Cisco Visual Networking Index (VNI)

Global IP Traffic Forecast 2009–2014

With Regional Highlights

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Cisco Visual Networking Index (VNI)

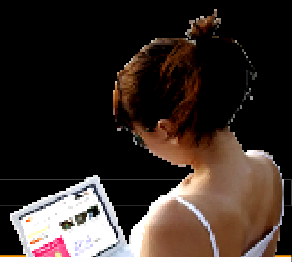
Expanding the scope of Cisco's IP Thought Leadership

The Cisco VNI Global Forecast methodology relies upon various independent analyst forecasts as well as fixed and mobile data usage surveys.

Global Forecast Data

Global Usage Trends

Region/country data modeling with consumer/business usage trends.

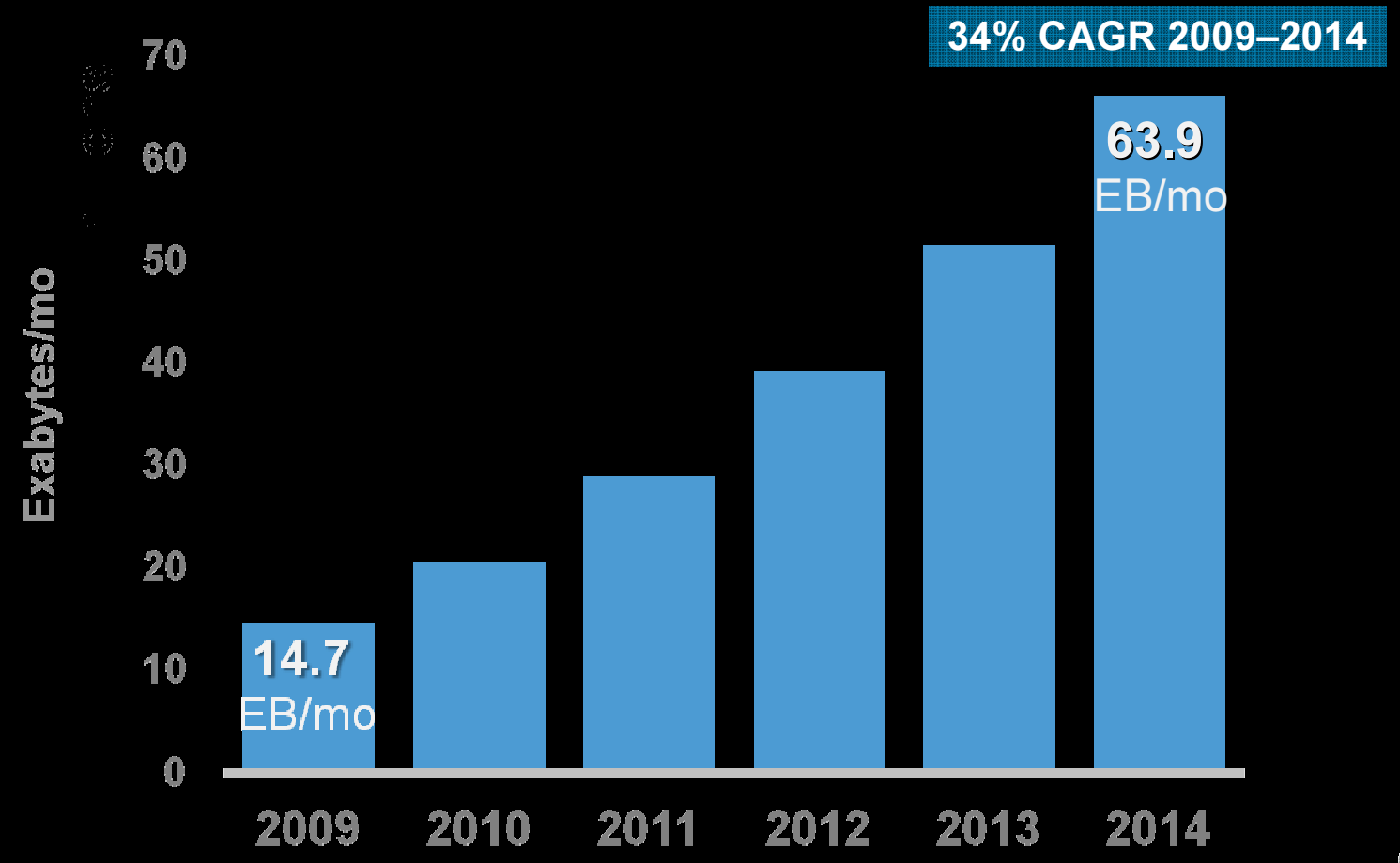


Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

Global IP Traffic Growth

IP traffic will increase 4.3 fold from 2009–2014

In 2014, global IP traffic will reach 3/4 of a zettabyte



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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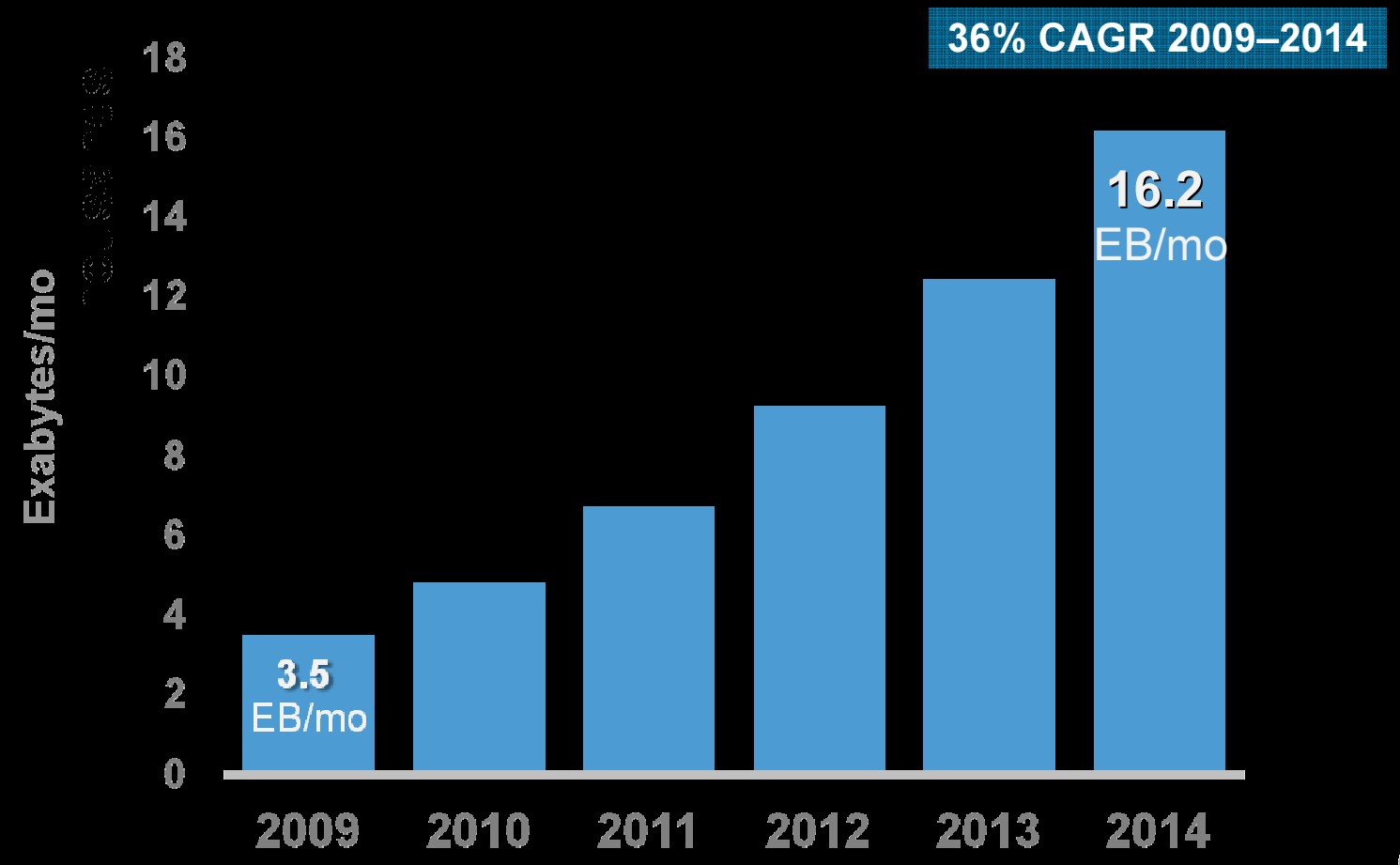
Western Europe IP Traffic Growth

IP traffic will increase 4.6 fold from 2009–2014



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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North America will generate the most IP traffic by 2014
19 exabytes/month by 2014, 30% CAGR, 3.7X growth

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009-2014

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Latin America will be the fastest growing traffic region 3.5 exabytes/month by 2014, 51% CAGR, 7.9X growth

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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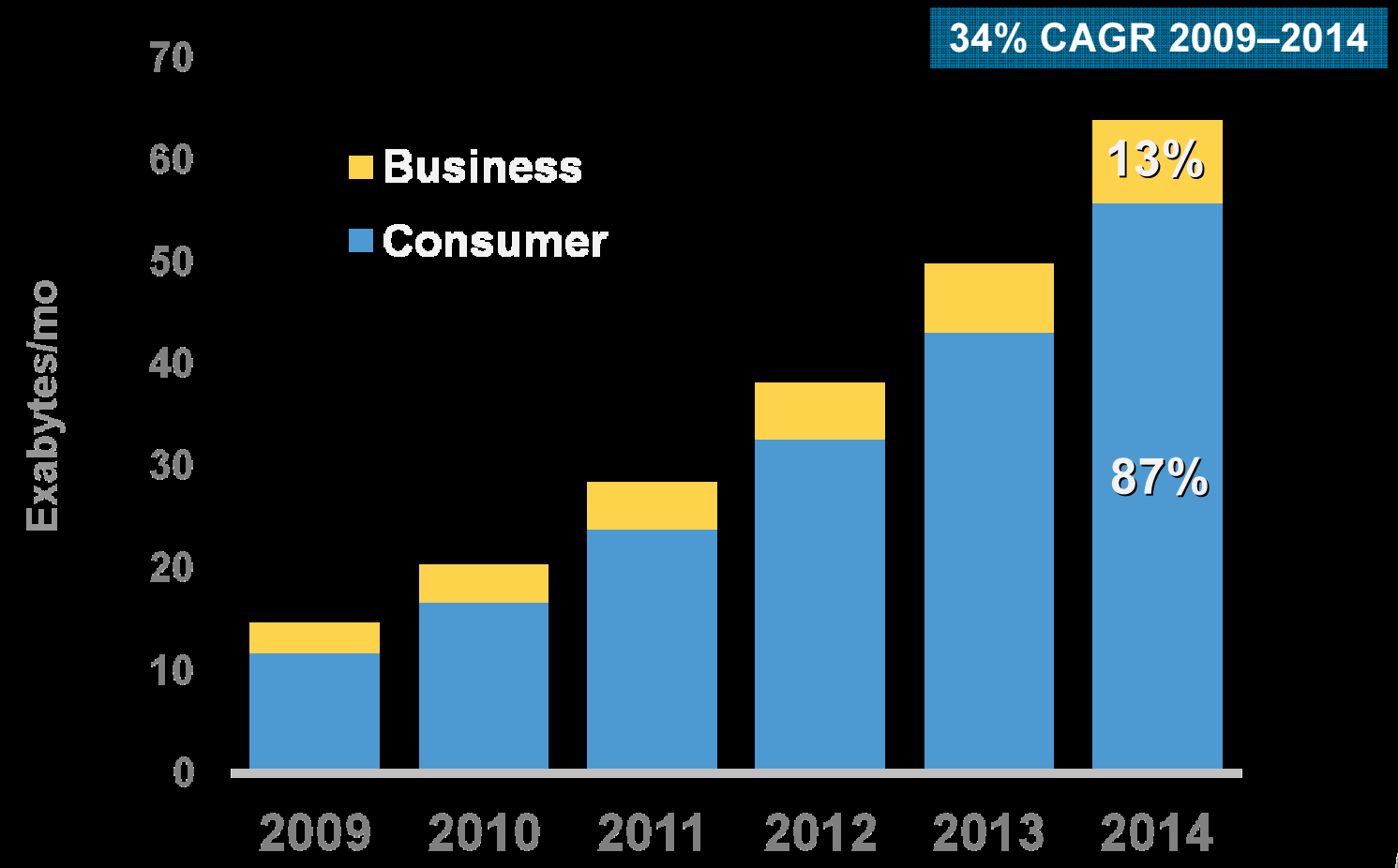
Global IP Traffic Growth

Consumer IP traffic outpaces business IP traffic (traffic volume and growth rate)



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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Western Europe IP Traffic Growth

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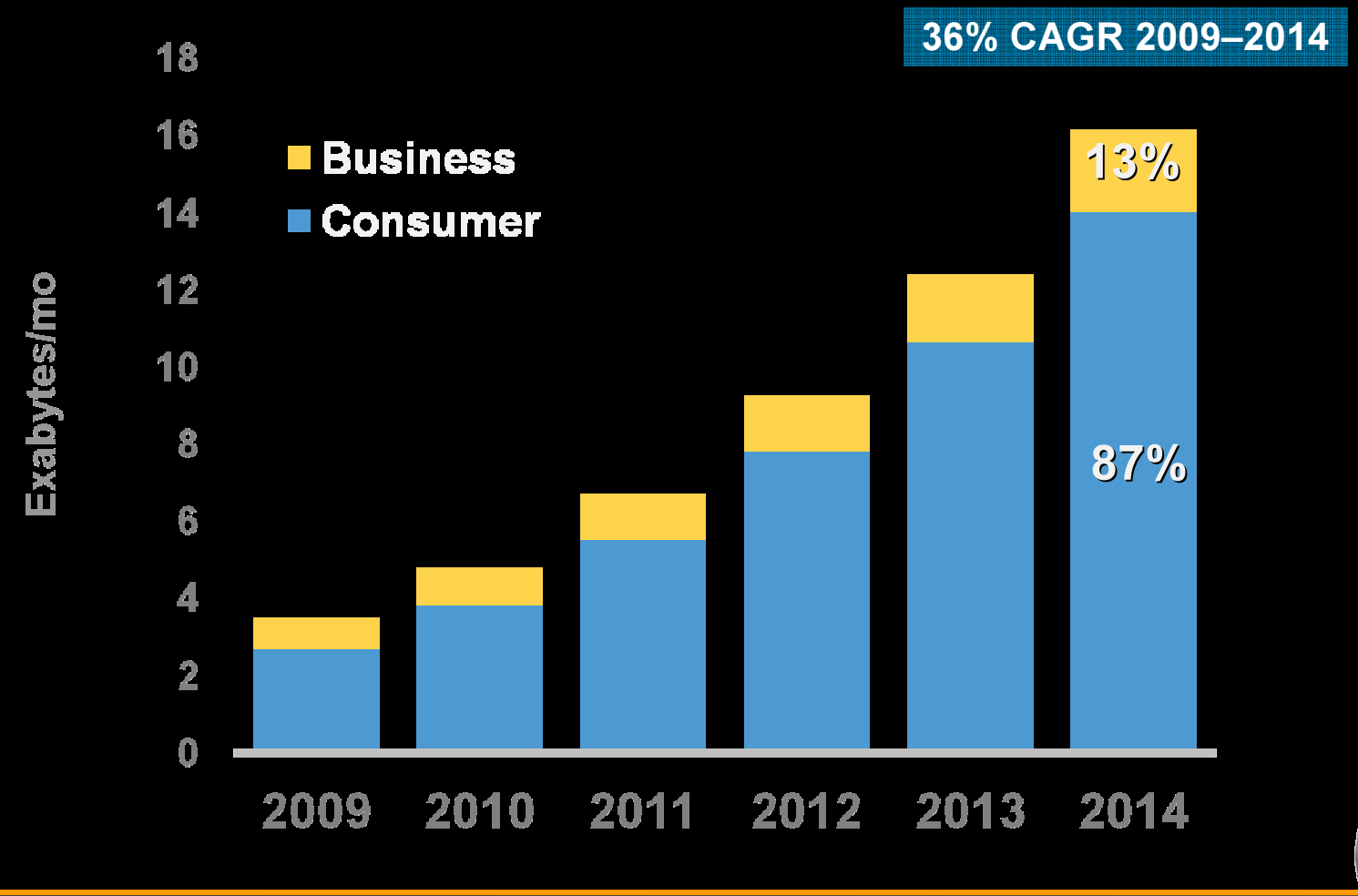

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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Evolving Dynamics of Hyperconnectivity

Person-to-person, person-to-machine, machine-to-machine

Active Multitasking

Adds 6.5 hours/day

Passive Networking

Adds *another* 6.5 hours/day

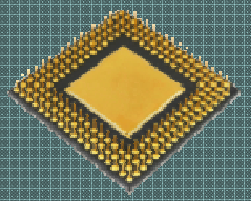
Multi-Screen Surface Area

12 billion square feet by 2014 (source: Cisco)

Proliferation of Devices

12 billion devices by 2014 (source: Cisco)

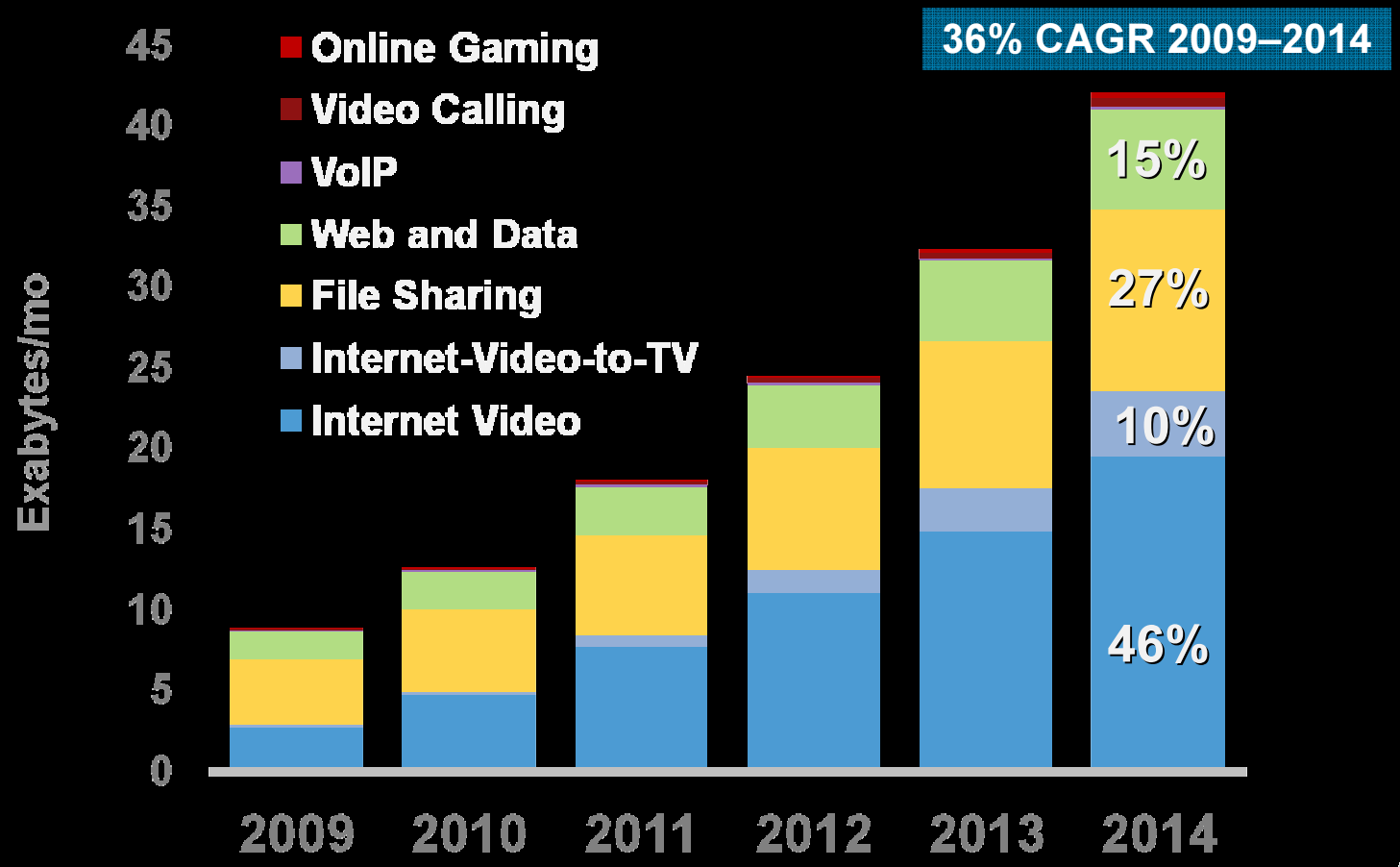
High Performance Computing



700 million multi-core shipments by 2014 (source: iSuppli)

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

Global Consumer Internet Traffic Growth
Video replaces P2P as top traffic type in 2010



** VoIP, Online Gaming, and Video Calling contribute 1% or less in 2014.*

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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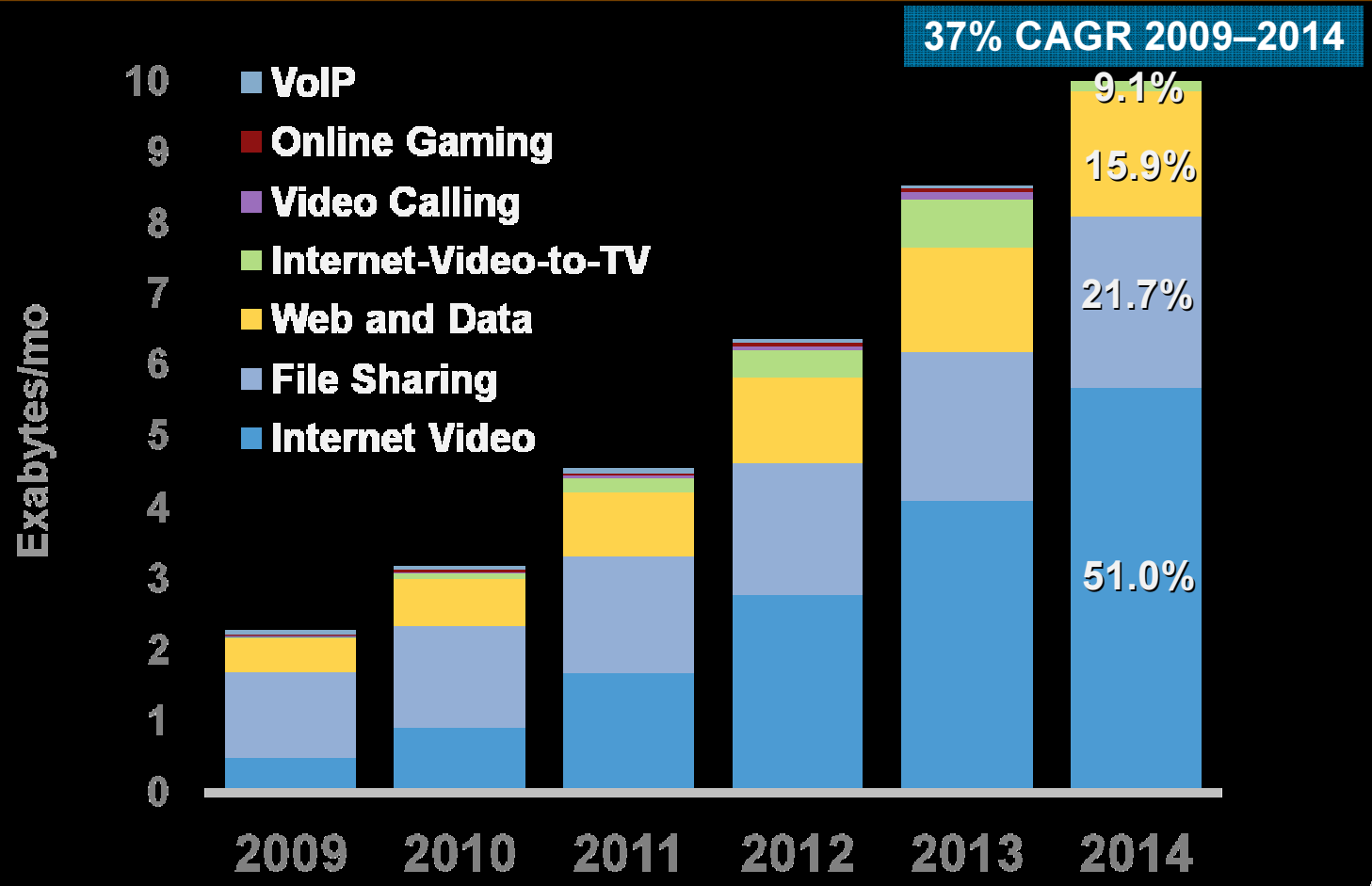
Western Europe Consumer Internet Traffic
Video replaces P2P as top traffic type in 2010



** VoIP, Online Gaming, and Video Calling contribute 3% or less in 2014.*

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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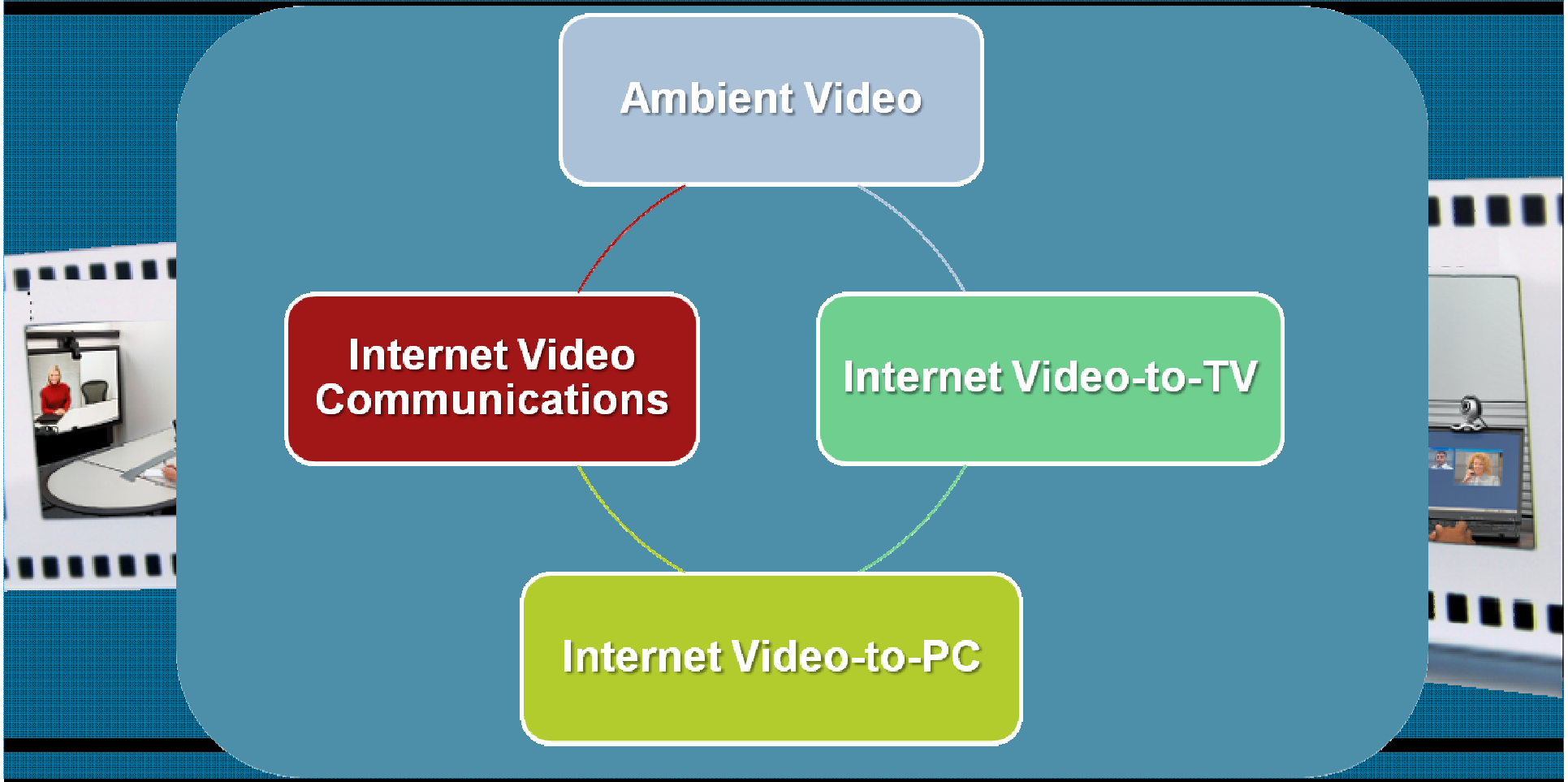
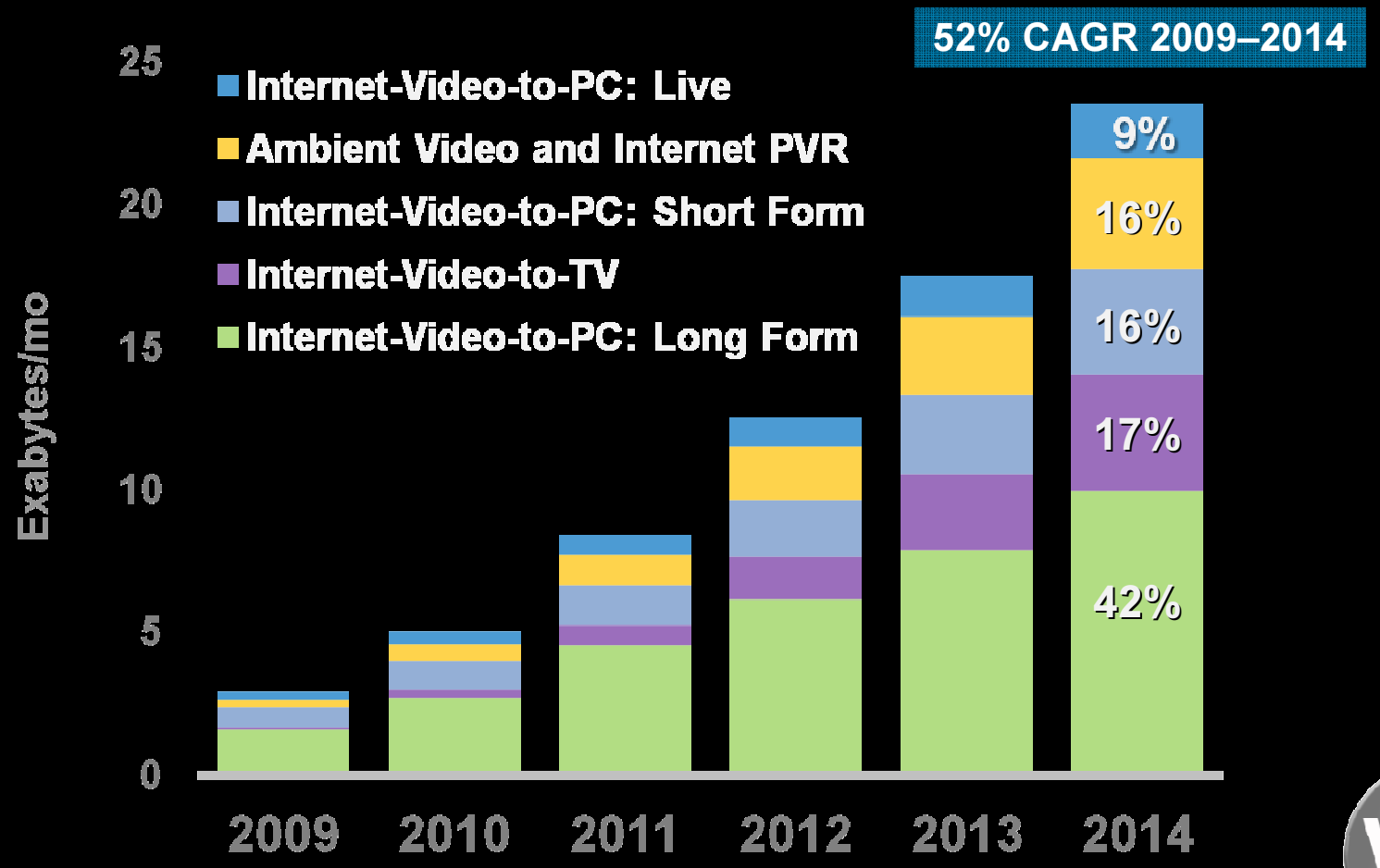
How Does the Cisco VNI Forecast Define Video?



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

Consumer Internet Video Composition

Video traffic increasingly driven by live video and TV



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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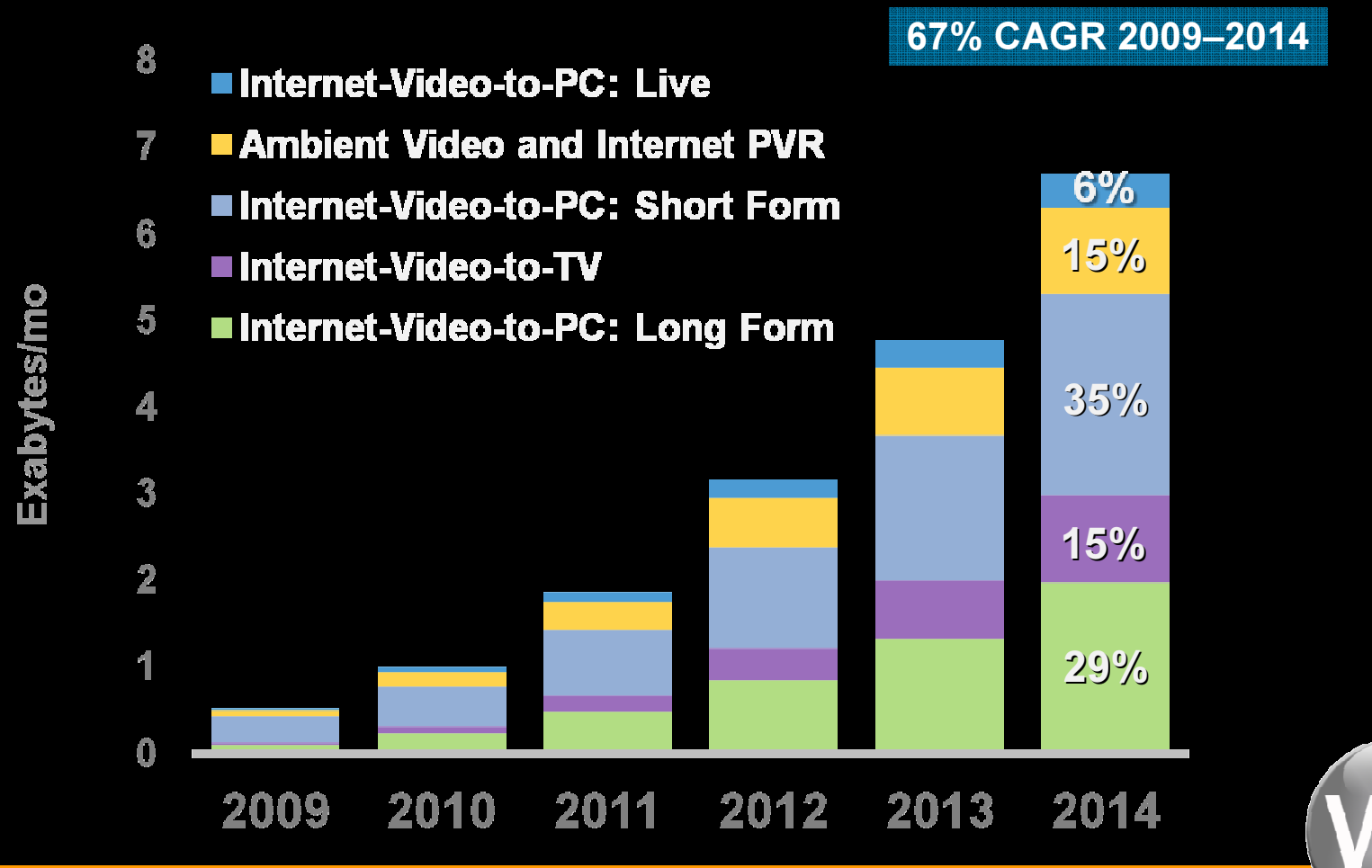
Western Europe Internet Video Composition

Video traffic increasingly driven by live video and TV



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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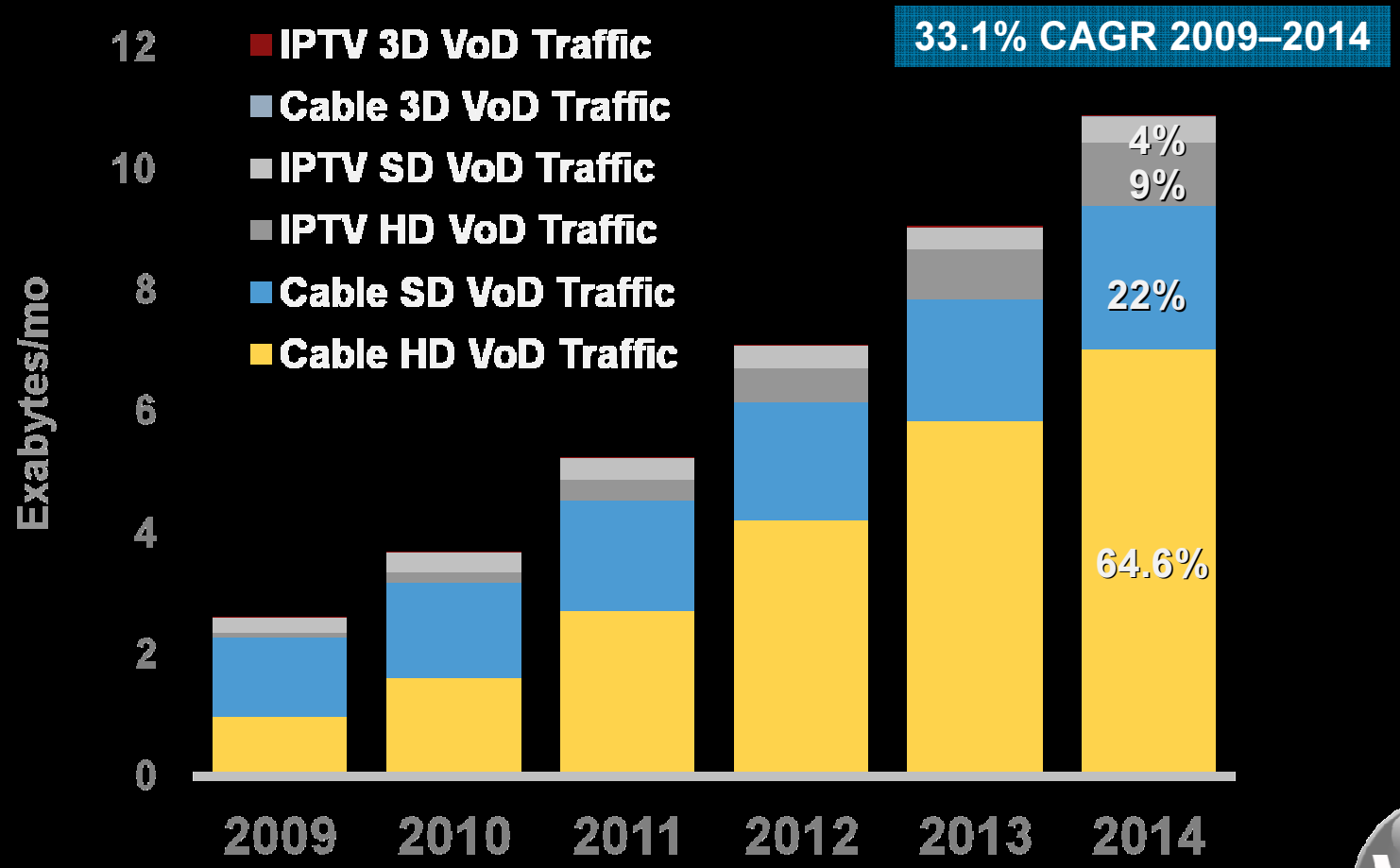
Global Consumer VoD Mix

VoD traffic driven by growth of HD



** IPTV 3D VoD and Cable 3D VoD contribute less than 1% in 2014.*

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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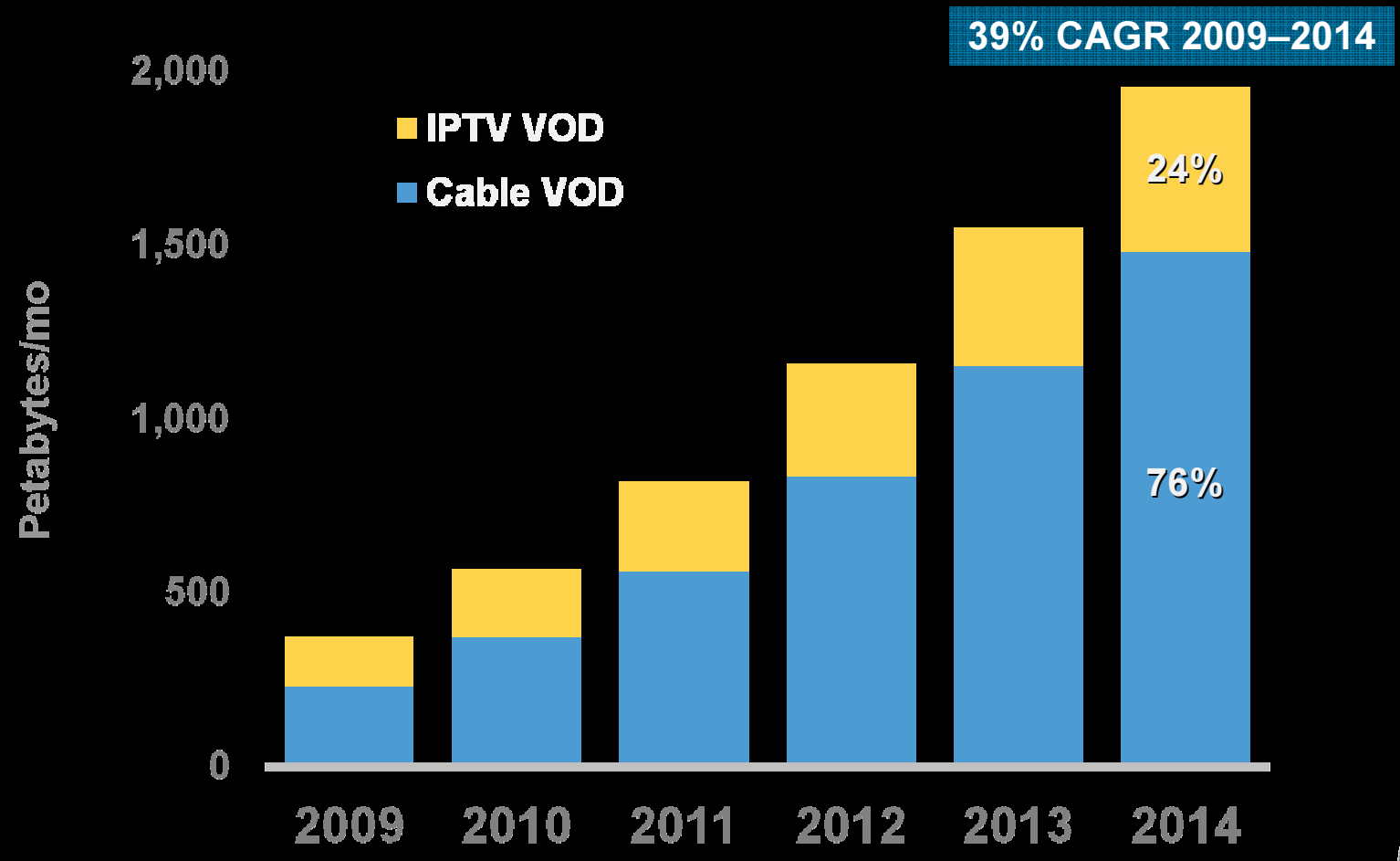
Western Europe VoD Mix

VoD traffic driven by growth of HD



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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If all video minutes were 3D in 2014, the video forecast would be 3X higher (from 38 EB to 111 EB per month).

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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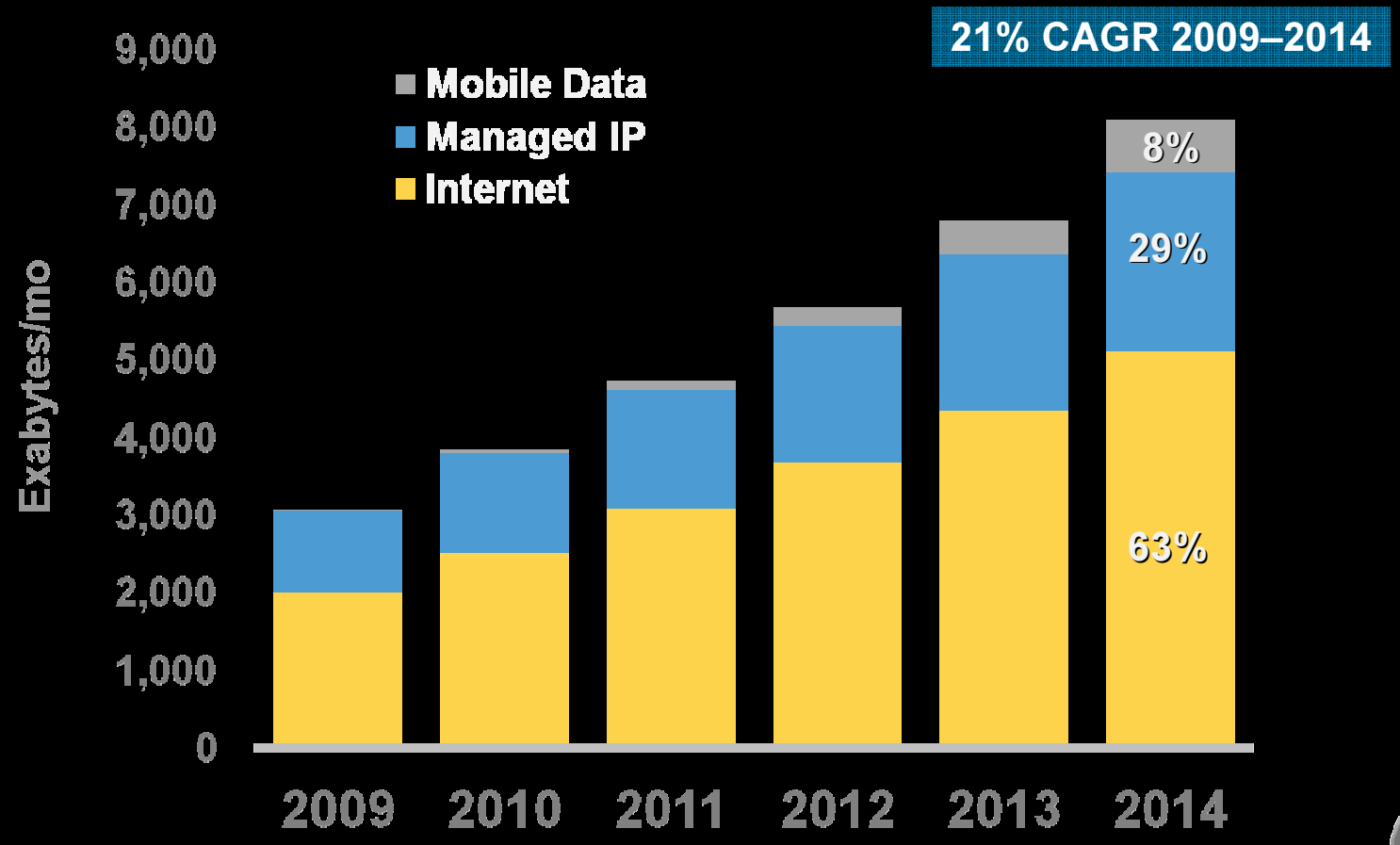
Global Business IP Traffic

Business IP to grow at a CAGR of 21%



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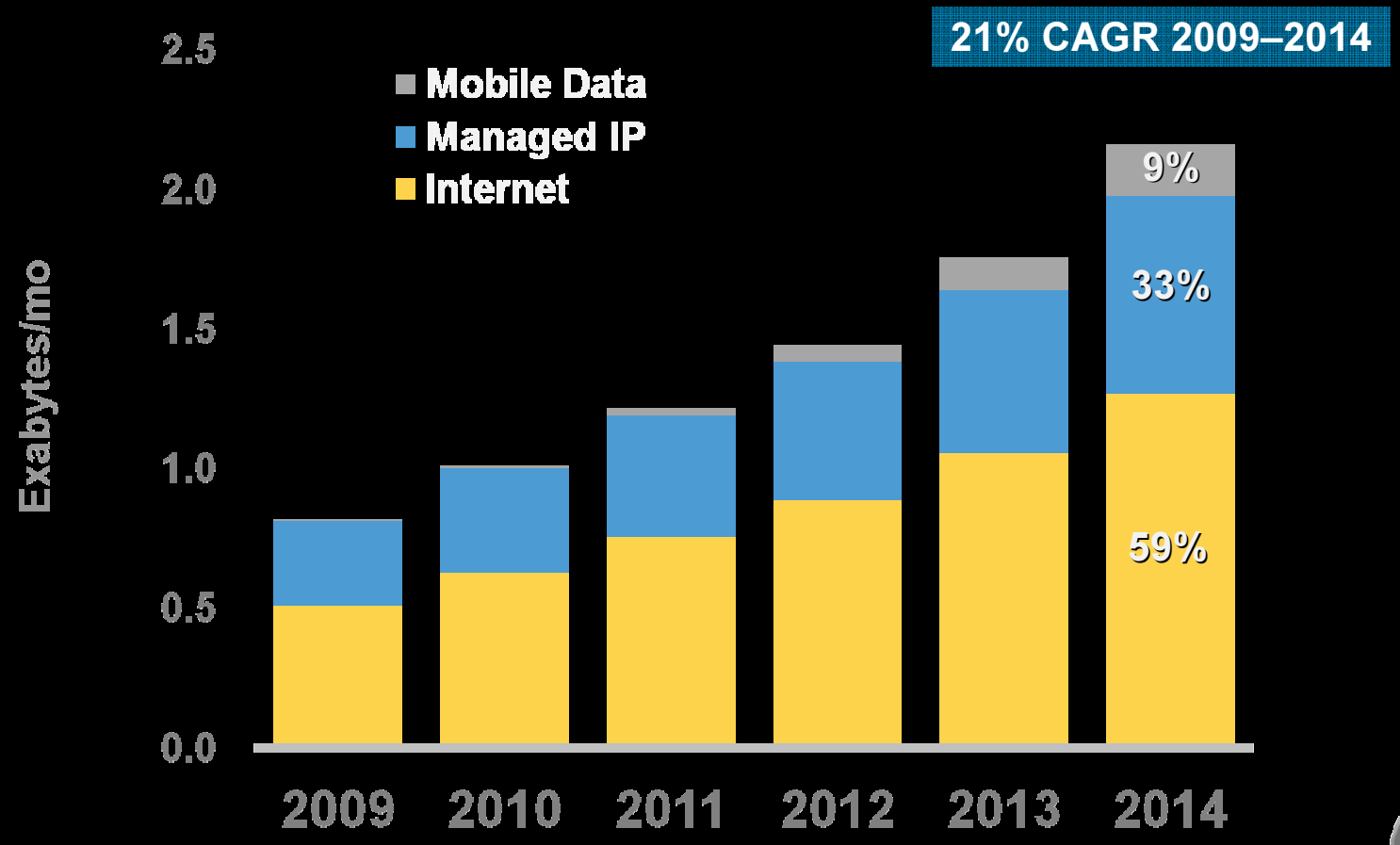
Business IP to grow at a CAGR of 21%



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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Web-based video conferencing is the fastest growing business sub-category; reaching 180-fold by 2014.

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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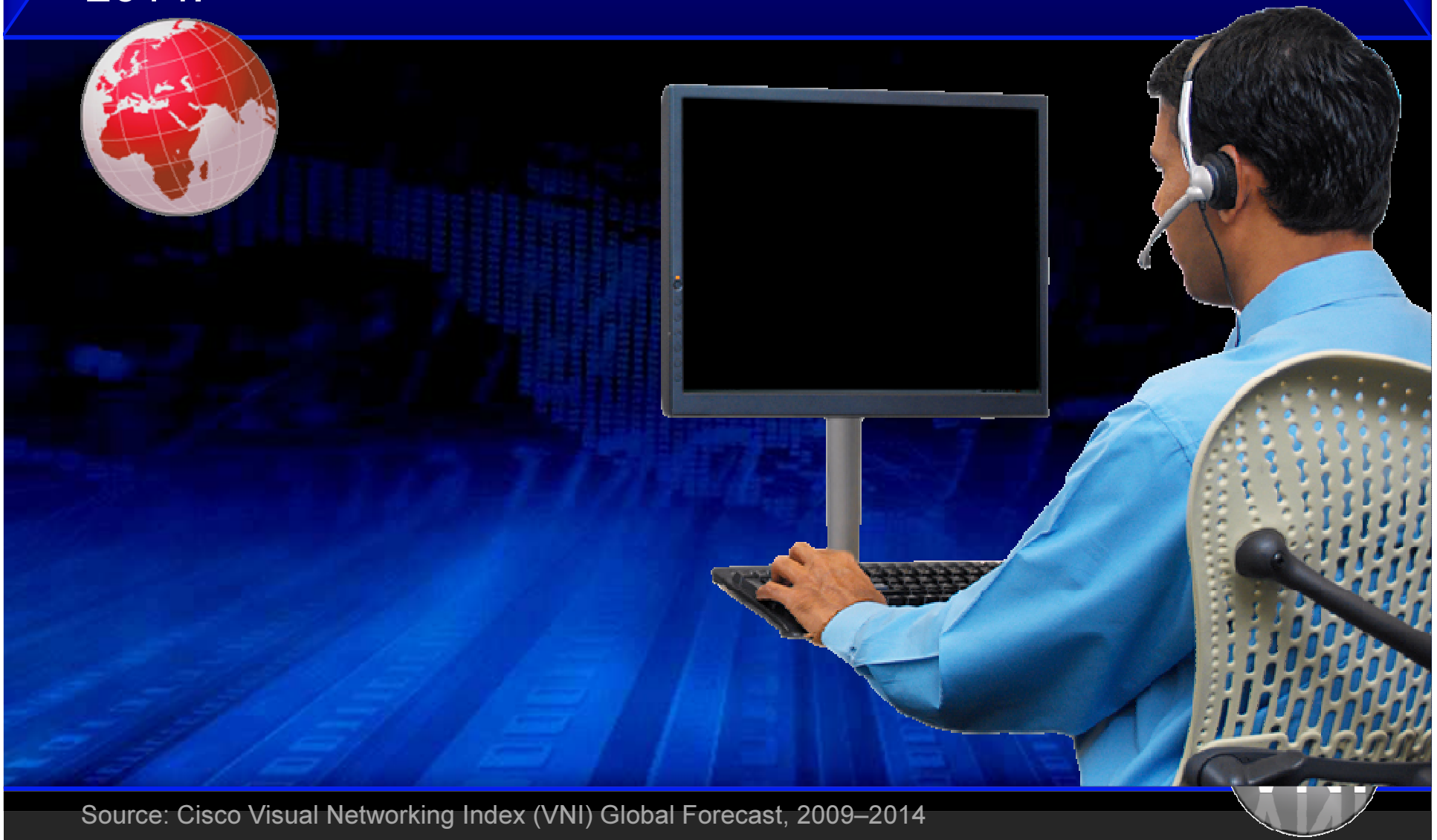
Western Europe web-based video conferencing is the fastest growing business sub-category; reaching 147-fold growth by 2014.



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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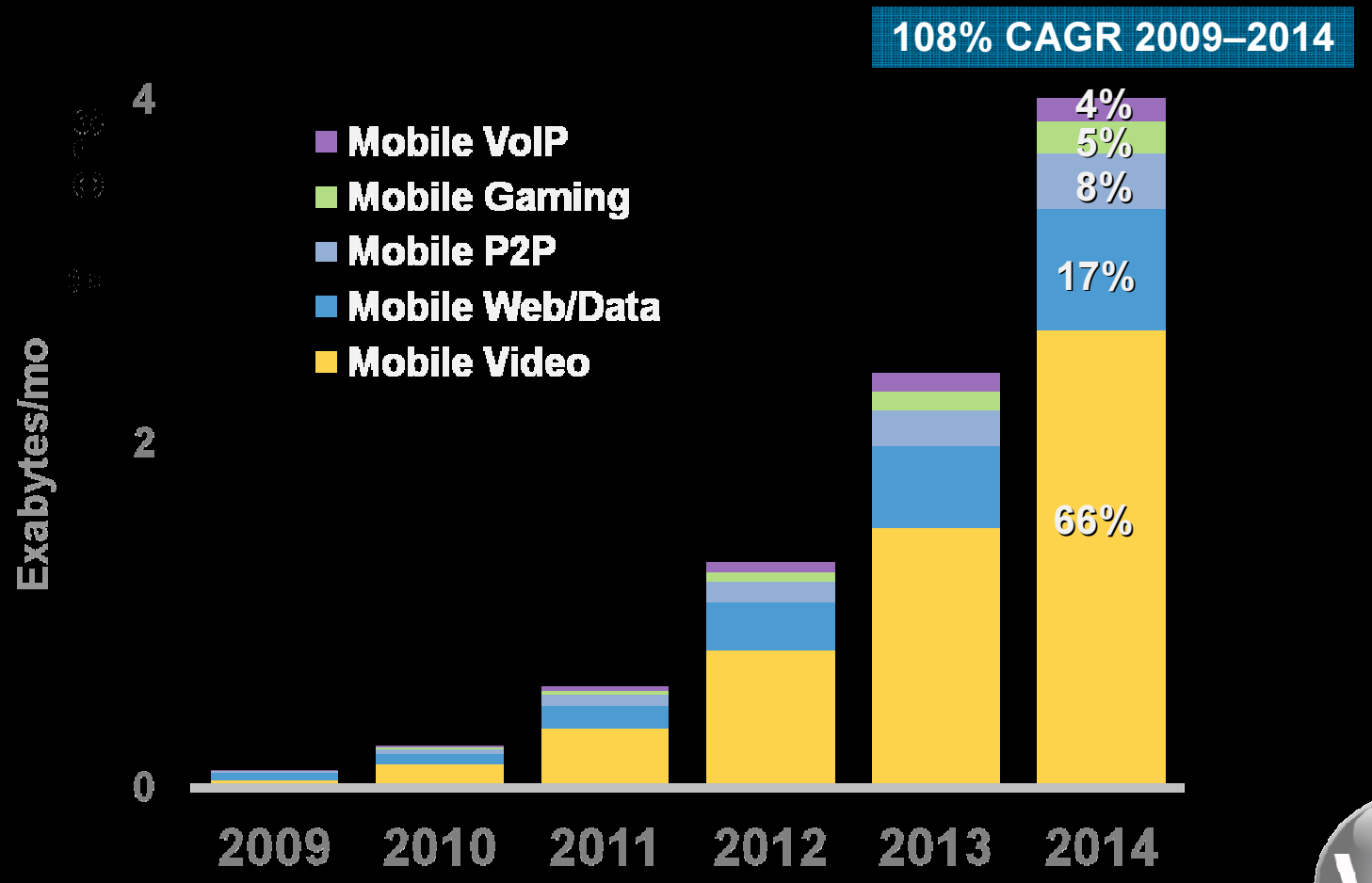
Global Mobile Data Traffic Growth

Mobile data traffic will increase 39 fold from 2009 to 2014



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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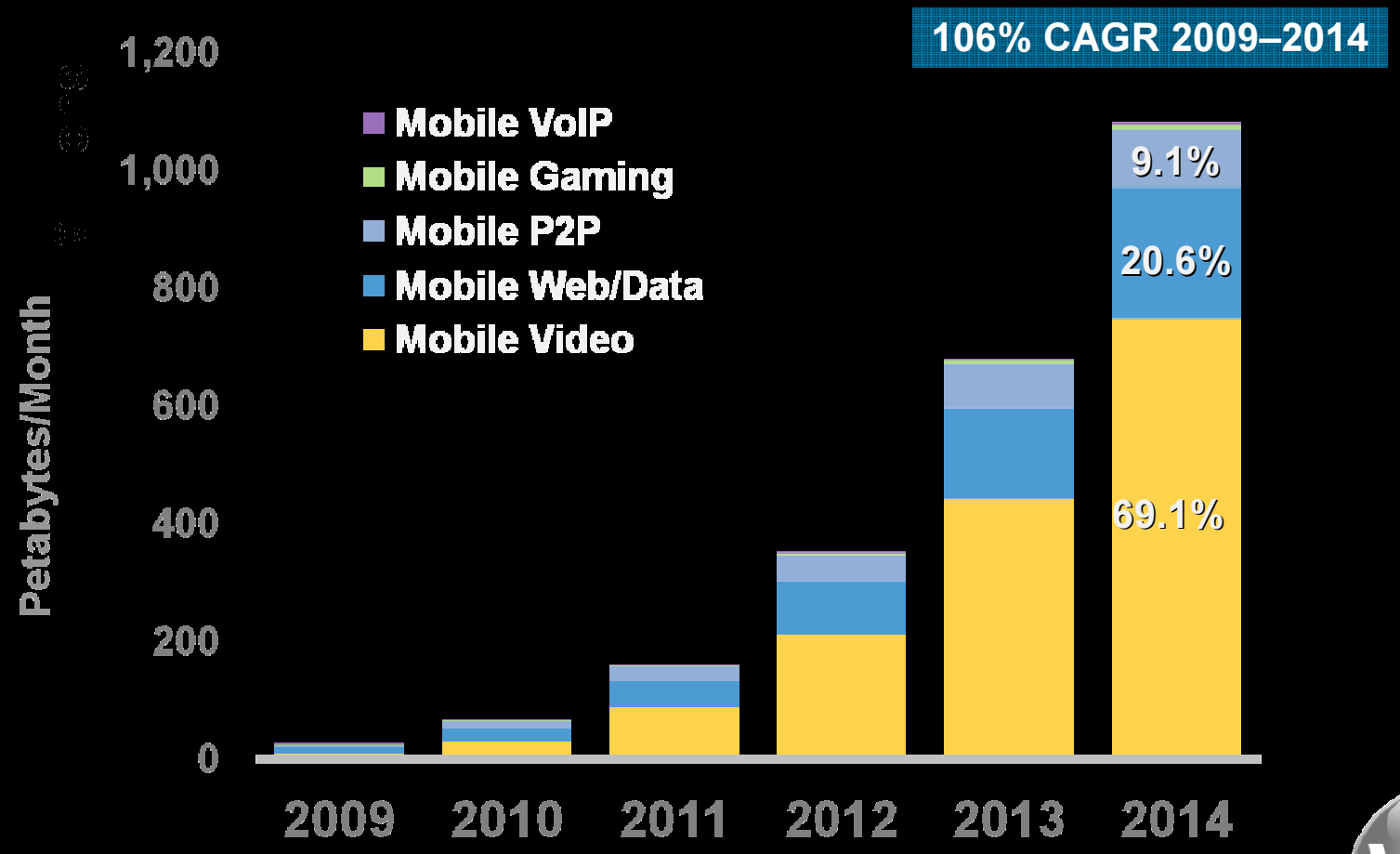
Western Europe Mobile Data Traffic Growth

Mobile data traffic will increase 37 fold from 2009 to 2014



** Mobile Gaming and VoIP contribute less than 2% in 2014.*

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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Global mobile data traffic is growing 3.2 times faster than fixed data traffic.

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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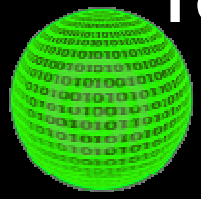
Cisco VNI Forecast Update: 2009–2014

Summary / Key Highlights



Total IP Traffic — 63.9 Exabytes per month by 2014

- Annual global IP traffic will reach 3/4 of a zettabyte by 2014

Internet — 47.2 Exabytes per month by 2014

- Internet video will surpass P2P as top traffic type by end of 2010

Managed IP — 13.2 Exabytes per month by 2014

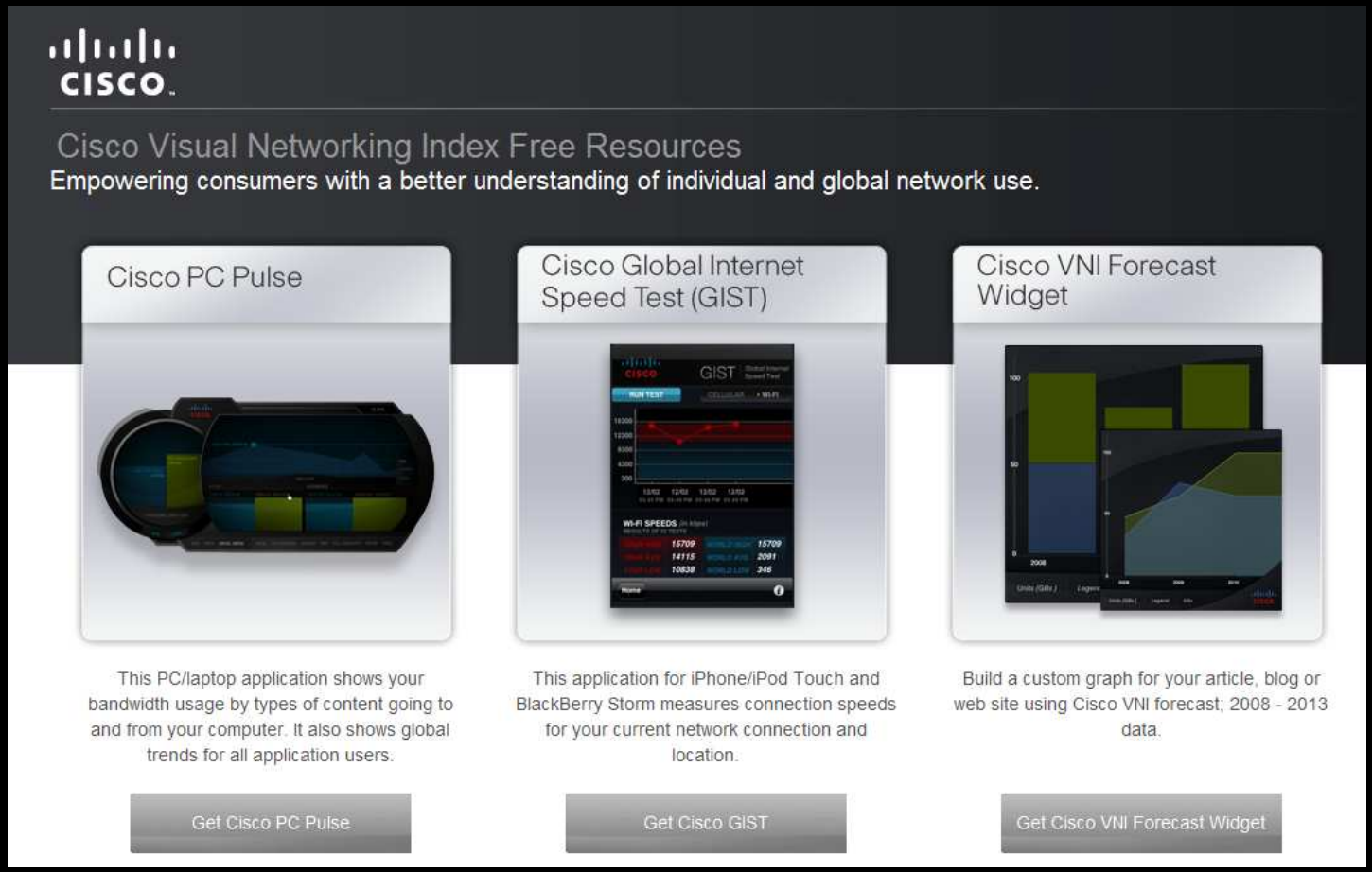
- Web-based video conferencing will grow 180-fold from 2009-2014

Mobile Data — 3.5 Exabytes per month by 2014

- Mobile video will increase 66-fold from 2009 to 2014

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

Cisco VNI Free Resources
URL: http://downloads.ciscovnipulse.com



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

Public Cisco VNI Web Site

URL: http://www.cisco.com/go/vni

- Press Releases
- White Papers / Research
- Cisco VNI Pulse Apps/Resources

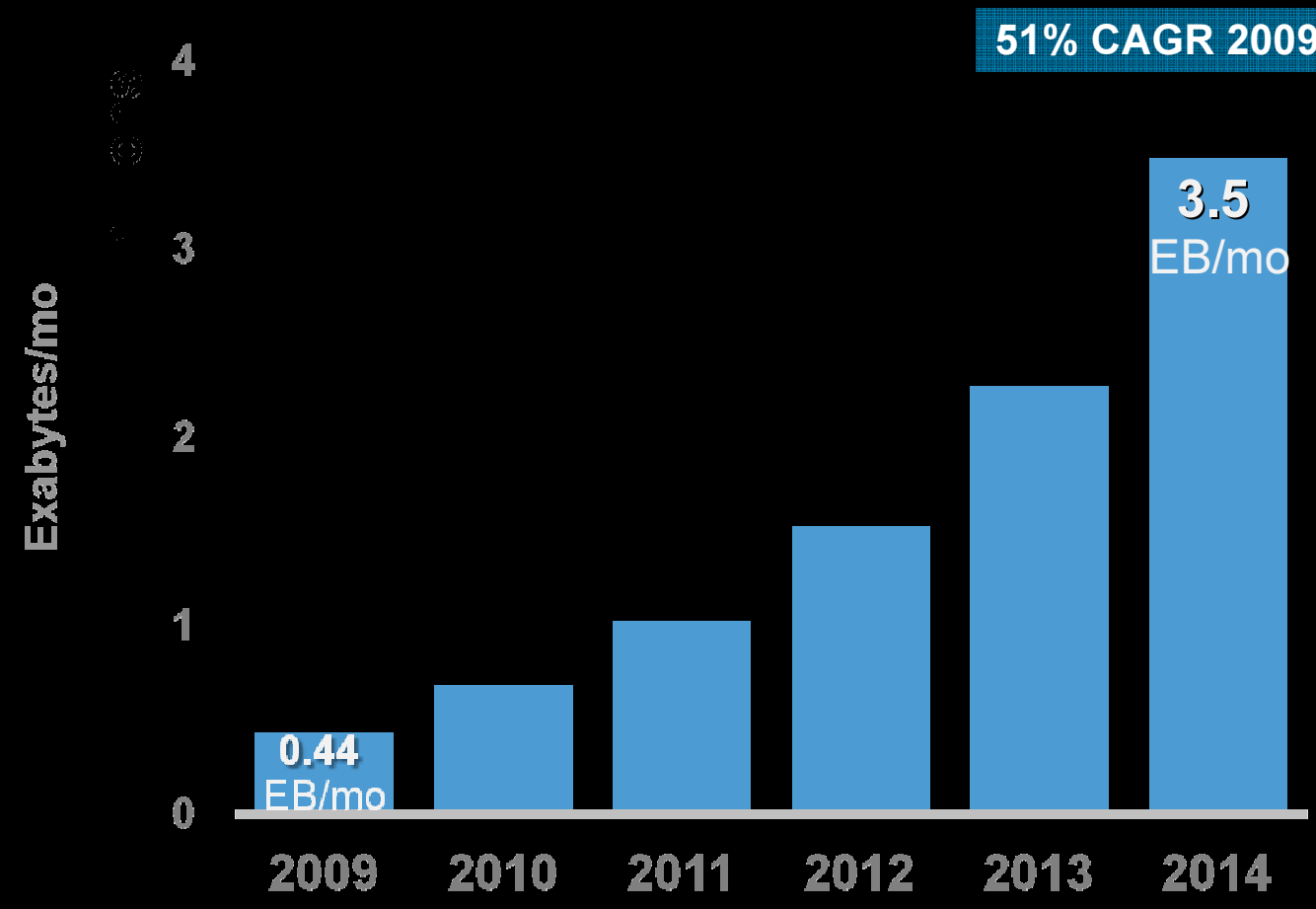
Send Cisco VNI Forecast inquiries to:
traffic-inquiries@cisco.com

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

CISCO

LATAM IP Traffic Growth

IP traffic will increase 7.9 fold from 2009–2014



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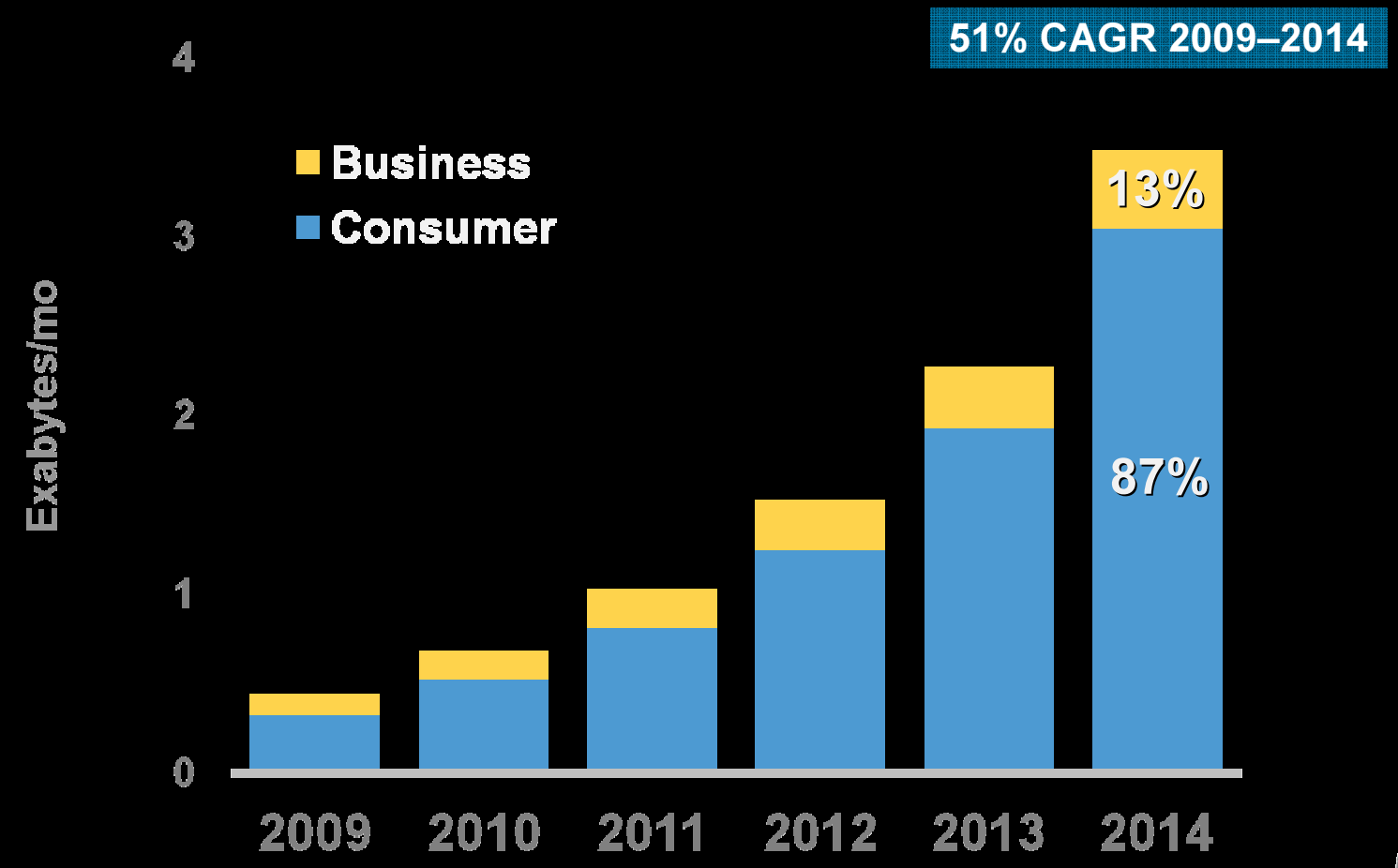
LATAM IP Traffic Growth

Consumer IP traffic outpaces business IP traffic (traffic volume and growth rate)



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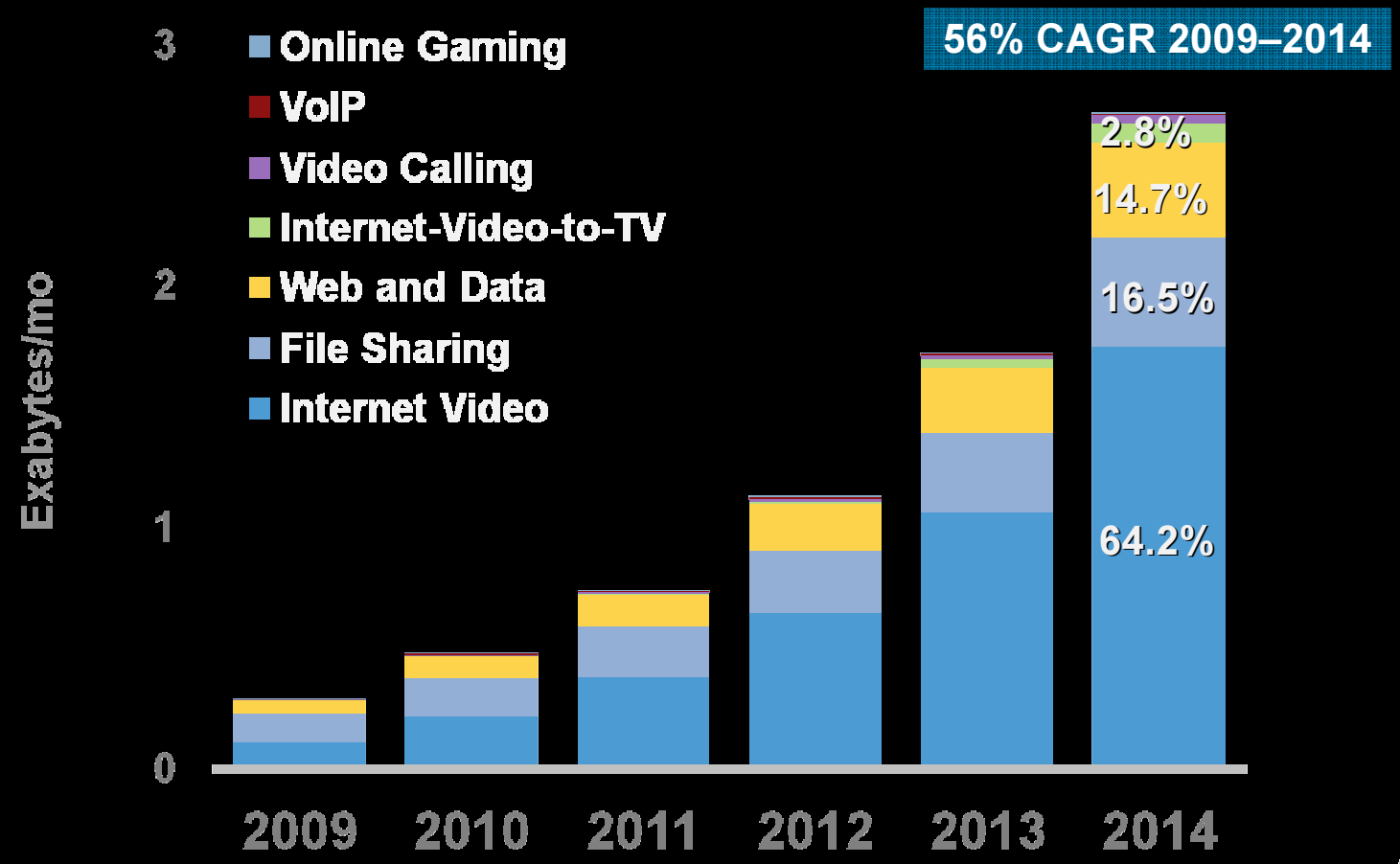
LATAM Consumer Internet Traffic Growth
Video replaces P2P as top traffic type in 2010



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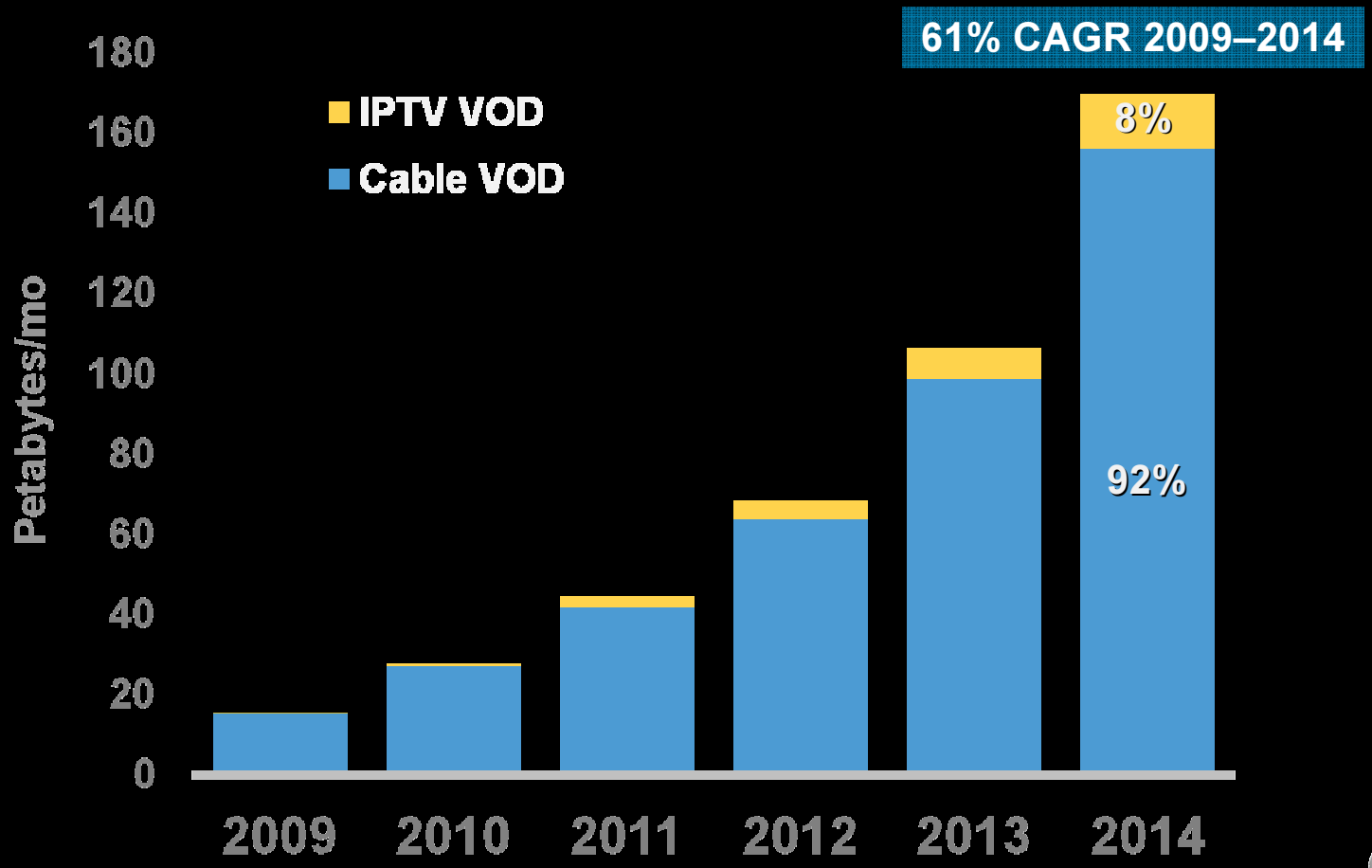
LATAM Consumer VoD Mix

VoD traffic driven by growth of HD



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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LATAM web-based video conferencing is the fastest growing business sub-category; reaching 596-fold by 2014.

Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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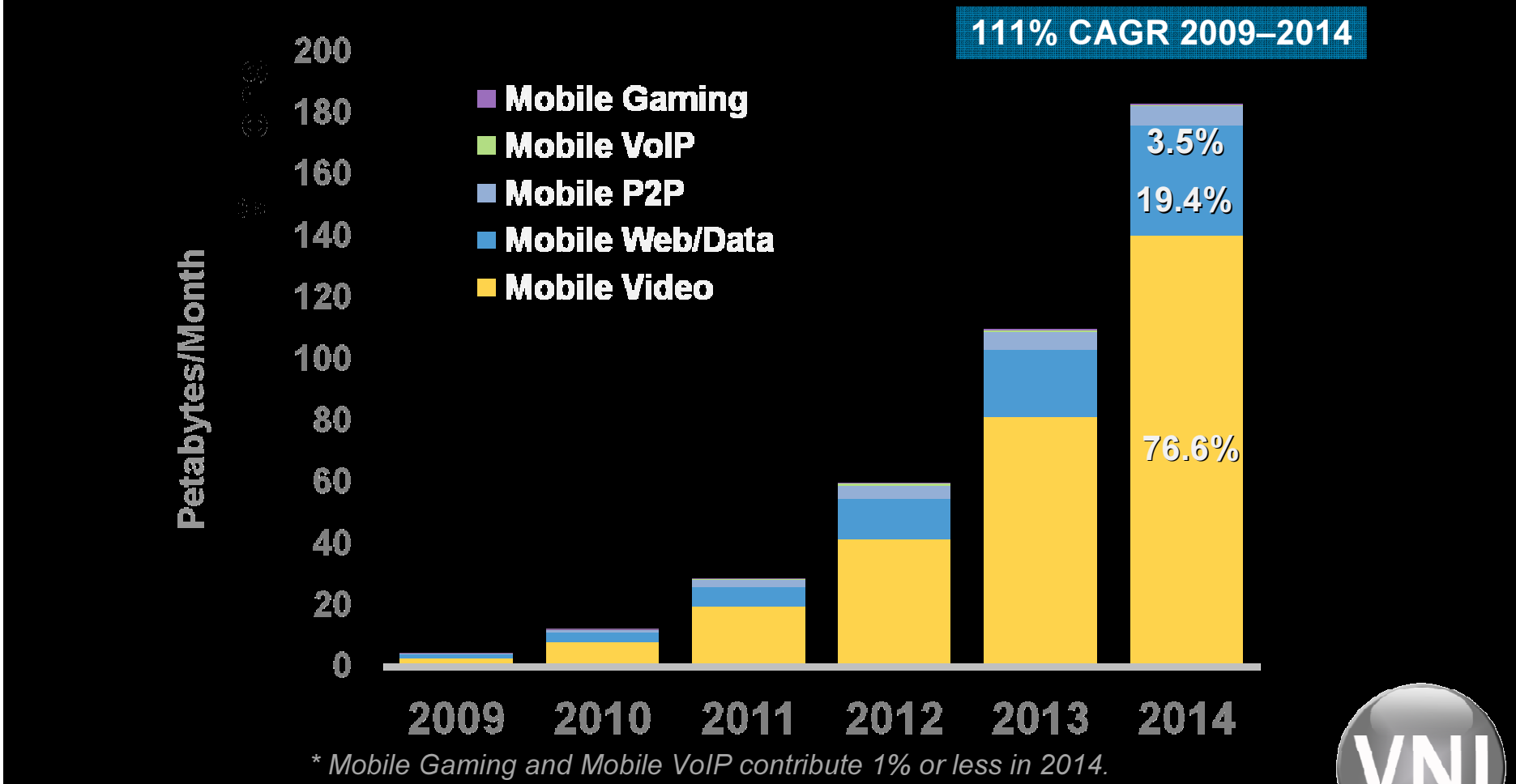
LATAM Mobile Data Traffic Growth

Mobile data traffic will increase 42 fold from 2009 to 2014



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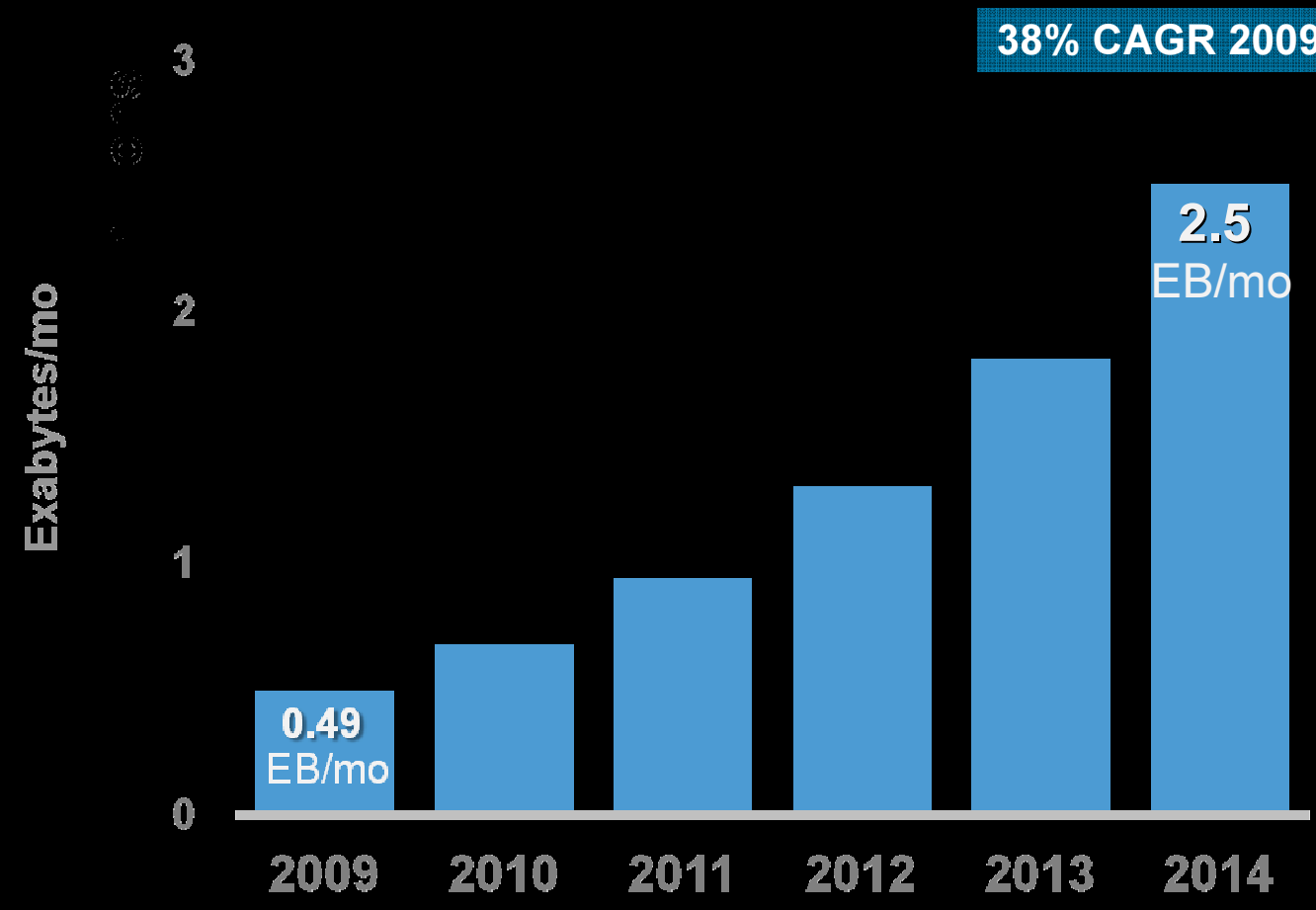
CEE IP Traffic Growth

IP traffic will increase 5.1 fold from 2009–2014



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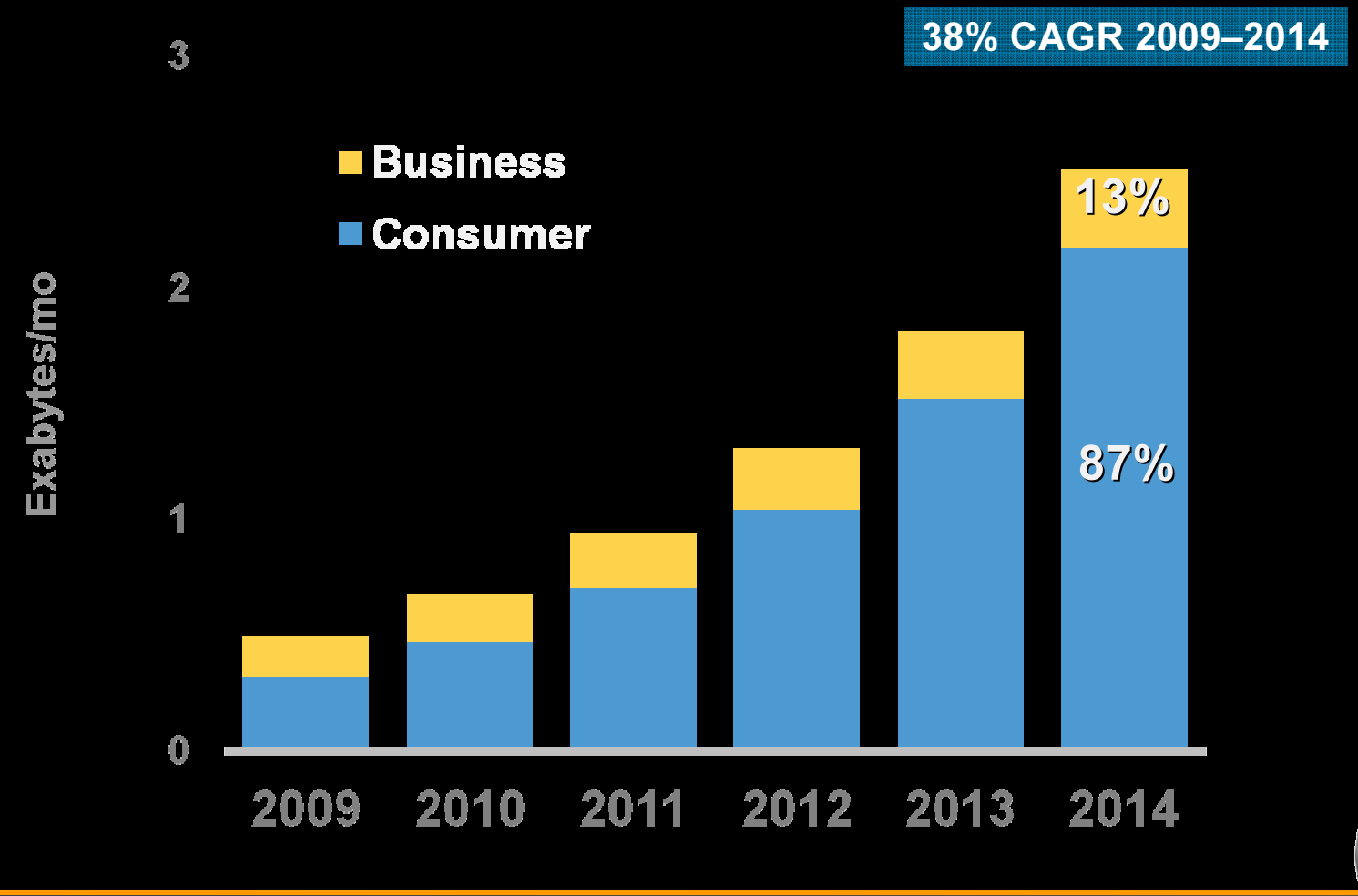
CEE IP Traffic Growth

Consumer IP traffic outpaces business IP traffic (traffic volume and growth rate)



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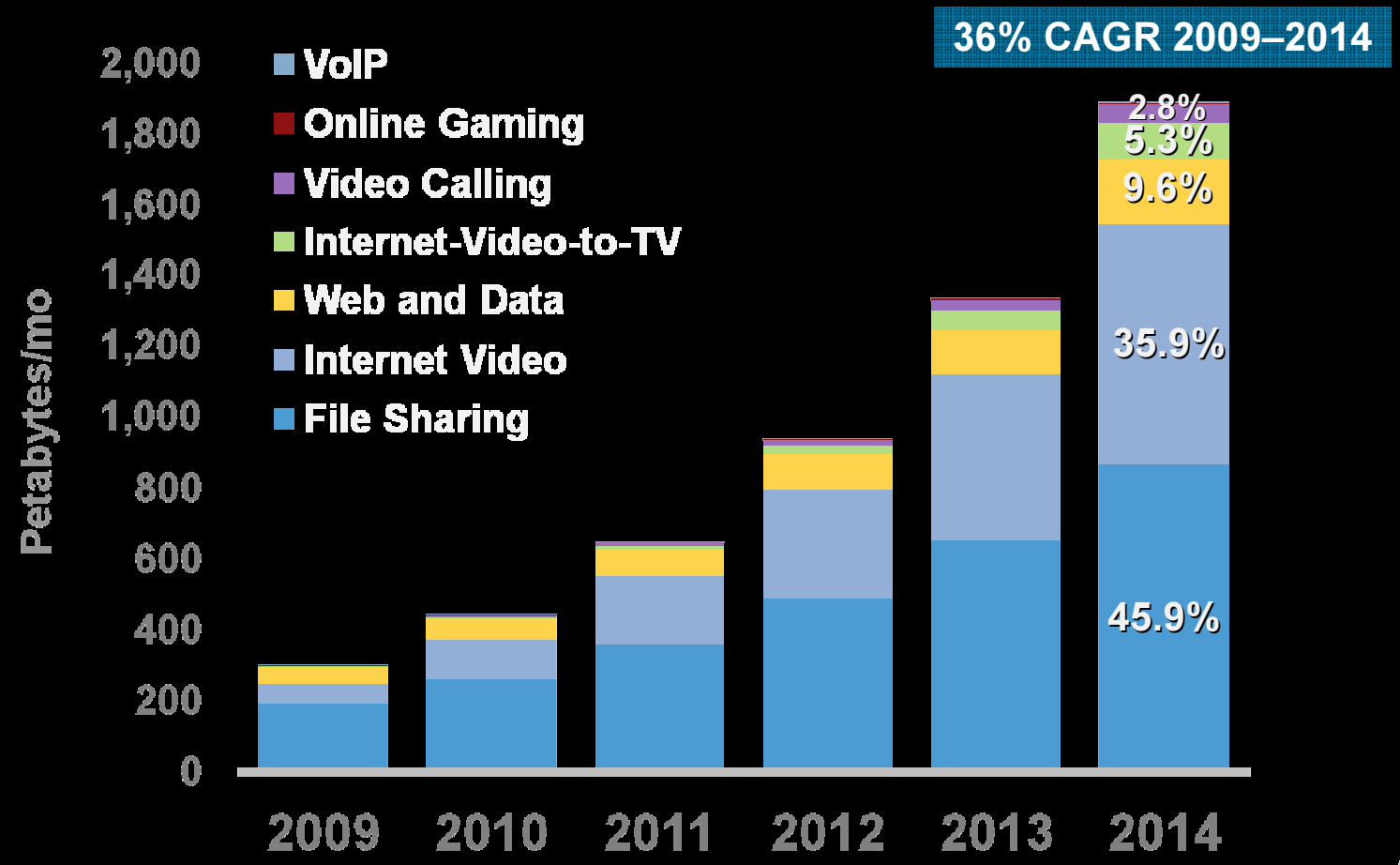
CEE Consumer Internet Traffic Growth
Video replaces P2P as top traffic type in 2010



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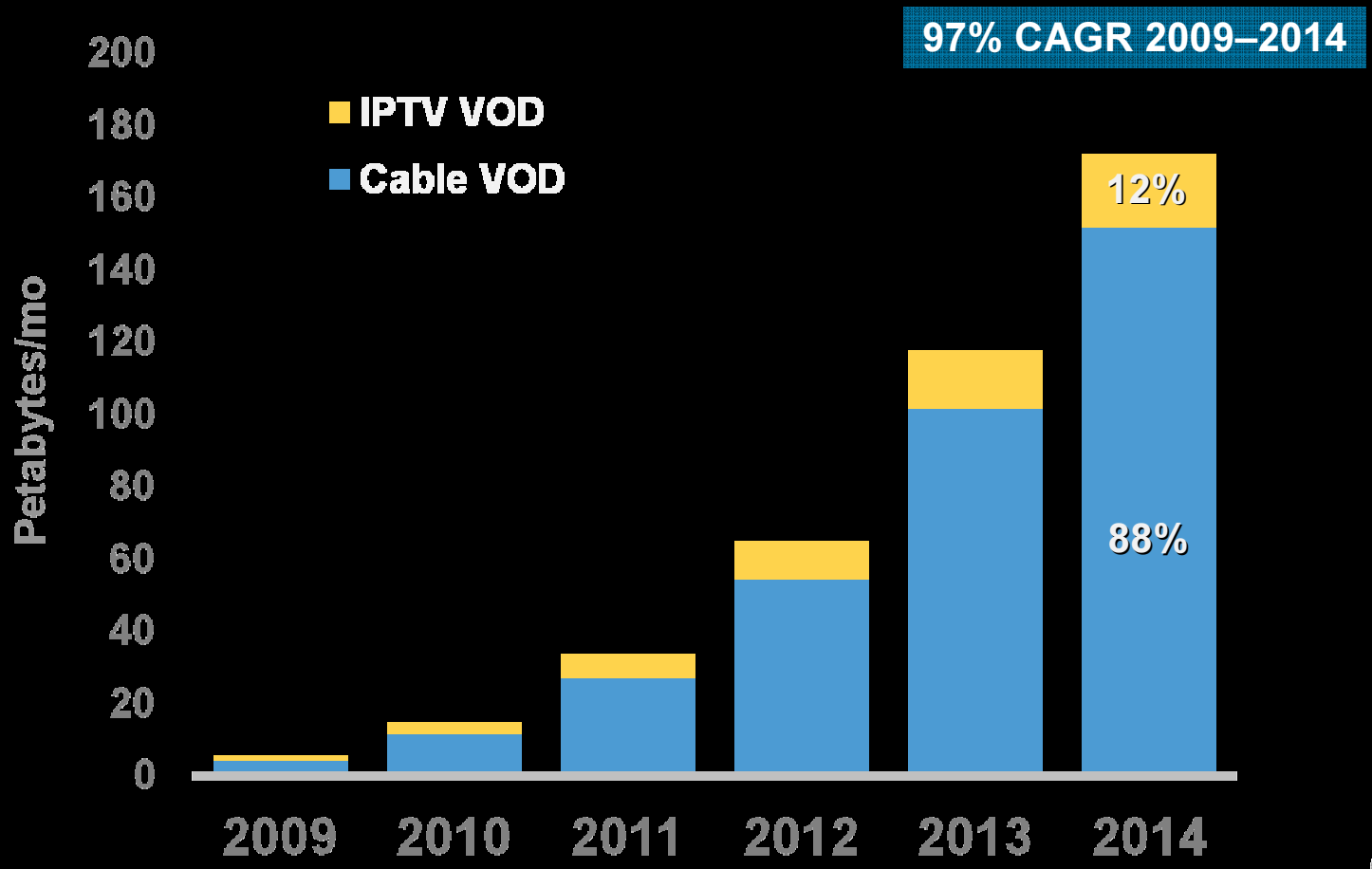
CEE Consumer VoD Mix

VoD traffic driven by growth of HD



Source: Cisco Visual Networking Index (VNI) Global Forecast, 2009–2014

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CEE web-based video conferencing is the fastest growing business sub-category; reaching 458-fold by 2014

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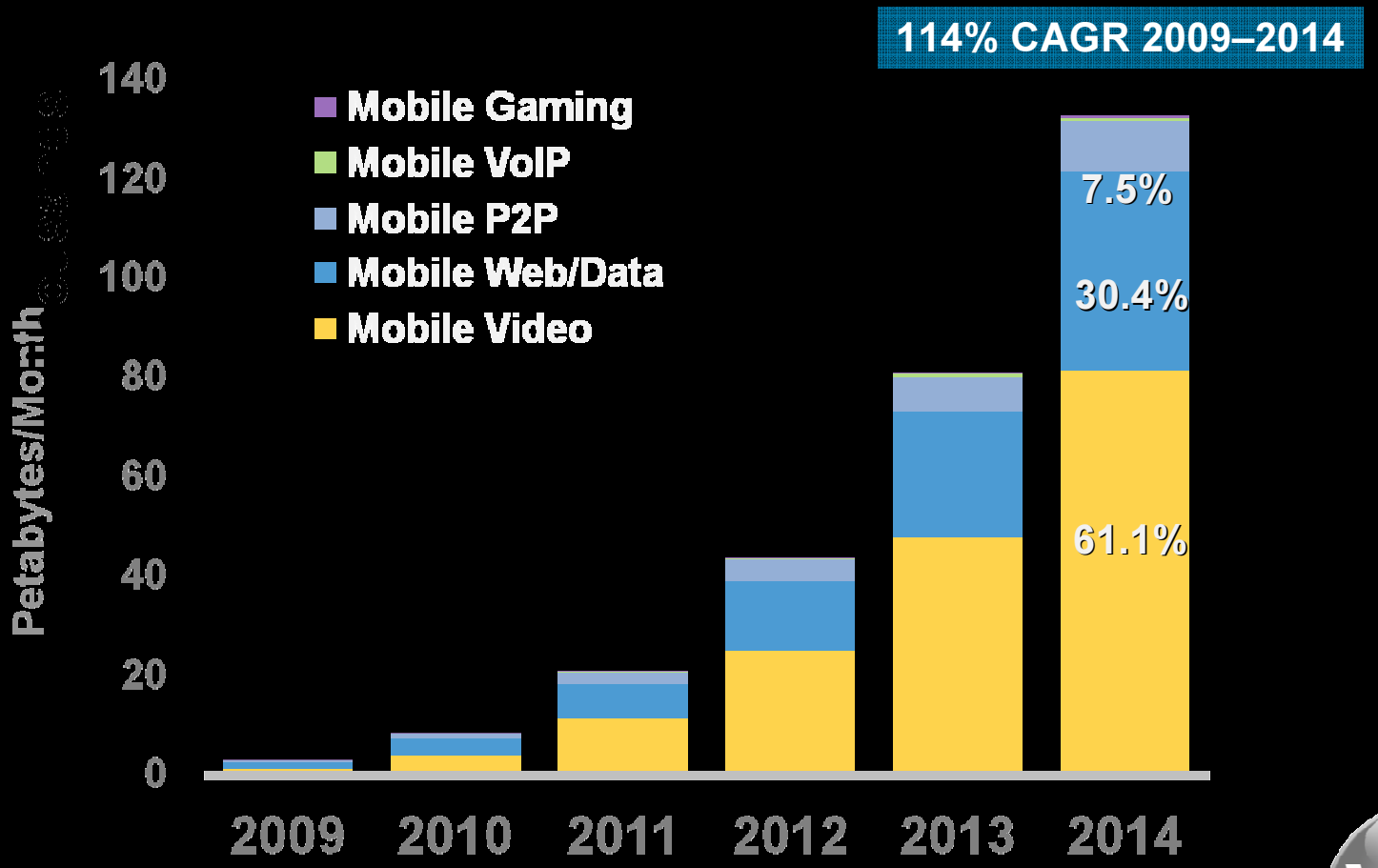
CEE Mobile Data Traffic Growth

Mobile data traffic will increase 45 fold from 2009 to 2014



* *Mobile Gaming and Mobile VoIP contribute 1% or less in 2014.*

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