





Consumer Technology Association

CE MarketMetrics



Global Consumer Technology
Spending Forecasts



Retail CE sales tracking at more than 340,000 retail stores in 80 countries.



Consumer Technology Association U.S. sell-in (shipments) data for dozens of CE categories on a monthly basis.



#### **Product Categories**

#### **Consumer Electronics**

- Audio and Video Accessory
  - o Headphone
  - o Universal Remote Control
  - o Docking Speakers
    - Bluetooth Pairing Speakers only
    - Docking Speakers Excl. Bluetooth Pairing only
- Auto Multimedia
  - o Car Entertainment
    - Car Audio
    - Car Speaker
    - Car Vision
    - Fixed Car Navigation
  - Portable Car Navigation
- Home Audio
  - Audio Home System
    - Home Theatre System
    - Music System
  - O Hi-Fi Single Element
  - Loud Speaker
    - Hi-Fi Loudspeaker
    - · Soundbar Speaker

- Home Video
  - O Home DVD Player and Recorder
    - Home DVD Player
    - Home DVD Recorder
  - O Home HD DVD+ Blu Ray
- Personal Audio
  - o Portable Media Player
  - o Radio Devices
    - Clock Radio
    - Portable Radio
    - Radio Boombox
- E-Reader
- Recording Media
  - o Memory Card
  - Other Recording Media
    - ∘ CD R
    - o DVD R
  - o USB Memory





#### **Product Categories**

#### **Consumer Electronics**

- TV
- o LCD TV
  - ∘ 3D LCD/LED TV
  - LED TV
  - ∘ Smart LCD/LED TV
- o CRT TV
- o Plasma TV
  - ∘ 3D Plasma TV
  - Smart Plasma TV
- TV Set-Top Box
- Videogame Console

#### IT

- Monitor
- Other PC Peripherals
  - o External HDD
  - Keying Device (Keyboard)
  - o PC Speaker
  - Pointing Device (Mouse)
- PC
- o Desk PC
  - All-in-One PC
  - Desk PC (ex AIO)
- o Mobile PC
  - Netbook PC
  - Notebook PC
  - Computing Tablet
- o Media Tablet
- Printing
  - o Printer
  - Printer Cartridge





#### **Product Categories**

#### **Telecom**

- Mobile Handsets
  - o Mobile Phone
  - o SmartPhone
- Other Telecom
  - Headset
    - Headset ex-Mobile Stereo
    - Mobile Stereo Headset
  - o Line Phone
    - Fixed Line Phone
    - Mobile Line Phone
- Wearables
  - Health & Fitness Tracker
  - Smart Eyewear
  - o Smartwatch
  - Wrist Sport Computer
  - o Locator
  - Connected Watch
  - o Hearables

#### **Photo**

- Digital Camcorder
  - Action Camera
  - O Digital Camcorder ex-Action Camera
- Digital Still Photography
  - O Digital Still Camera
    - Compact Camera
    - Compact System Camera (Mirrorless)
    - DSLR Camera
  - O Interchangeable Lens



#### **Analysis Considerations: Geographical, Financial**

## <u>Developed</u>

- North America
- Western Europe
- Developed APAC



### **Emerging**

- Central /Eastern Europe
- Latin America
- Emerging APAC
- Middle East/ Africa



- Exchange Rates (FX)
- Sales Tax
- Tech Subsidies





0.81



0.96



6.94



118.50



1.34





# **Technology** 2016: The Year of the Unexpected





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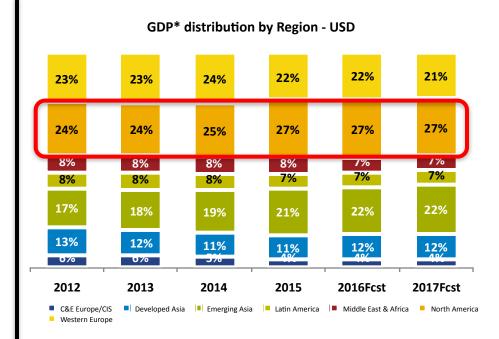
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#### **Global Economic Picture**

#### **World GDP**





CES.tech

<sup>\*</sup> Source: IMF, OCT 2016



# Consumer Technology 2017 Global Economy:

#### Realignments, Long-Term Trends, New Shocks

- Uncertainty underscores outlook
- Brexit, trade risks and Trump
- Some firming of commodities pricing
- Sentiment toward emerging markets improving Asia looking strong
- Advanced economies wrestle with new political landscape
  - USA, UK, Korea, Brazil
- China: consumer spending strong, capital spending weak





# **Technology's Magnificent Seven**







Share: Global

**2015 = 79%** 761 billion USD

**2016 = 78%** 740 billion USD







# Technology's (New) Magnificent Seven







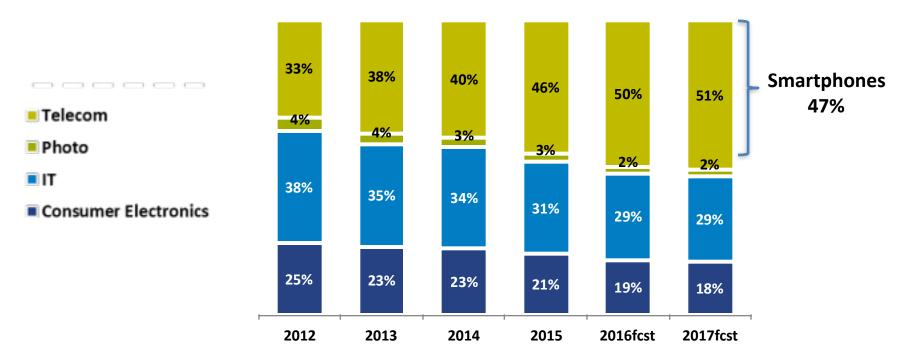
Global Share:

2017 = 81% 754 billion USD



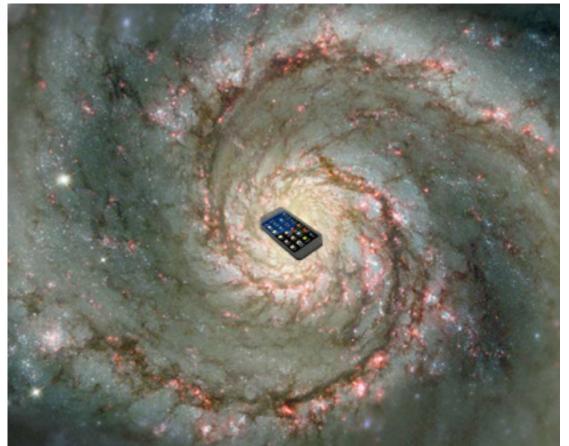
### **Mobility Makes the World Go Round**

Global Digital World Values (USD) share by Category





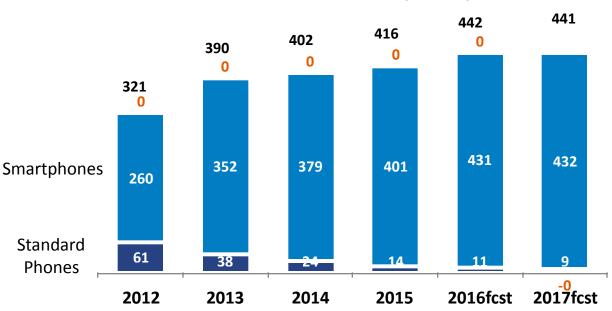






## **Smartphones: Super Massive**

#### Global Mobile Values (USD bn)







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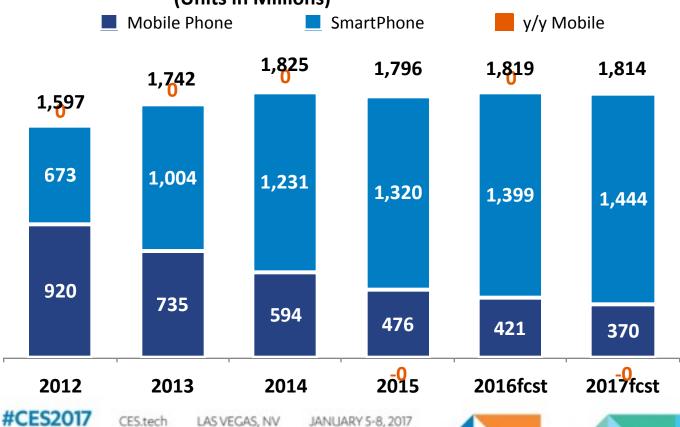
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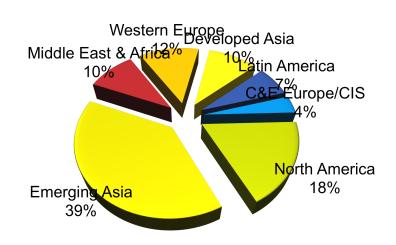
## **Global Handset Volumes Steady**

(Units in Millions)





## **Smartphones Value Share by Region (USD)**

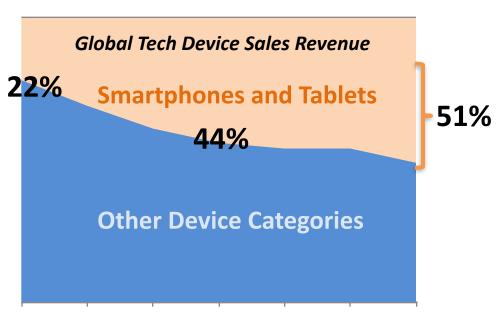




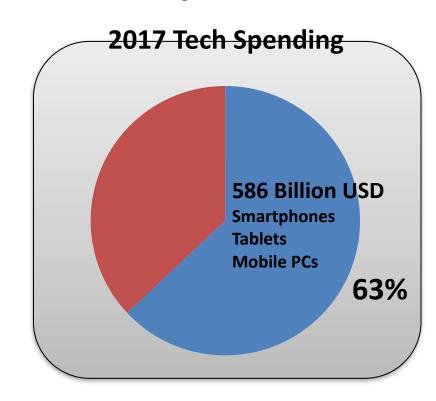




## Think Globally, Connect 'Mobilly'



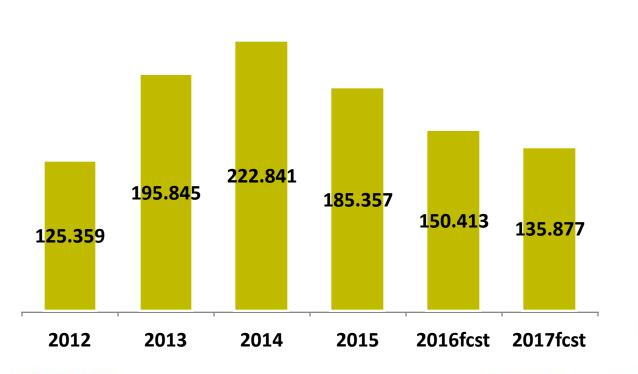






**Global Tablet Volumes Trending Lower** 

(Units in Millions)



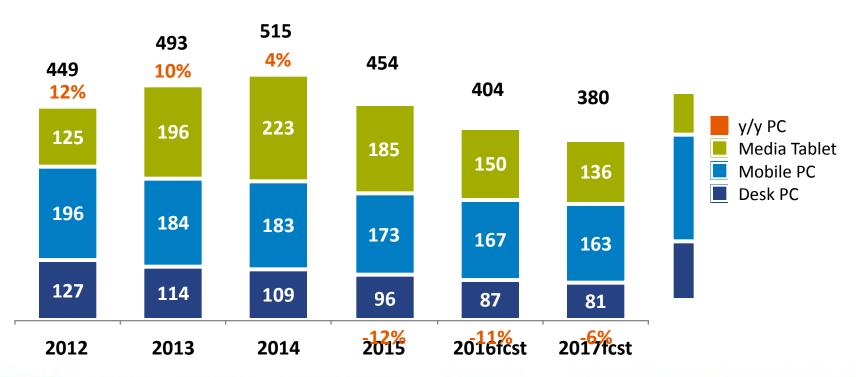






#### **Have Global PC Volumes Crested?**

(Units in Millions)





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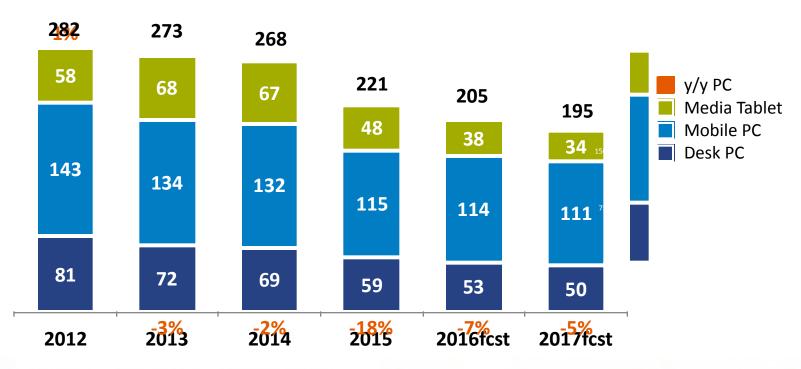
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## **Tablet Declines Impact Global PC Revenues**

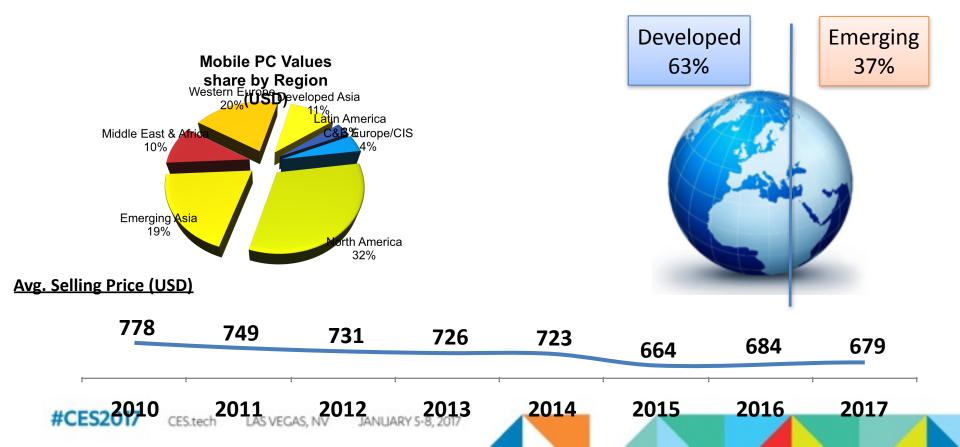
(Revenues in Billions USD)







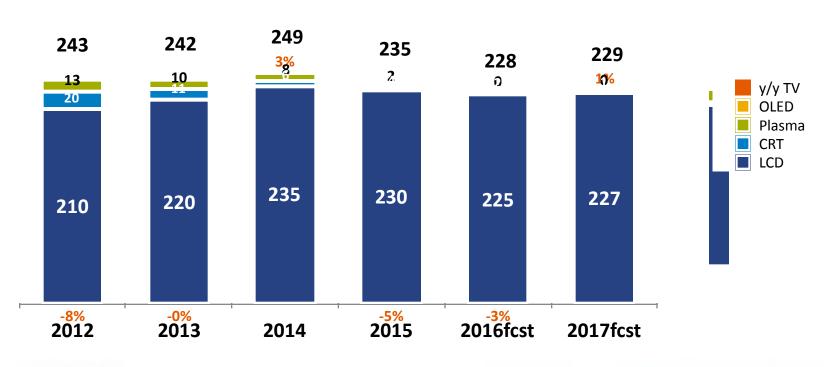
## **Developed Regions Dominate Mobile PC Sales**





## **Global TV Volumes Leveling Off**

(Units in Millions)

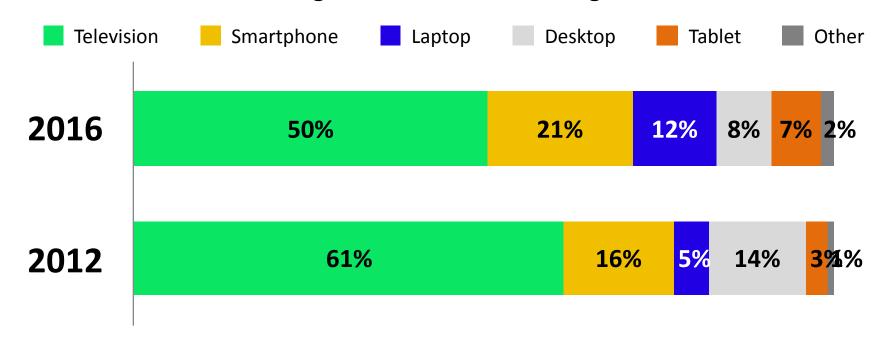






# Smaller Screens = Bigger Viewing Profile

#### **USA: Average Share of Video Viewing on Each Device**



Source: The Evolving Video Landscape (2012)

Source: 2016 Video Study



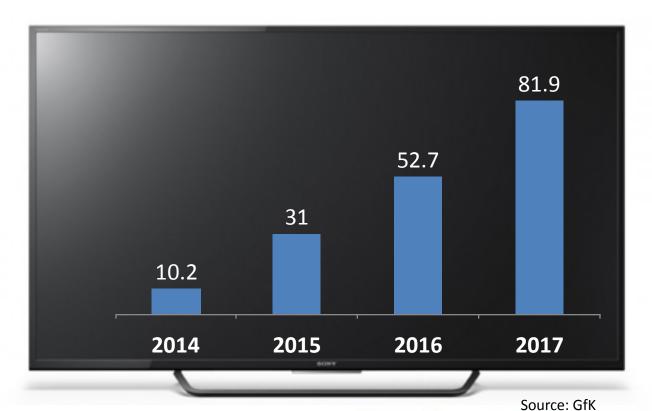
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### Global 4K UHD Sales Volumes (in Millions)

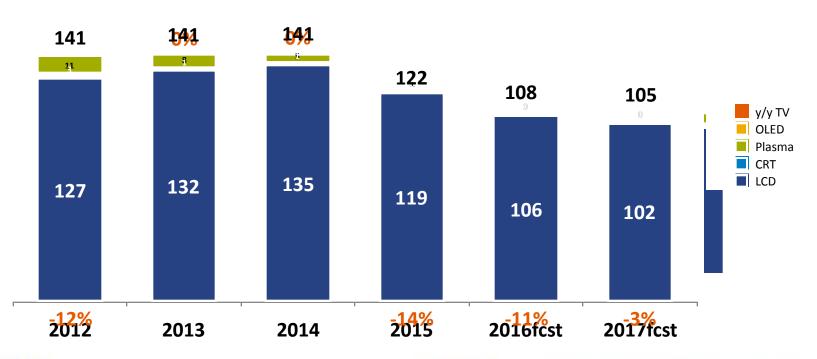






### The New Normal for TV

(Revenues in Billions USD)





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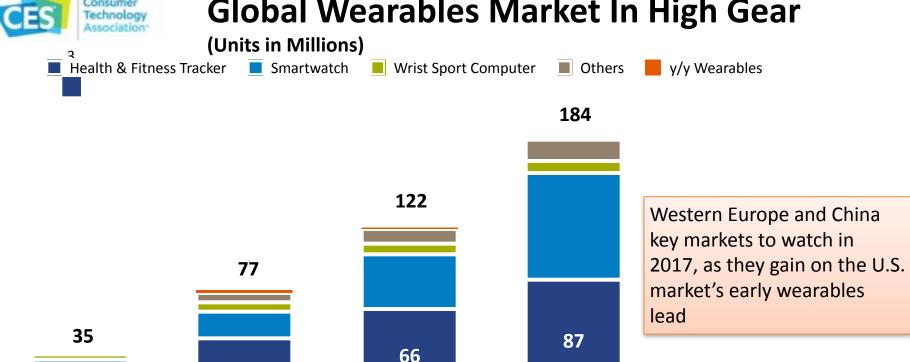
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### **Global Wearables Market In High Gear**

**2017fcst** 





26

2014

45

2015

**2016fcst** 



#### Gear S3 smartwatch





VPS 16 eye-tracking glasses

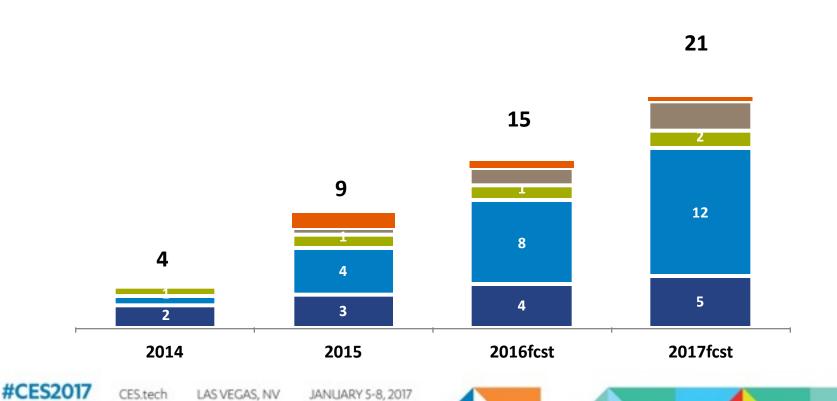
Spartan Boxer Brief

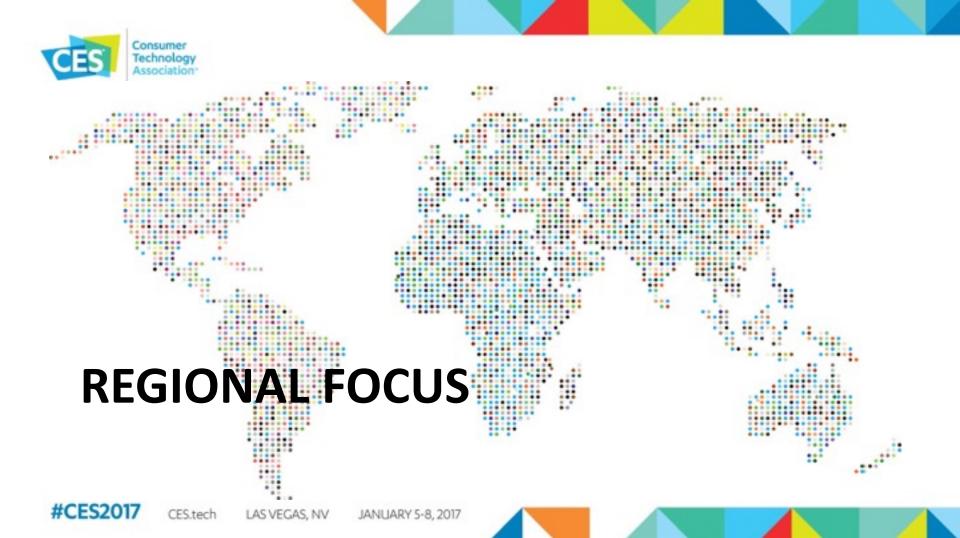




# Wearables: Double-Digit Revenue Growth

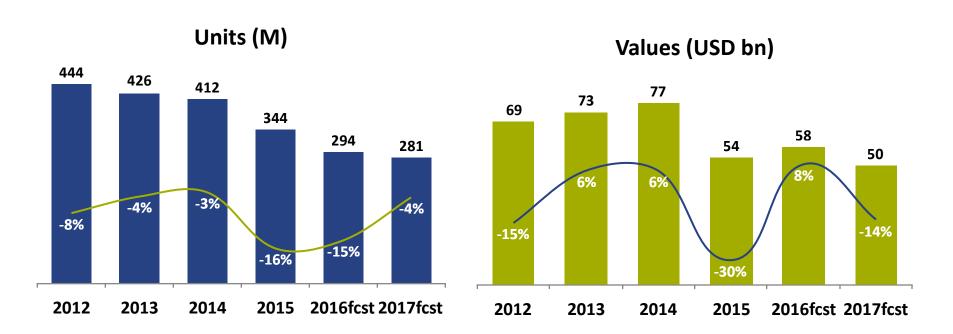
(Revenues in Billions USD)







## **Latin America – Tech Spending Analysis**







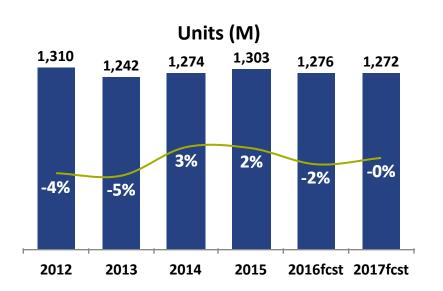
## Latin America | Seeking Economic Redemption?

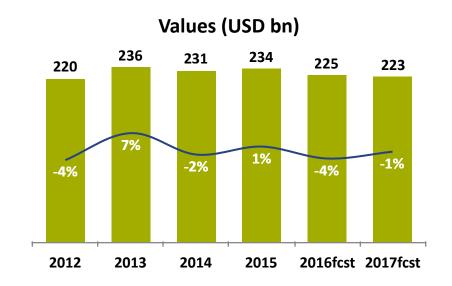
- **Brazil** tough recession, infrastructure
- **Argentina** more economic weakness
- Venezuela soaring inflation
- Economic challenges dim 2017 outlook for tech spending
- Telecoms is expected to return to growth in 2017, while the other main categories continue to decline
- Some emerging product markets are still small





## **North America – Tech Spending Analysis**









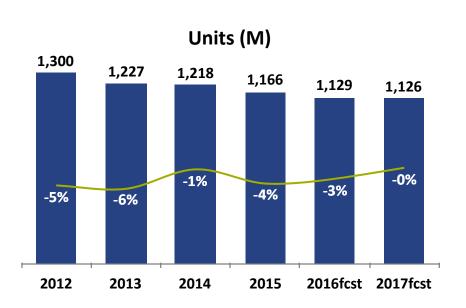
- **USA** CCI=113.7 highest since 2001. Employment/wages, spending and interest rates up.
- **Mexico** modest growth. Crime, corruption, immigration issues present headwinds.
- Canada impact of oil slowdown. Trade with USA and EU to rise.
- Demand for 2017 revised up, driven by expected improvement in smartphones and PC demand.
- Revenue decline expected to moderate slightly due to increasing ASP's within main sectors
- Wearables and audio products are among the fastest growing products.

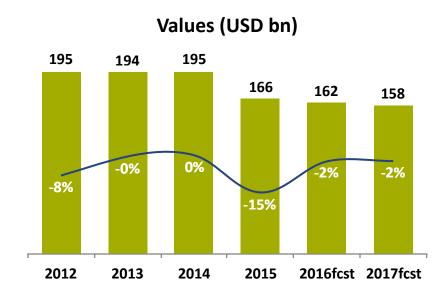






## **Western Europe – Tech Spending Analysis**







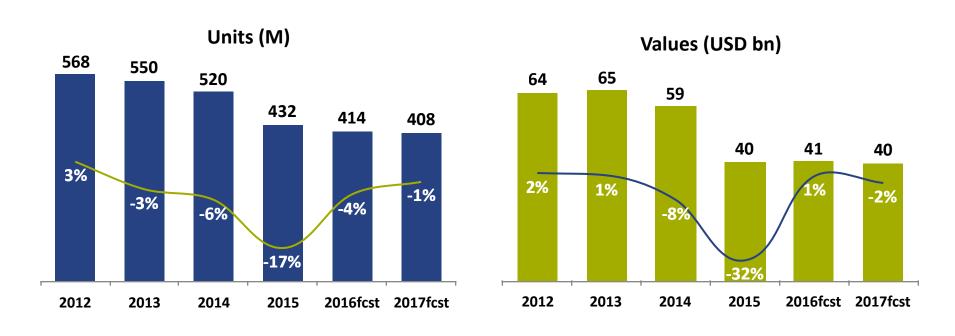
#### Western Europe | Mind the Gap

- Brexit impact and potential aftershocks still unclear
- EU public debt; immigration tensions spark nationalism
- More headwinds to economic growth than tailwinds
- Smartphones sales stable. Softening demand for other major categories.
- Streaming video adding new life to living room entertainment.





# **C&E Europe – Tech Spending Analysis**







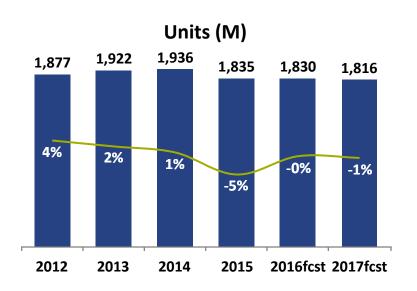
# C&E Europe | Going for Growth!

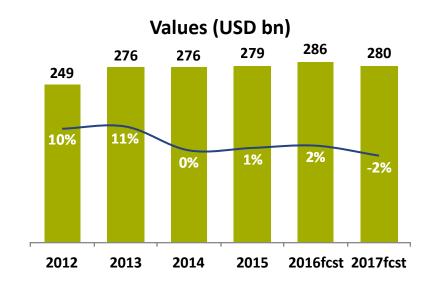
- Central and Eastern Europe economy growing steadily at 3.0%. EU development funds to fuel more growth although currencies pressures present headwinds. Trade tightening could hurt.
- Ukraine and Russia remain in focus 2017.
- Marginal improvement in tech end-demand in most countries. 2016 revenue gains defined by smartphones and LCD TV.
- Replacement cycles quickening. Sales orient towards higher-end devices with better user experience and higher ASP.
- Growth continues for emerging products like wearables.





#### **Emerging Asia – Tech Spending Analysis**

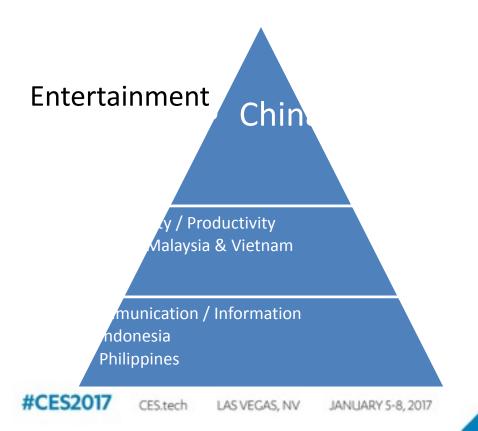








#### China = fully developed tech market



- Tech is fully integrated into daily life & used for enjoyment / entertainment
- Few barriers other than access to brands
- Robust channels online purchasing
- Tech use more basic supports communication & productivity
- Markets still developing in terms of:
  - Internet
  - Channels largely in-store purchase which may contribute to limited access



# Technology Emerging Asia | Growth Beyond China

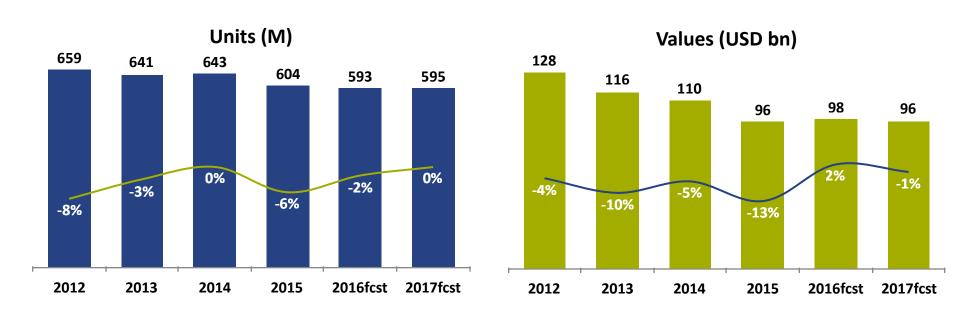
- China GDP 6.4% in 2017 as turn toward service/innovation economy continues.
- India is the new China. GDP growth 7.5% through 2020.
- Other countries seeing lift in end-demand. Chinese brands capitalizing.
- Smartphones dominate the tech landscape.
- Bifurcated strategy: budget phones and high-performance models.
- Among fastest-growing products are 4K Ultra HDTV, action cameras, wearables and audio products.



June 7-9, 2017 Shanghai, China



# **Developed Asia – Tech Spending Analysis**







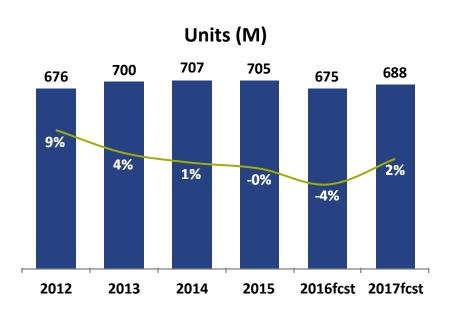
# **Developed Asia** | Active Aging with Technology

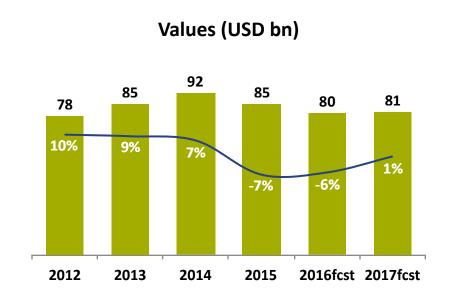
- Weakness moderates in all key countries, 2017 outlook for Japan GDP growth is positive, but still historically low.
- South Korea moving past political scandal
- PC sales improving; smartphone outlook stable.
- · Photo declining.
- Wearables seeing strong growth.
- High adoption of active aging tech?





# Middle East & Africa – Tech Spending Analysis







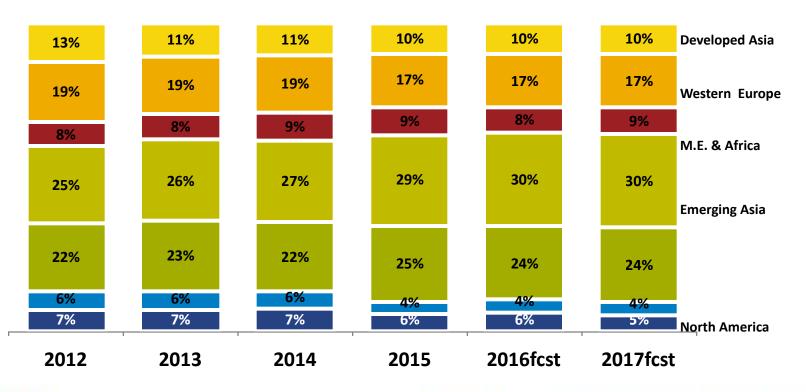


- Conflicts across the region continue to create headwinds to growth.
- 2017 outlook remains positive, driven by improved demand in a some countries, as UAE and Egypt.
- Smartphones domination of tech landscape even more pronounced here.
- Rising competition driving down prices, but also revenues.





#### **Global Tech Spending Share by Region**





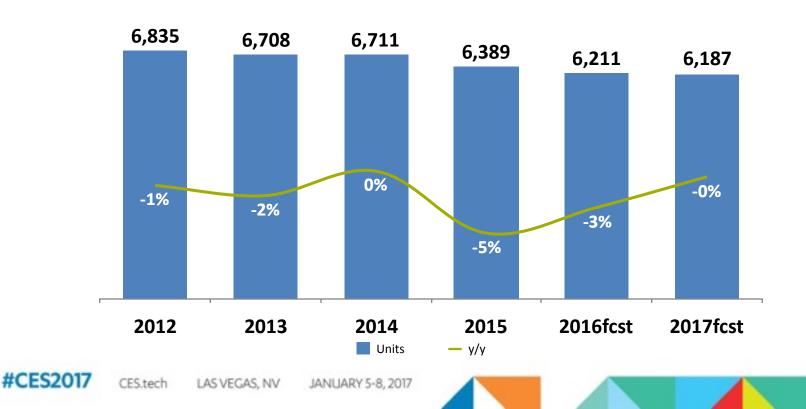
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# Global Consumer Tech Unit Sales Leveling Off (in Millions)





# Global Consumer Tech Spending

(Billions of USD)







# Technology Why is Global Tech Spending Lower?

- Strong dollar unfavorable to conversion of global currencies.
  - Global GDP growth of 3.4% in 2017
  - China growth moderating, Euro and Yen weak
- Volume growth flat / negative in core categories: Smartphones, PCs, TVs
  - Tablets units down 10% in 2017
- Retail prices trending lower in categories with big impact:
  - Smartphones (-3%); TV (-5%); Laptops (-1%)
- Uncertainty underscores outlook for end-demand
  - Geopolitical (Trump, Russia); Trade risks (TPP, Brexit), Commodities pricing (Oil)





# Go here for slides: CTA.tech/salesandforecasts

