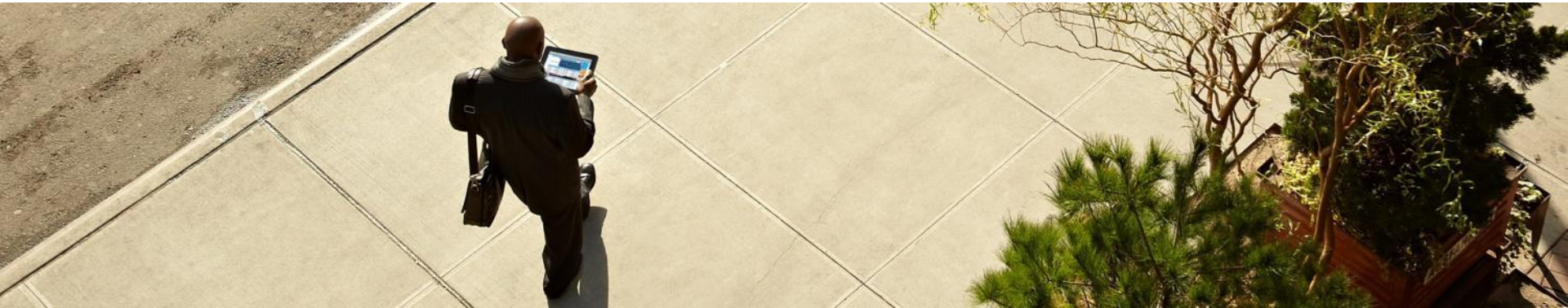
Meeting Spectrum Demand in A Zettabyte World: The Role of Spectrum Sharing

Robert Pepper, VP Global Technology Policy

GSR14 Pre-Event

2 June 2014



Top Trends

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

Cisco Visual Networking Index (VNI)

Expanding the Scope of Cisco's IP Thought Leadership

Cisco® VNI Forecast research is an ongoing initiative to predict global traffic growth. This study focuses on consumer and business mobile data traffic and its key drivers.

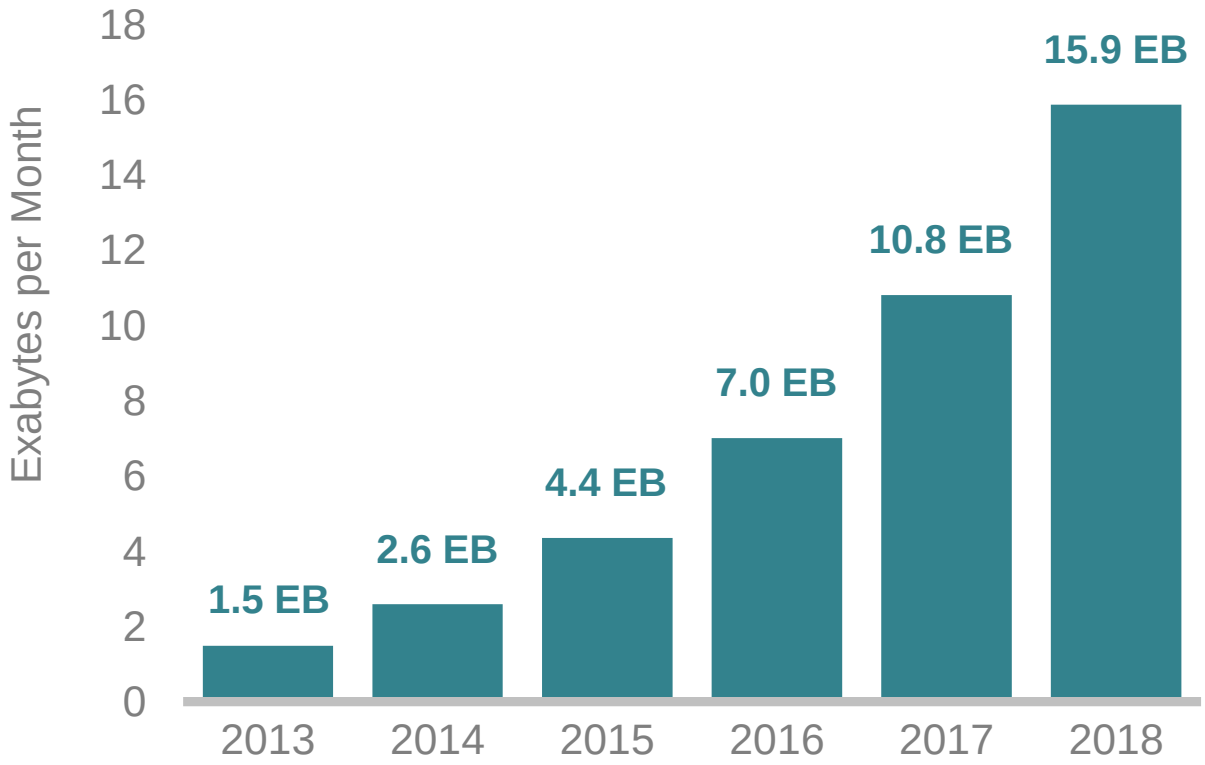
Source: Cisco VNI Global Mobile Data Traffic Forecast, 2013–2018

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

Global Mobile Data Traffic Growth / Top-Line

Global Mobile Data Traffic will Increase Nearly 11-Fold from 2013–2018

61% CAGR 2013–2018



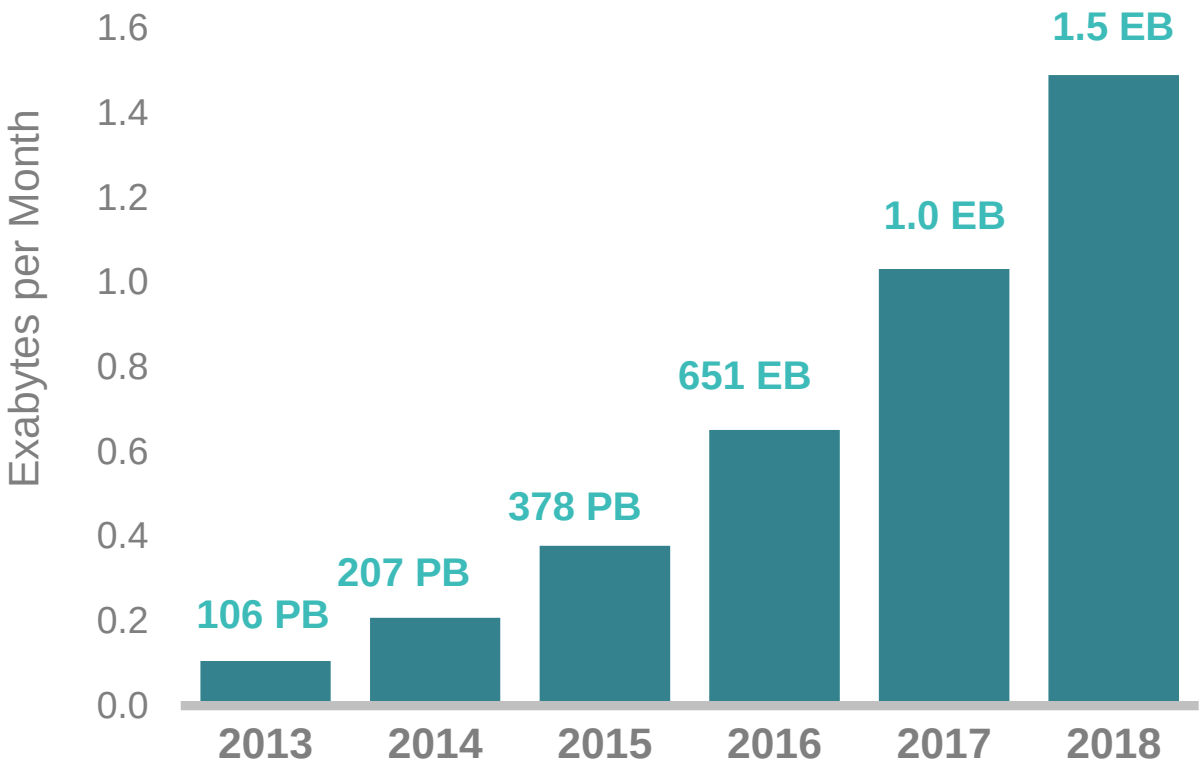
Source: Cisco VNI Global Mobile Data Traffic Forecast, 2013–2018

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

MEA Mobile Data Traffic Growth / Top-Line

MEA Mobile Data Traffic will Increase Nearly 14-Fold from 2013–2018

70% CAGR 2013–2018



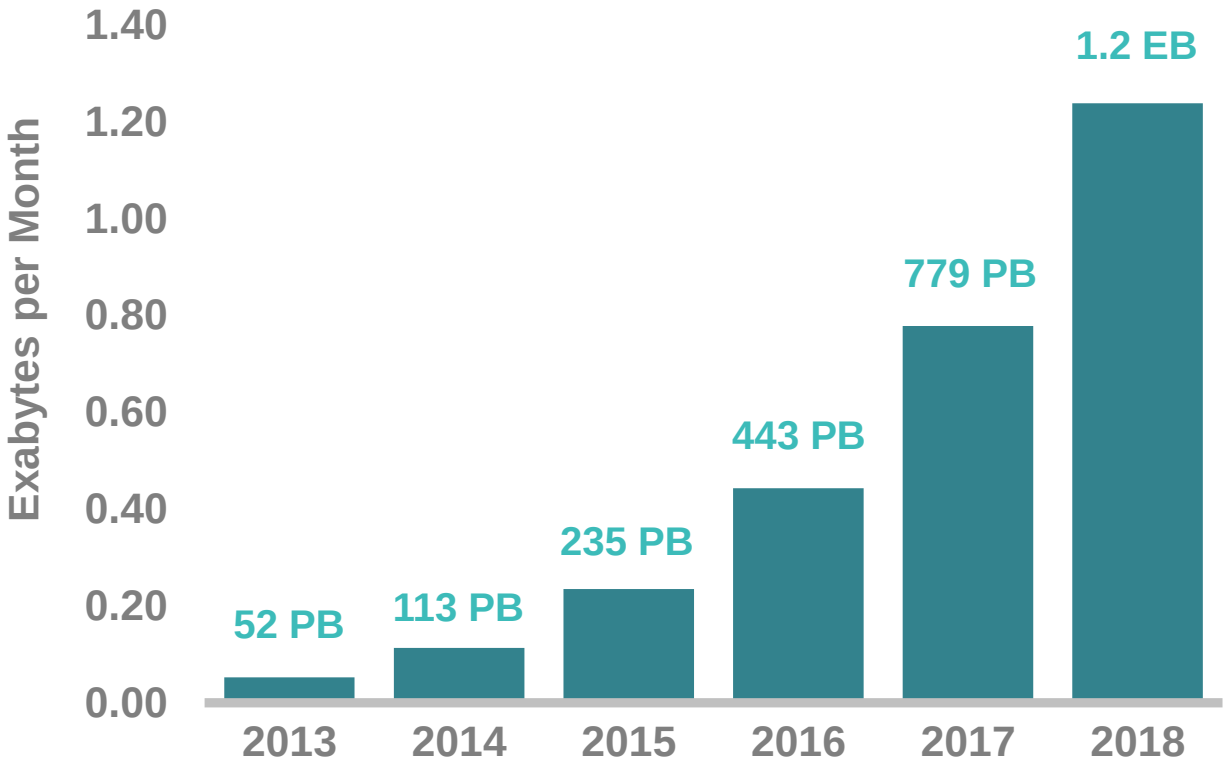
Source: Cisco VNI Global Mobile Data Traffic Forecast, 2013–2018

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

India Mobile Data Traffic Growth / Top-Line

India Mobile Data Traffic will Increase Nearly 24-Fold from 2013–2018

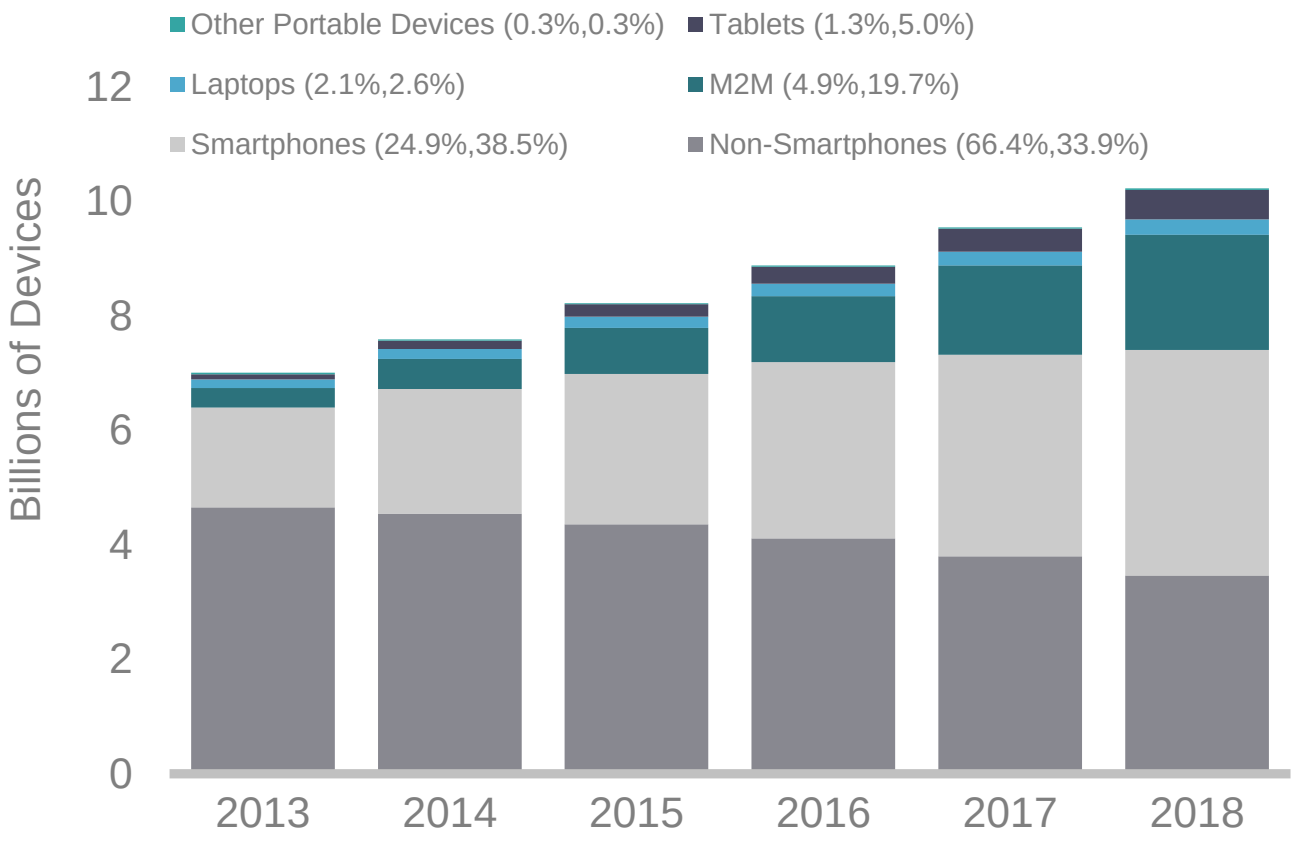
88% CAGR 2013–2018



Source: Cisco VNI Global Mobile Data Traffic Forecast, 2013–2018

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

Global Mobile Device Growth by Type



* Figures (n) refer to 2013, 2018 device share

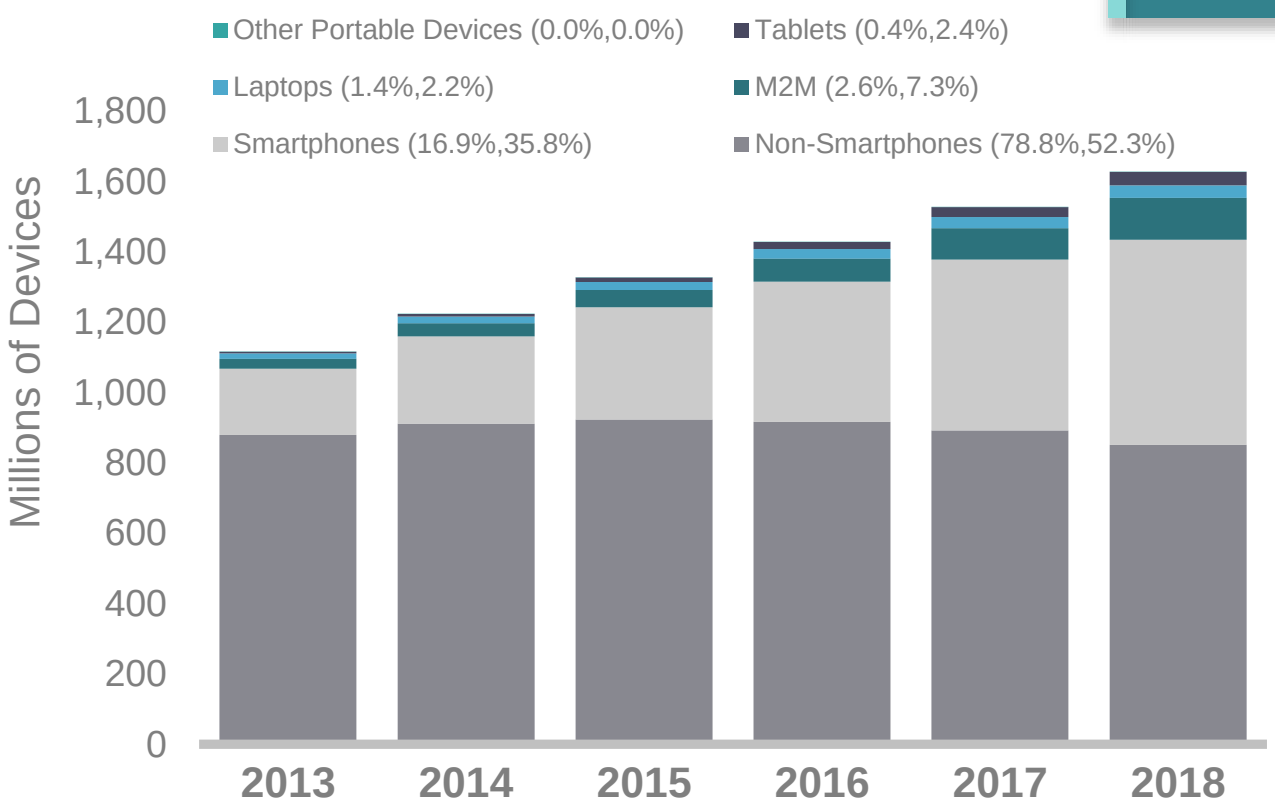
Source: Cisco VNI Global Mobile Data Traffic Forecast, 2013–2018

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

Middle East & Africa Mobile Device Growth by Type

By 2018, Smartphones Have 36% Share; Non-Smartphones Decline Tablets and M2M Gain Share

8% CAGR 2013–2018



* Figures (n) refer to 2013, 2018 device share

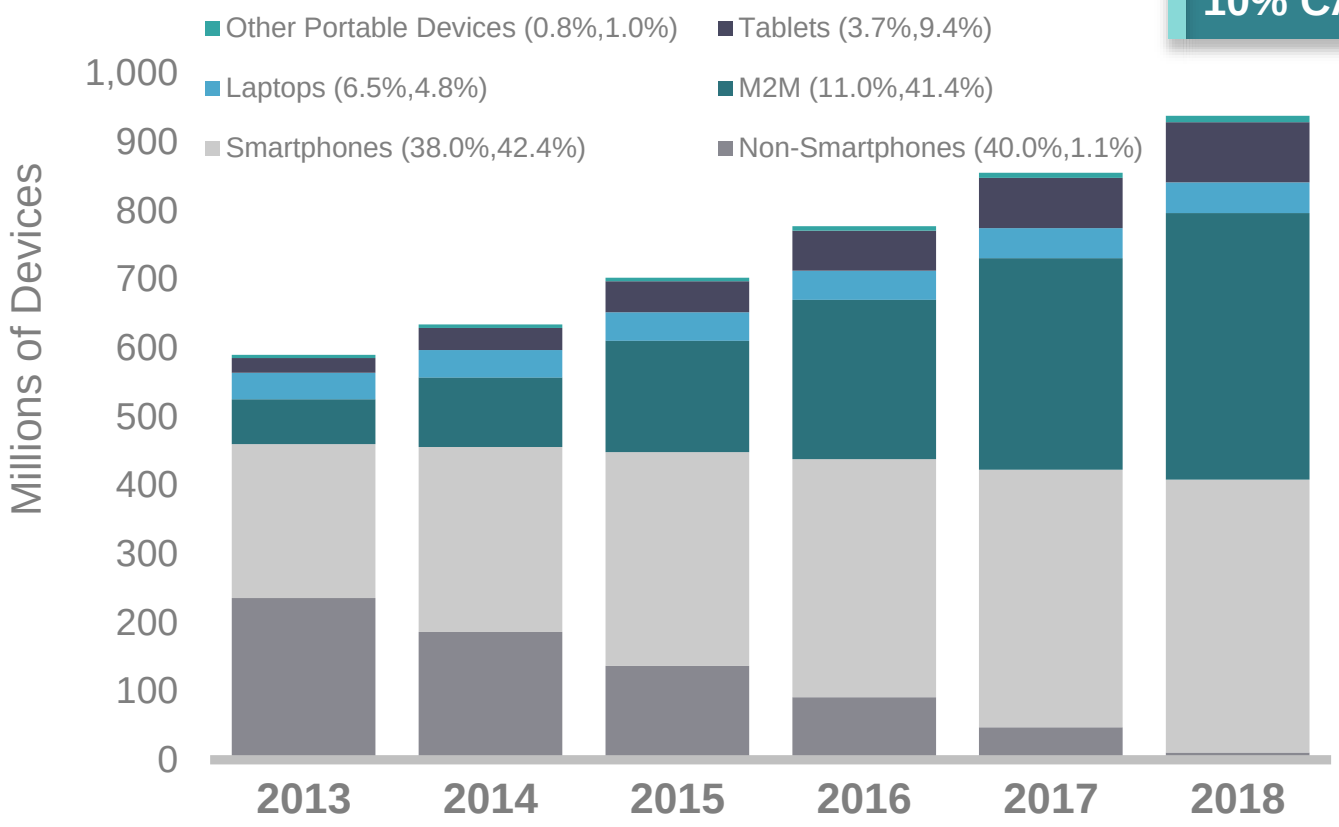
Source: Cisco VNI Global Mobile Data Traffic Forecast, 2013–2018

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

Western Europe Mobile Device Growth by Type

By 2018, Smartphones Have 42% Share; Non-Smartphones Decline Tablets and M2M Gain Share

10% CAGR 2013–2018



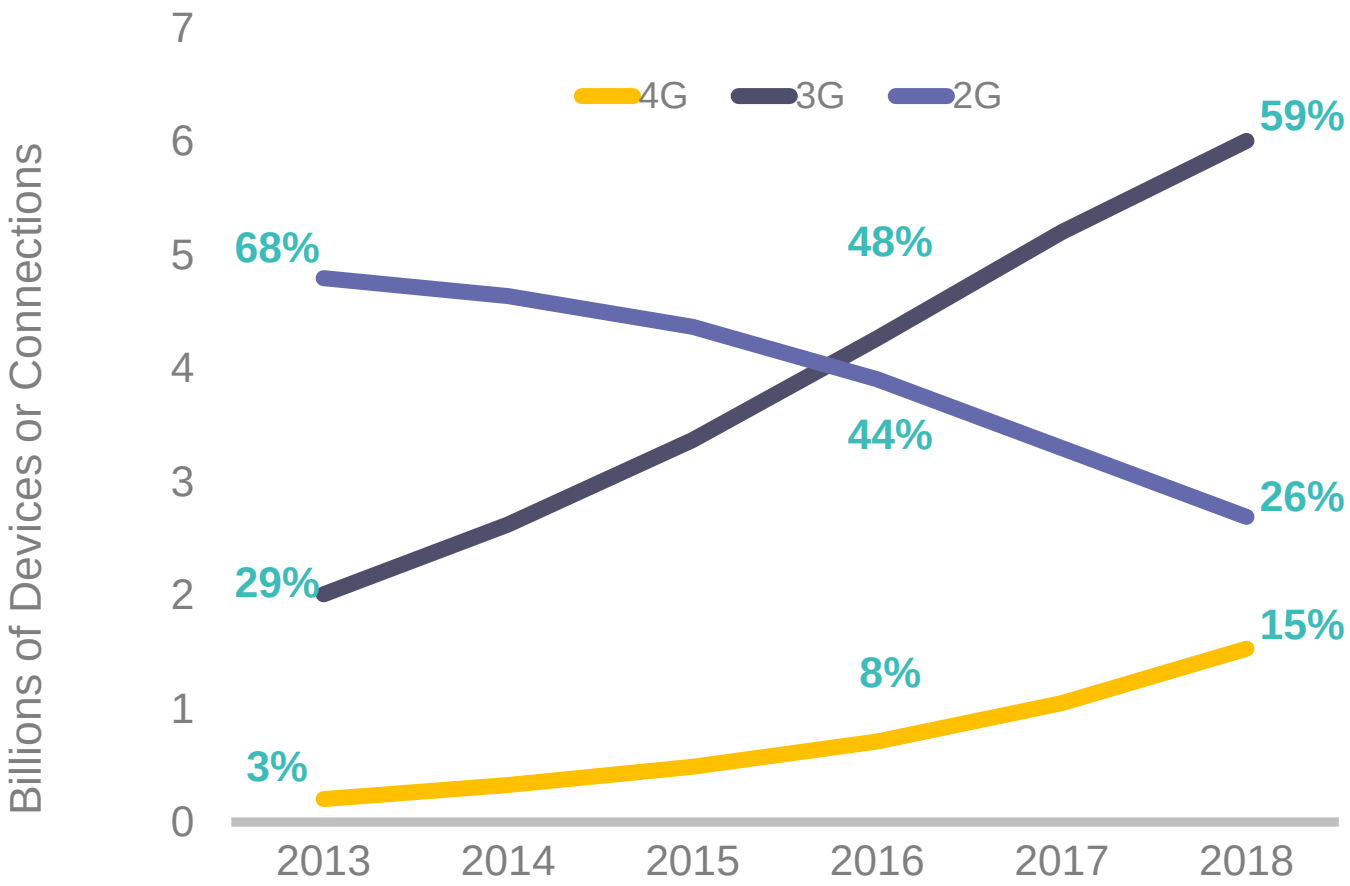
* Figures (n) refer to 2013, 2018 device share

Source: Cisco VNI Global Mobile Data Traffic Forecast, 2013–2018

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

Global Connections by Network Type

2G, 3G, and 4G Technology Connection Share

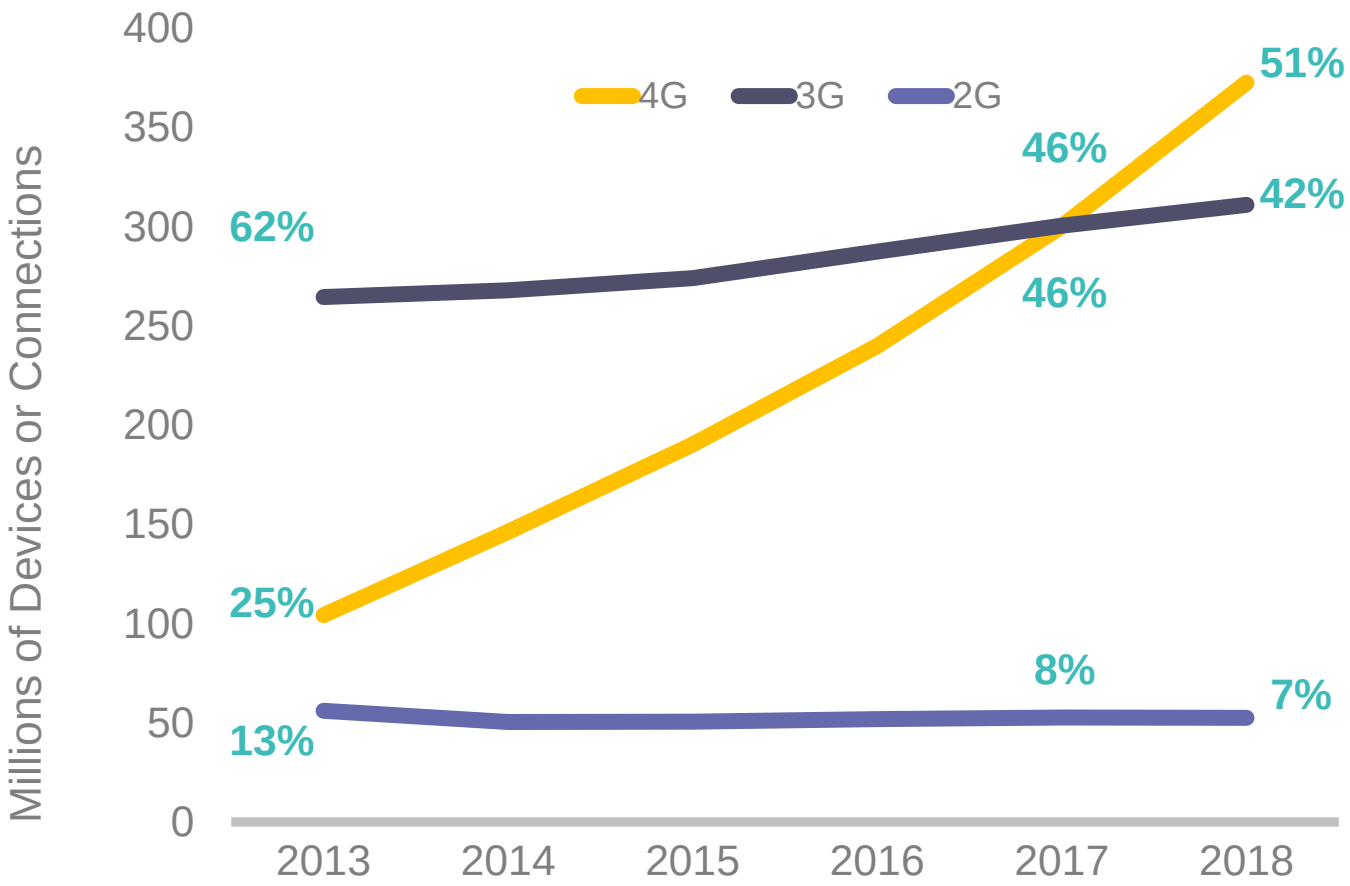


Source: Cisco VNI Global Mobile Data Traffic Forecast, 2013–2018

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

North America Connections by Network Type

2G, 3G, and 4G Technology Connection Share

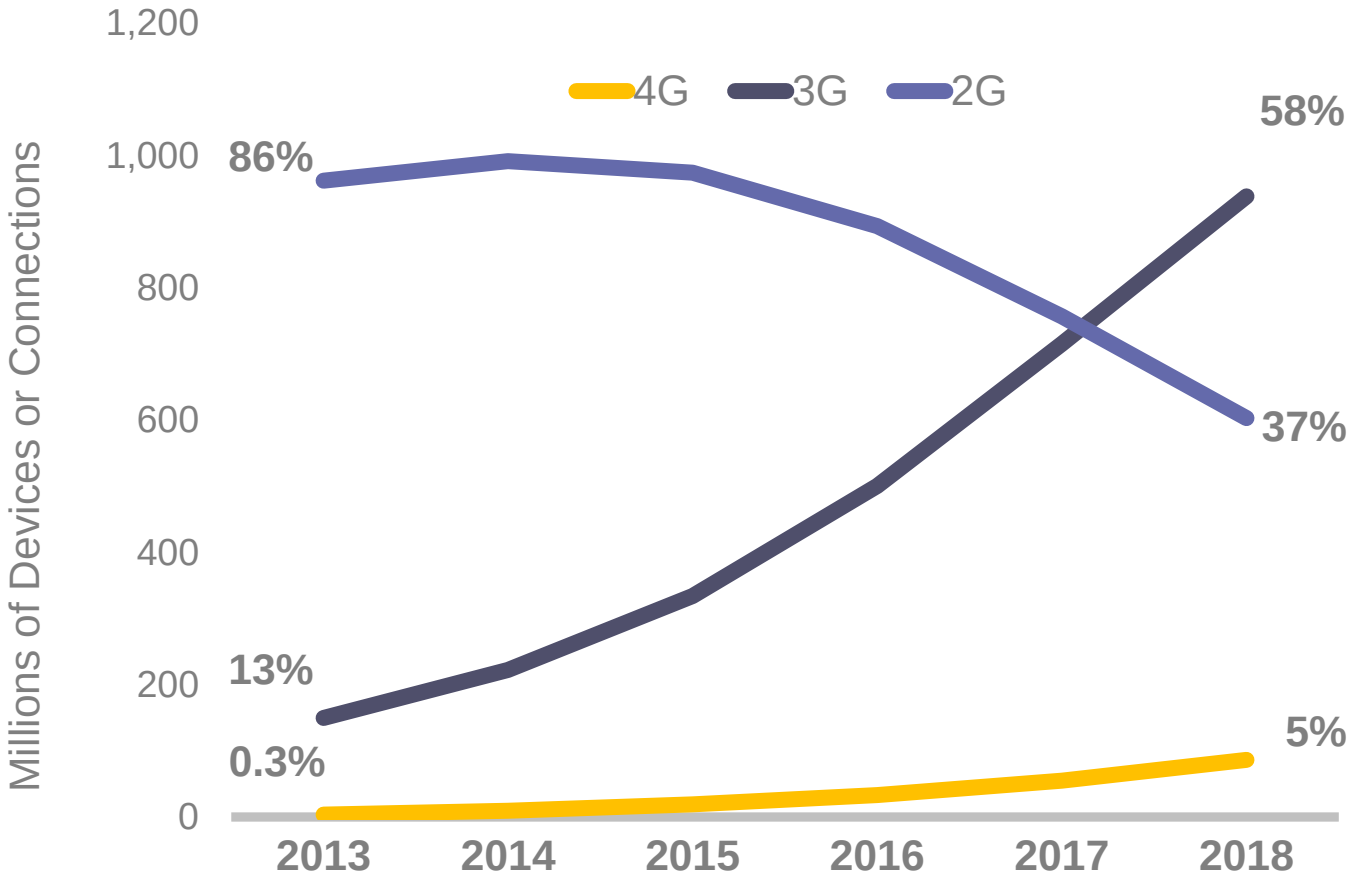


Source: Cisco VNI Global Mobile Data Traffic Forecast, 2013–2018

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

Middle East & Africa Connections by Network Type

2G, 3G, and 4G Technology Connection Share

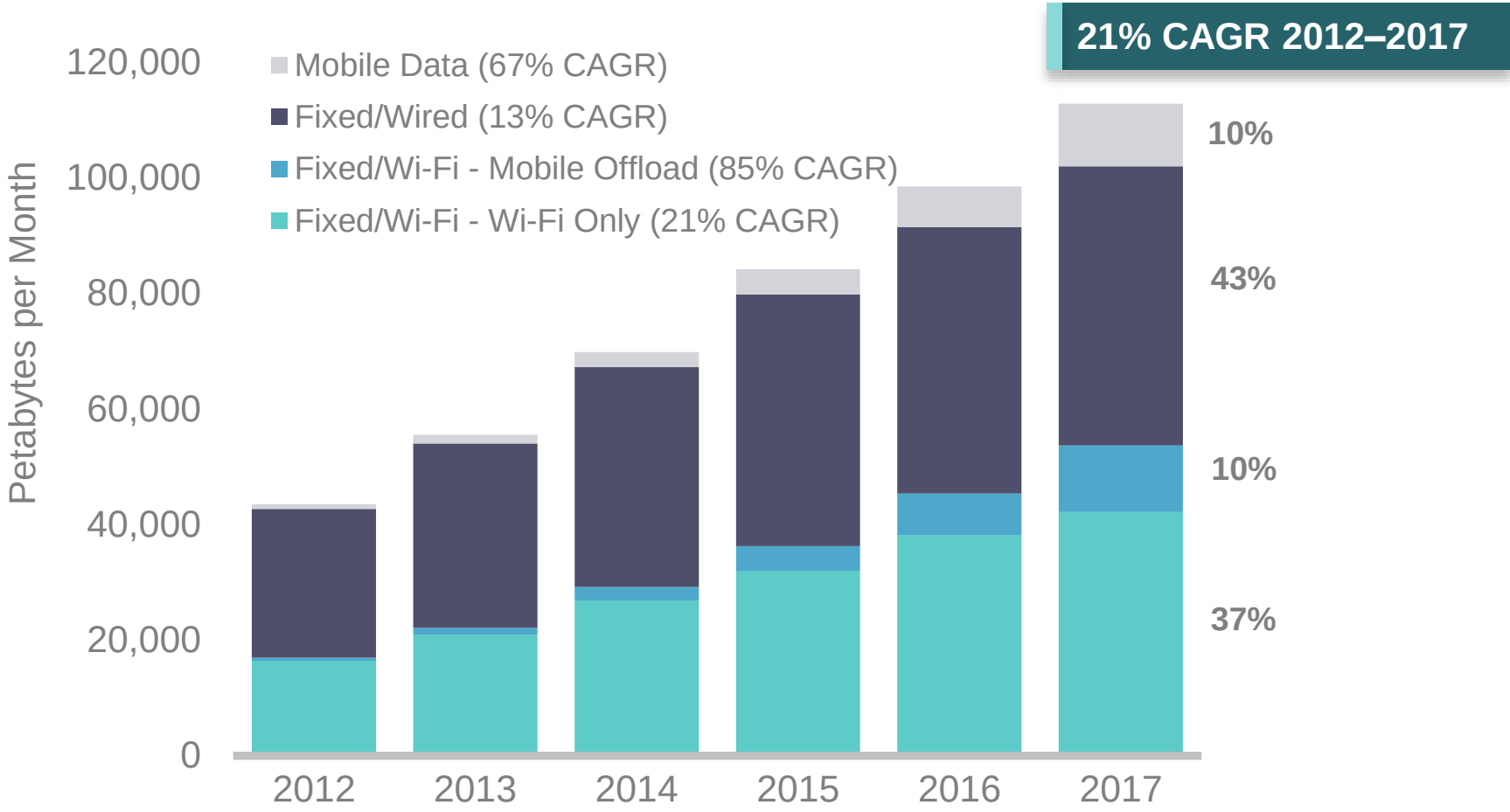


Source: Cisco VNI Global Mobile Data Traffic Forecast, 2013–2018

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

Global IP Traffic by Local Access Technology

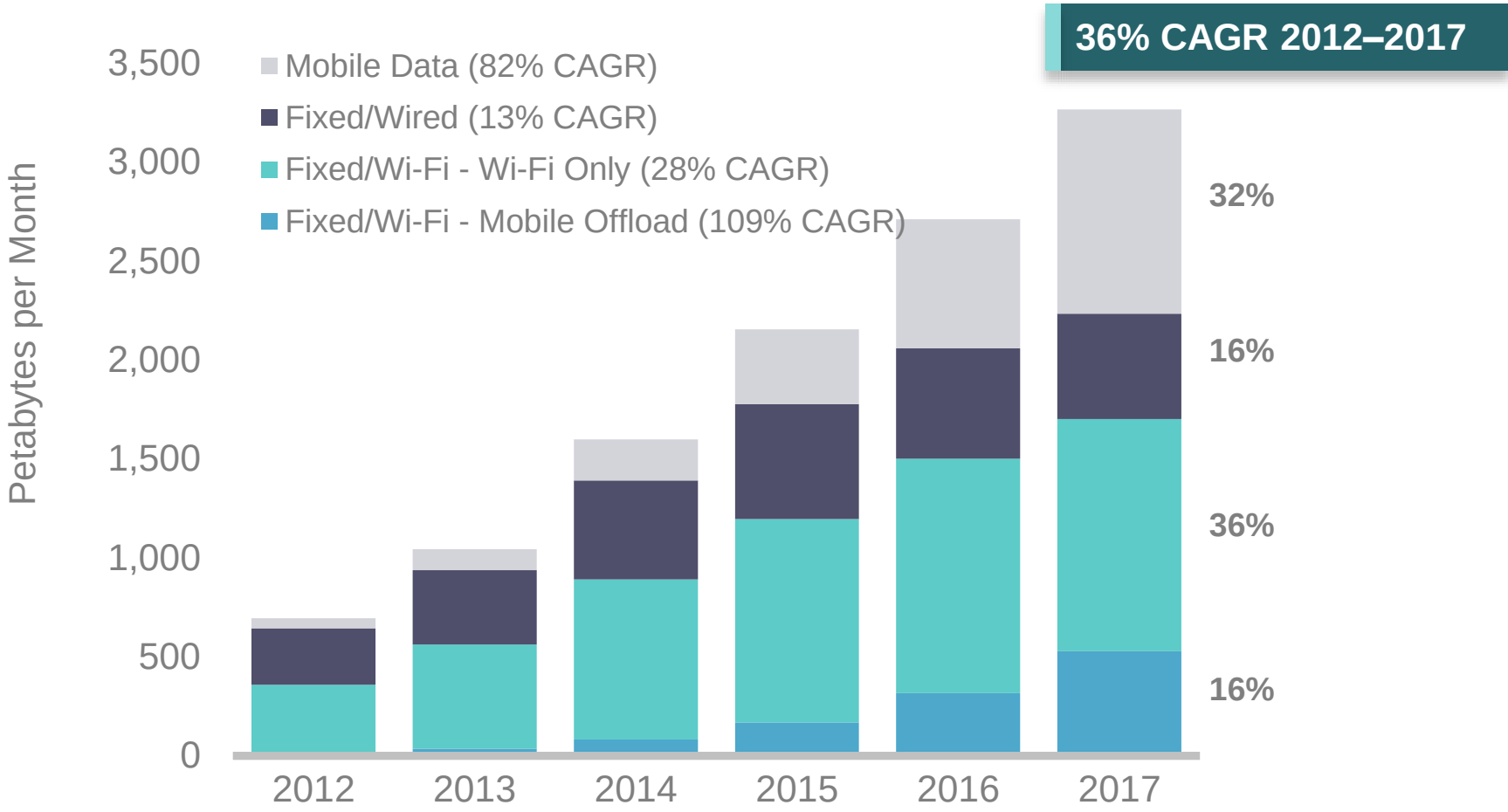
Wi-Fi From Mobile Offload Growing Fastest



Source: Cisco VNI Global Mobile Data Traffic Forecast, 2013–2018

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

Middle East & Africa IP Traffic by Local Access Technology



Source: Cisco VNI Global Mobile Data Traffic Forecast, 2013–2018

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

Spectrum Sharing to Meet Demand?

- Need more spectrum: licensed and unlicensed
- Heterogeneous requirements
- White Space: The opportunistic use of allocated but unassigned spectrum
  - Secondary use in licensed bands
  - NOT: stealth reallocation of licensed bands
- Dynamic Spectrum Access: Next step in sharing using range of new technologies/techniques to share
- Challenges
  - Technical
  - Business case

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

Top Trends

© 2013-2014 Cisco and/or its affiliates. All rights reserved.

Thank you.