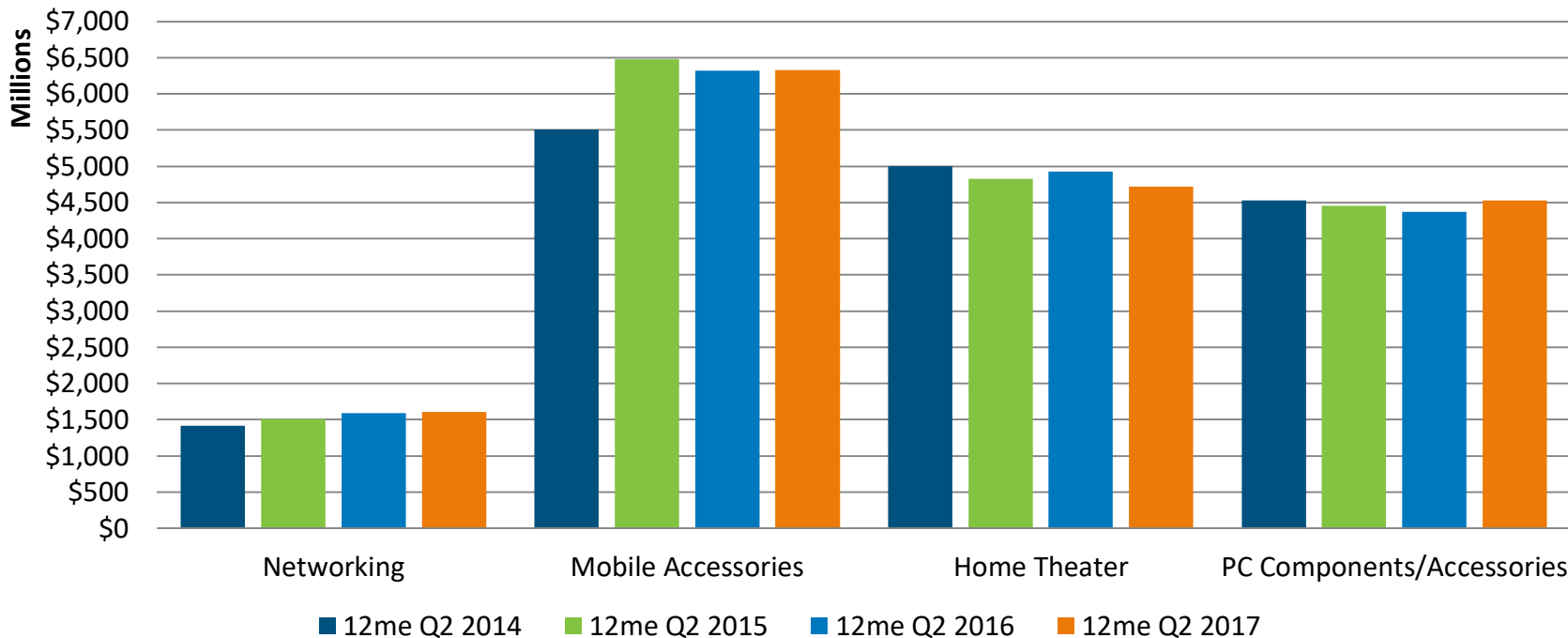
# Stable Category Overview

1. While volume is stable it is declining. Good opportunities masked by some of the market changes in the larger segment or larger marketplace
  - This dynamic makes it difficult to deliver real value and traffic in these categories
2. Innovation in subsegments, as in high profile segments, provides some offsetting revenue growth (and holiday demand) against segment declines
  - Some opportunities would be Mesh and AC networking, USB-C cabling and Mobile Power, Turntables and Video Streaming, Gaming Accessories and PC components for gaming
3. Performing segments in stable categories fit in one of 3 segments
  - a strong attachment to a segment with high, consistent installed bases
  - dedicated consumers
  - Demonstrable technology advantage relating to a growing device use case



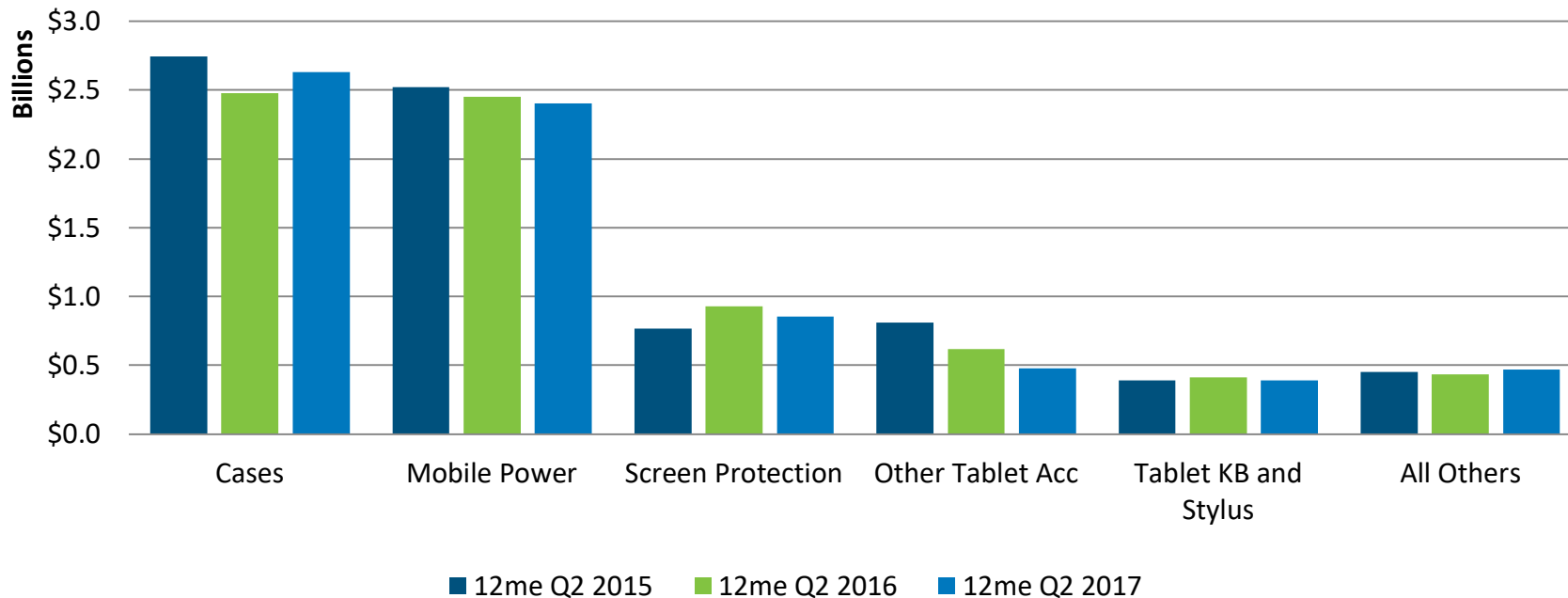
# Stable categories generate large revenue numbers

## Stable Category Revenue Trends



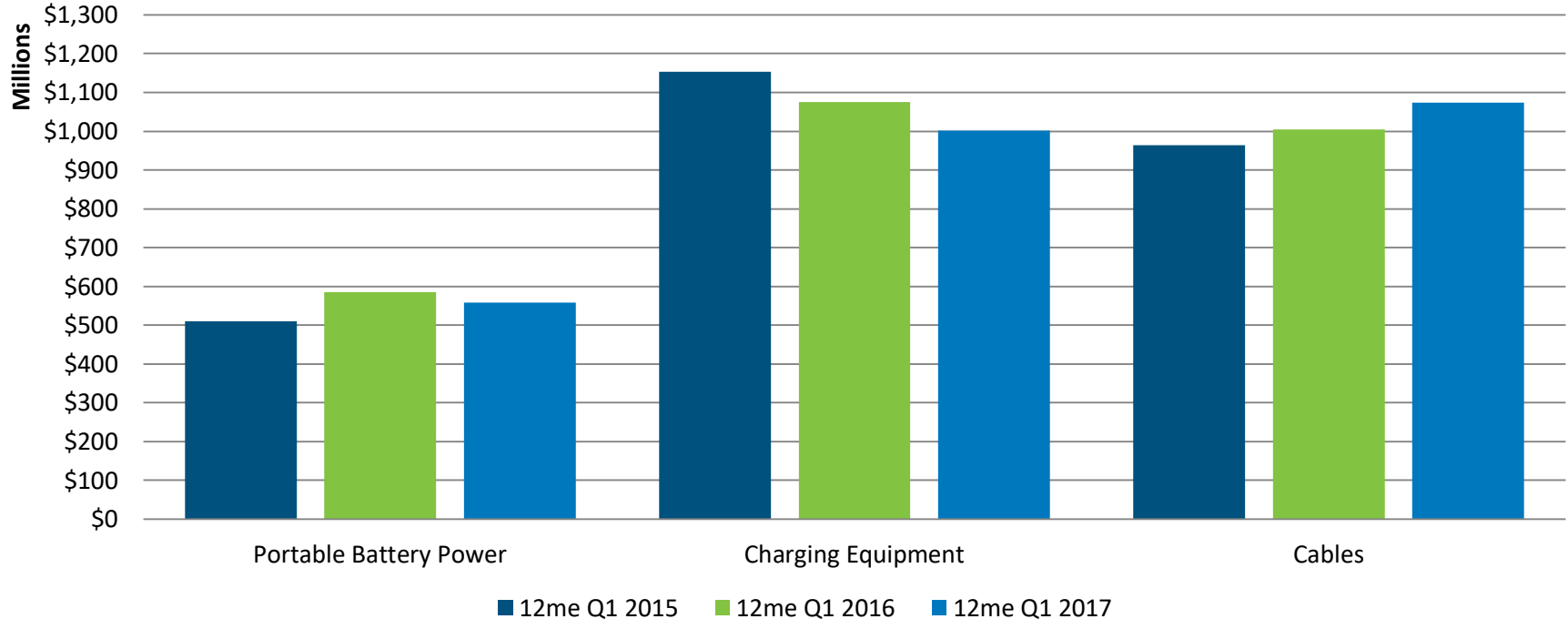
# Mobile accessories struggle to grow in a stagnant phone market

Revenue for key mobile related accessory categories



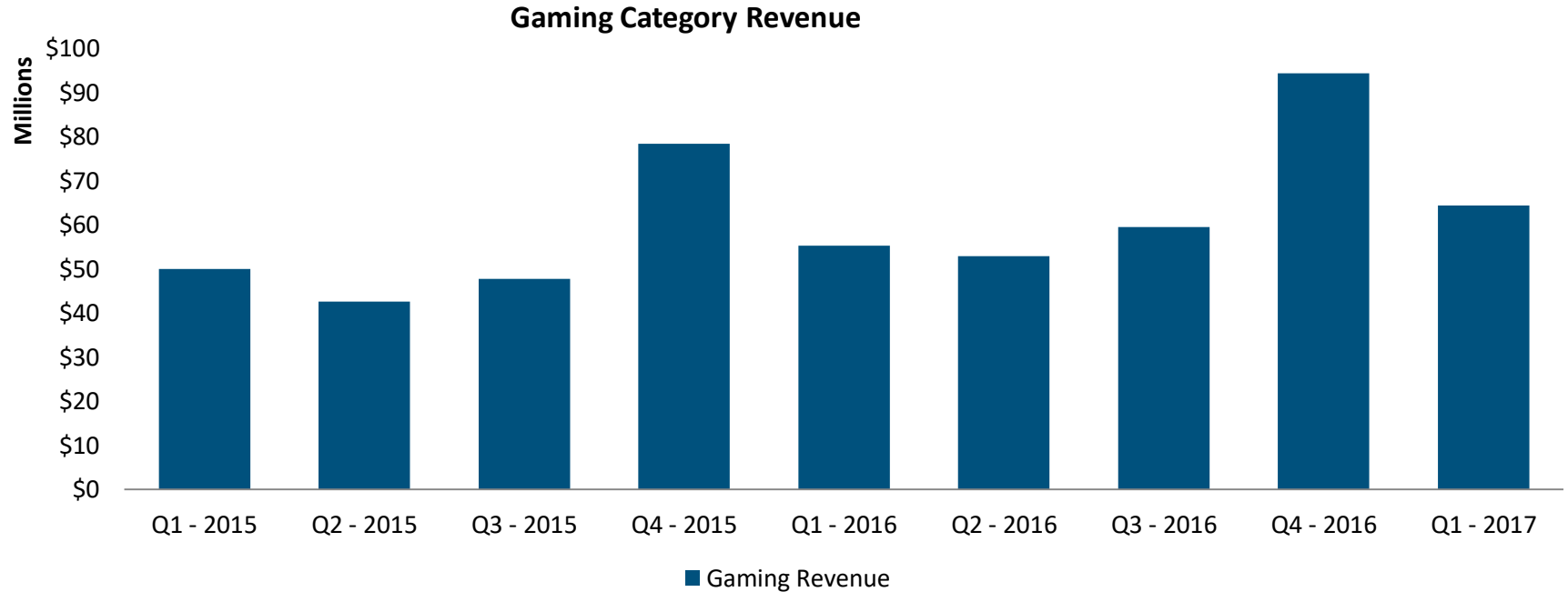
# Cables are leading revenue for power related mobile accessories

Power Category Revenue



Source: The NPD Group, Inc./Retail Tracking Service, Battery Pack Revenue includes Charging Cases

# Core gaming accessories\* performing very strongly suggesting demand has picked up



\*Gaming Accessories : Keyboard, Mice, PC Headset/PC Microphone

# Climbing connectivity drives network needs; network devices growing \$417MM

## Increasing Strain on Wi-Fi Driving Upgrades



Phones & Tablets



Gaming Consoles



Smart TVs and Streaming Boxes



Personal Computers



Connected Home Solutions



Stephen Baker  
Vice President,  
Technology

## Connectivity is the watchword in CE.

Our phones, tablets, computers, streaming boxes, gaming consoles, and a growing host of home automation devices and digital assistants all rely on bandwidth, and are taxing home networks more than ever before.

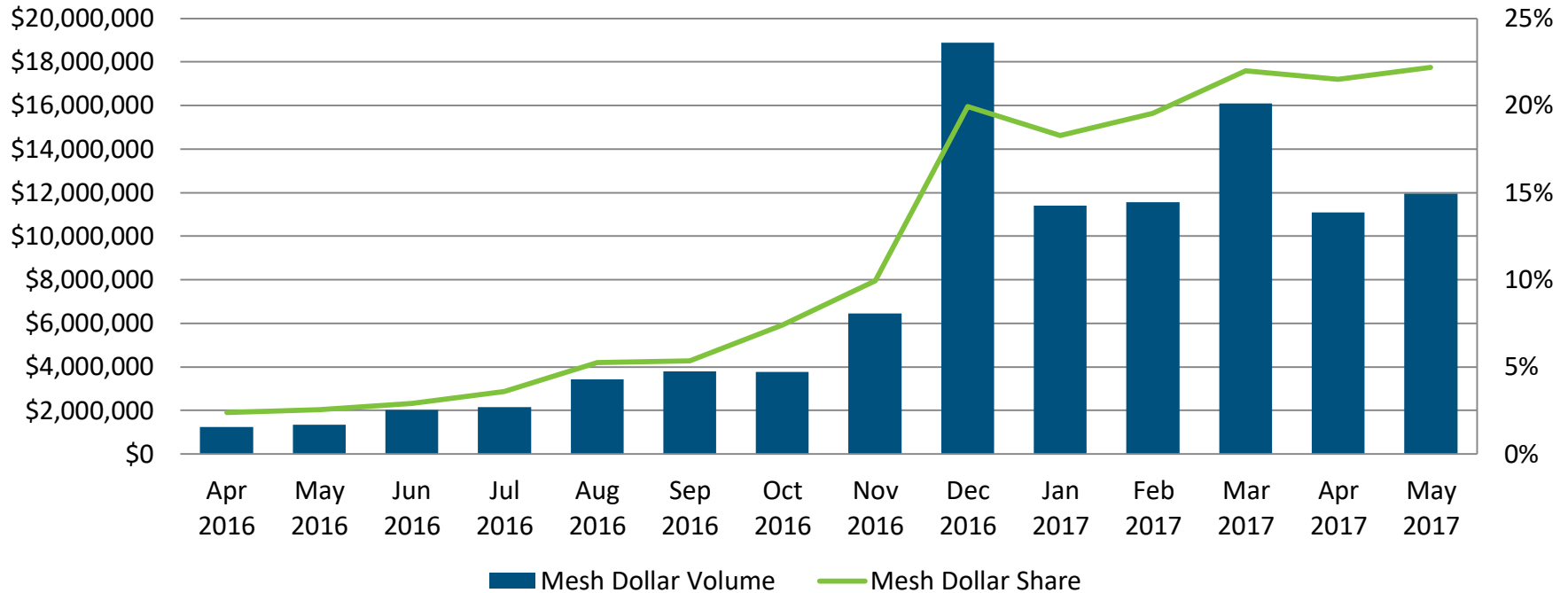
Consumers are answering the call with more robust Wi-Fi; routers alone will likely add an incremental \$240MM through 2018, with **nearly one in 10 adults** planning a purchase within the next year, according to our survey data.

“ Whole-home mesh Wi-Fi and more powerful Wi-Fi routers are driving these dollars. Consumers recognize that doing all this on their current network is putting a lot of pressure on the current networks. People want to stream, etc., and they are willing to pay to stream and connect, both by spending more on broadband and getting better equipment that can support the strains on the network in the home. ”



# Premium solution in a premium marketplace

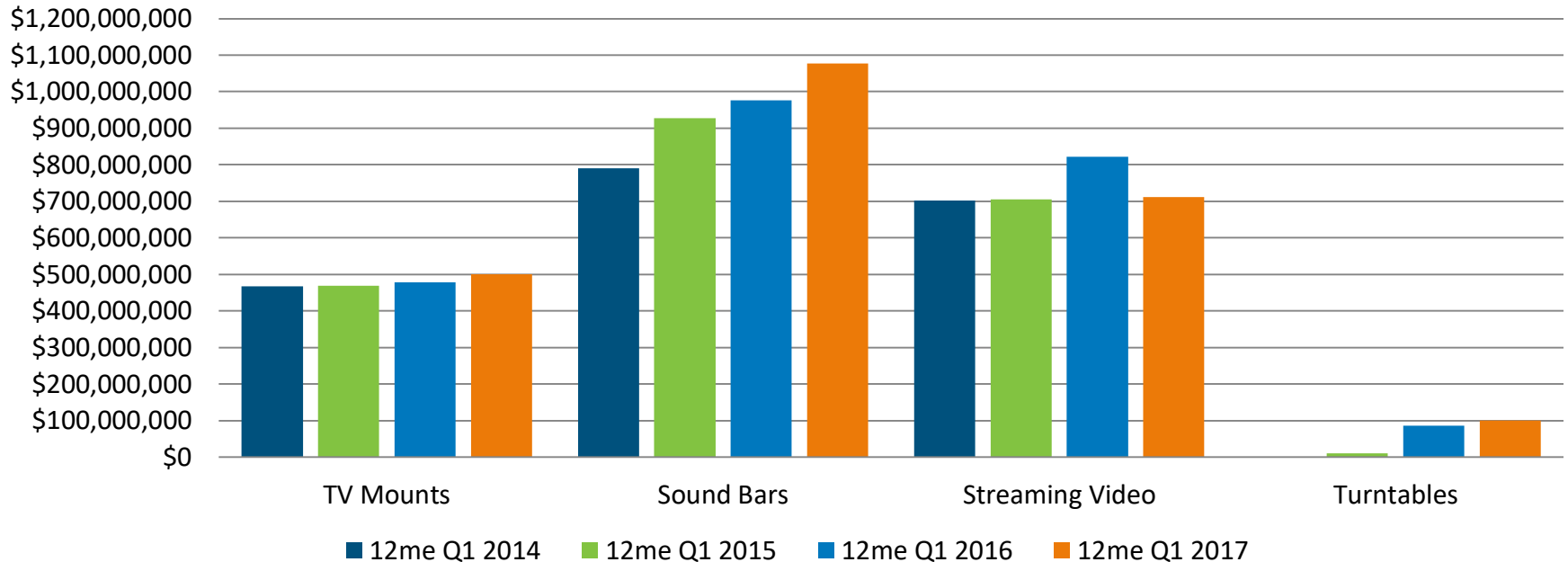
## Mesh Sales Dollars and Share



Source: The NPD Group / Retail Tracking Service

# Attaching to the TV, as the TV business changes can prove to be valuable

## Key Home Theater Growth Segments



Source: The NPD Group / Retail Tracking Service, does not include Amazon Fire TV Products

# Innovations

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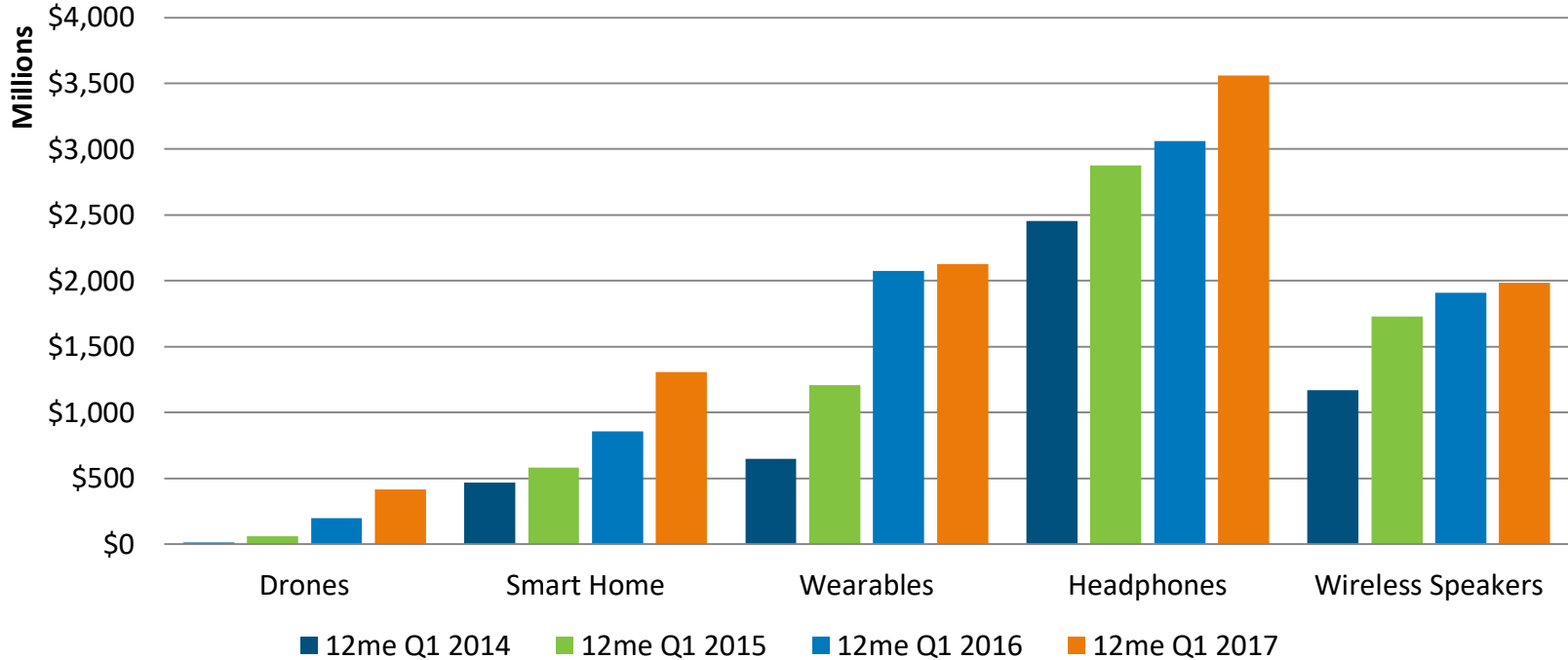


# Innovation Segments

1. Most innovation is creating brand new experiences, or extending traditional CE concepts and technologies into adjacent categories
  - Wireless headphones create brand new experiences
  - Voice controlled speakers and Smart Home are extending CE concepts and products into new areas in the home
  - VR enables new experiences
  - Wearables enable new experiences and extend traditional CE concepts
2. Innovation building new segments is fundamentally different than extending opportunities (such as large screen TVs)
3. Innovation is making tech more personal and more one to one versus a more hybrid group interaction with technology

# Innovation growth can be bumpy

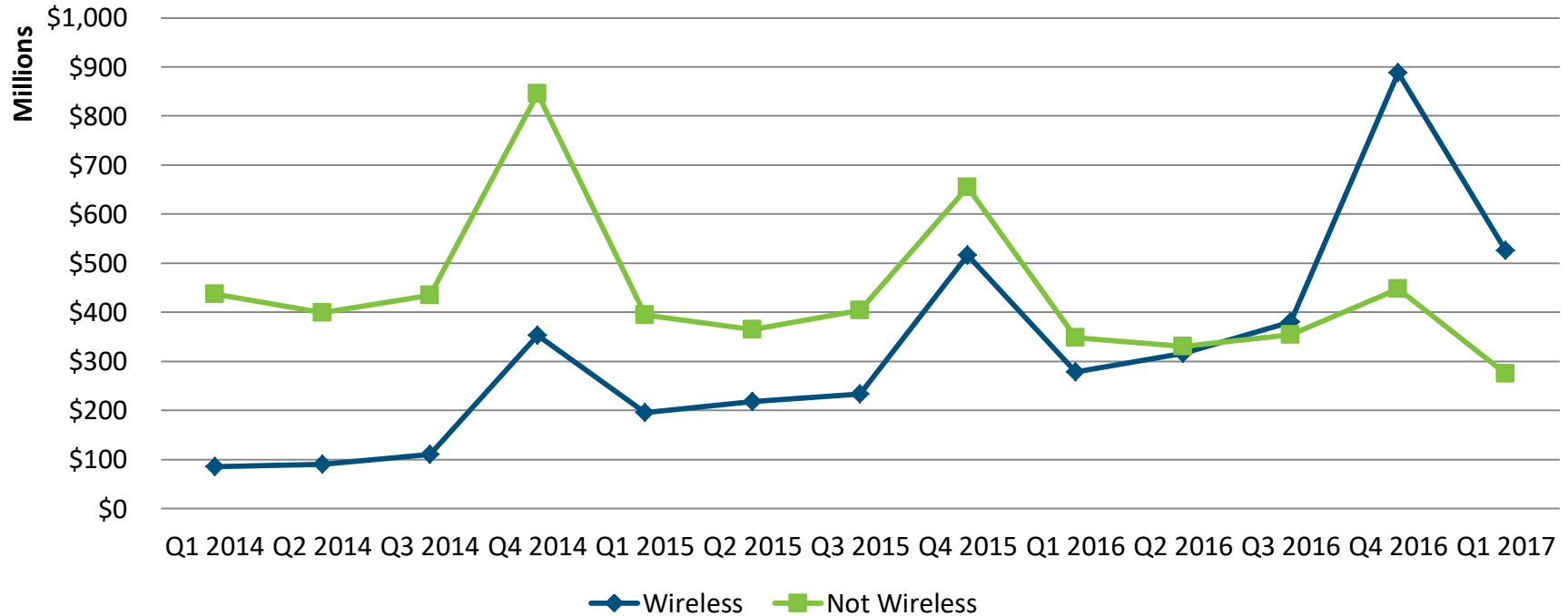
Innovation Category Volumes



Source: The NPD Group, Inc./Retail Tracking Service, Amazon branded products not included, Apple Watch not included

# Wireless has now passed wired in revenue

## Headphone Revenue Trends



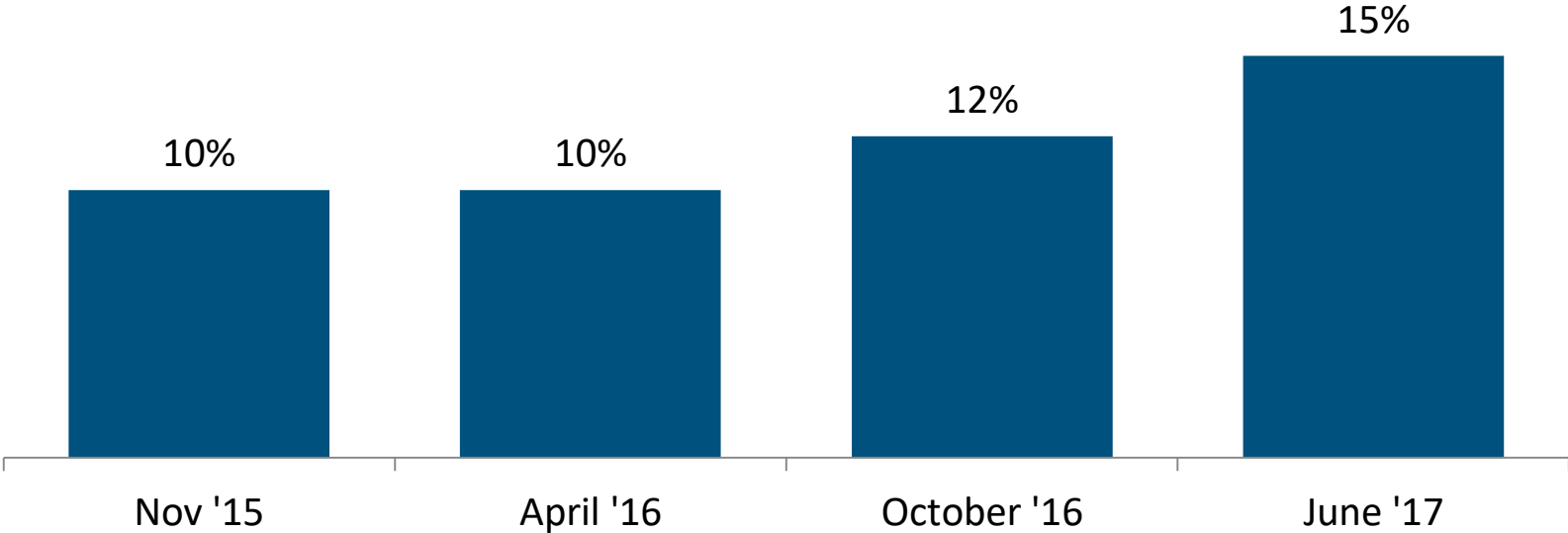
Source: The NPD Group / Retail Tracking Service

# Smart Home Review

1. Fastest growing large category in 2016 and likely to be the stellar segment for 2017
2. Top 1 or 2 brands dominate their categories (ex. Nest in smart thermostats, Philips in lighting)
  - Price disruption will challenge the brand landscape across all smart home categories in 2017 and 2018
3. Millennials are driving interest but broader consumer interaction needed to make growth continue to accelerate
  - Voice is key in driving adoption outside of tech enthusiasts
4. Retail still struggles with displays and merchandising while consumers struggle about where and how to buy

# Smart home ownership growth is beginning to accelerate

% of Internet HHs that own a smart home device

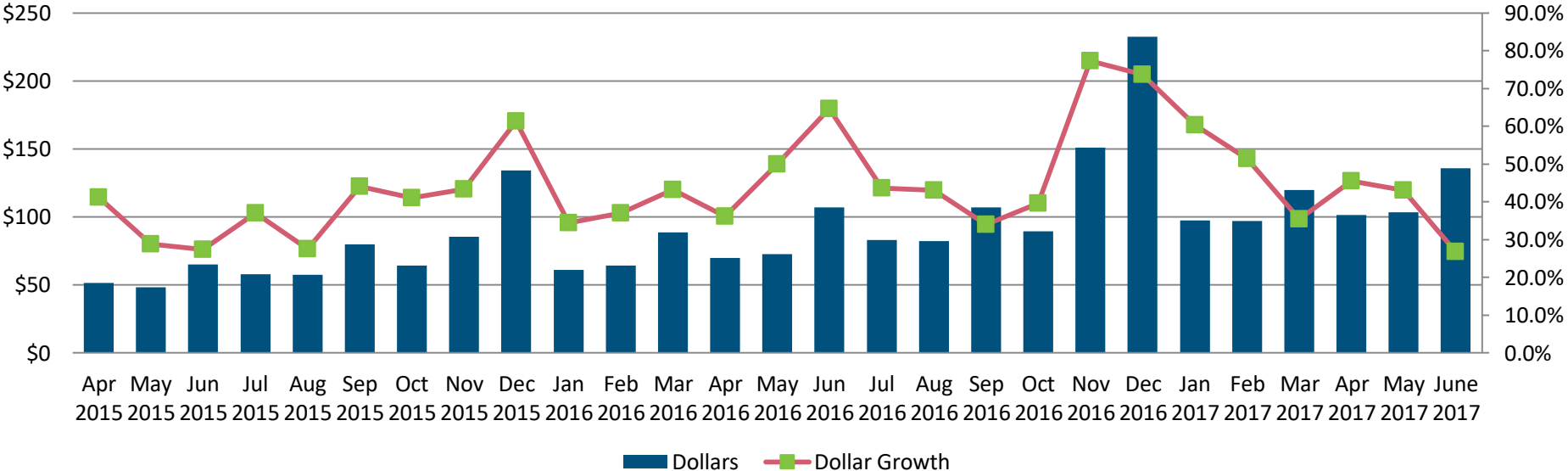


Source: Connected Intelligence, Connected Home Automation Report, Q2 '17



# Smart Home continues to post strong revenue growth despite tough comps

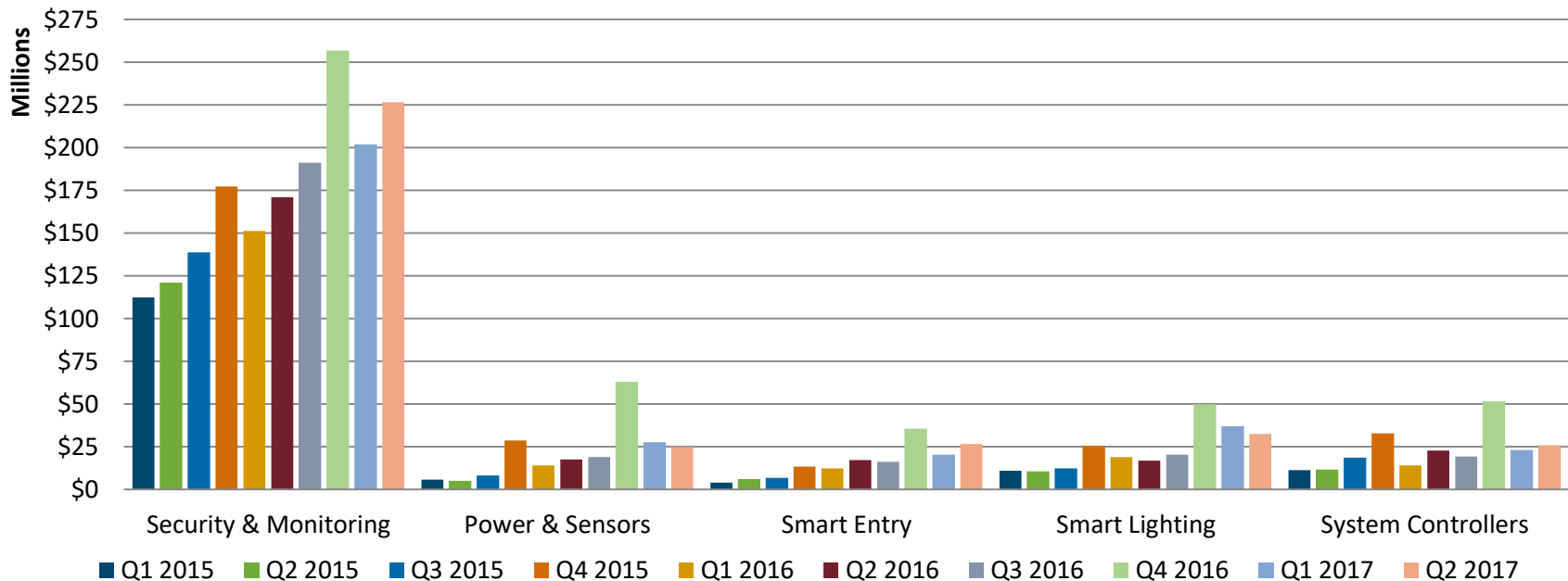
Dollars and Dollar Growth



Source: The NPD Group / Retail Tracking Service

# While security dominates sales \$ other segments are beginning to be more relevant

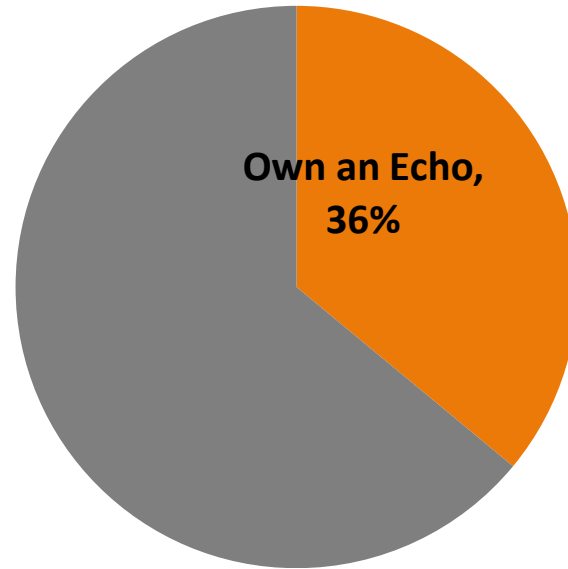
Quarterly Smart Home Revenue by Segments



Source: The NPD Group / Retail Tracking Service

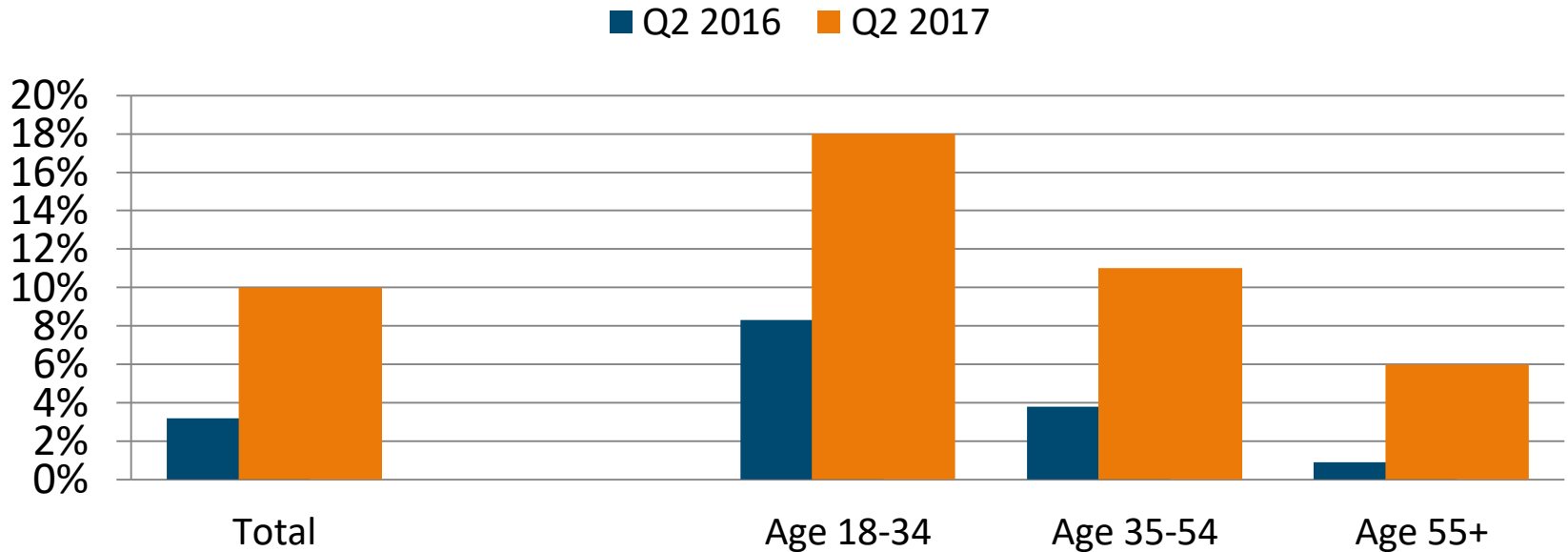
# Smart home owners are more likely to own an Echo product

Echo ownership within smart homes



# Voice activated speaker ownership stands at 10%

## Voice Activated Speaker Ownership\*



Source: Connected Intelligence, Connected Home Automation Report, Q2 '17  
\*Q2 2017 wave includes Google Home

# Holiday Final Thoughts

- CE industry continues to see improving revenues as ASPs in largest categories rise
  - Falling units however point to industry challenges
  - Channel competition the biggest pricing wildcard in holiday 2017
- Channel challenges will remain as timing and promotion continues to play an important part in demand even as the device demand changes
  - eCommerce and omnichannel will be more pronounced in retail than ever before
- Holiday 2017 will remain dependent on traditional promotional categories but new and innovation segments (and some traditional opportunities) will need to outperform to deliver on forecast
- Positives of the Tech mass market are always challenged by the shifting of technology towards early adopters, no where is this more apparent than holiday

# Question & Answer

# Thank you

Apparel  
Appliances  
Automotive  
Beauty  
Consumer Electronics  
Diamonds  
E-commerce  
Entertainment  
Fashion Accessories  
Food Consumption  
Foodservice  
Footwear  
Home  
Mobile  
Office Supplies  
Retail  
Sports  
Technology  
Toys  
Video Games  
Watches / Jewelry