



What Customers Want from Wi-Fi (Brazil)

Insights from Cisco IBSG
Customer Research



Cisco Internet Business Solutions Group

August 2012

Contents

- Executive Summary
- Research Background and Objectives
- Use of Mobile Devices
- Location Selection
- Network Choice: Wi-Fi or Mobile?
- The New Mobile
- Innovative Business Models
- Conclusions and Implications



1 Executive Summary

Background

- Wi-Fi represents a significant new opportunity for mobile and broadband service providers in Brazil
- However, there is very little market insight into customers' perceptions and needs related to Wi-Fi
- Cisco IBSG undertook primary research to understand key customer needs, behaviors, and perspectives
 - Online survey of 650 customers age 18 and older
 - Representative of Brazilian broadband customer population
 - Study was fielded in May 2012
- Study was replicated in Canada, United Kingdom, Mexico, and the United States

Source: Cisco IBSG, 2012

Key Research Insights: Wi-Fi Is an Attractive Alternative for Mobility

Has Greatest Value When Integrated with Cellular

- **Its all about home:** Home is #1 place where mobile devices are connected to the Internet, and this trend is growing
- **The device world is Wi-Fi:** Most devices are Wi-Fi enabled; Wi-Fi is preferred way to connect to the Internet, even for smartphones
- **People prefer Wi-Fi to mobile:** Customers see the benefits of Wi-Fi vs. mobile
- **Ubiquity:** Customers want Wi-Fi everywhere—indoors and outdoors
- **A seamless experience:** Customers want seamless hand-off and integration between mobile and Wi-Fi
- **New ways to make money:** Users would like new Wi-Fi services that enhance the retail experience and provide roaming and secure access to remote content
- **Wi-Fi can fight churn:** Offering free Wi-Fi may help retain existing broadband customers and attract new ones from competitors
- **New business models:** Customers are open to accepting advertising and personalized marketing messages in order to have free Wi-Fi
- **Wi-Fi + mobile = “new mobile”:** Customers are interested in a combined Wi-Fi-mobile offering that provides pervasive, cost-effective, seamless mobility

Source: Cisco IBSG, 2012



2

Research Objectives and Demographics

Wi-Fi Represents Significant Opportunity for Brazilian Operators

Brazil Wi-Fi Market Is Underserved, Little Understood

- Brazil has only 0.5% of the world's 777,000 hotspots*
- Global Wi-Fi trends imply significant opportunity for Brazilian operators:
 - Wi-Fi is a viable complement to mobile: coverage, user experience, quality, price
 - Mobile operators are looking to Wi-Fi as an offload strategy for congested networks
 - Mobile operators are trying to understand new business models around Wi-Fi
- Almost no understanding of Brazilian customers' perceptions of Wi-Fi
- Cisco IBSG research—primary customer research for insight into:
 - Customer behavior
 - Current and future use
 - Customer needs and level of interest
 - Requirements for Brazilian service providers to achieve success

Source: *JiWire, June 2012; Cisco IBSG, 2012

Research Objectives

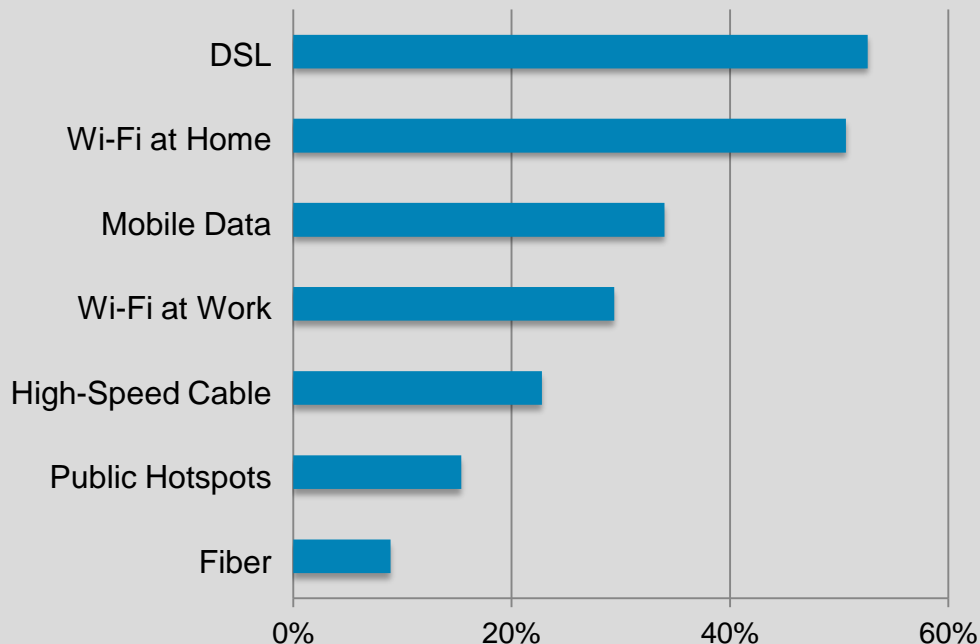
- Determine how and where mobile users access mobile and Wi-Fi networks
- Understand future growth of Wi-Fi-enabled devices
- Understand what drives mobile users' choice of mobile vs. Wi-Fi network
- Determine the “stickiness” of Wi-Fi in relation to mobility and broadband services
- Test and evaluate new and innovative business models that leverage Wi-Fi

Source: Cisco IBSG, 2012

Research Addressed Key Technologies, Customer Characteristics, and Attitudes

Use of Access Technologies

Percentage of Respondents



Key Areas Analyzed

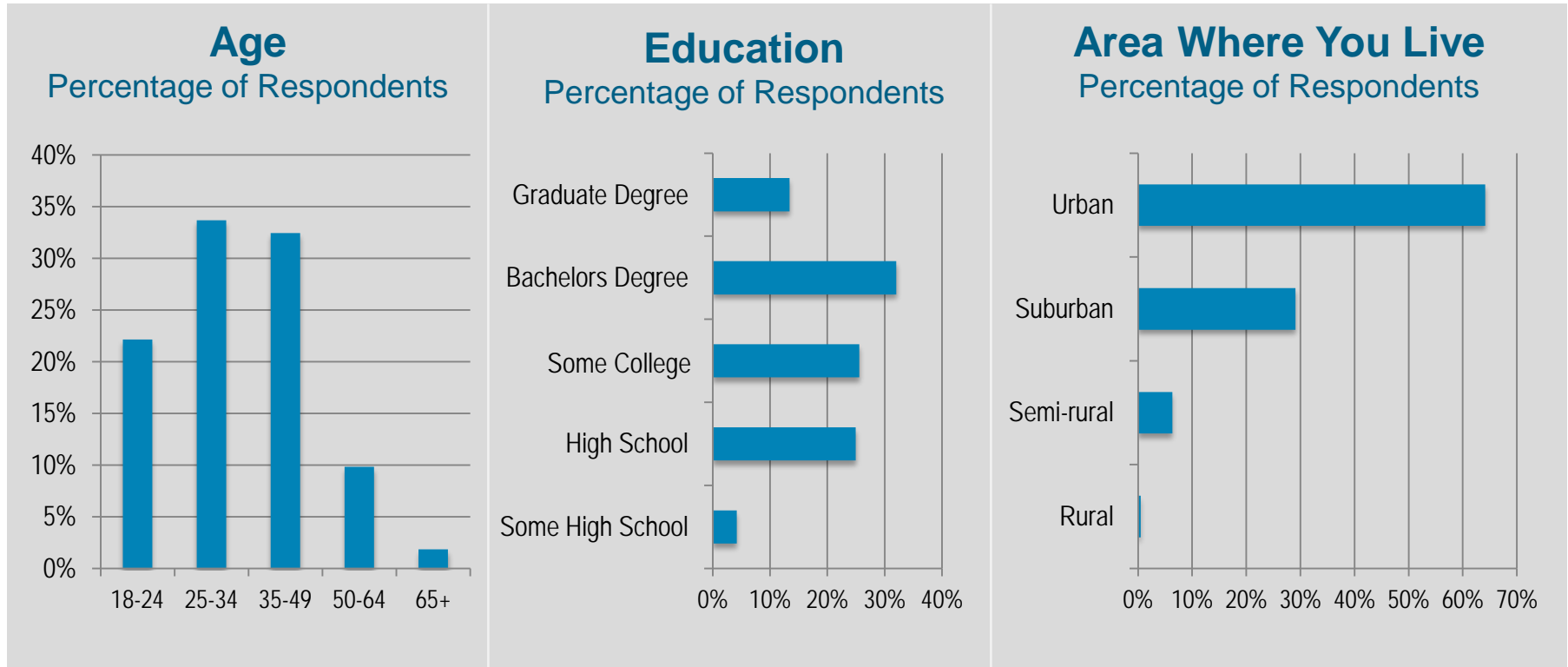
- Demographics
- Devices used (frequency and duration)
- Primary locations (frequency and duration)
- Network preferences
- Attitudes toward innovative business models
- Attitudes toward service providers

Source: Cisco IBSG, 2012

Base: 650 Brazilian broadband consumers

Survey Represents Brazilian Home Broadband Population

55 Million People (29% of Households) Have Home Broadband Access

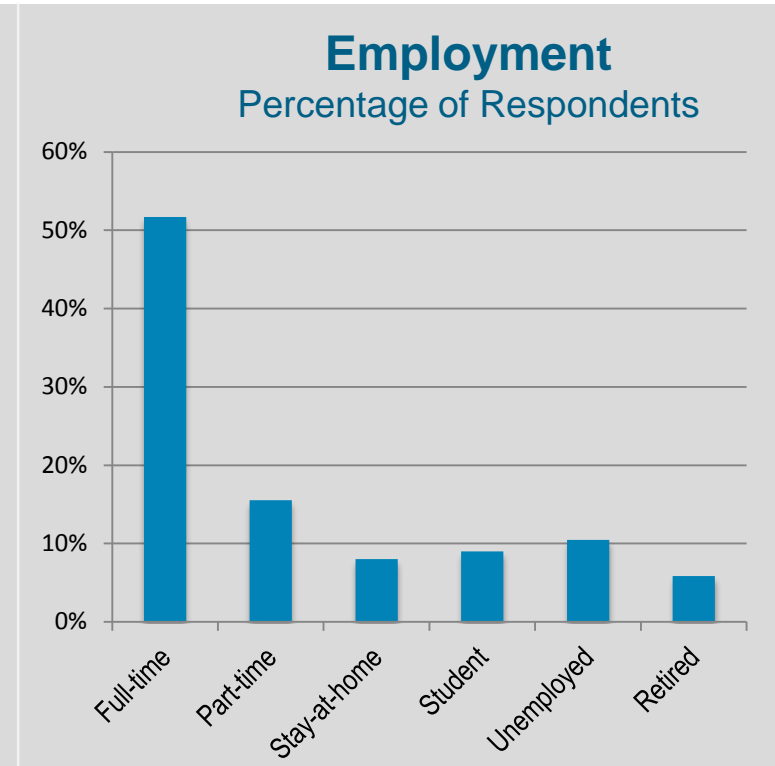
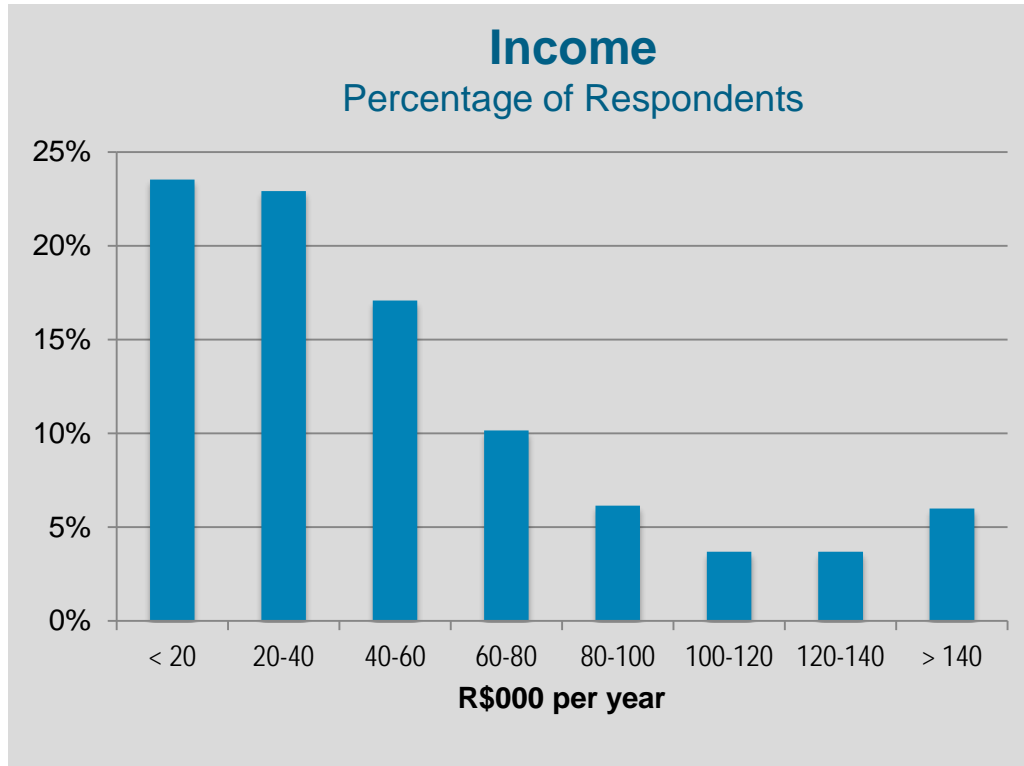


This segment of the Brazilian population is on average younger, better educated, and somewhat more urban than the total population

Source: Cisco IBSG, 2012

Base: 650 Brazilian broadband consumers

Income and Employment: Home Broadband Population



This segment of the Brazilian population has higher income and better employment situation than average Brazilian

Source: Cisco IBSG, 2012

Base: 650 Brazilian broadband consumers

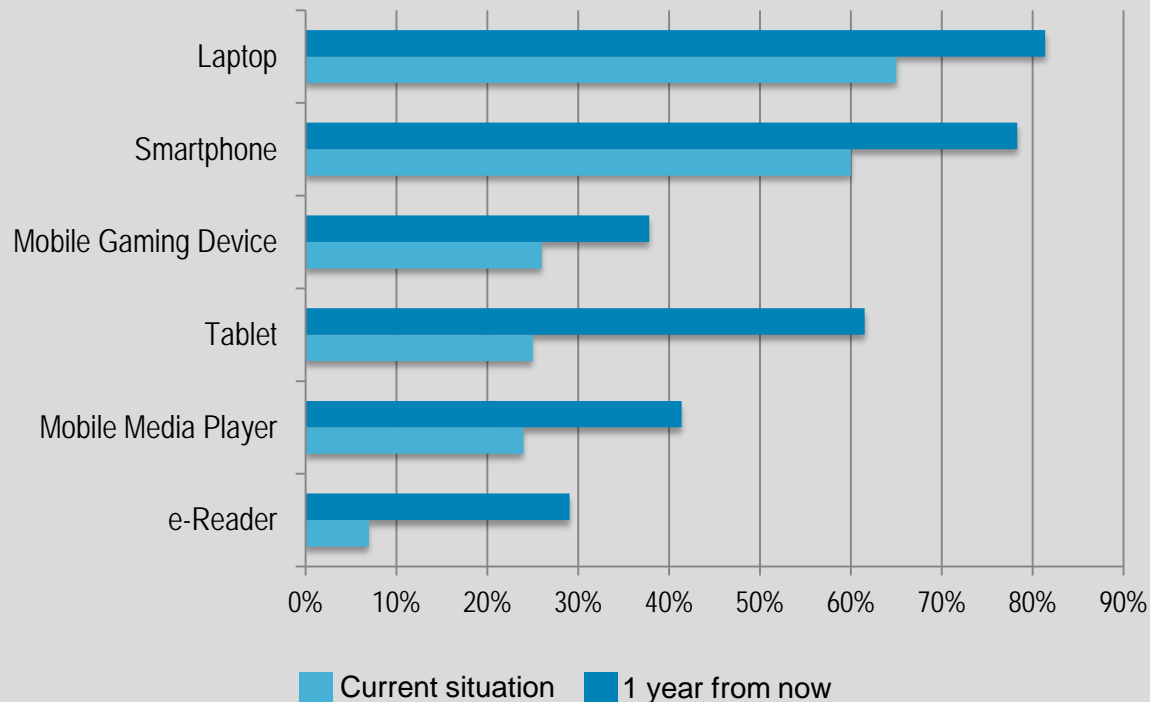


3 Use of Mobile Devices

Brazilians Love Their Mobile Devices

High Penetration of Laptops and Smartphones; Explosive Growth of Tablets

Devices Owned by Consumers
Percentage of Respondents



On average, Brazilian broadband consumers own more mobile devices than their counterparts in more developed countries:

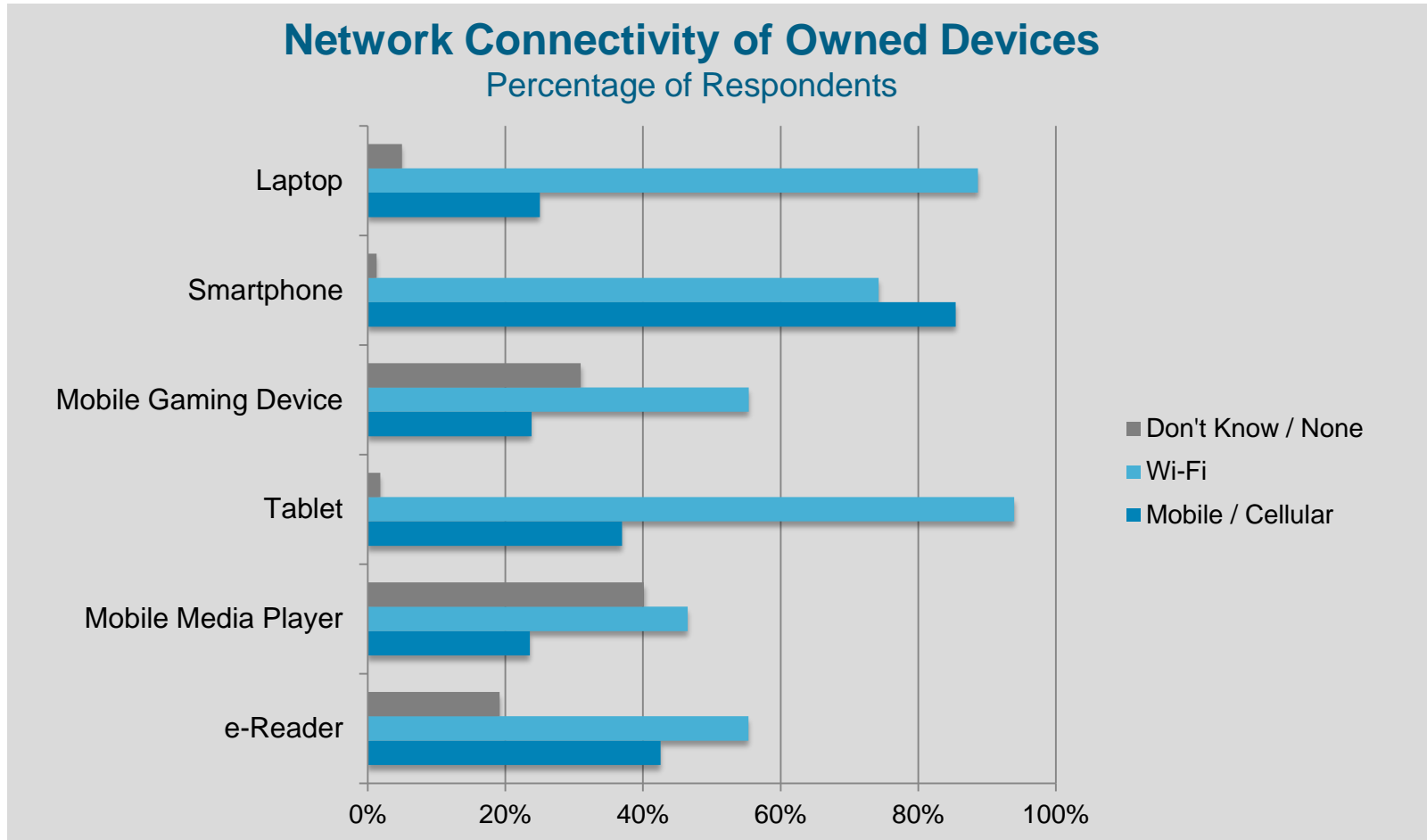
- Mexico: 2.85 devices
- **Brazil: 2.74 devices**
- United Kingdom: 2.62 devices
- United States: 2.59 devices
- Canada: 2.43 devices

Source: Cisco IBSG, 2012

Base: 650 Brazilian broadband consumers

Wi-Fi Is Primary Access Technology for These Mobile Devices

Only Smartphones Use Cellular Technology More than Wi-Fi

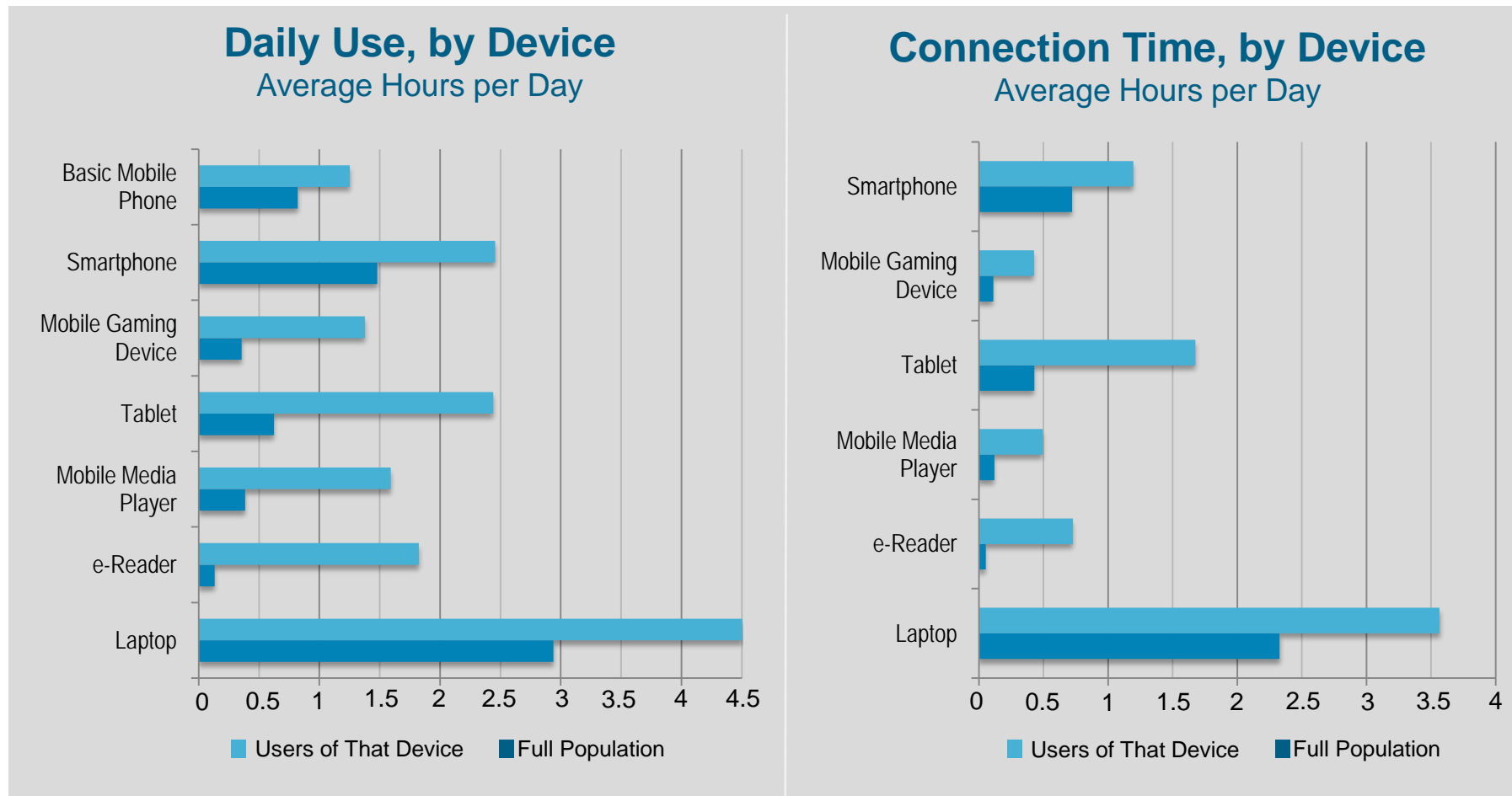


Source: Cisco IBSG, 2012

Base: 650 Brazilian broadband consumers

Consumers Use Mobile Devices More than an Hour per Day

Connected About Half the Time; Laptops Are Predominant Device



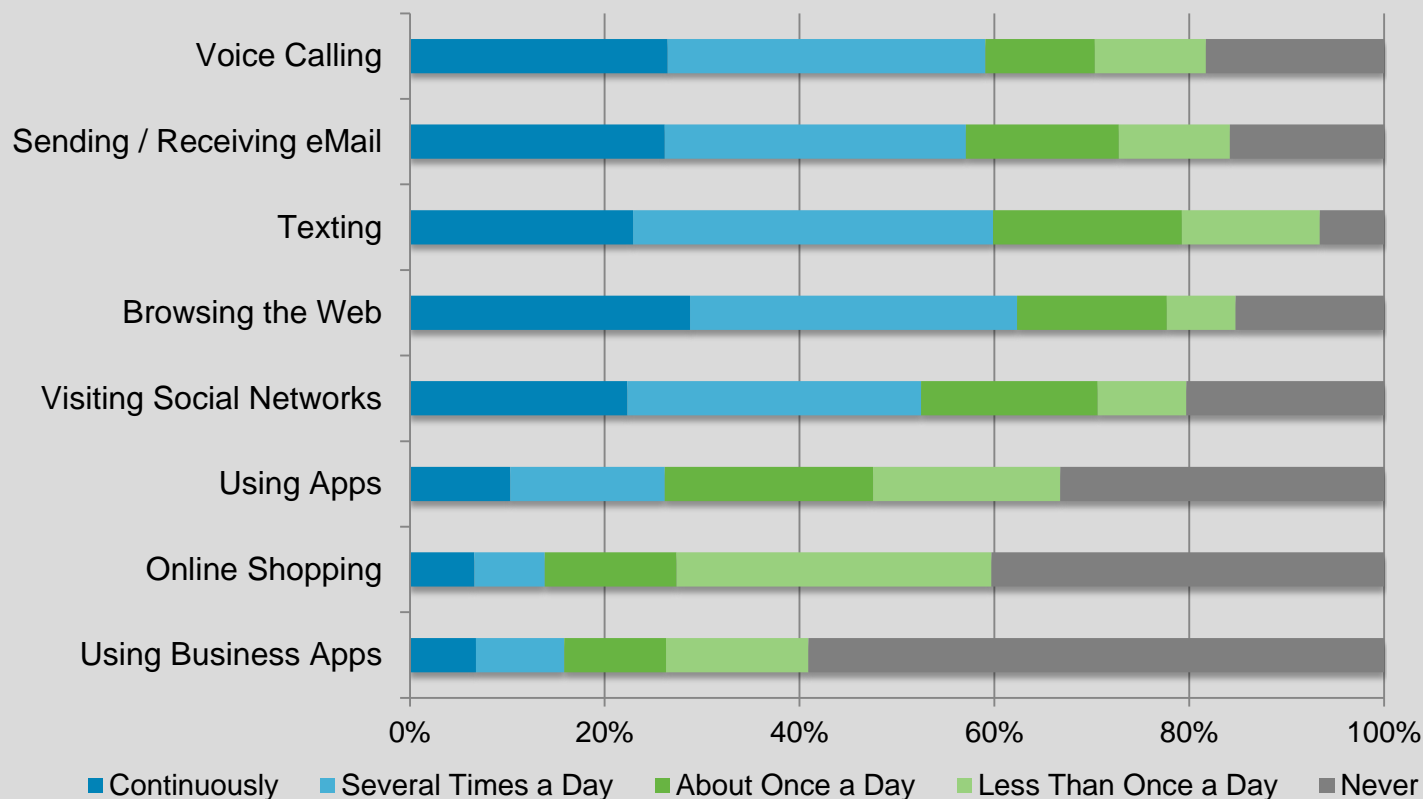
Source: Cisco IBSG, 2012

Base: 650 Brazilian broadband consumers

These Devices Are Used Daily for a Wide Variety of Online Activities

Daily Use of Mobile Services

Percentage of Respondents



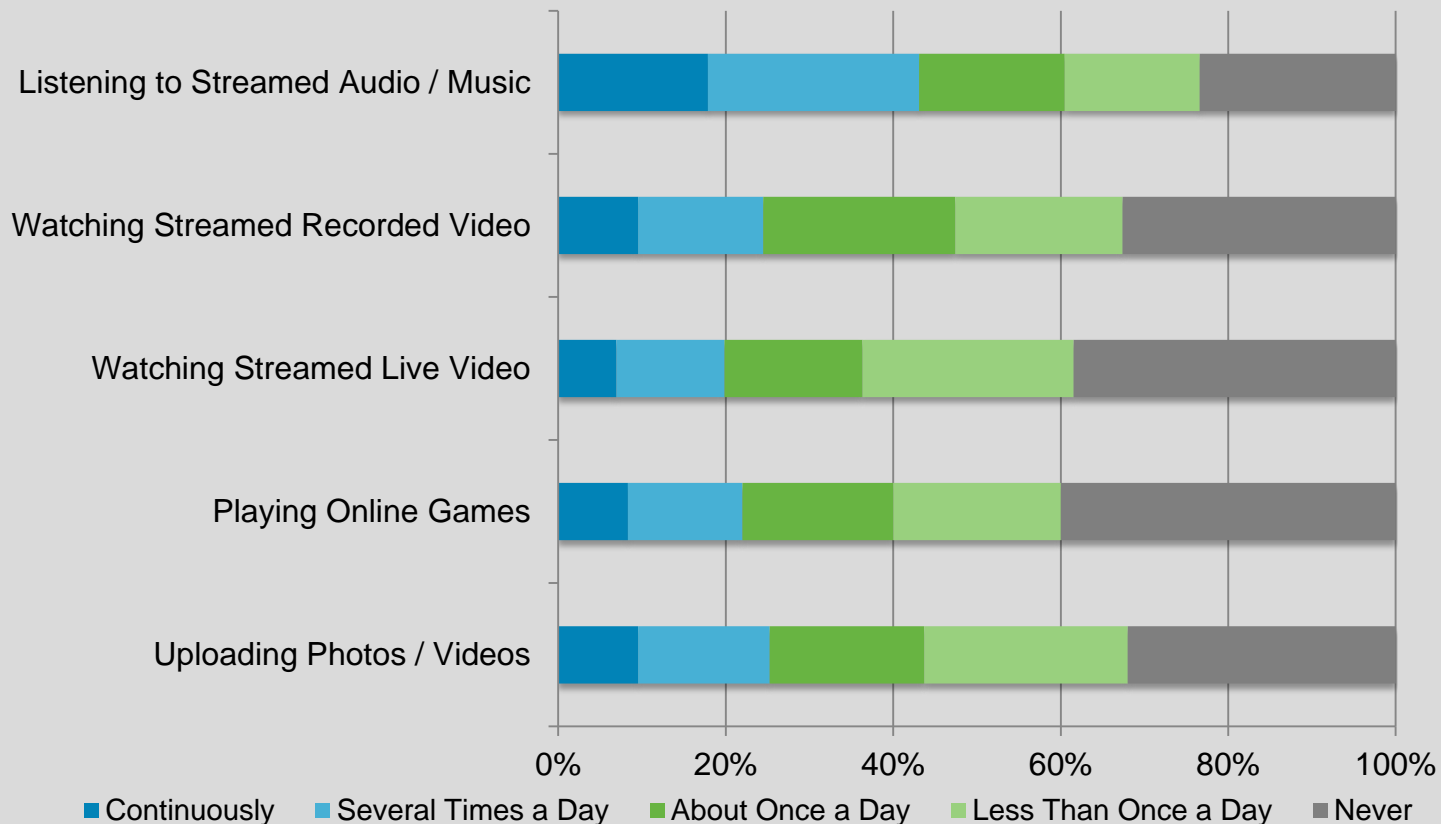
Source: Cisco IBSG, 2012

Base: 650 Brazilian broadband consumers

Significant Use of Mobile Devices for Streaming and/or Uploading Content

Daily Use of Mobile Services

Percentage of Respondents



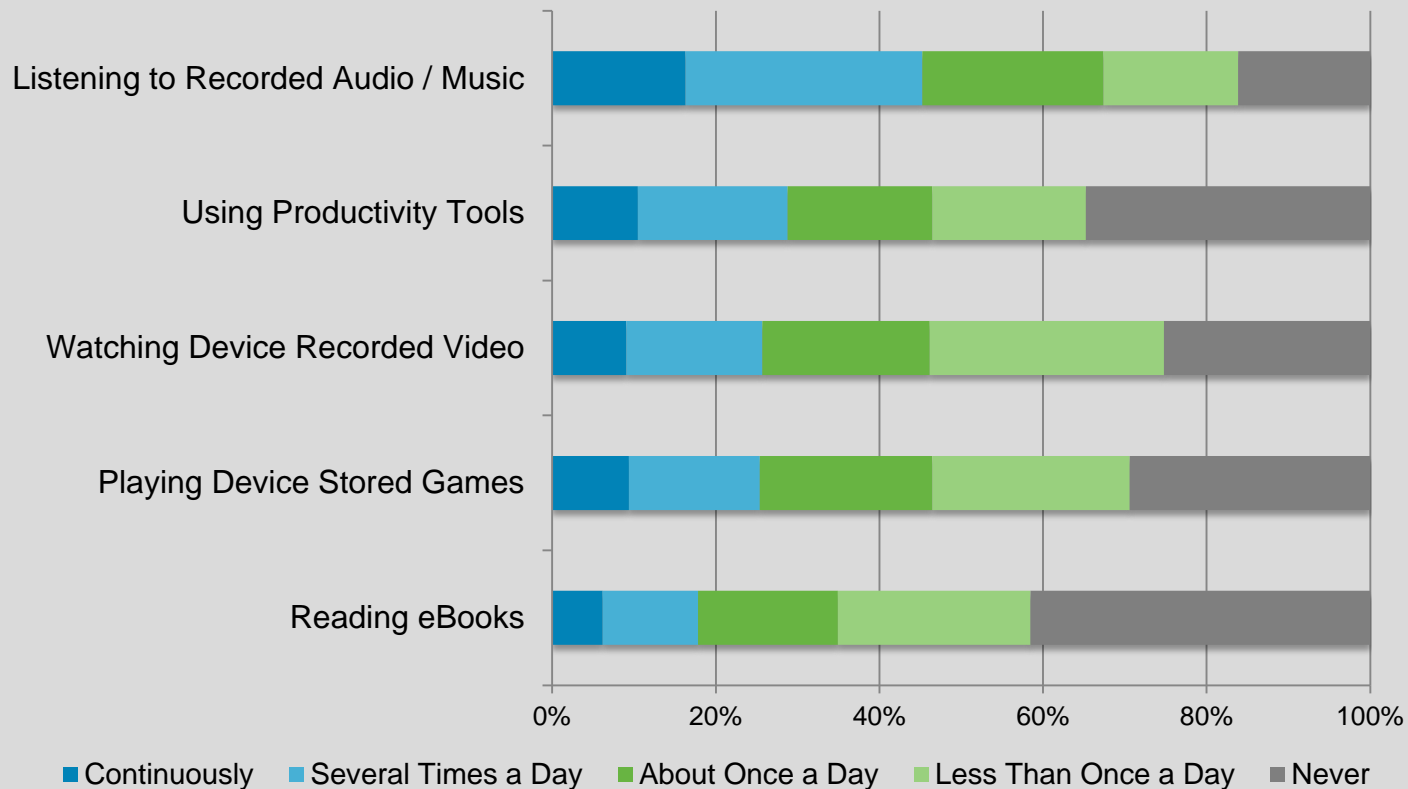
Source: Cisco IBSG, 2012

Base: 650 Brazilian broadband consumers

Music/Audio Is Most Frequently Accessed Type of Stored Content

Daily Use of Mobile Services

Percentage of Respondents



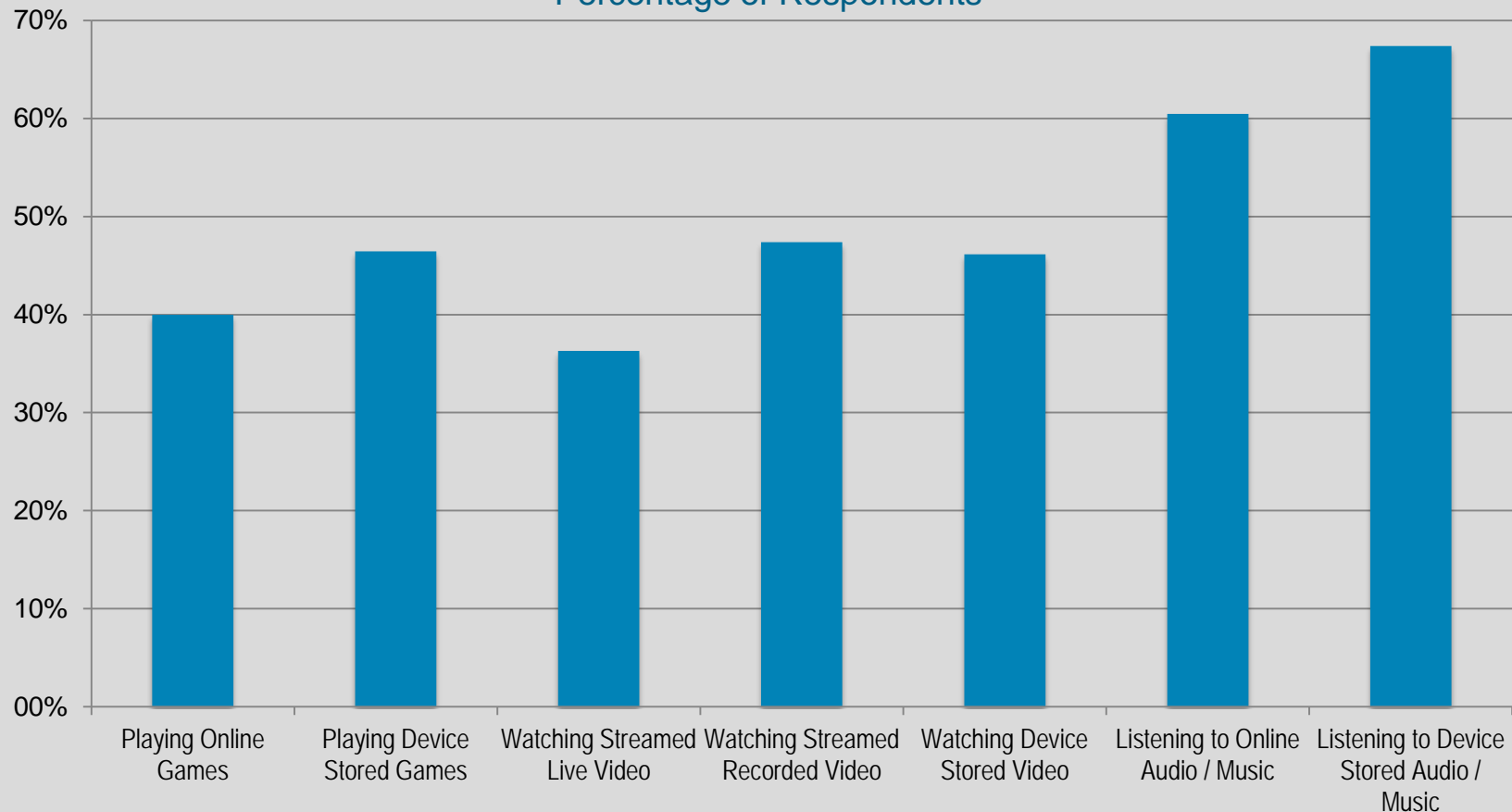
Source: Cisco IBSG, 2012

Base: 650 Brazilian broadband consumers

Both Online and Stored Music/Audio Are Accessed More than Games or Videos

Daily Use of Mobile Services

Percentage of Respondents



Source: Cisco IBSG, 2012

Base: 650 Brazilian broadband consumers

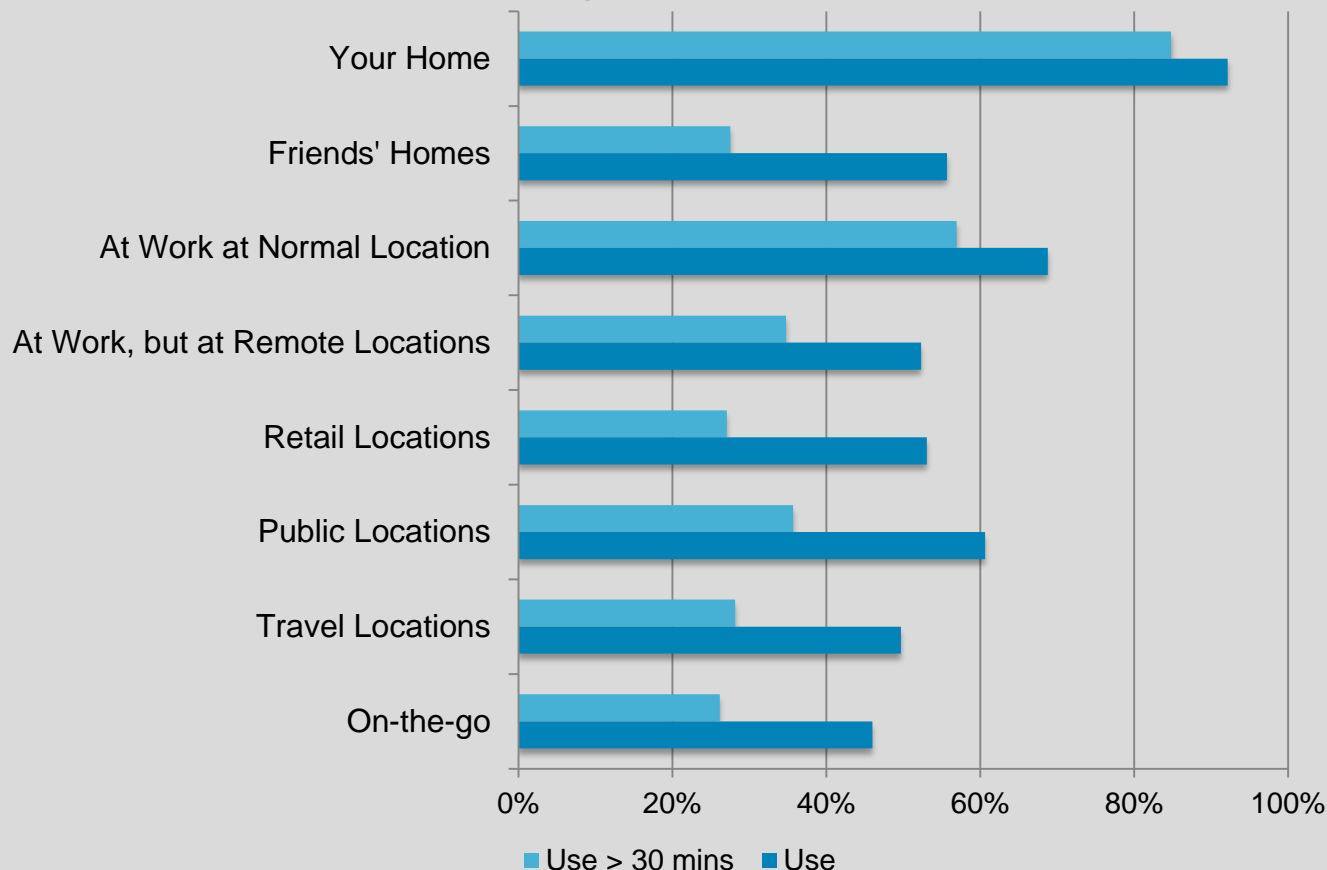


4 Location Selection

People Use Mobile Devices Across a Range of Locations During the Day

Daily Mobile Use, by Location

Percentage of Respondents



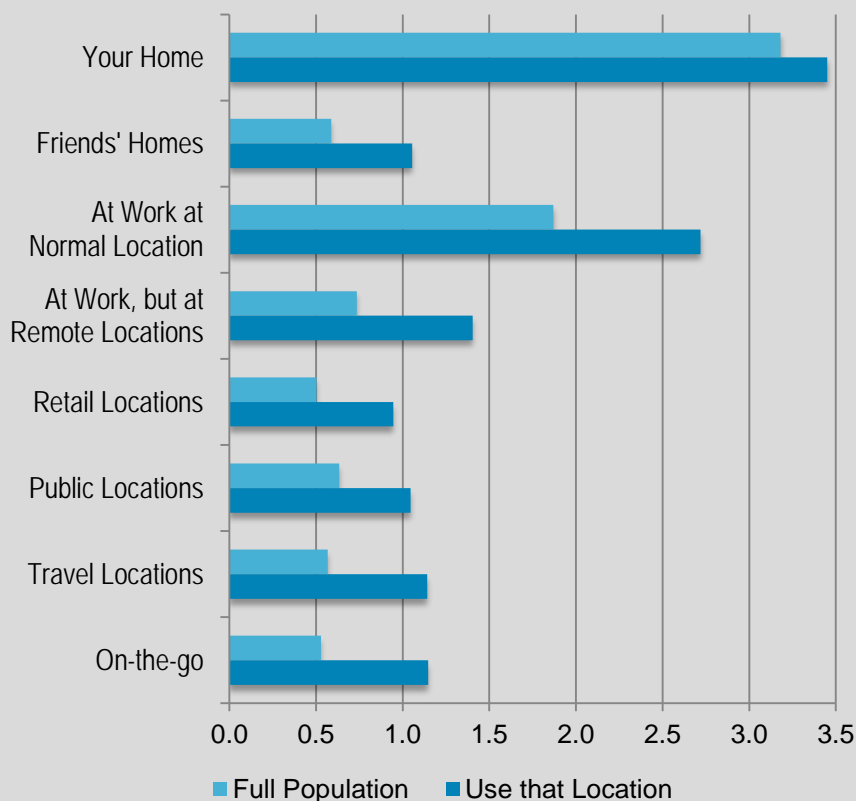
Source: Cisco IBSG, 2012

Base: 650 Brazilian broadband consumers

Most Connected Use Is at Home, and Home Use Is Growing

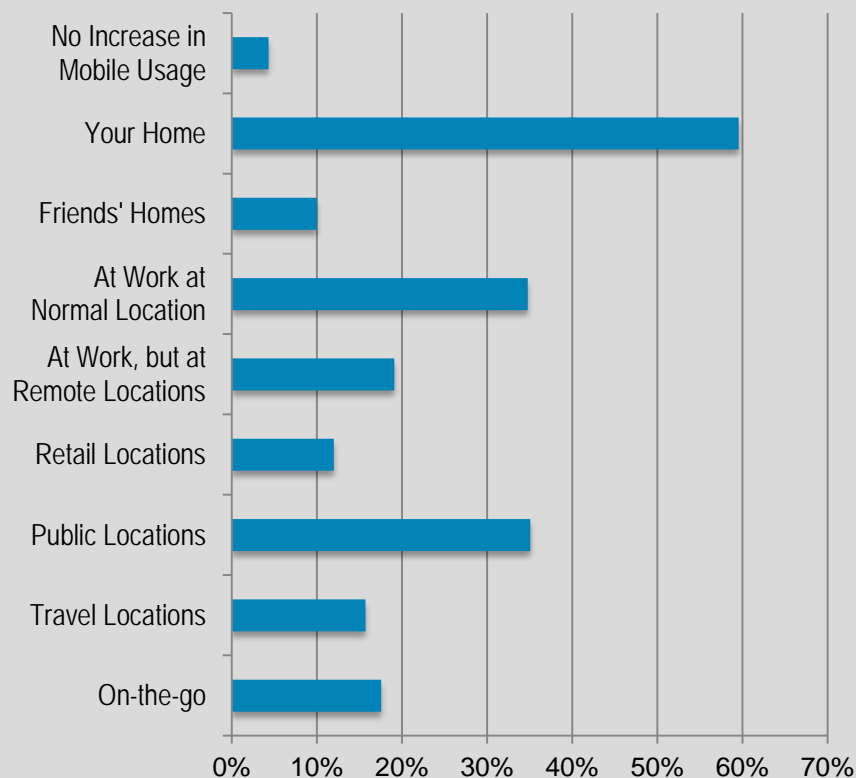
Average Daily Use, by Location

Hours per Typical Day



Increase in Use, by Location

Percentage of Respondents



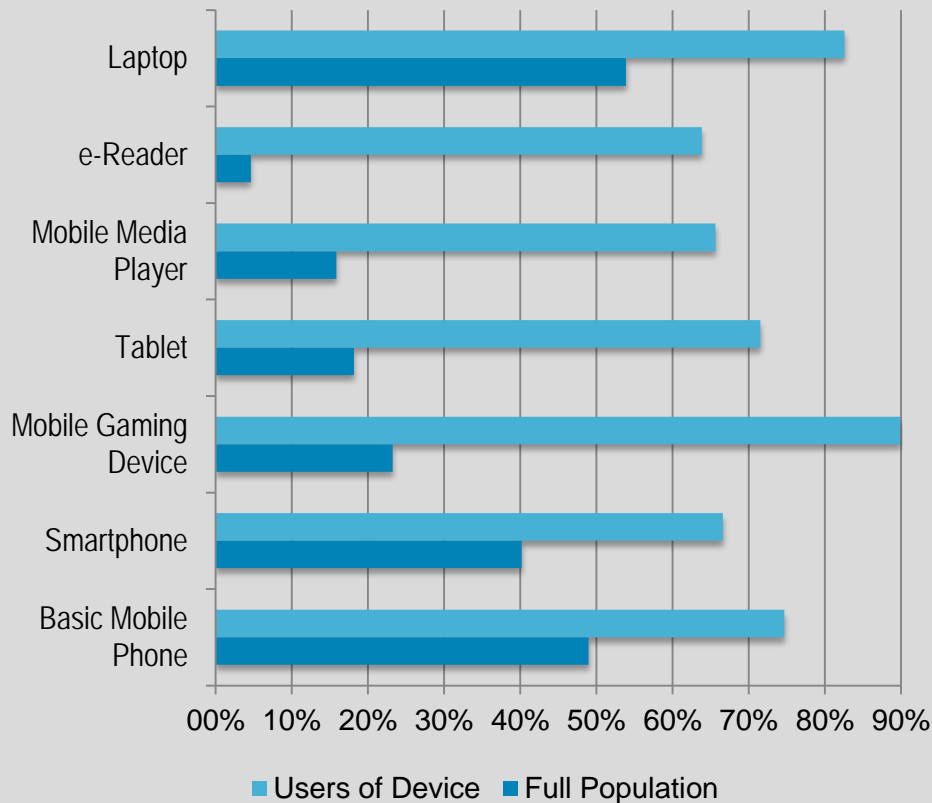
Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

Mobile Media Players and Phones Have Highest Use On-the-Go

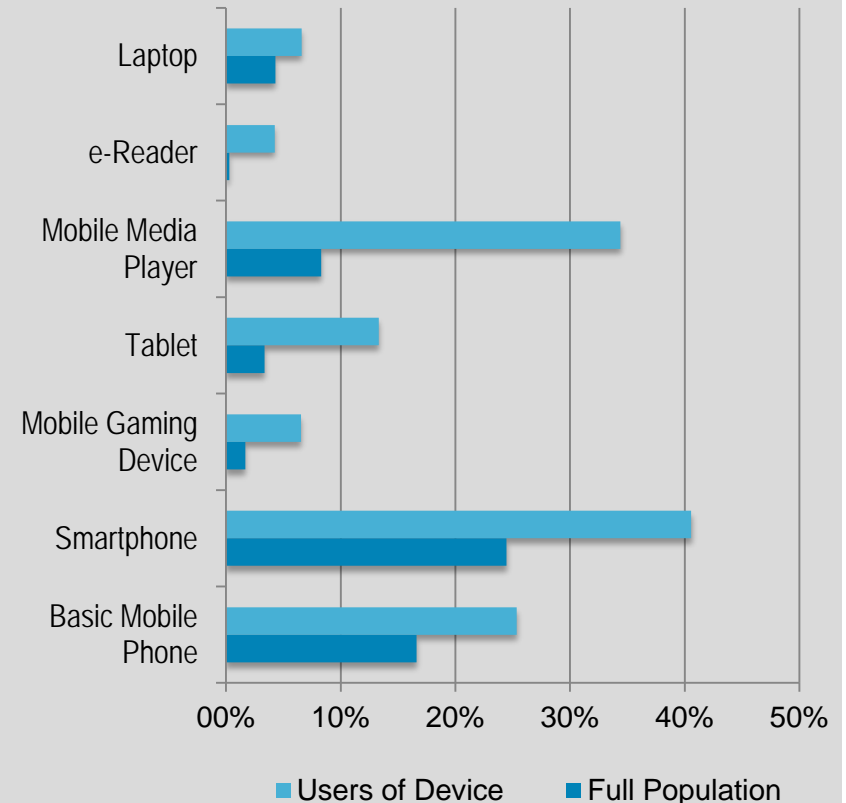
Devices Used in the Home

Percentage of Respondents



Devices Used On-the-Go

Percentage of Respondents



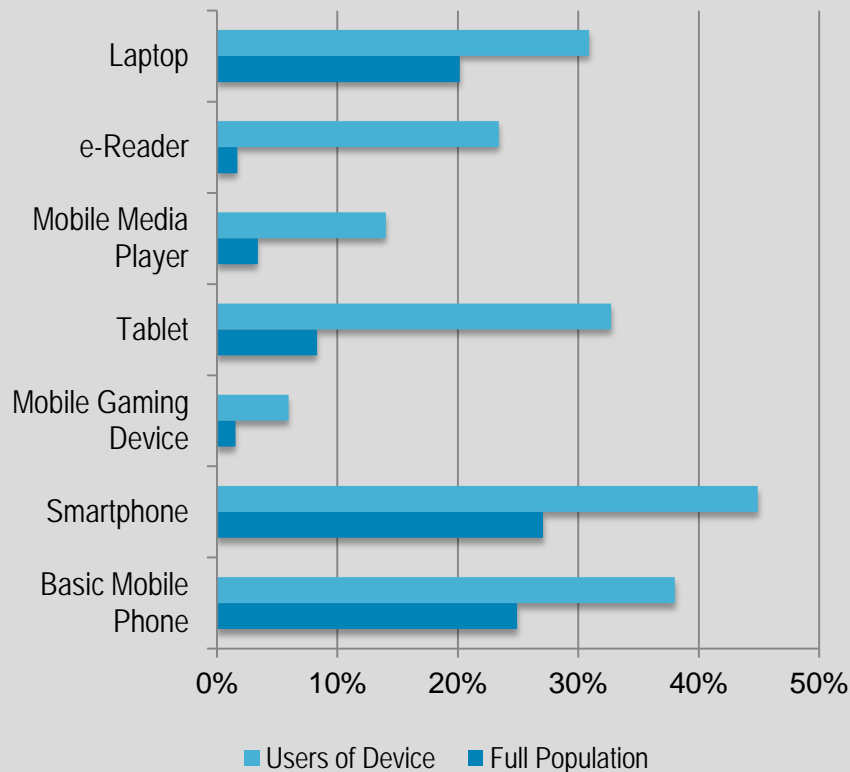
Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

Phones, Laptops, and Tablets Are Primary Work Devices

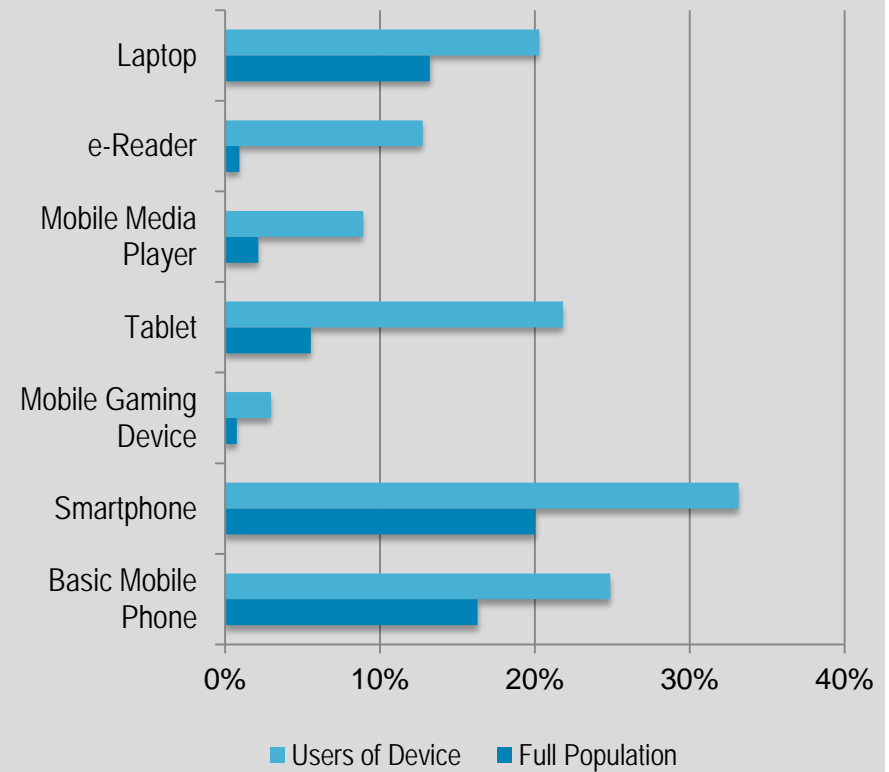
Devices Used at Normal Work Location

Percentage of Respondents



Devices Used at Remote Work Location

Percentage of Respondents



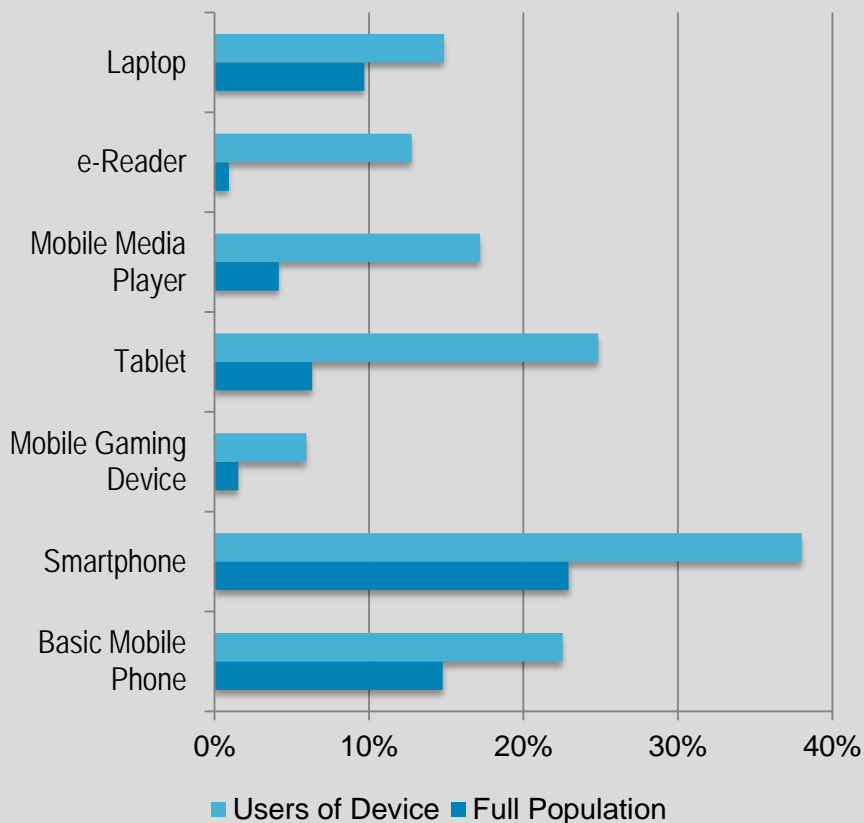
Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

Phones Are Used Most in Retail and Public Locations; Tablets Growing

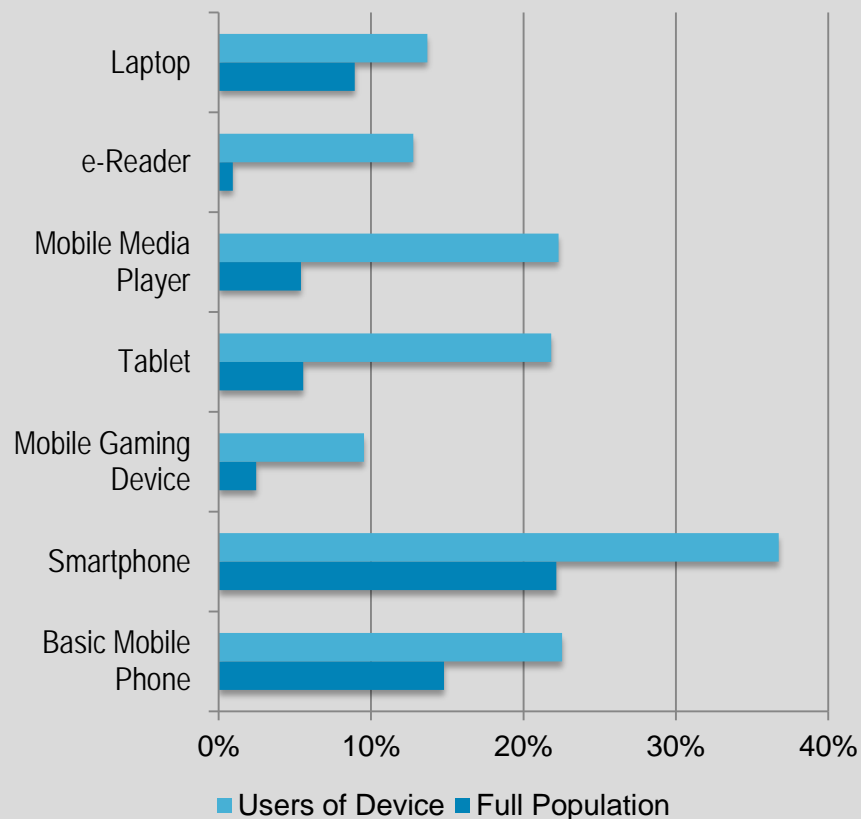
Devices Used at Retail Location

Percentage of Respondents



Devices Used at Public Location

Percentage of Respondents



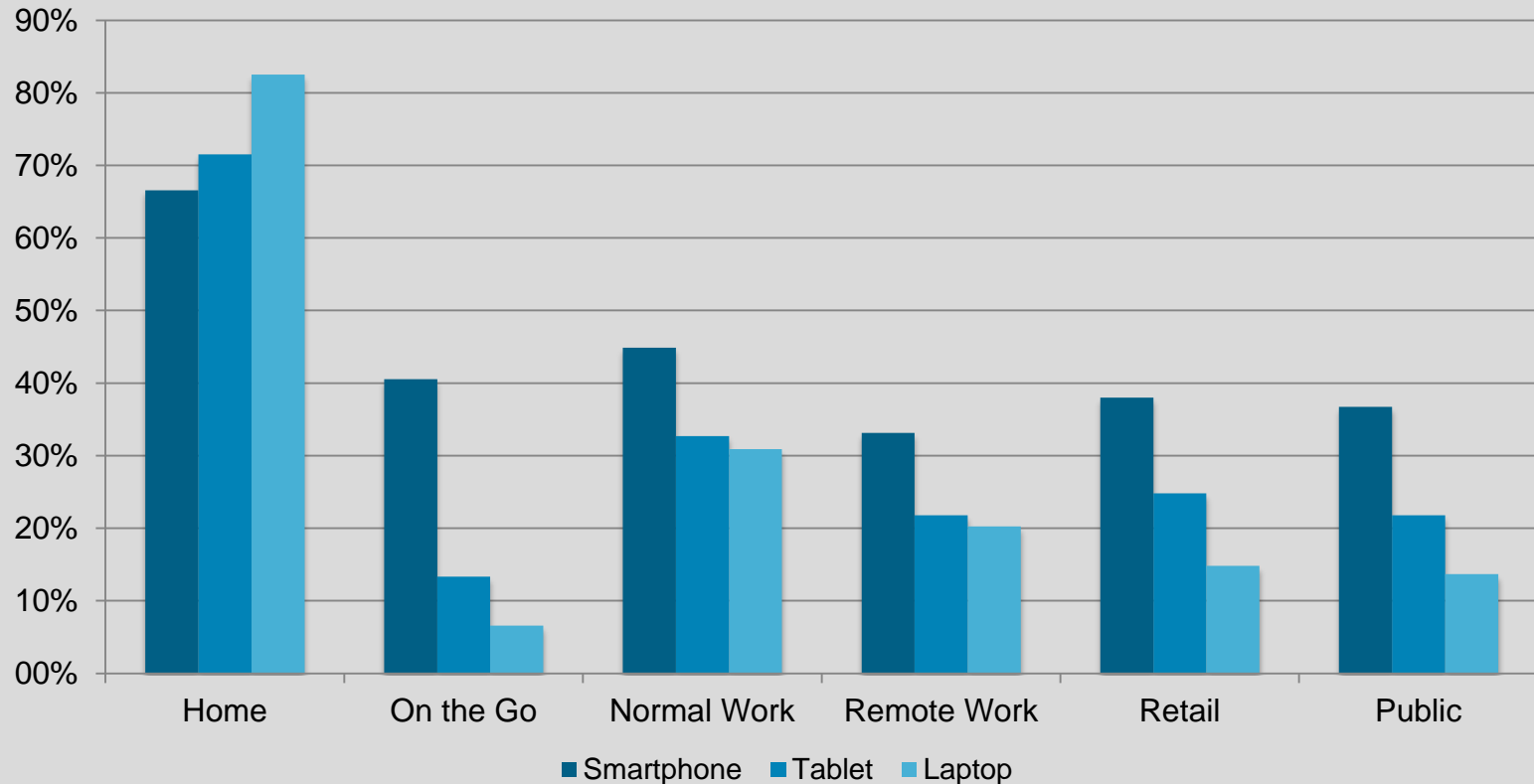
Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

Home Is Place of Highest Use for Multi-Function Devices

Smartphone Is Most Used Device Outside of Home

Usage of Multi-Function Devices by Location
Percentage of Respondents



Source: Cisco IBSG, 2012

Base: Users of the device

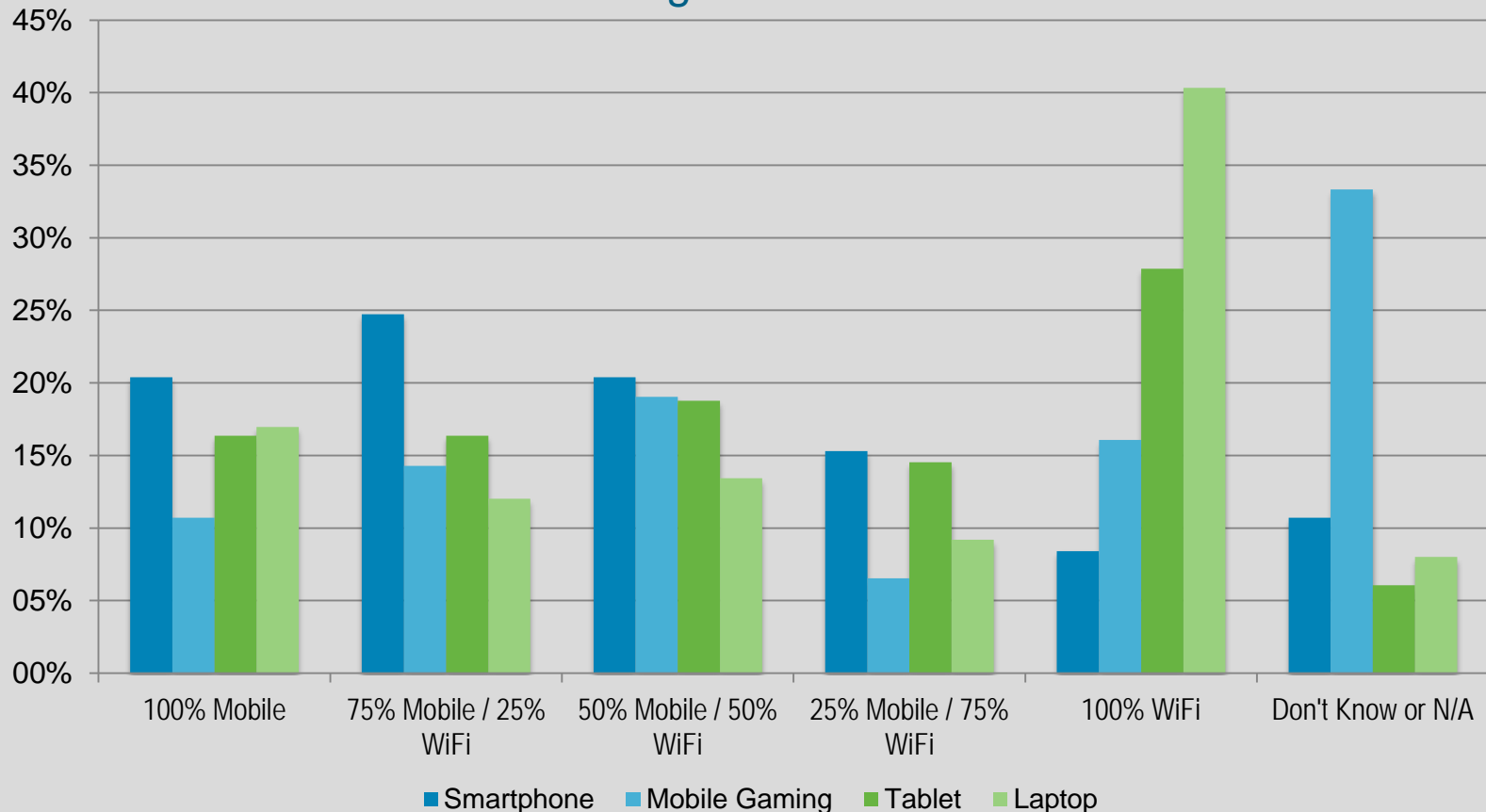


5

Network Choice: Wi-Fi vs. Mobile

Most Mobile Users Employ Some Wi-Fi, Including 80% of Smartphone Owners

Current Distribution of Network Connectivity Time
Percentage of Device Users

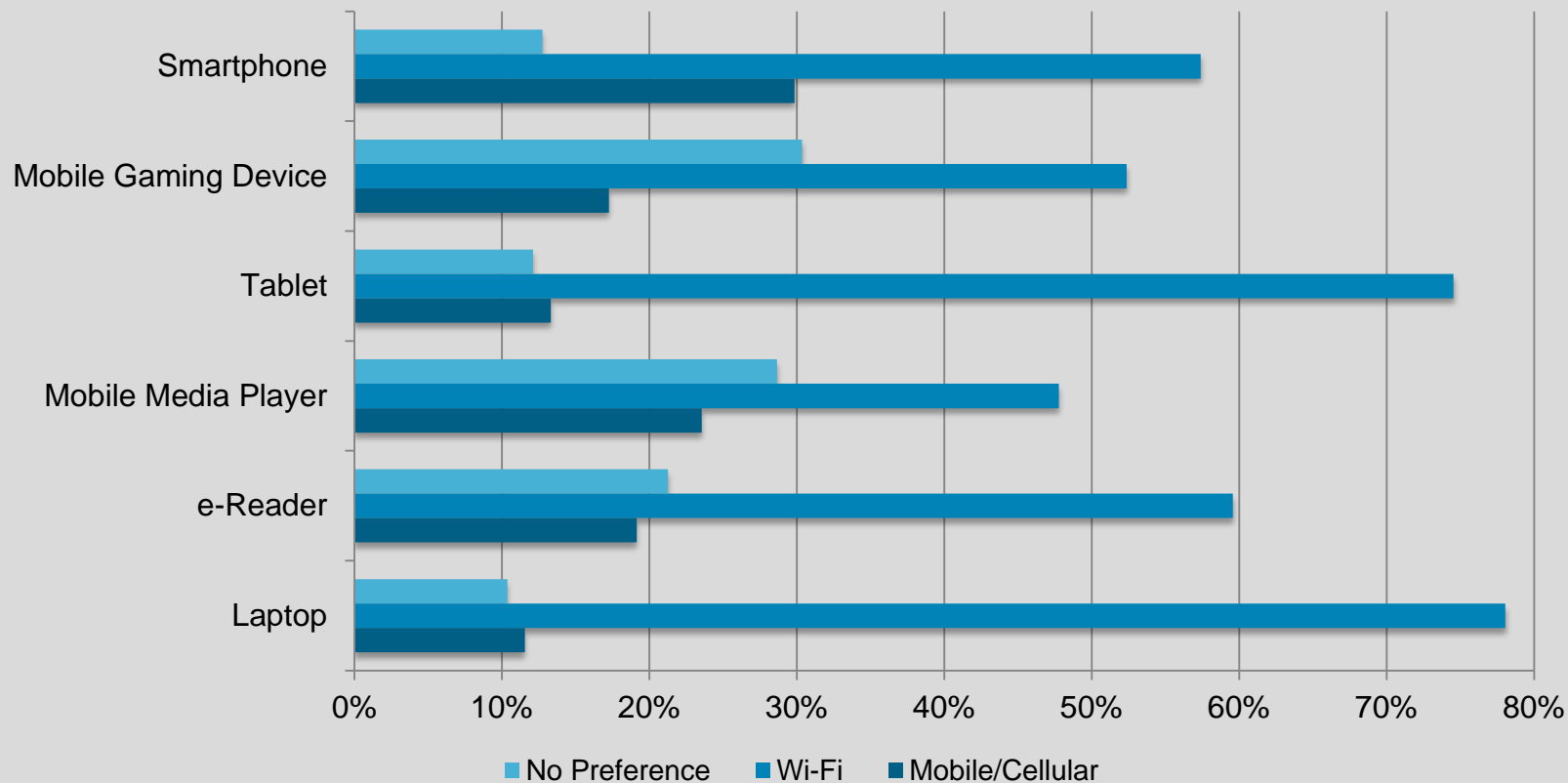


Source: Cisco IBSG, 2012

Base: Users of the device

Even Smartphone Users Prefer Connecting Devices via Wi-Fi

Preferred Network Access, by Device
Percentage of Device Users



Source: Cisco IBSG, 2012

Base: Users of the device

Wi-Fi Is the Preferred Means of Mobile Network Access Across All Attributes

Preferred Network Access, by Attribute

Attribute	Mobile / Cellular	Wi-Fi	No Difference	Sample Size*
Lower cost	27%	61%	12%	575
Speed of network	16%	71%	13%	577
Best reliability	30%	53%	17%	573
Best performance for my applications	22%	61%	17%	572
Best coverage	41%	46%	12%	583
Most secure	31%	50%	19%	563
Easier to use	29%	53%	18%	589

* "Don't know" responses removed from sample.

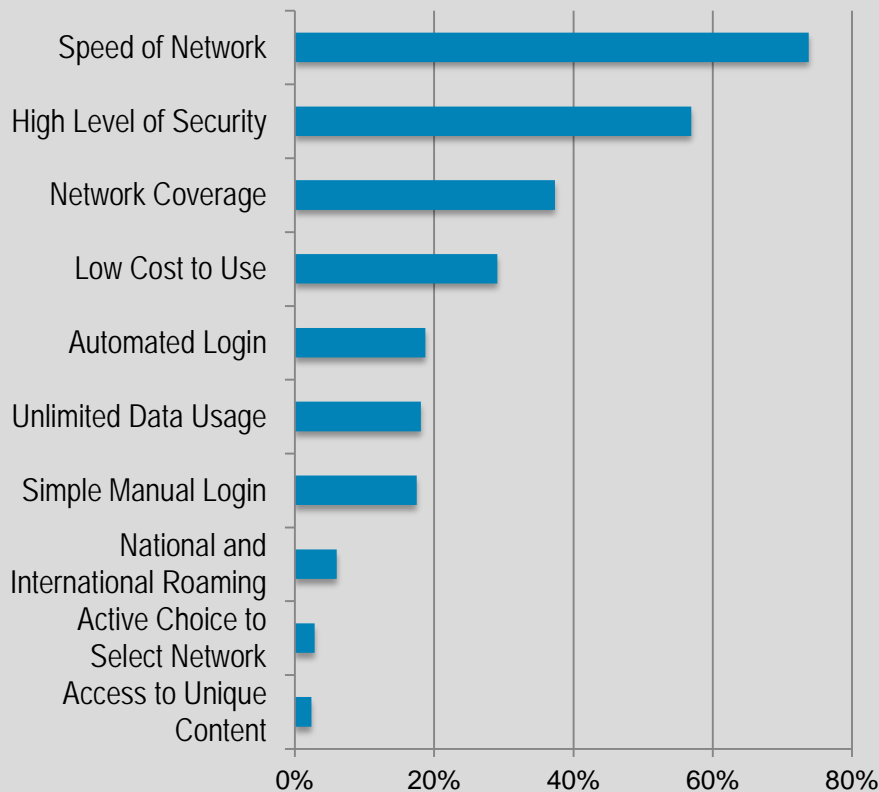
Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

Users Like Wi-Fi's Speed and Security, but Face Several Challenges

Most Important Wi-Fi Features

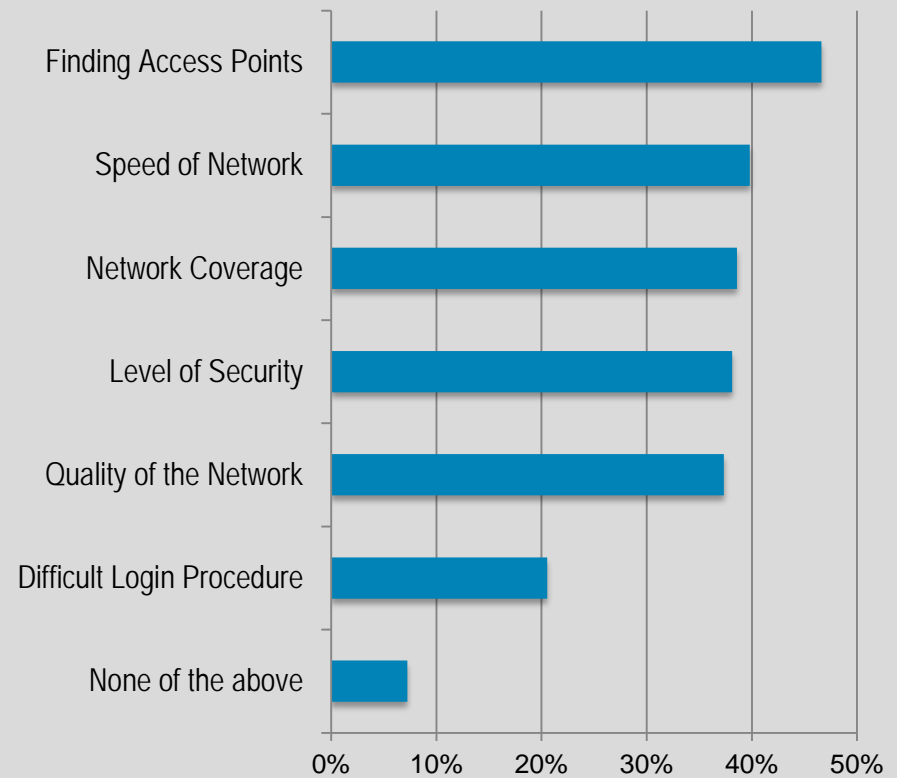
Percentage of Respondents*



**"Other" excluded; N=629

Challenges of Wi-Fi Networks

Percentage of Respondents*



**"Other" excluded; N=648

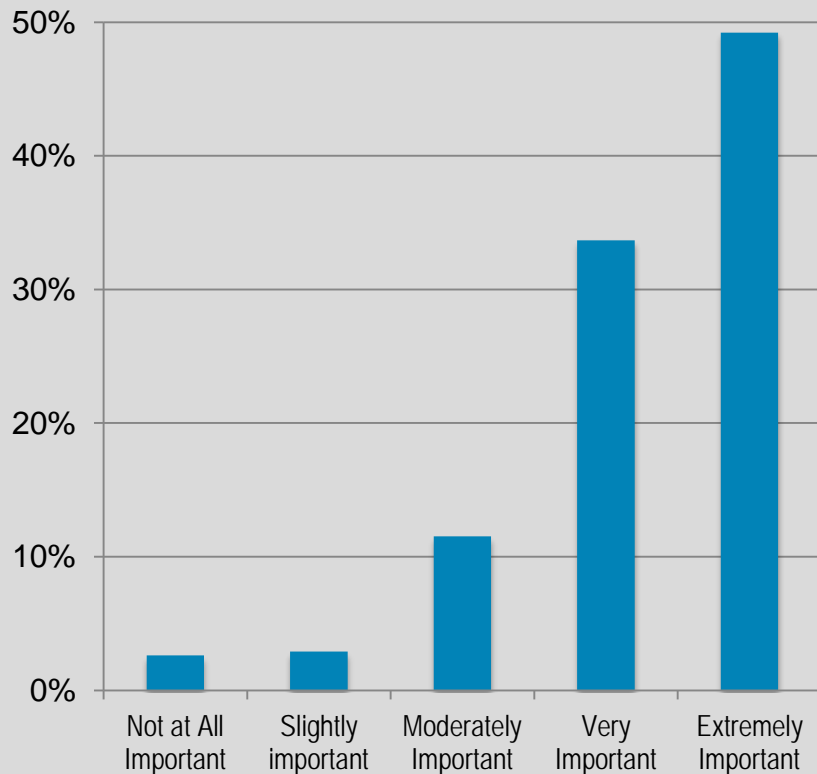
Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

Seamless Handoff and Integration of Mobile and Wi-Fi Are Very Important

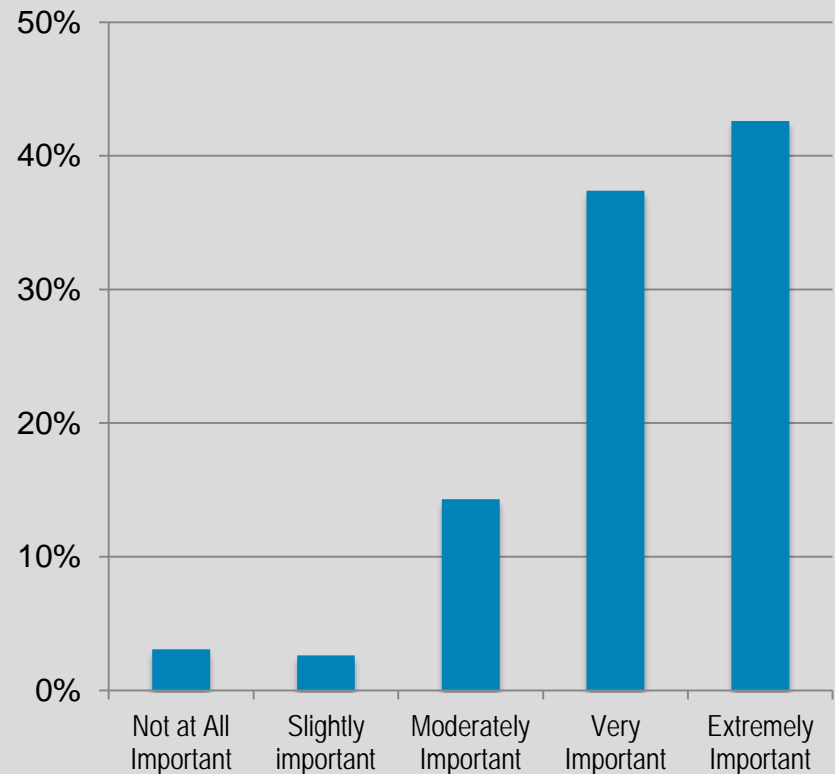
Importance of Seamless *Wi-Fi-to-Wi-Fi* Handoff

Percentage of Respondents



Importance of Seamless *Mobile-to-Wi-Fi* Handoff

Percentage of Respondents



Source: Cisco IBSG, 2012

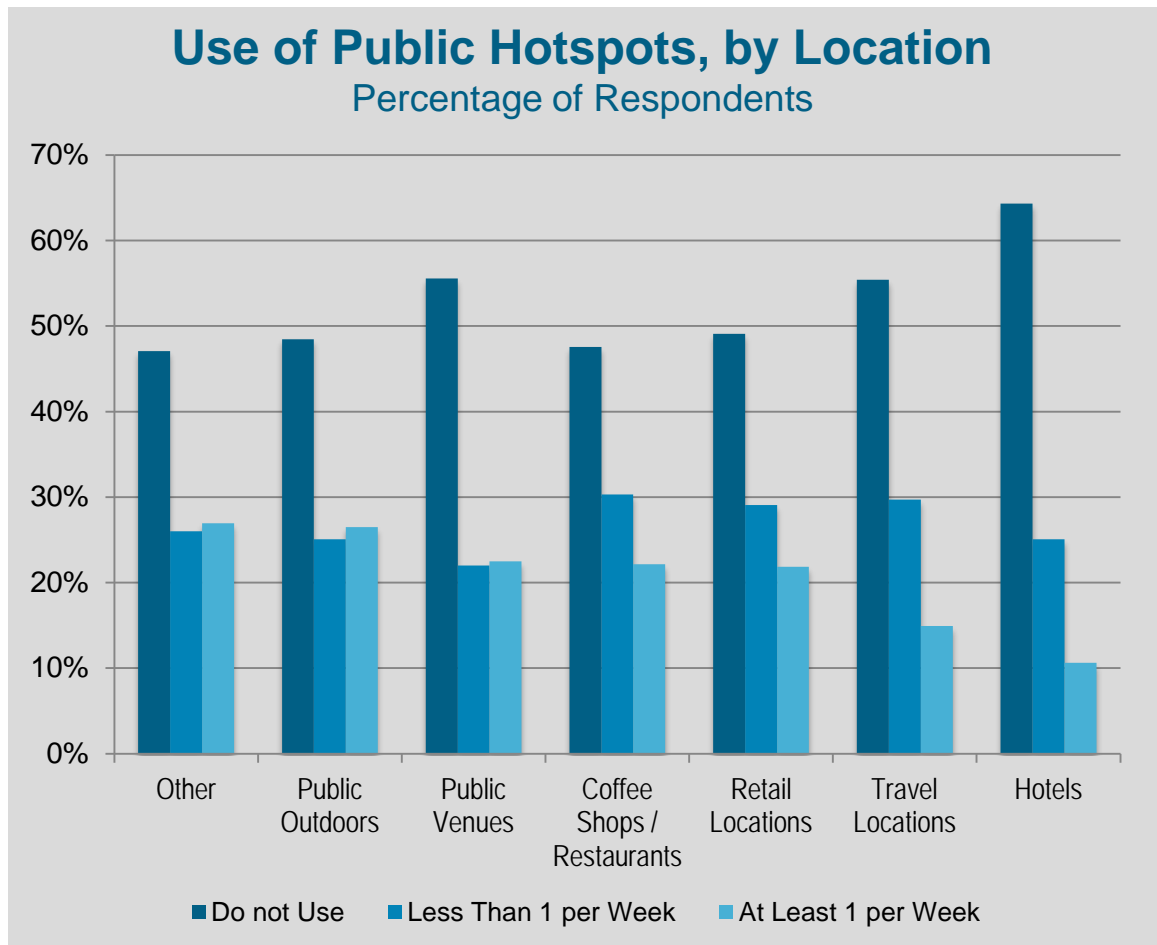
Base: Brazilian broadband consumers



6 The New Mobile

Mobile Users Access Wi-Fi from a Variety of Public Locations

They Use Different Kinds of Public Hotspots with Similar Frequency



- Frequency of use is a function of availability of hotspots, not necessarily an indicator of user preference
- Likewise, use in travel locations and hotels, which is relatively low, depends on frequency of traveling
- A higher percentage of broadband consumers has used public hotspots in Brazil than in more developed countries:
 - Mexico: 88%
 - **Brazil: 72%**
 - United States: 58%
 - Canada: 56%
 - United Kingdom: 51%

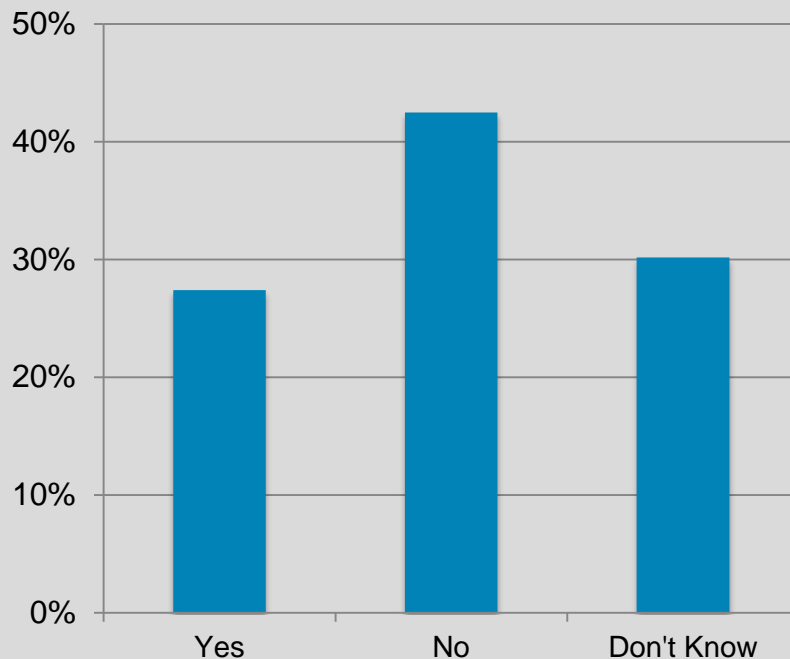
Source: Cisco IBSG, 2012

Base: 650 Brazilian broadband consumers

Most Users Do Not Access Free Wi-Fi as Part of Mobile or Broadband Service

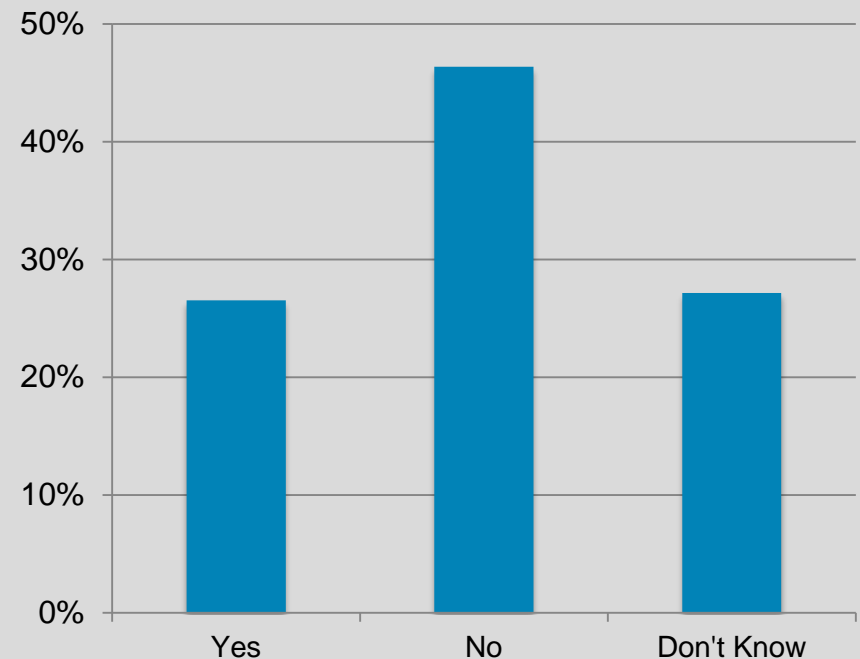
More than 40% Don't Have It, and About 30% Don't Know

**Inclusion of Free Public Wi-Fi in
*Home Broadband***
Percentage of Respondents



N=650

**Inclusion of Free Public Wi-Fi in
*Mobile Subscription***
Percentage of Respondents



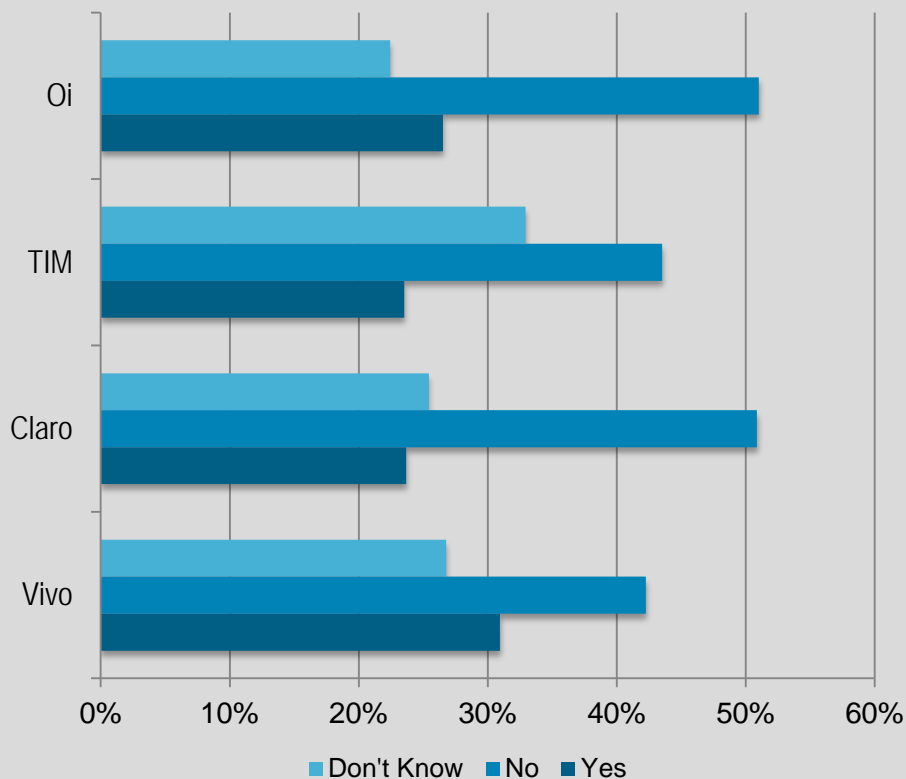
N=630 customers with mobile voice or data plan

Source: Cisco IBSG, 2012

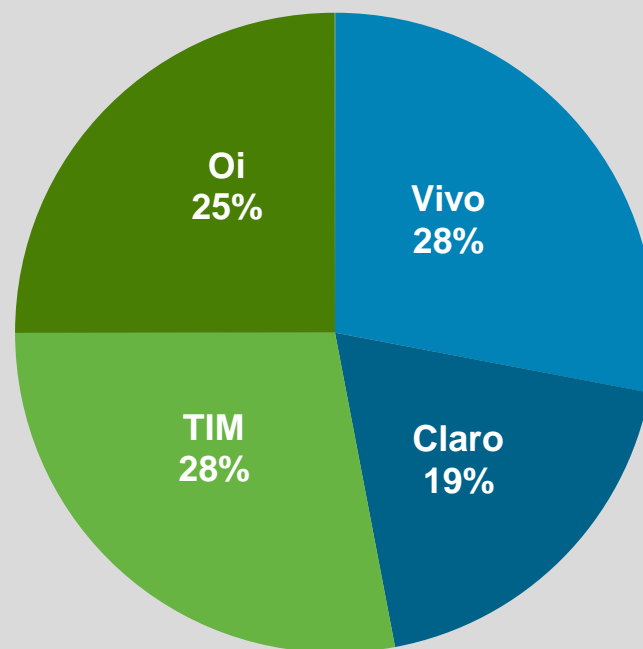
Base: Brazilian broadband consumers

Mobile Customers Are More Aware that Free Wi-Fi Is *Not* Included in Plan

**Inclusion of Free Public Wi-Fi in
Mobile Subscription, by Provider**
Percentage of Mobile Customers



**Distribution of Respondents,
by Mobile Provider**
Percentage of Respondents



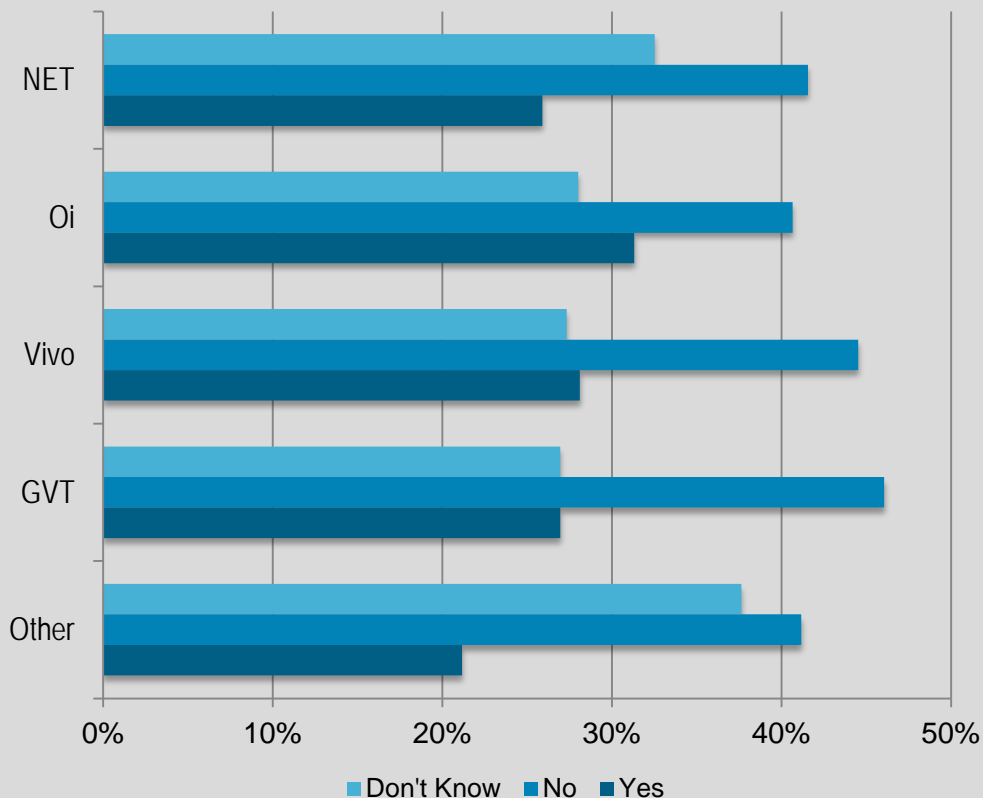
Note: Claro does not currently offer Wi-Fi access to public hotspots, while TIM, Oi, and Vivo do. N=599

Source: Cisco IBSG, 2012

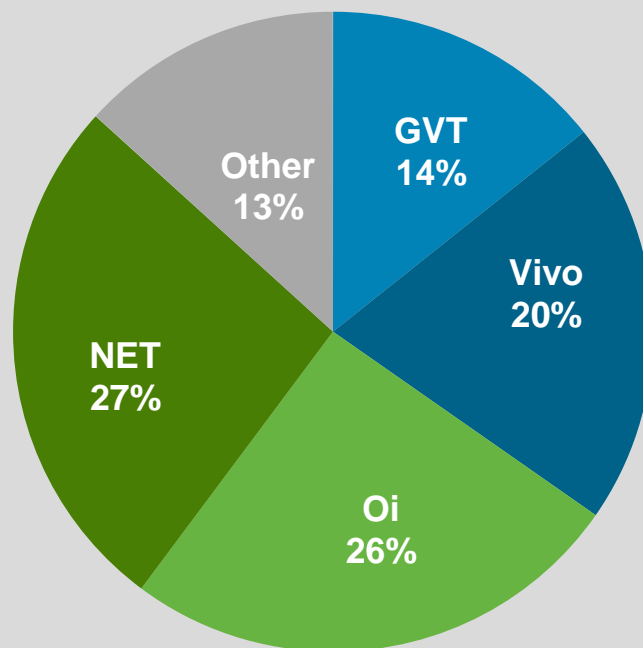
Base: Brazilian broadband consumers

Broadband Customers Are Less Clear About Inclusion of Free Wi-Fi in Plan

**Inclusion of Free Public Wi-Fi in
Home Broadband, by Provider**
Percentage of Fixed Broadband Customers



**Distribution of Respondents,
by Broadband Provider**
Percentage of Respondents



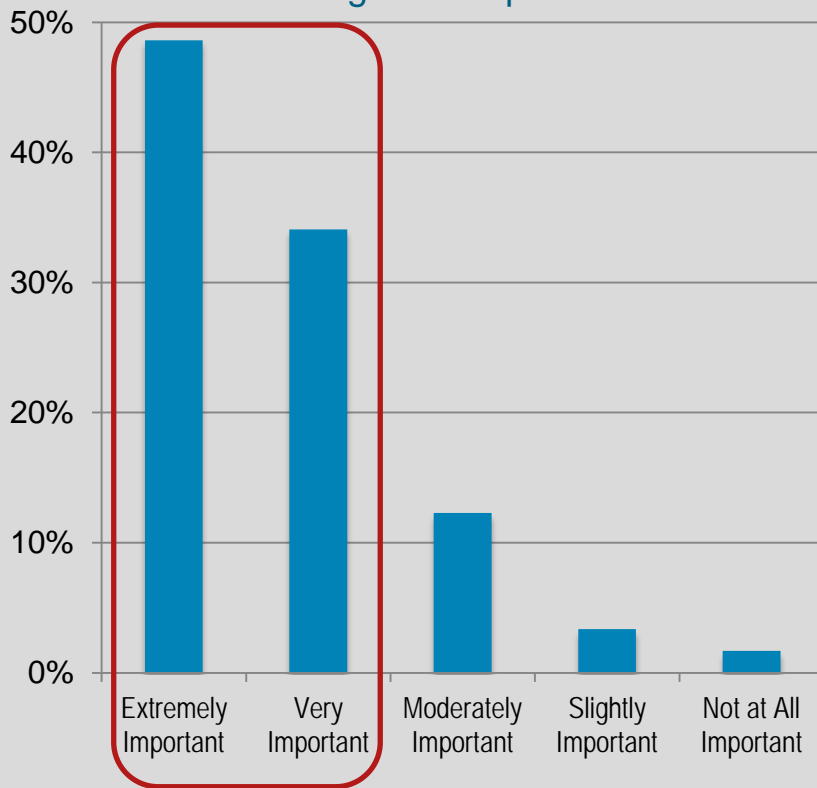
Note: GVT does not currently offer Wi-Fi access to public hotspots, while NET, Oi, Vivo, and some small SPs do.
N=650

Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

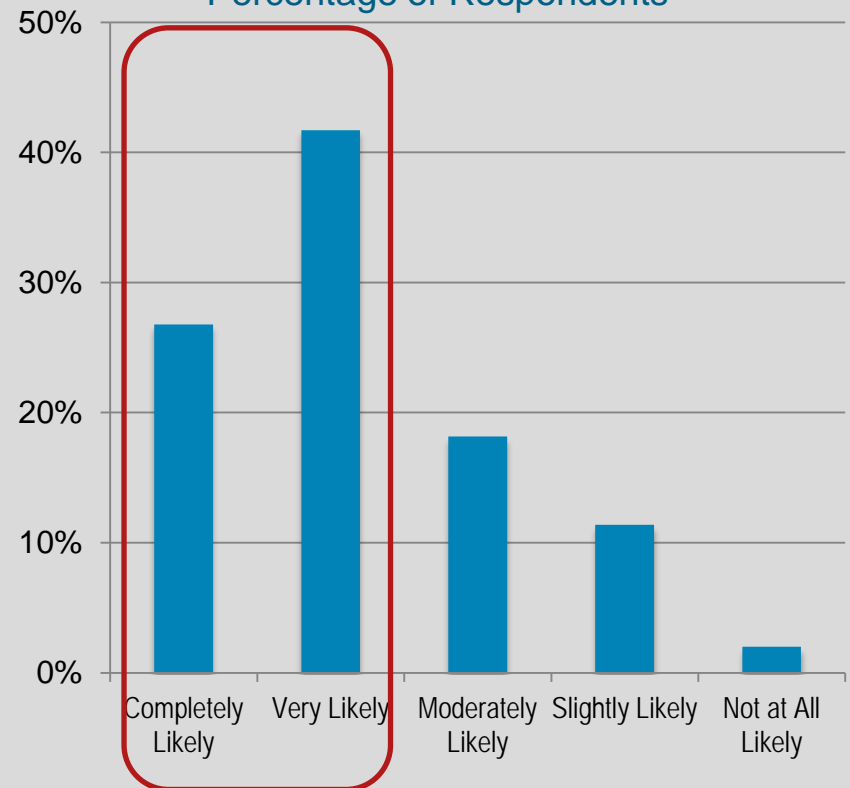
Free Wi-Fi Is a Strong Way To Attract and Retain Customers

Importance of Free Wi-Fi in Broadband Provider Choice
Percentage of Respondents



N=179 users who have free Wi-Fi bundled in subscription

Likelihood of Changing Provider for Free Public Wi-Fi
Percentage of Respondents



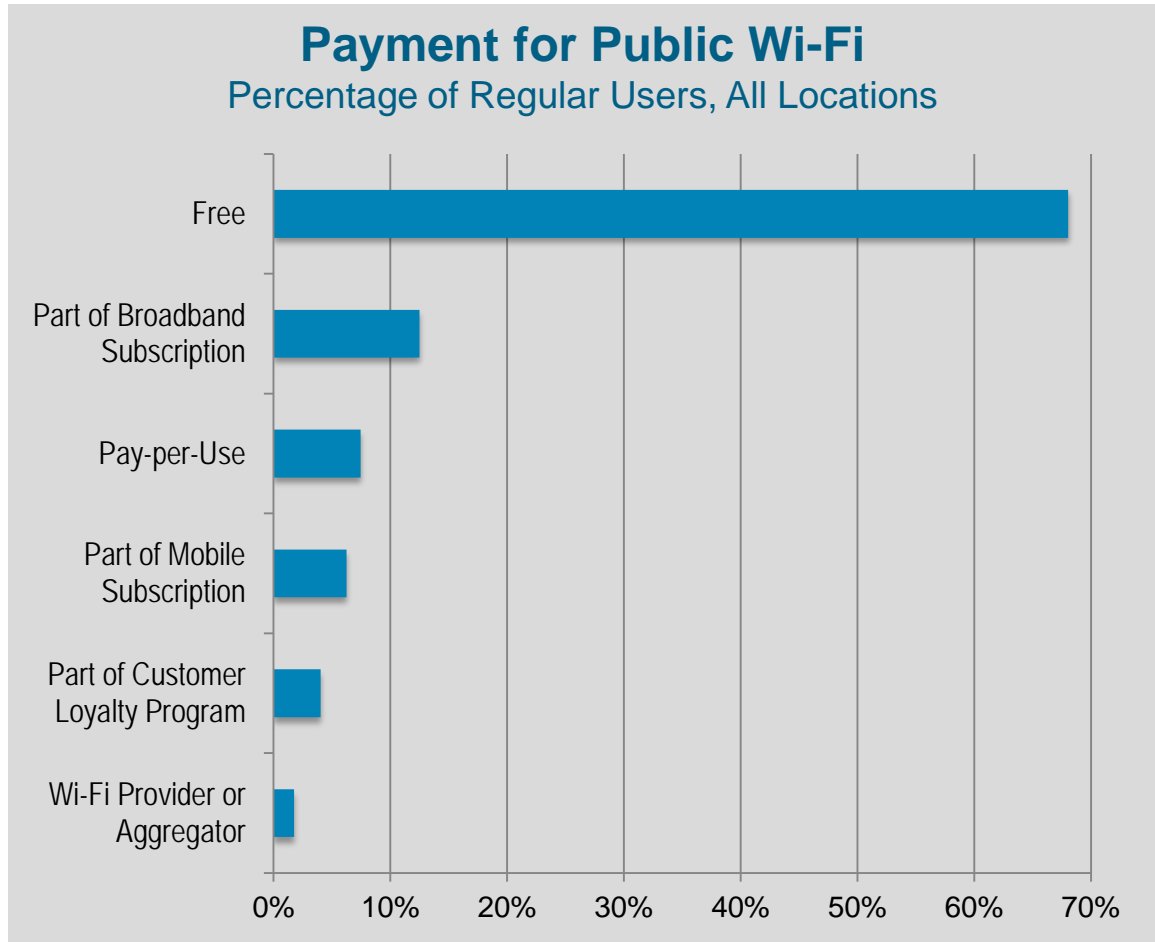
N=650

Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

Brazilians Rarely Pay for Public Wi-Fi

Access Is Usually Free, or Part of Subscription or Loyalty Plan

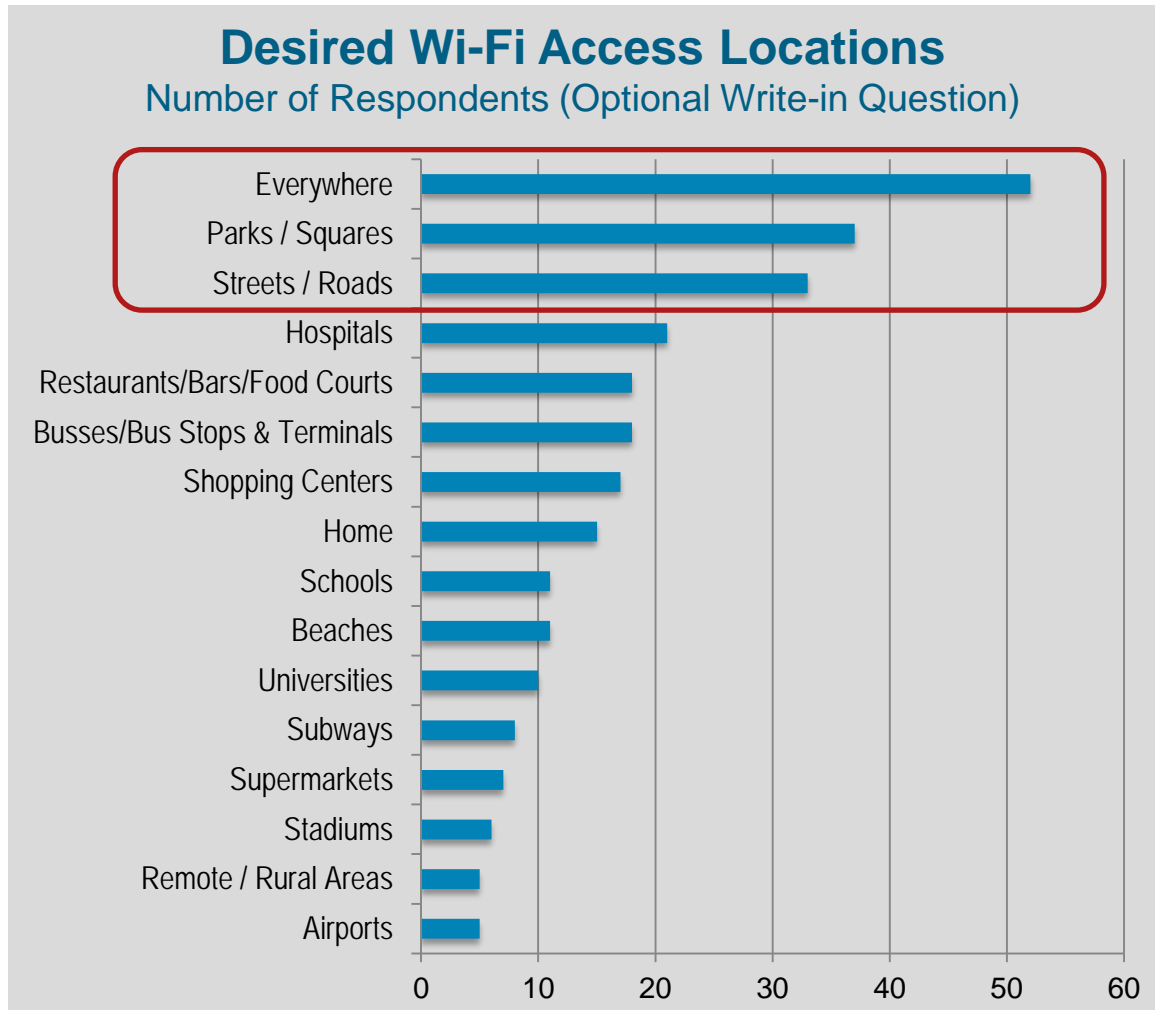


- Wi-Fi as part of broadband subscription is somewhat more frequently used in outdoor public spaces (16%) and in travel locations (15%) such as airports
- Pay-per-use occurs slightly more in hotels (10%) and travel locations (9%)

Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

Mobile Users Want Ubiquitous Wi-Fi and Have Creative Ideas for New Locations



Source: Cisco IBSG, 2012

Base: 312 write-in responses

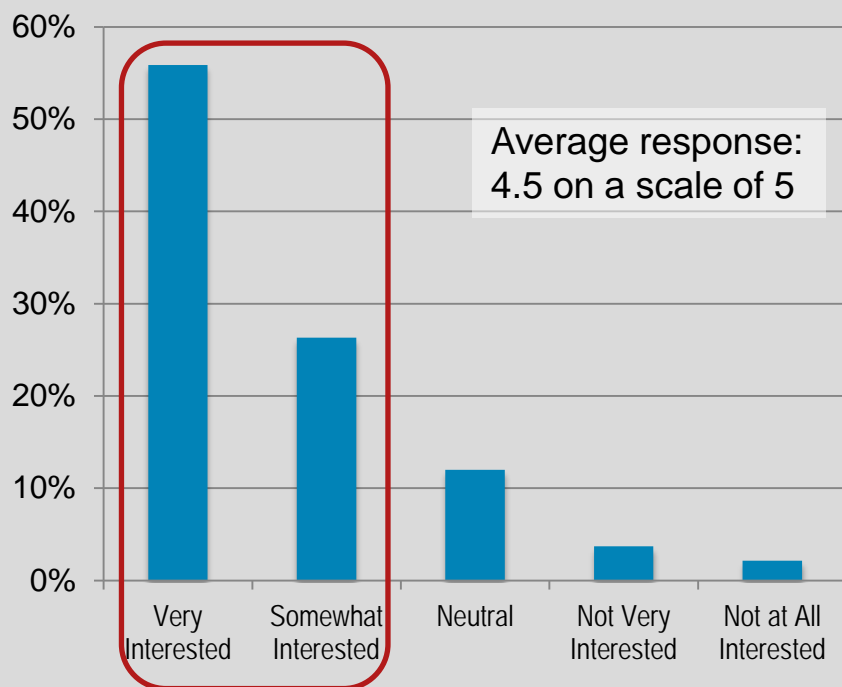
- Interesting new locations included:
 - Churches
 - Libraries
 - Museums
 - Cinema
 - Banks
- Respondent quote:
“In every place it is useful, as sometimes we need to consult a map, get information...”

High Interest in a “New Mobile” that Combines Different Access Networks

Pervasive, Cost-Effective, Seamless, and Unlimited Data Offering

Interest in Flat Fee for Bundled Mobile and Wi-Fi Access

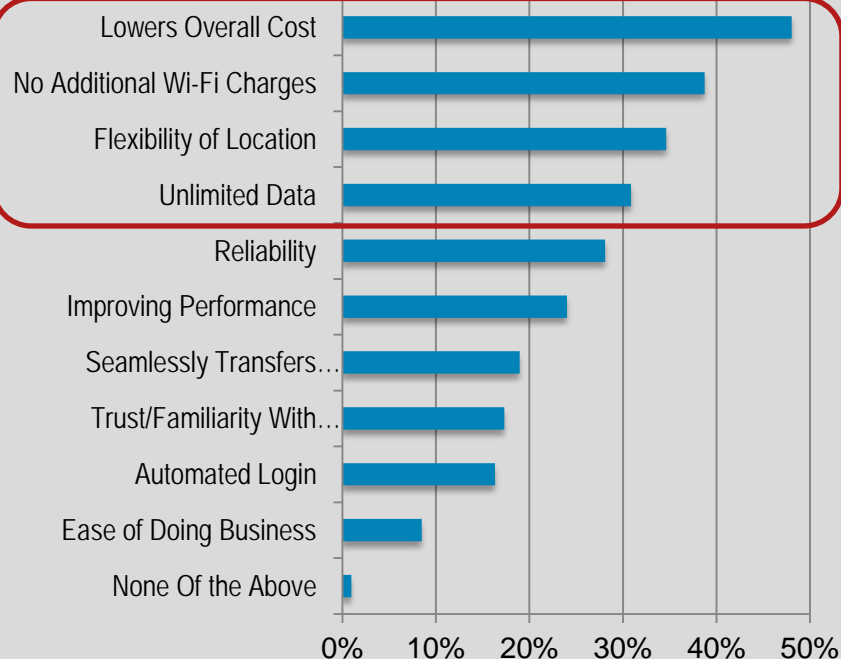
Percentage of Respondents



N=650

Most Important Attributes

Percentage of Respondents Rating Neutral and Above



N=612

Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers



7

Innovative Business Models

Five New Wi-Fi Business Model Concepts

Tested Concepts with Brazilian Mobile Users

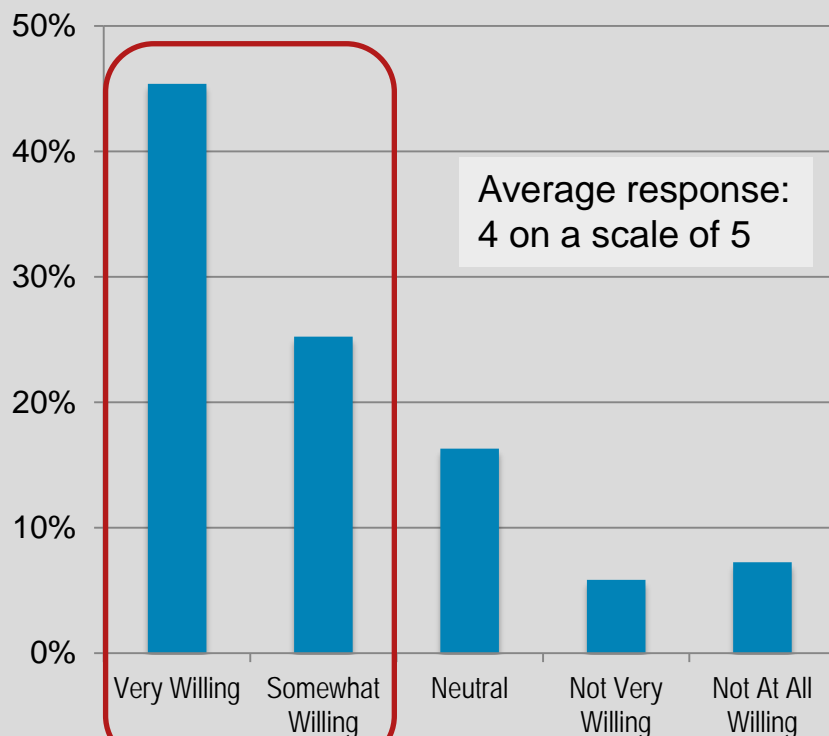
Most Important Wi-Fi Network Features	
Concept 1	Accepting advertising for free Wi-Fi access
Concept 2	Accepting personalized marketing for free public Wi-Fi access
Concept 3	Secure Wi-Fi access to remotely stored content
Concept 4	National/international Wi-Fi roaming
Concept 5	Enhanced in-store shopping experience

Source: Cisco IBSG, 2012

Concept 1: Accepting Advertising for Free Wi-Fi Access

Interest in Accepting Advertising for Free Public Wi-Fi Access

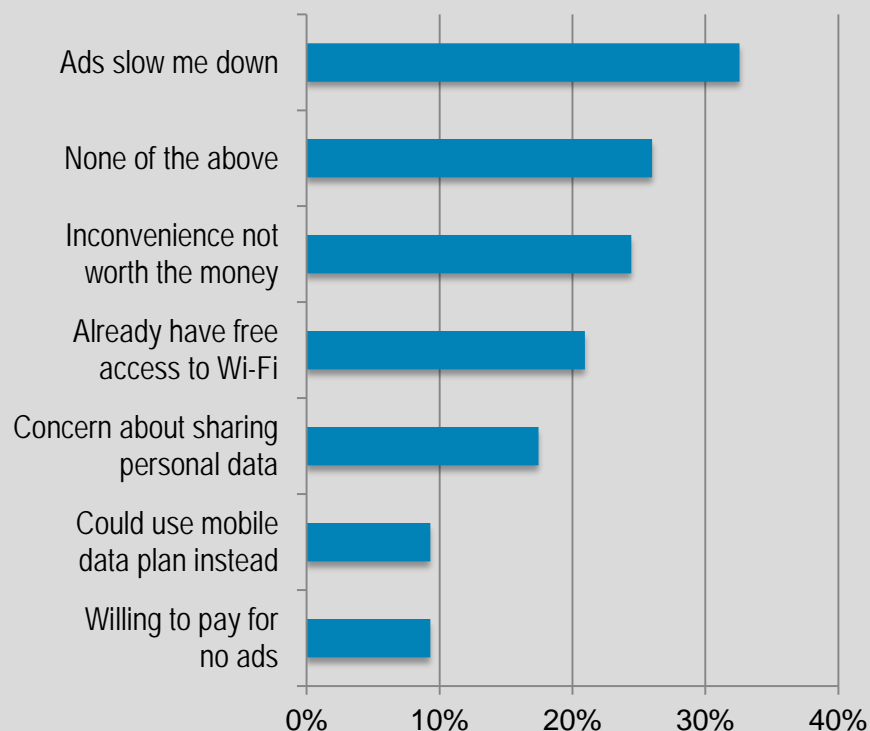
Percentage of Respondents



N=650

Reasons Not Willing To Accept Advertising

Percentage of Respondents



N=86 users who are "not at all" or "not very willing"

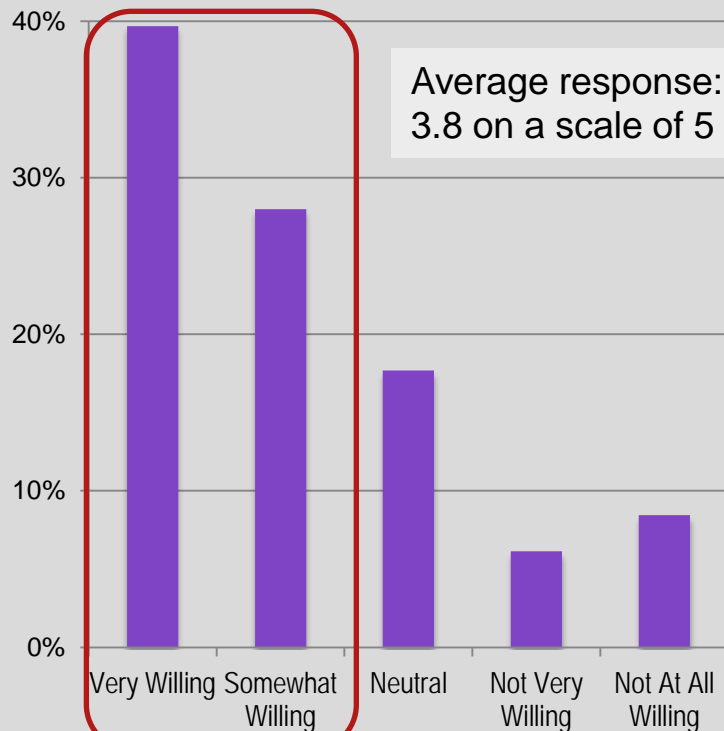
Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

Concept 2: Accepting Personalized Marketing for Free Wi-Fi Access

Interest in Accepting Personalized Marketing for Free Public Wi-Fi Access

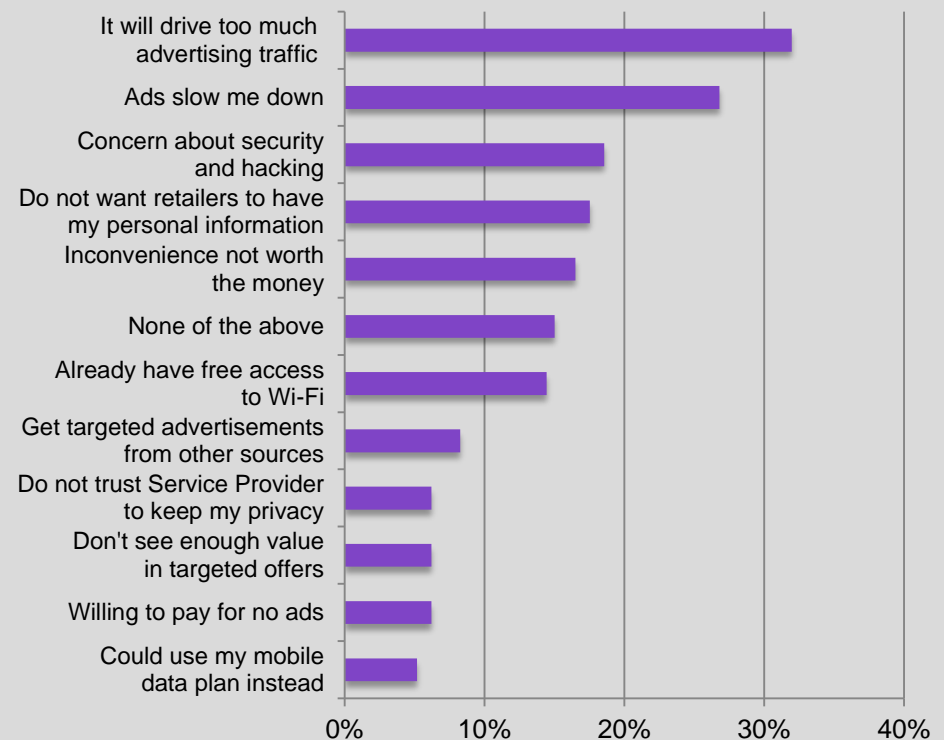
Percentage of Respondents



N=650

Reasons Not Willing To Accept Personalized Marketing

Percentage of Respondents



N=97 users who are "not at all" or "not very willing"

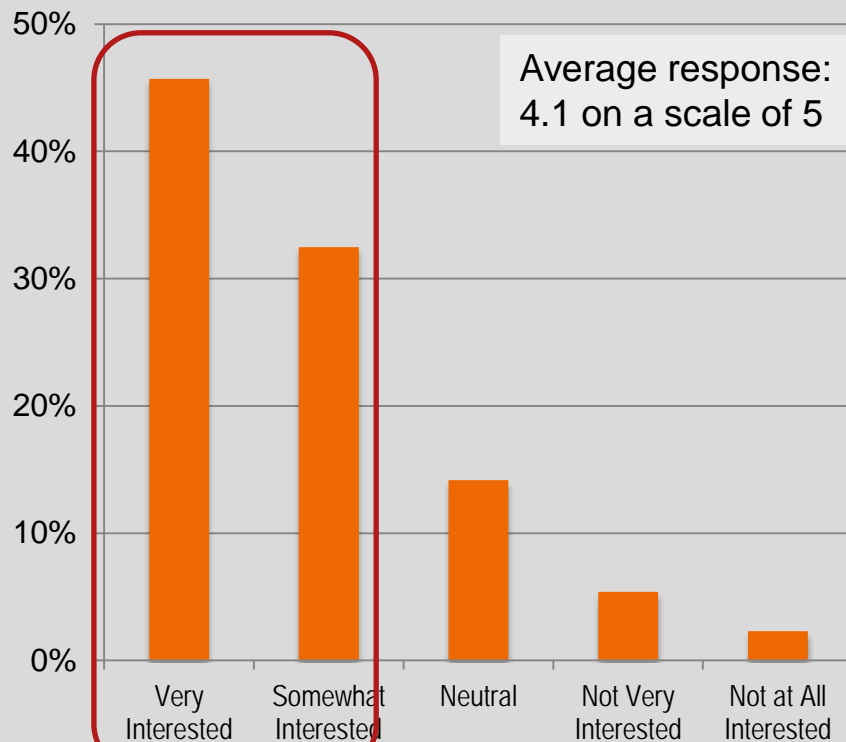
Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

Concept 3: Secure Wi-Fi Access to Remotely Stored Content

Interest in Secure Wi-Fi Access to Remote Content

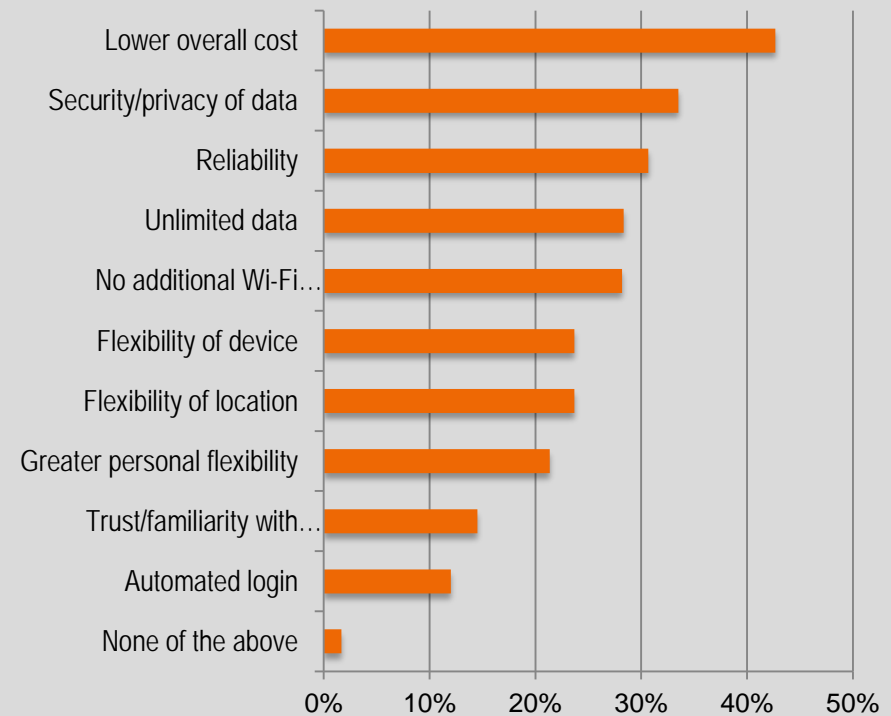
Percentage of Respondents



N=650

Most Important Attributes

Percentage of Respondents



N=600 users who responded neutral and above

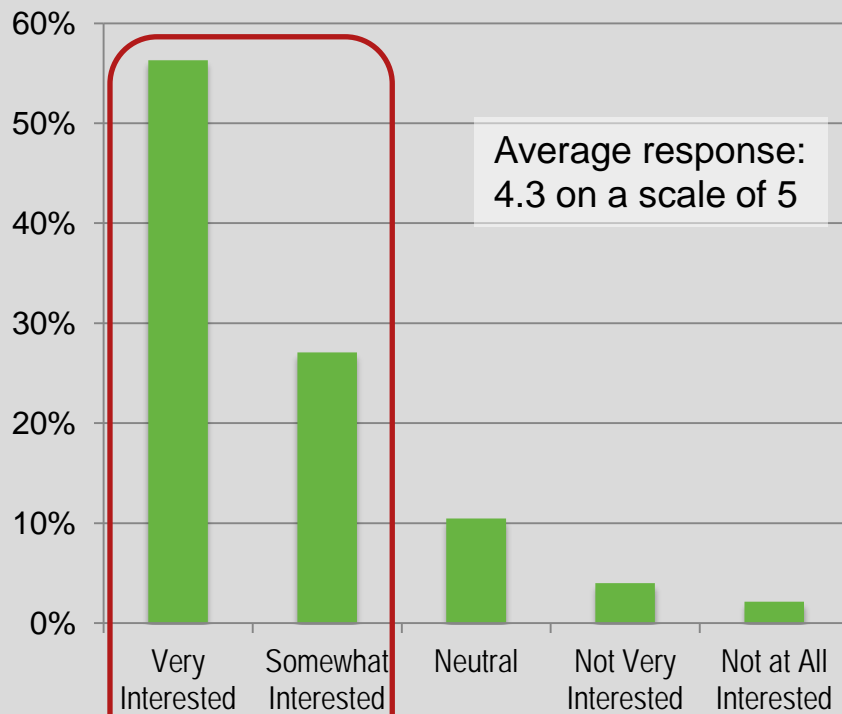
Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

Concept 4: National / International Wi-Fi Roaming

Interest in National / International Wi-Fi Roaming

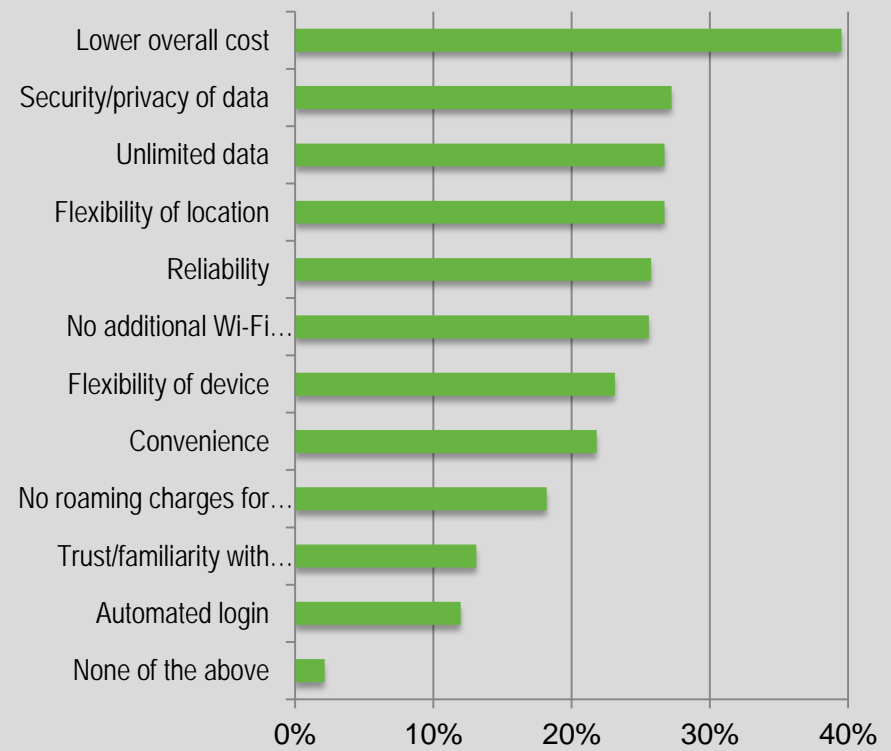
Percentage of Respondents



N=650

Most Important Attributes

Percentage of Respondents



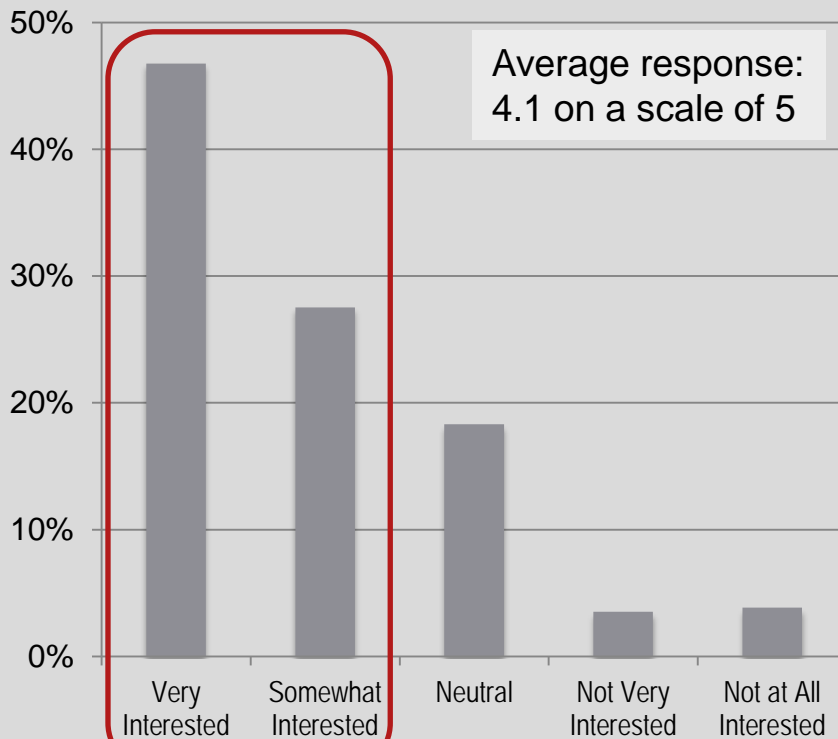
N=610 users who responded neutral and above

Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers

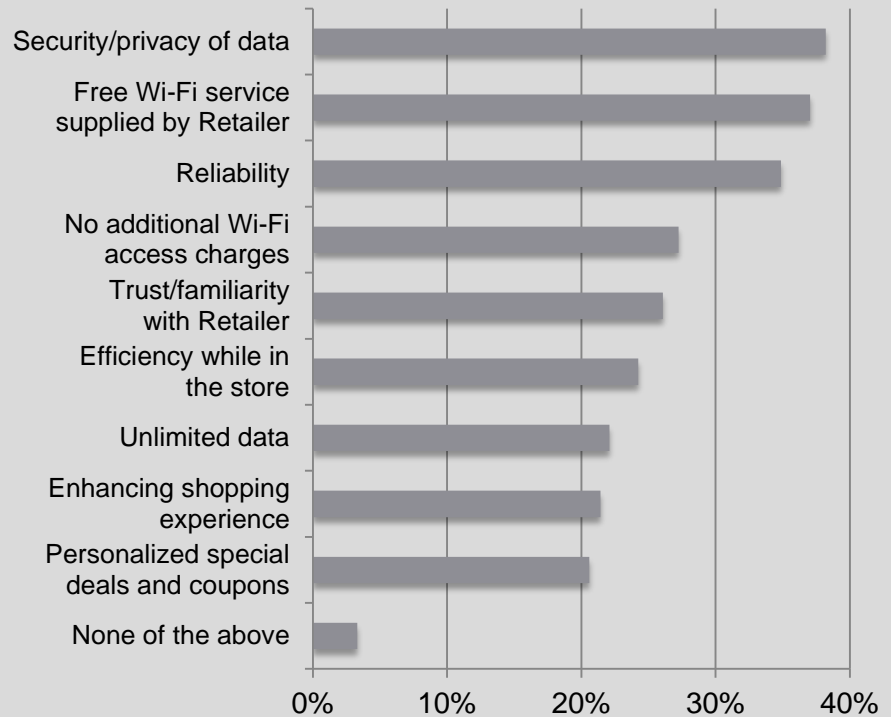
Concept 5: Enhanced In-Store Shopping Experience

Interest in Enhanced In-Store Shopping Experience
Percentage of Respondents



N=650

Most Important Attributes
Percentage of Respondents



N=602 users who responded neutral and above

Source: Cisco IBSG, 2012

Base: Brazilian broadband consumers



8

Implications for Service Providers

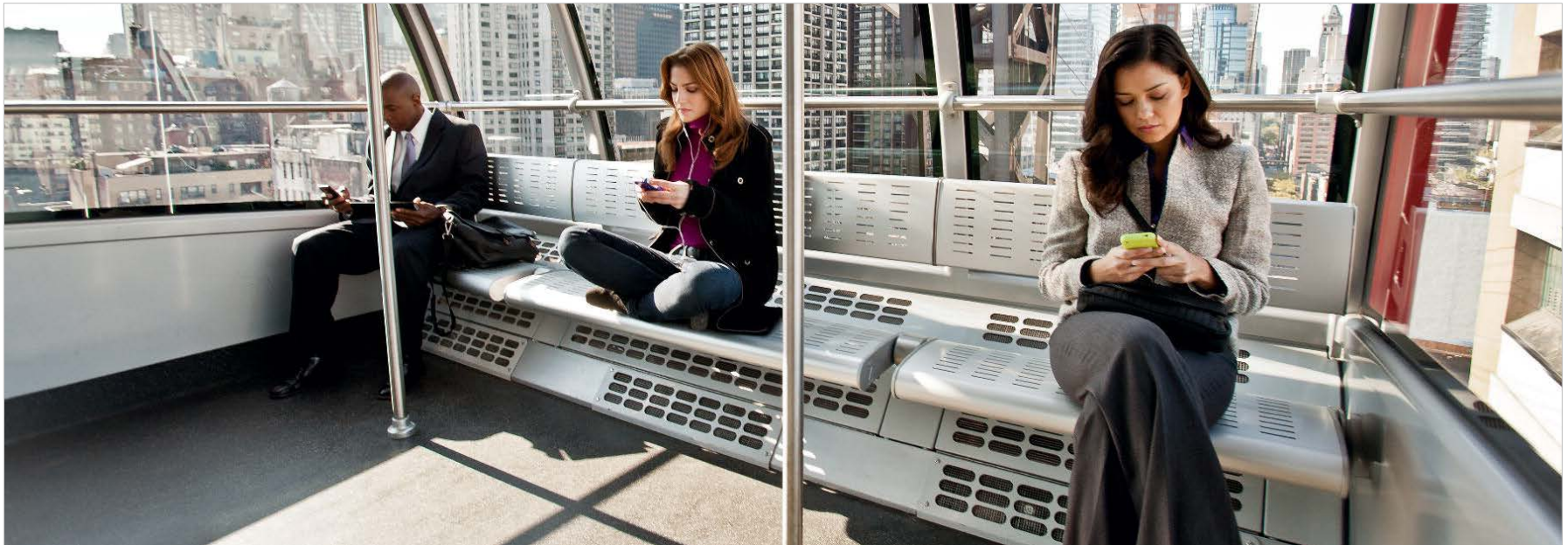
Implications for Service Providers

- Target Wi-Fi in the home
 - Create solutions and incentives to encourage users to offload mobile traffic
- Incorporate Wi-Fi as integral part of the portfolio
 - Use pricing, marketing, and new solutions to create integrated offers
 - Create new Wi-Fi business opportunities for “nomadic” devices
- Provide a pervasive Wi-Fi experience
 - Invest in both indoor and outdoor coverage
 - Establish extensive roaming agreement with other Wi-Fi SPs, in country and abroad
- Explore new ways to make money from Wi-Fi
 - Augment the typical offload business case with new and innovative Wi-Fi services and business models – general and personalized advertising, retail application, managed services, wholesale
- Deliver on “new mobile”
 - Align network architectures and deploy appropriate technology to deliver a seamless, integrated mobile-Wi-Fi user experience

Source: Cisco IBSG, 2012

For More Information...

- Please contact:
Luiz Lima, Director,
Internet Business Solutions Group, Brazil
luizlima@cisco.com





CISCO