Connected Life Market Watch

Transitions in Consumer Video Entertainment in Brazil

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Connected Life Market Watch Program: Transitions in Consumer Video Entertainment

Scope

- United States
- United Kingdom
- **Brazil**
- China
- Germany

Approach

Market Watch Program

- Cisco IBSG's recurring primary research program
- Monitors changing consumer behavior to identify key market transitions

Methodology

- Broadband consumers
- 20-minute online survey
- 5,500 total respondents
- December 2009 – January 2010

Segmentation

- Used proprietary scoring methodologies to identify consumer "technology" segments

Source: Cisco IBSG Connected Life Market Watch, 2010

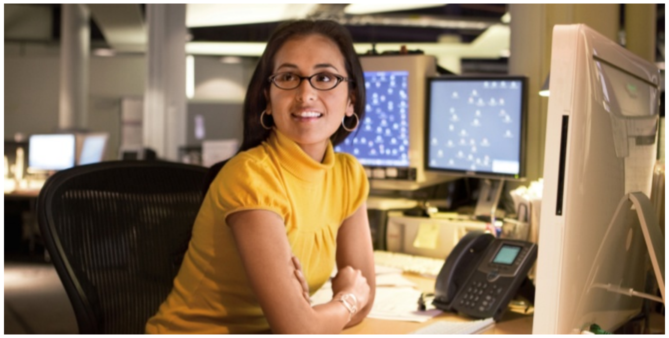
Agenda

- Situation: Brazil Video Market Overview
- Key Transitions: Consumers Taking Control
- Impact of Transitions in Consumer Video
- Trends To Watch
- Service Provider Opportunities

Situation:
Brazil Video Market Overview

Brazil Has Underserved and Growing Broadband Market

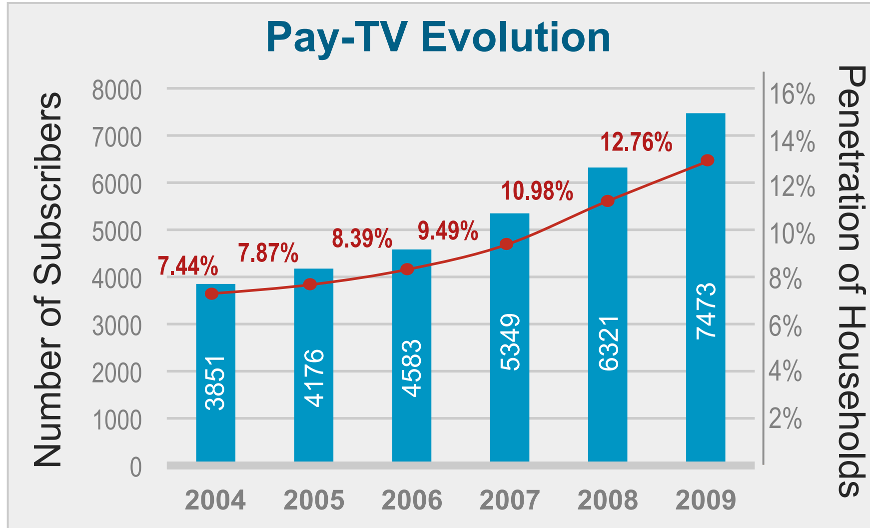
- 12.3 million[1] fixed broadband (BB) subscribers, 90% residential[2]
- Low BB penetration (18.9% of households) but high Internet use (67M users in 2009[3]); in July 2009, 35.4M users spent average of 48 hours, 26 minutes on Web, highest in world[4]
- Dominant technology is ADSL (68%), followed by cable (27.3%)[1]; average speed is 1-2 Mbps, increasing steadily due to competitive pressure
- 58% PC penetration[5], driving high demand for BB expansion
- National plan aims to increase BB penetration to 67% by end of 2014

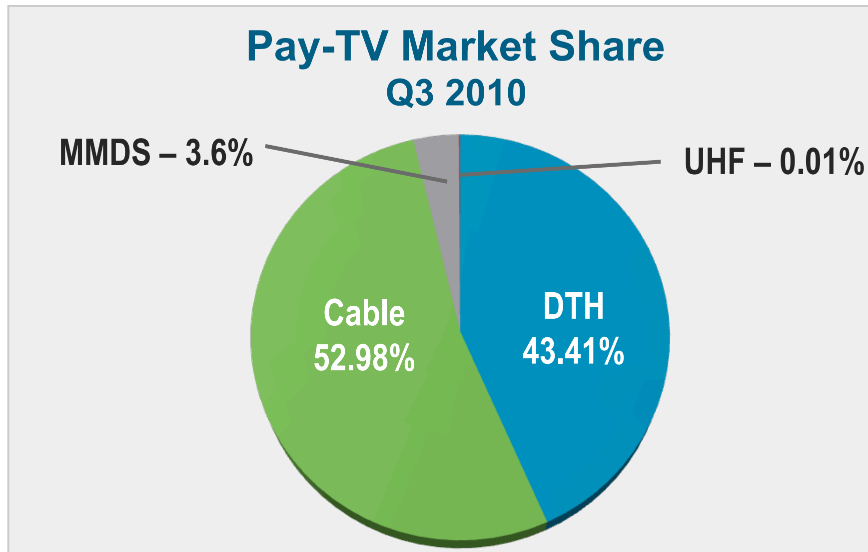


Sources: 1) www.teleco.com.br, 2010; 2) Cisco BB Barometer, 2010; 3) IBGE (Brazilian Institute of Geography and Statistics), 2010; 4) IBOPE Nielsen, 2010; 5) Intel/IPSOS, 2010

Brazil Also Has Underserved and Growing Pay-TV Market

- 9 million subscribers in Q3 2010, 21% increase over 2009
- Low penetration compared to more advanced markets
- Cable and satellite are dominant technologies, as regulation prevents telecoms from offering IPTV-based pay TV
- Significant expansion expected soon
  - —Regulatory barrier to IPTV is expected to fall
  - —Major SPs plan investment in both cable and direct-to-home (DTH) satellite

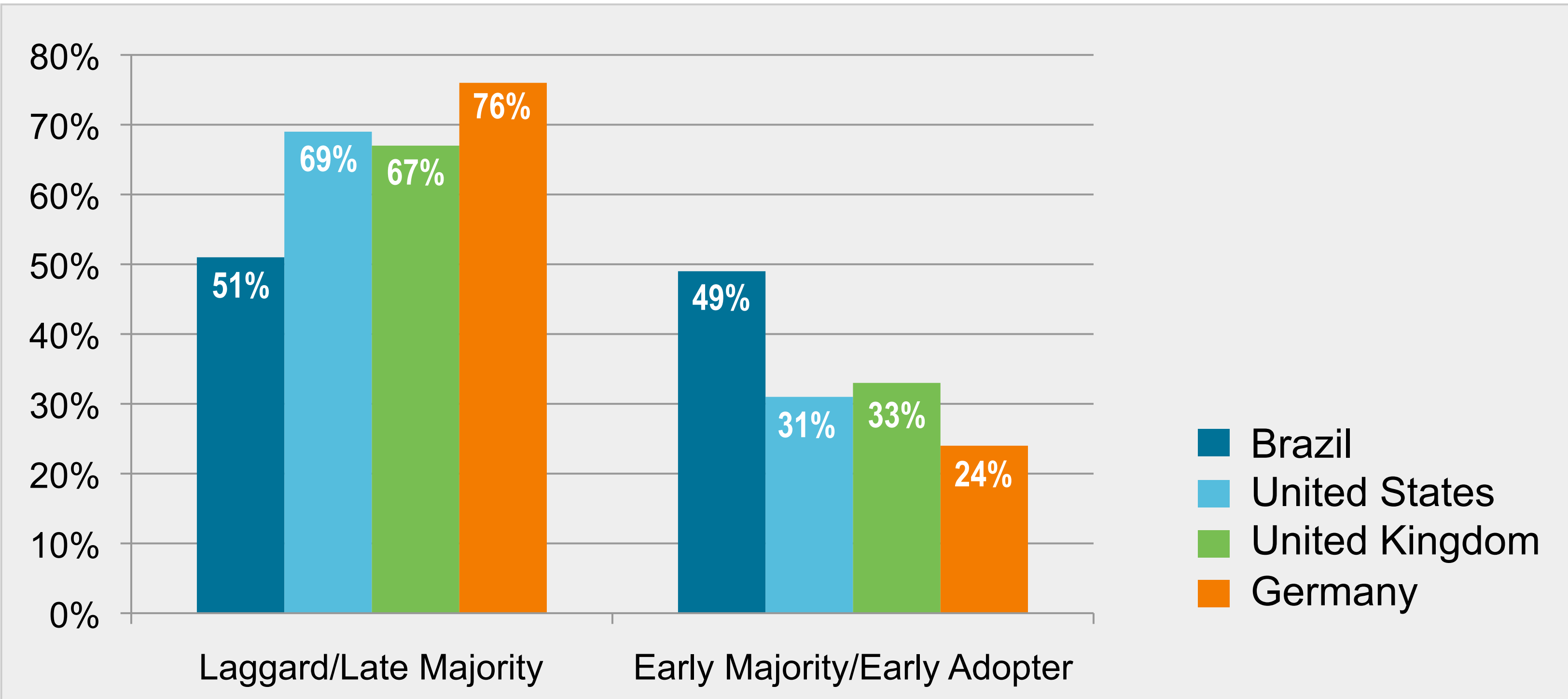




Source: www.teleco.com.br, 2010

Brazil Offers High Potential for New, Advanced Services

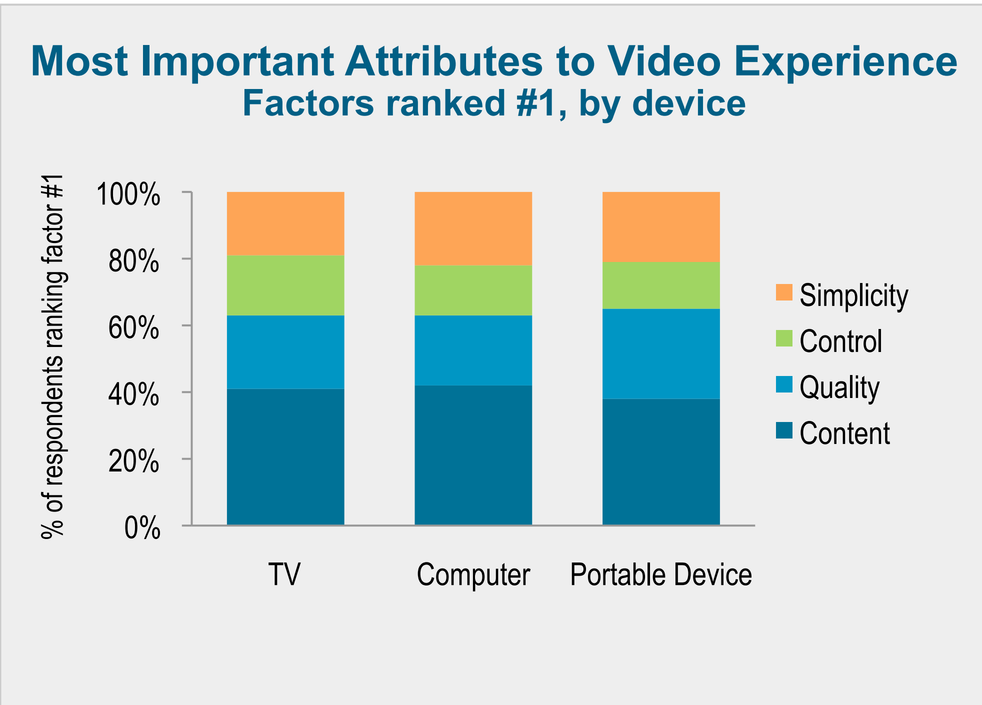
- Brazil broadband consumers are significantly more likely to adopt new video technologies and services than those of mature advanced markets such as the United States, United Kingdom, and Germany

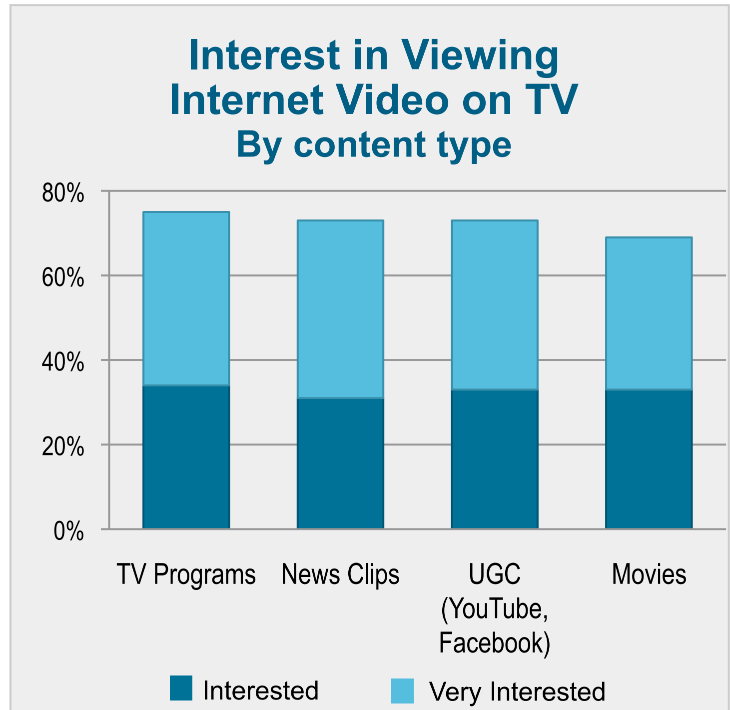


Source: Cisco IBSG Connected Life Market Watch, 2010

Content Still Drives Industry

- Content remains most important part of the experience, even as consumers explore new devices and new video sources
- When consumers consider Internet-sourced video, they are interested in both traditional professional content (including TV programs, news, and movies) and user-generated content (UGC)





Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil broadband consumers

Broadband Consumers Are Investing Heavily in Home Video Experience

Average broadband household:

- 2.4 TVs, including 0.6 HDTV
- Spends R$74 per month for pay-TV services
- Spends another R$56 on other forms of video watched at home

Brazil Broadband Consumers	
Subscribe to cable/satellite/ telco TV*	**68%**
Subscribe to premium movies	**33%**
Subscribe to online DVD rental (web-based service)	**16%**
Have at least one HDTV	**44%**
Have DVR	**>10%**
Have gaming console with DVD functionality	**40%**

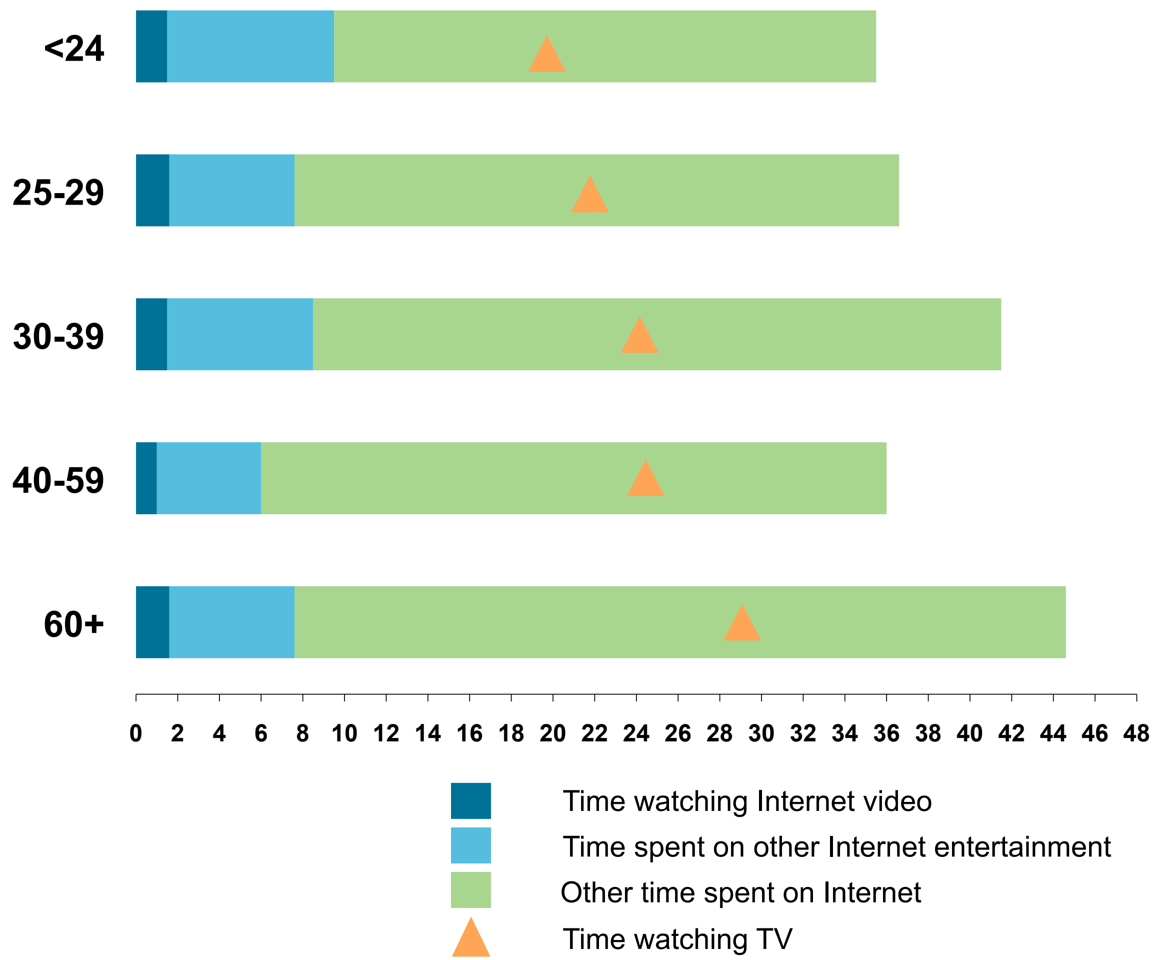
* As both BB and pay-TV penetration are relatively low in Brazil, there is significant overlap between consumer segments.

Source: Cisco IBSG Connected Life Market Watch, 2010

Consumers Spend Significantly More Time on Internet than Watching TV

- Consumers—even older users—spend more time in front of computer screen than TV screen
- But TV is still main source of entertainment

Internet and TV Viewing by Age

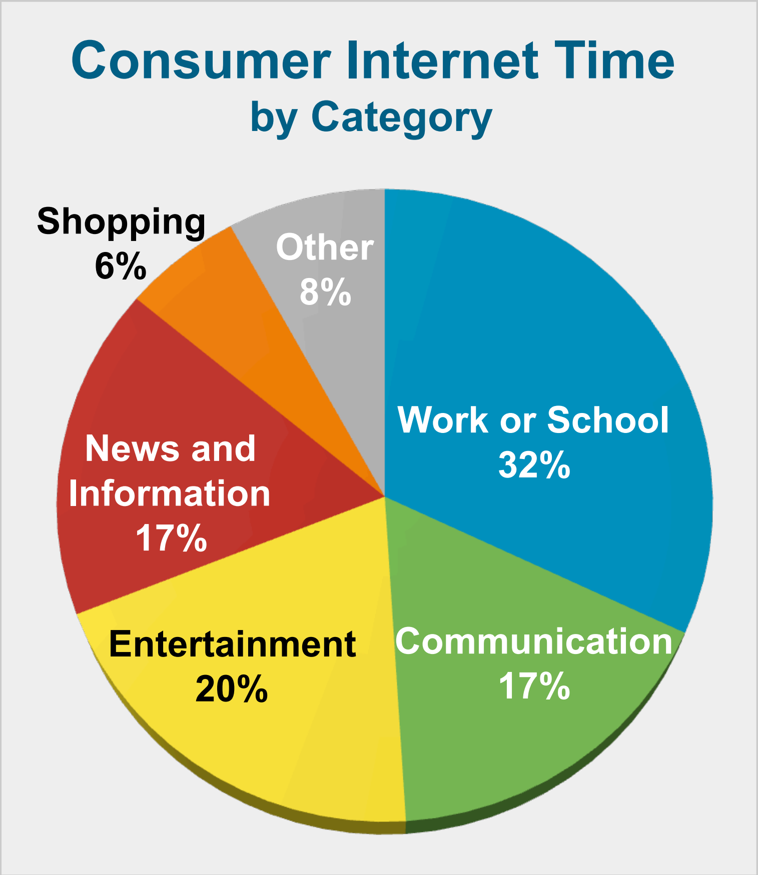


Source: Cisco IBSG Connected Life Market Watch 2010

Base: Brazil broadband subscribers

Entertainment Is #2 Reason Consumers Use Internet

- Work or school activities lead consumer time-spend on Internet
- On average, broadband consumers spend slightly more the 38 hours per week on Internet, with entertainment representing about 20% of those hours
- Broadband users also spend significant time using Internet to communicate with others* and to access news and information



Source: Cisco IBSG Connected Life Market Watch 2010

* Brazil is a leading country in Skype and Orkut social network use

Key Transitions:
Consumers Taking Control

Consumers Are Taking Control of Video Entertainment Experience

2006 *TIME* Magazine Person of the Year

Consumers got the message

- DVRs taught users they could take control of video experience
- This increased user control is driving four interrelated trends:
  1. Time shifting
  2. Device shifting
  3. Increased video sourcing options (e.g., Internet)
  4. Increased spending control
- Together, these are part of larger, viewer-controlled viewing trend

Source: *Time* Magazine, 2006; Cisco IBSG Connected Life Market Watch, 2010

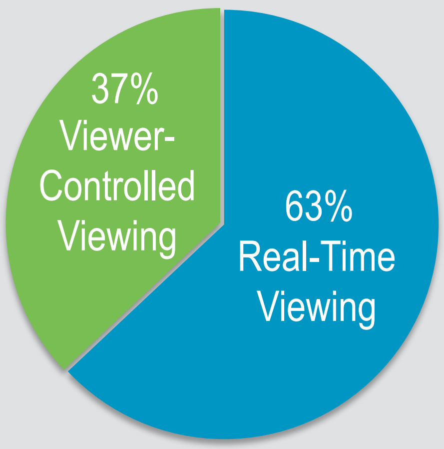
Traditional TV Experience Is Changing

Consumers Are No Longer Making Appointments with Their TVs

- Consumers are changing their usage patterns
- They are no longer making appointments with their TVs
- They want to watch their video entertainment at the time they choose

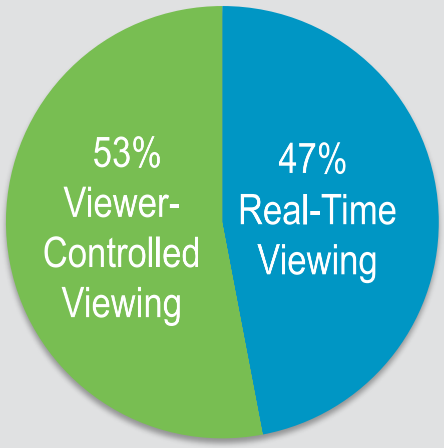
Real-Time vs. Controlled Viewing

Average Consumers
(Percentage of Time Spent)



Base: Brazilian broadband consumers

DVR Owners
(Percentage of Time Spent)

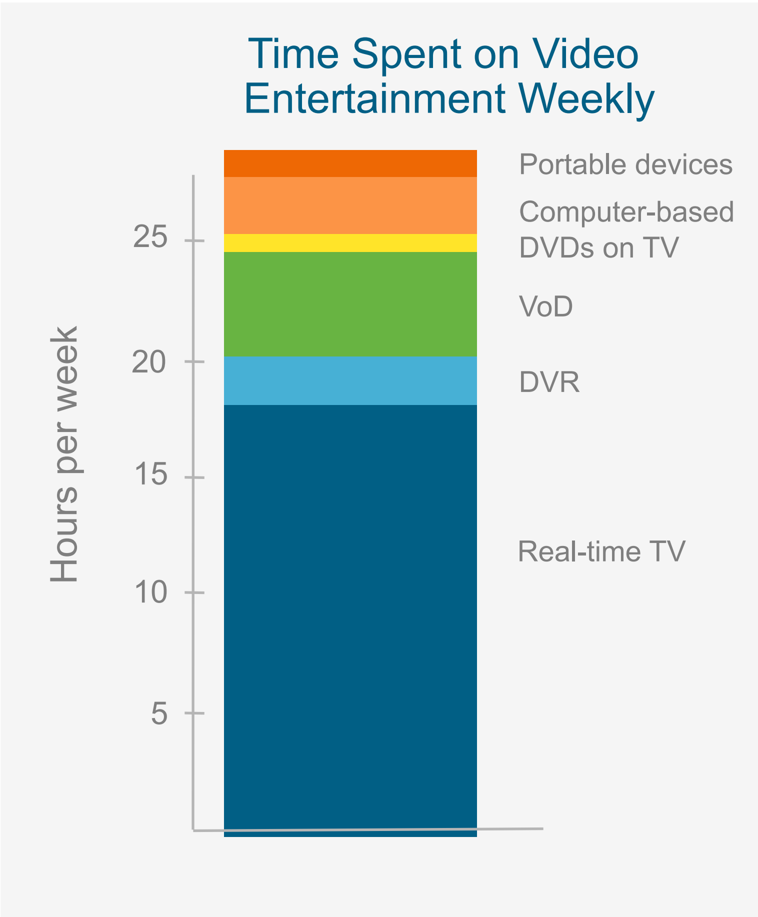


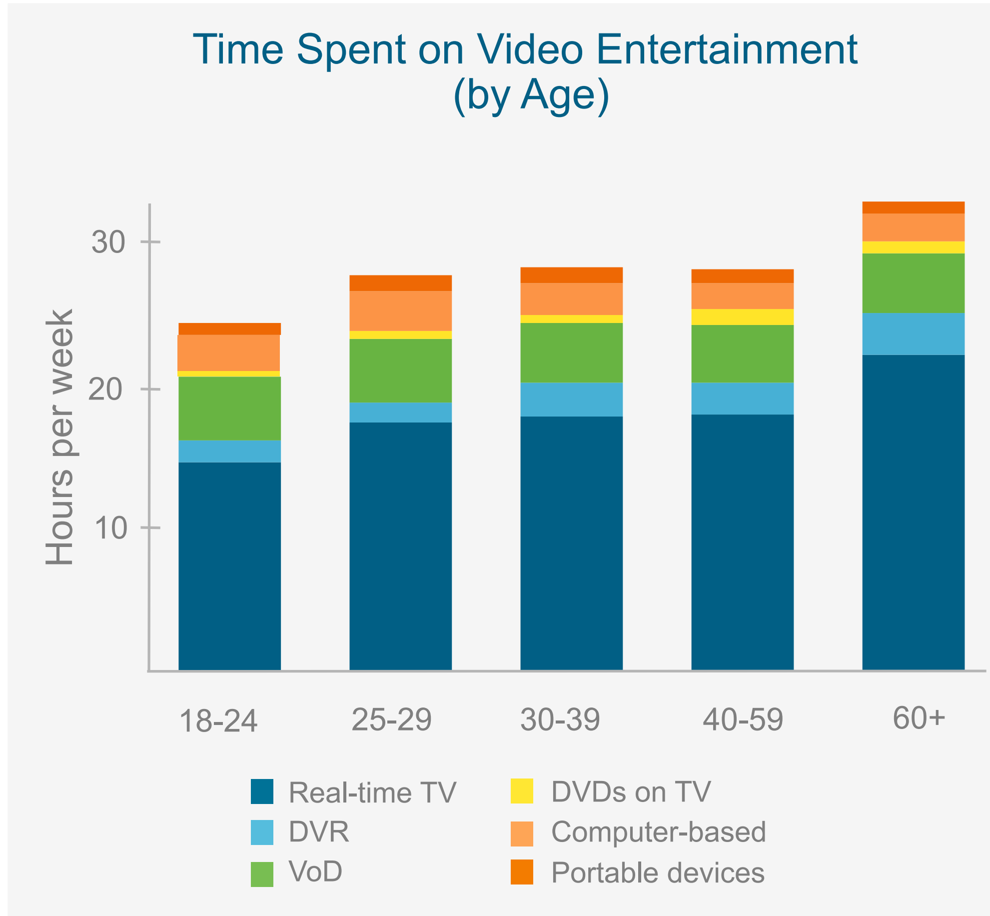
Base: Brazilian broadband consumers with DVRs

Source: Cisco IBSG Connected Life Market Watch, 2010

TV-Content "Walled Garden" Is Cracking

Consumers Are Supplementing Linear TV with Other Video





Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil broadband consumers

Consumers Are More Aware of Choices in Video Entertainment

In an average month,

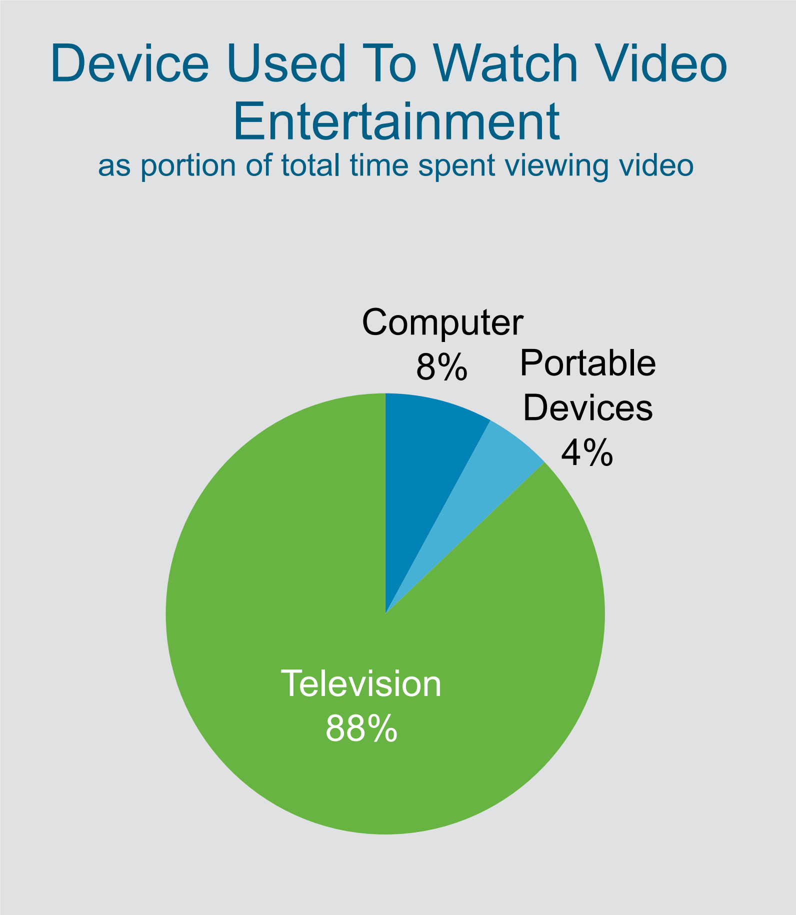
- 43% of broadband consumers watch TV programs on Internet
- Broadband consumers watch almost 6 hours of video from Internet
- 20% connect computer to TV
- Another 28% watch video on their mobile phones
- 64% of broadband consumers use their gaming consoles to watch DVDs
- 14% rent movies online from their gaming console

Source: Cisco IBSG Connected Life Market Watch, 2010

Today, Most Video Entertainment Is Via TV

TV Is Consumers' Preferred Device

- While broadband consumers in Brazil are exploring video entertainment on other devices, they still watch most of their video on TV
- 44% of Brazilian broadband consumers have high-definition television at home

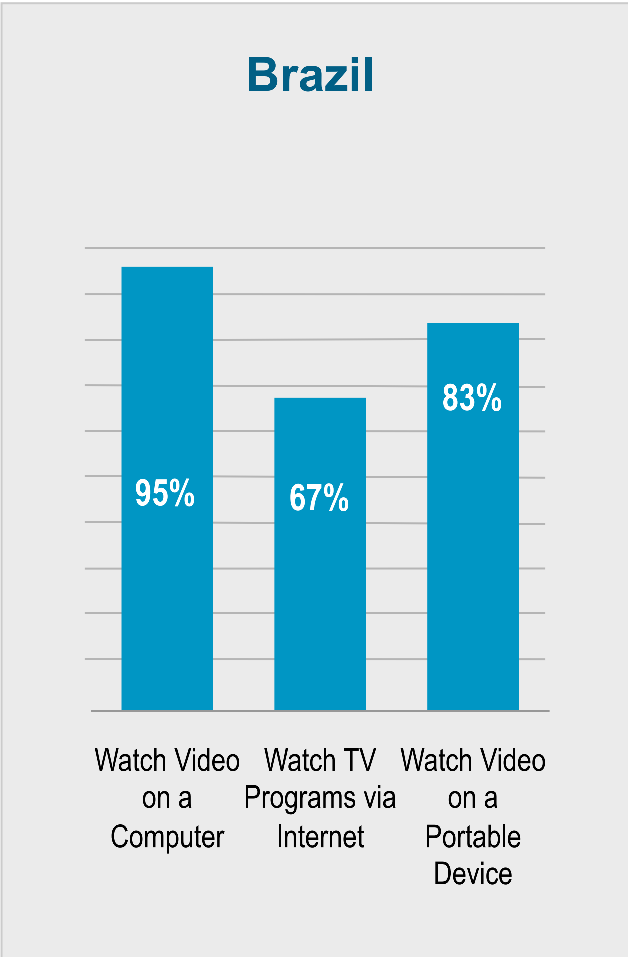


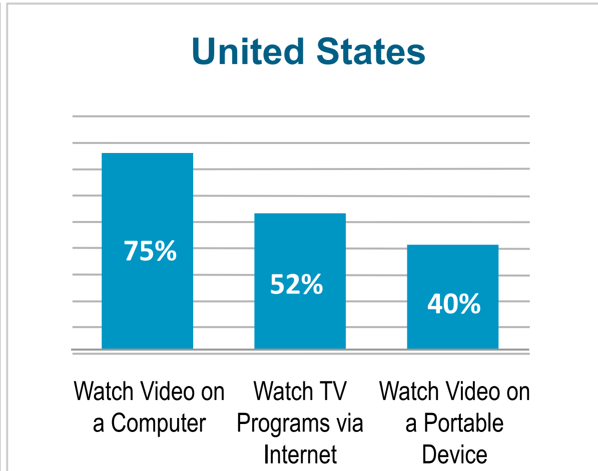
Source: Cisco IBSG Connected Life Market Watch, 2010

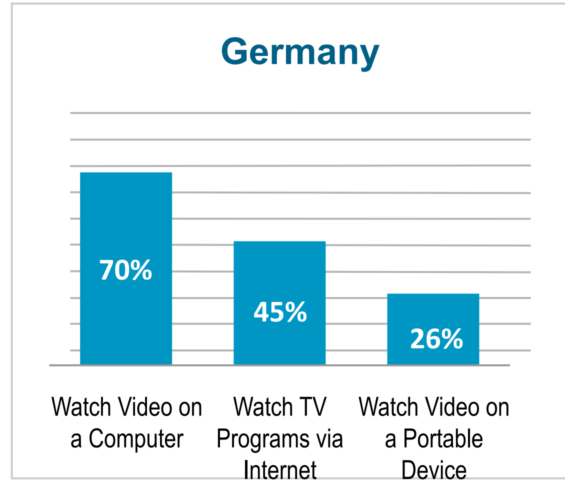
Base: Brazil broadband subscribers

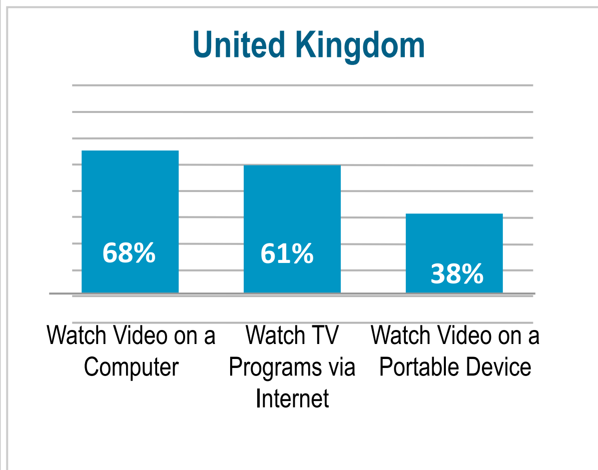
Many Brazilian Consumers Are Exploring Alternative Video Entertainment . . .

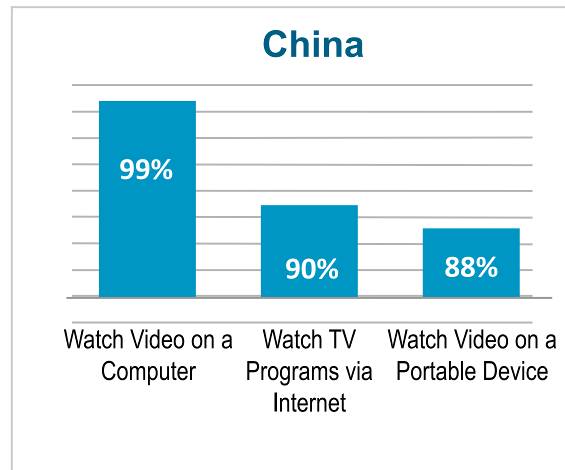
Percentage of Broadband Users that Use Alternative Video Sources









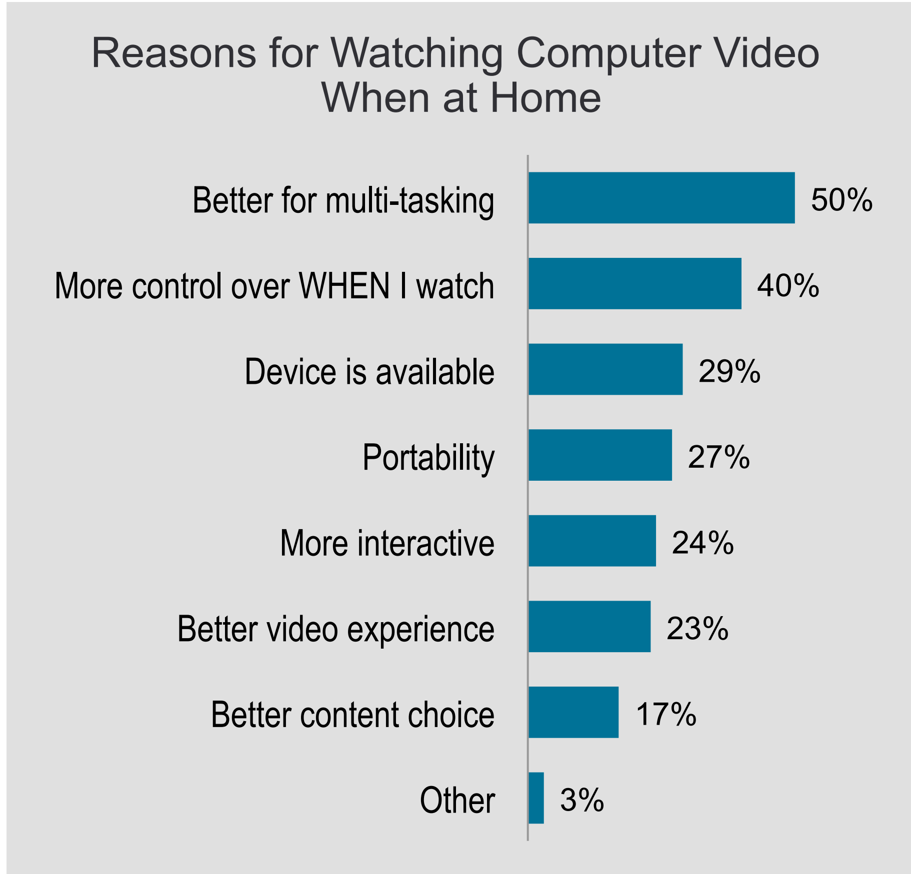


Source: Cisco IBSG Connected Life Market Watch, 2010

…Yet Consumers Often Choose To Watch Video on Different Device

Many Consumers Watch Video on Their Computers To Time-Shift and Multi-Task

- 67% of respondents watch video on computer an average of 2 hours, 19 minutes each week
  - Only 36% takes place at home
  - 79% of 18- to 24-year-olds watch video on a computer; average 2 hours, 26 minutes per week
- 75% of respondents watch video using portable devices; average nearly 1½ hours per week
  - 35% takes place at home

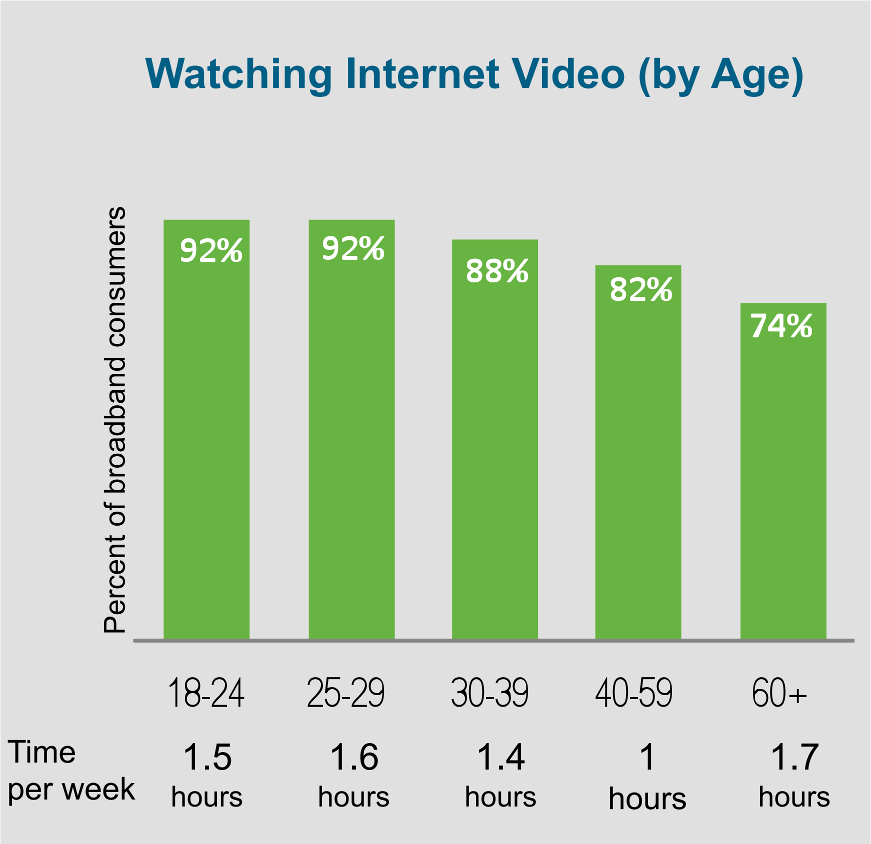


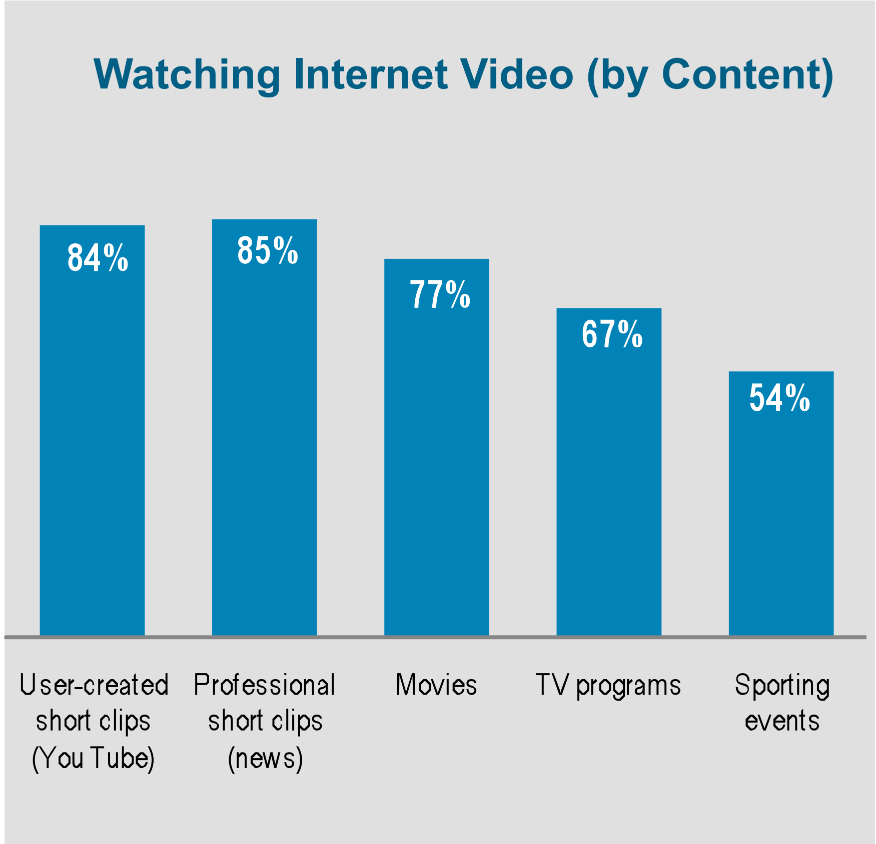
Base: Brazil BB consumers: watch video on computer at home

Source: Cisco IBSG Connected Life Market Watch, 2010

Consumers of All Ages Watch All Types of Internet Video Content

Internet Video Is No Longer Defined Only by Young People Watching YouTube





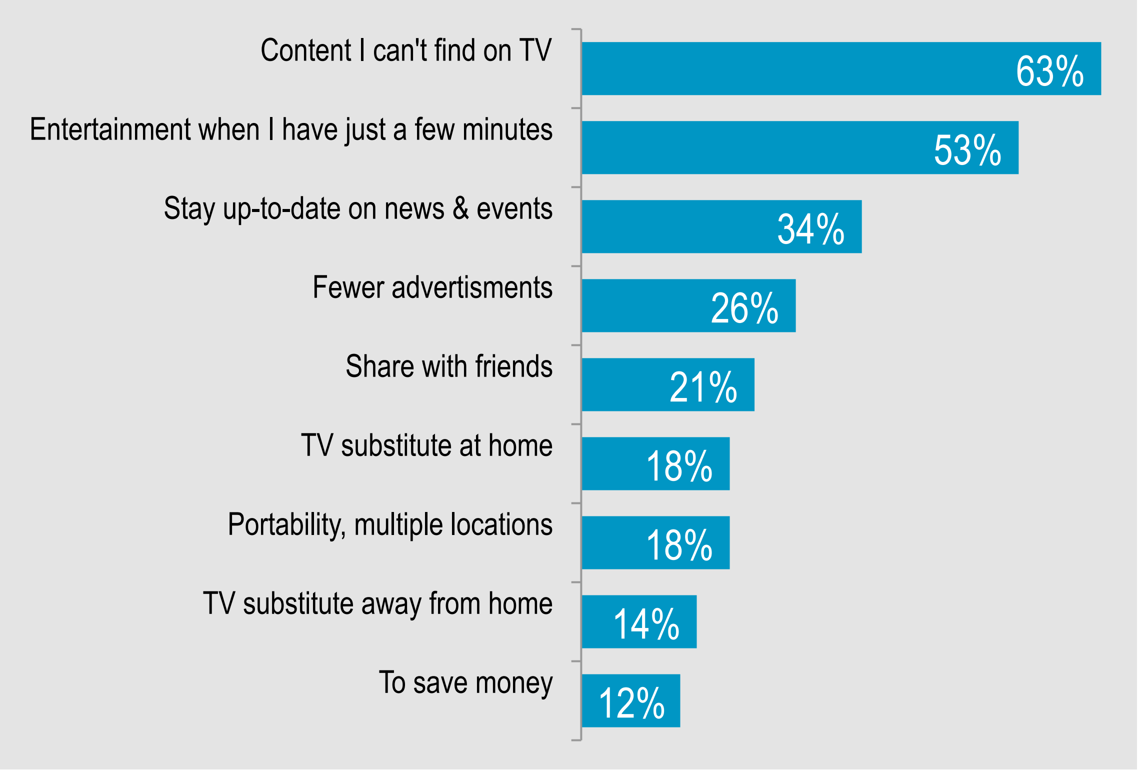
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil broadband subscribers

Internet Video Has Different Value Proposition from Traditional TV

Reasons for Watching / Downloading Online Video

- Choice, control, and convenience are driving Internet TV use
- "Snacking" and non-TV content are key drivers



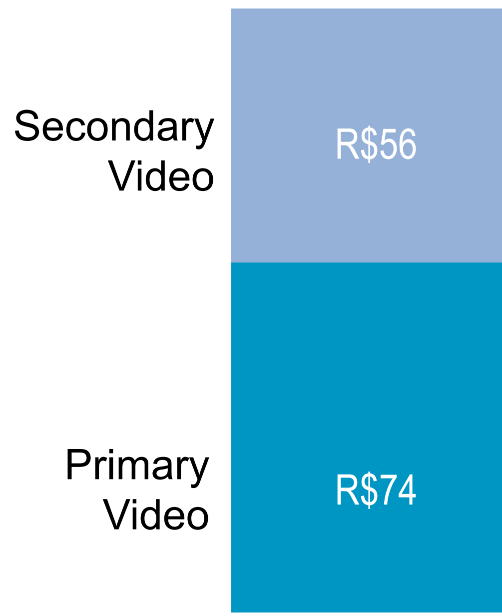
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil broadband subscribers

Nearly 43% of Consumer Video Spending Is for Supplemental Options

- Consumers supplement their basic TV experience with as many as 5 other sources of video
- Consumers can exert more immediate control over these *a la carte* options
  - — They have flexibility and can select the secondary video option that best suits the given situation
  - — In many cases, they can adjust their spending incrementally without entirely abandoning the service

Brazil BB Consumers' Monthly Video Spending



- Online DVD rentals: R$4
- Normal DVD rentals: R$14.4
- VoD / PPV: R$7.4
- DVD purchases: R$25
- Internet downloads & subscriptions: R$5

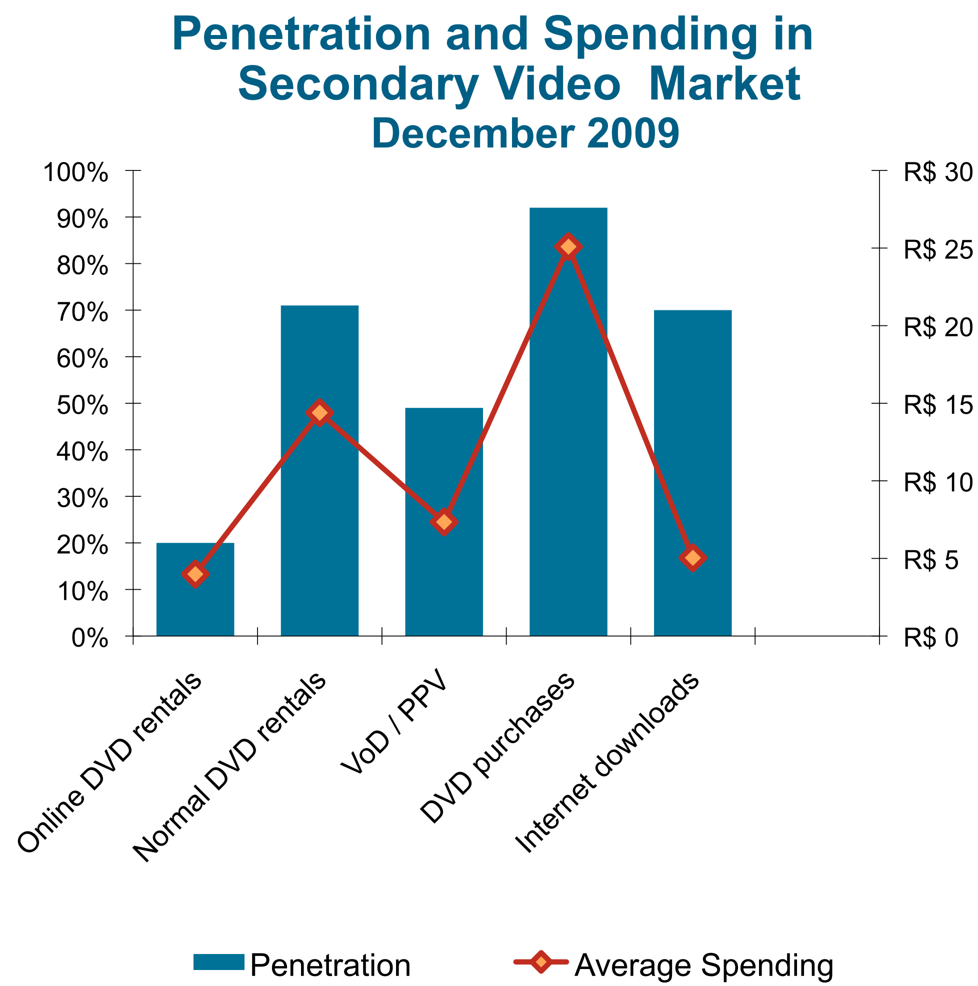
Average monthly subscription for cable, satellite, or pay TV, including R$13 in premium film channels

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil broadband subscribers

Secondary Video Market Offers Opportunity for New Services

- Fragmented and shifting secondary market makes it easier to displace players than in primary (cable/satellite) pay-TV market
- Consumers use multiple methods, and few are attached to any one
- High DVD purchase level suggests desire to "own" media, which presents an opportunity in digital online world



Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil broadband subscribers

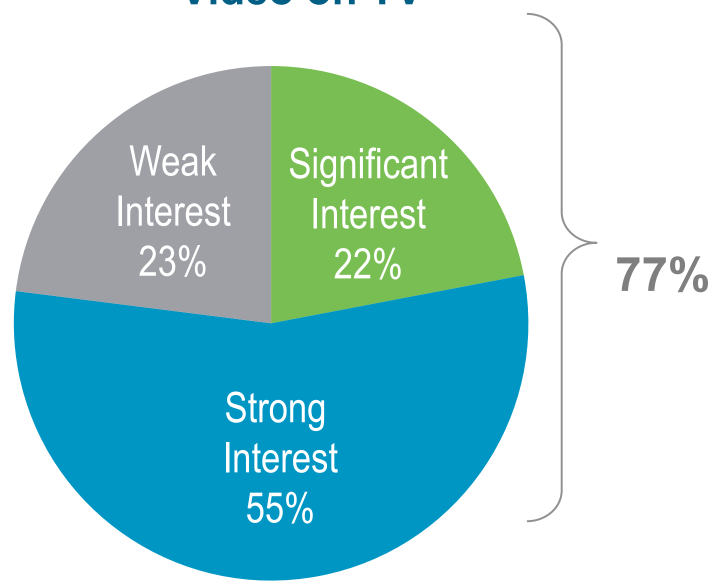
Impact of Transitions in Consumer Video

Consumers Are Ready for New TV Services Such as *Web Video to TV*

Service Concept: *Web Video to TV*

- Simple and easy to watch different types of video available on Internet on your TV instead of on your computer
- Use TV's remote control to find and select program, movie, or clip from an Internet site and watch it directly on your TV
- Enabled through device attached to TV; separate from your TV service
- Still need TV service to access television channels, video on demand, and other services offered by TV service provider

Consumer Interest in Service that Simply & Easily Enables Internet Video on TV



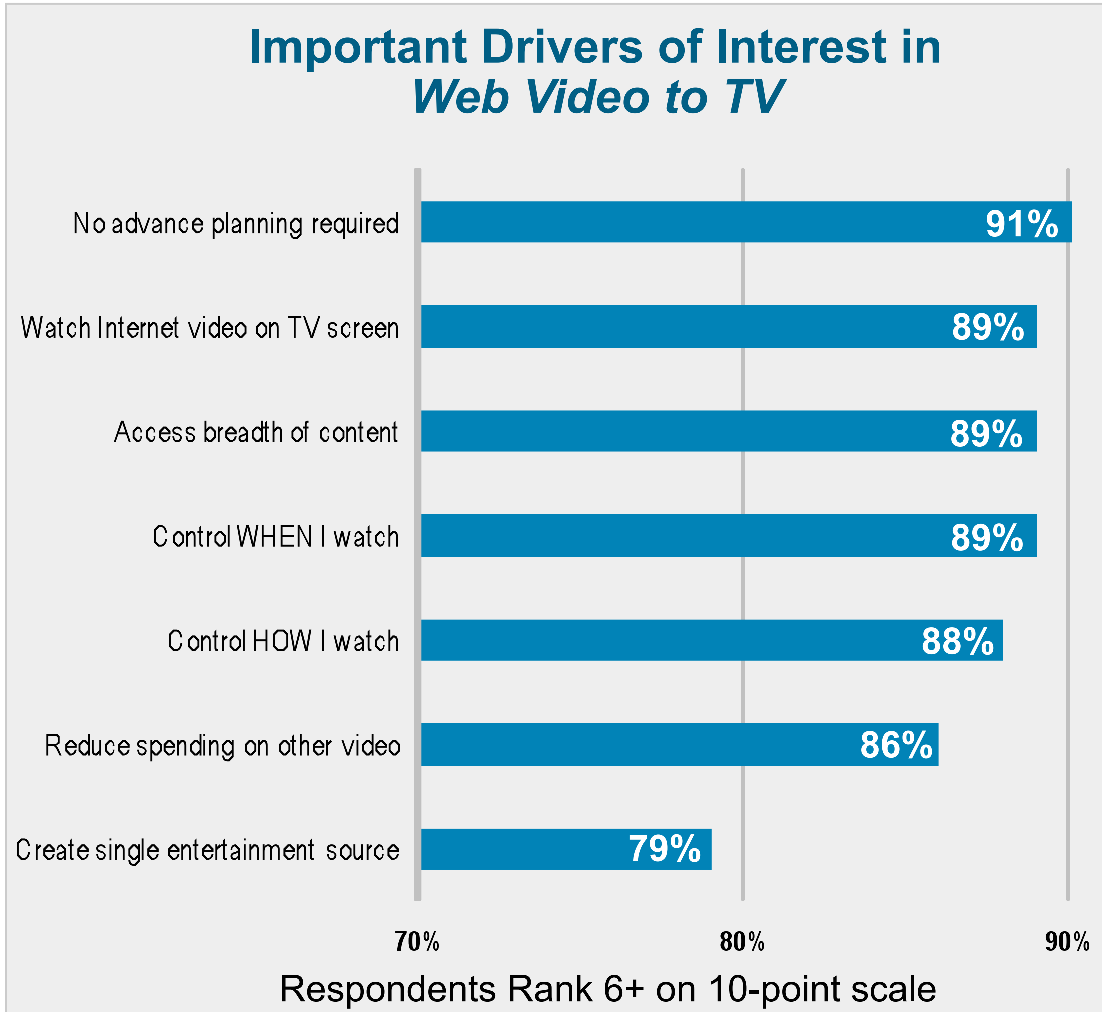
Q: How interested would you be in this offering, if it were priced at a level you consider reasonable?

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil broadband subscribers

Web Video to TV Service Would Address Many Consumer Pain Points . . .

- Moving Internet video to TV is important, but not only driver
- Consumers want control of when they watch their video entertainment
- *Web video to TV* addresses many other consumer pain points, from access, to content, to total spending

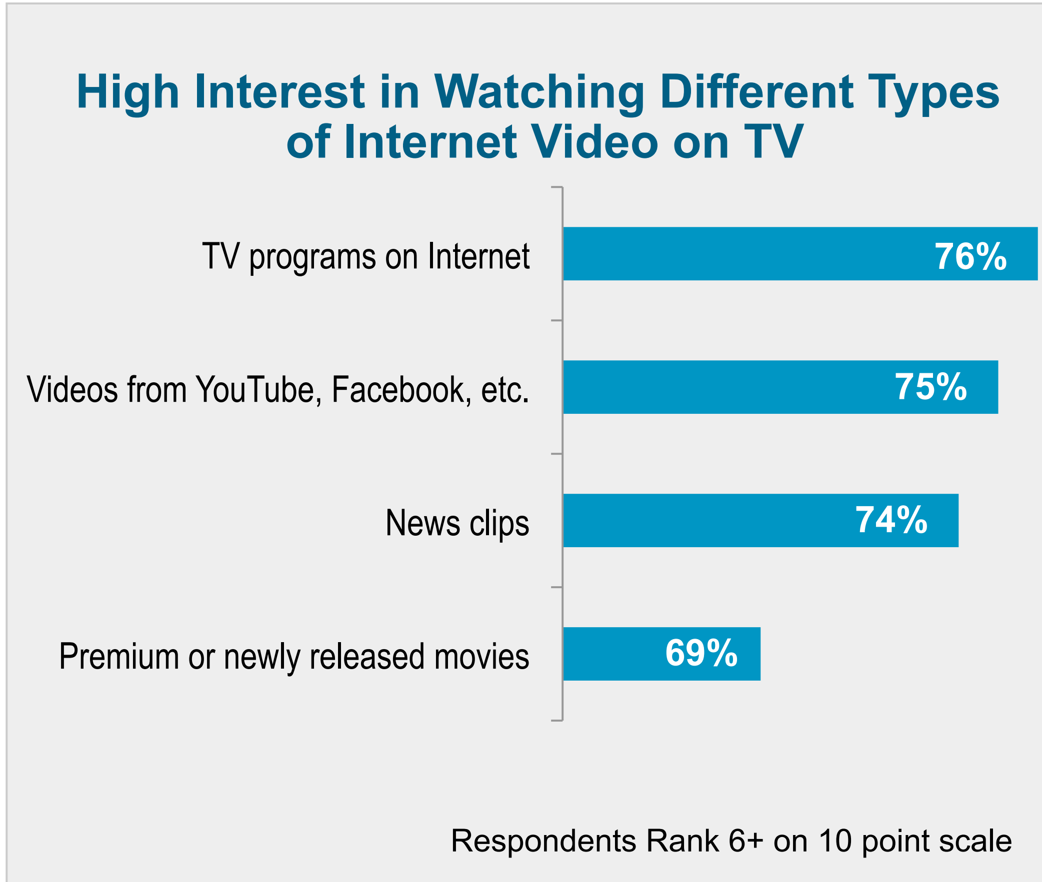


Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Any Interest in *Web Video to TV*

. . . And It Is Not Only About Watching YouTube

- Consumers have less interest in Internet-based premium and recently released movies, either rented or purchased
- In Brazil it is not possible to watch TV channels through the Internet as they are broadcasted ("TV programs" here means content generated for TV, such as pieces of old TV shows available on YouTube)

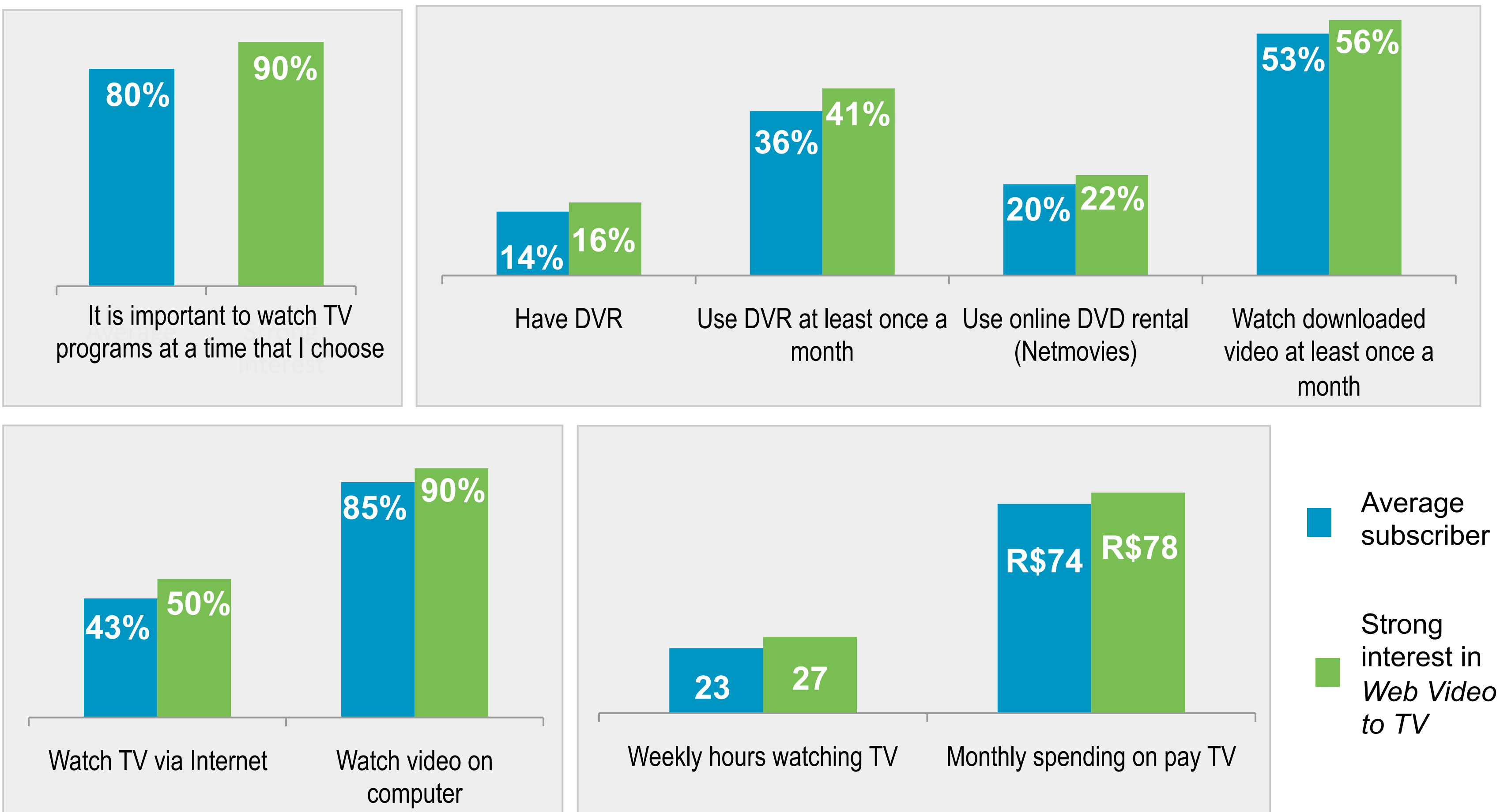


Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Any interest in *Web Video to TV*

Web Video to TV Attracts Consumers Who Want To Control TV Experience

Profile of Initial Target Segment for *Web Video to TV*



Source: Cisco IBSG Connected Life Market Watch, 2010

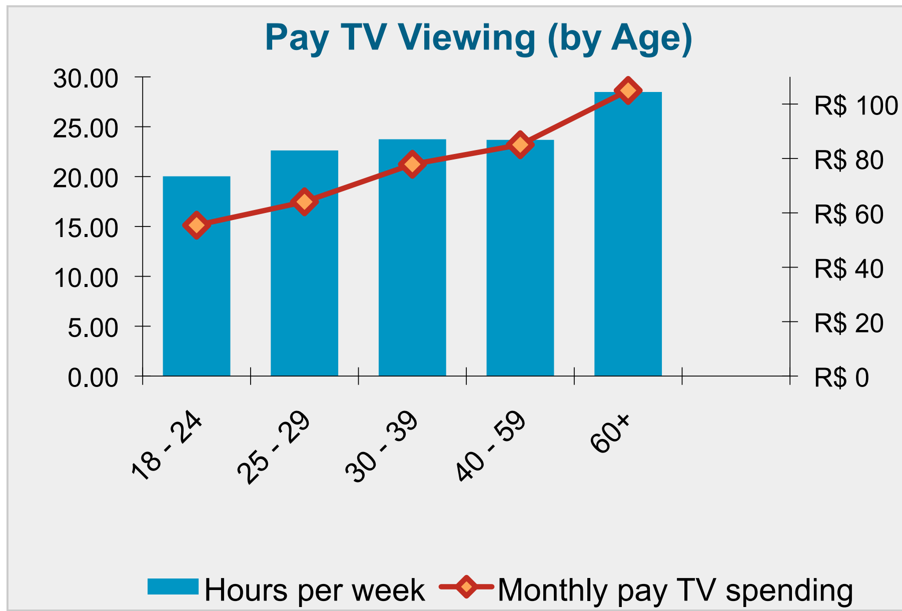
Base: Brazil broadband subscribers

Some Aspects of Broadband Consumer Behavior Vary with Age

- Consumers under 40 watch significantly more TV via Internet than older users
- Consumers above 60 watch about the same amount of online video as others, but spend much less money on online video and would be much less likely to cancel pay TV if Internet video were available on TV

Notes: 1) Behavior of older consumers in survey is biased by the fact that they are broadband consumers and may not be typical of age segment. 2) TV via Internet is mainly "old" content available on web.

	18-24	25-39	40-59	60+
Watch TV via Internet at least weekly	**31%**	**29%**	16%	16%
Monthly spending on online video	R$5.20	R$5.70	R$3.90	**R$1.00**
Subscribers likely to cancel pay TV if Internet video available on TV	17%	20%	23%	**7%**



Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil broadband subscribers

Some Groups Are Abandoning Traditional Pay TV

Internet Video Dominant

- 29% already use Internet video for majority of video viewing
- 36% of this Internet-video-dominant group do not subscribe to pay TV
- Another 18% of the Internet-video-dominant respondents would cancel pay TV if Internet video were easily accessible via TV
- This group is younger—76% under 40 years old—and more likely to live with parents or other relatives

A very small group (1%) of consumers has no TV service at all.

They use only their computer and/or portable devices to meet their video entertainment needs.

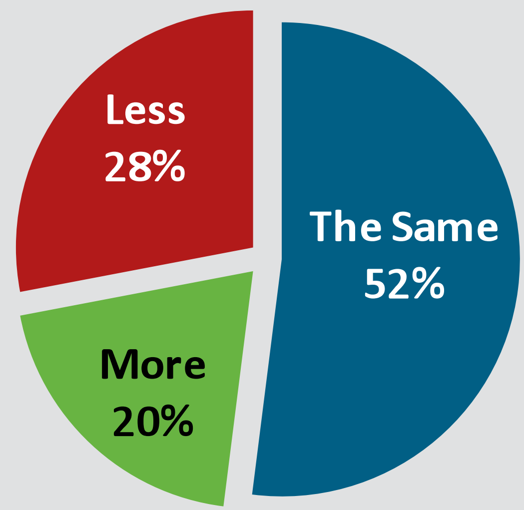
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil broadband subscribers

Internet Has Already Had Impact on Consumer Video Viewing Behavior

- 28% of consumers watch less TV since they began watching Internet TV
- There is more cannibalization among younger consumers
  - —35% of Internet TV watchers aged 18-24 say they watch less TV on TV since they began watching Internet TV
- 20% watch more television programming on TV, supporting theory that Internet can find new user bases and/or help keep users loyal

Change in Consumer TV Time-Spend After Beginning To Watch Internet TV



Q. Since you began watching TV programs on the Internet, do you spend *more, less, or the same* time watching TV programs on a television?

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil Internet TV viewers

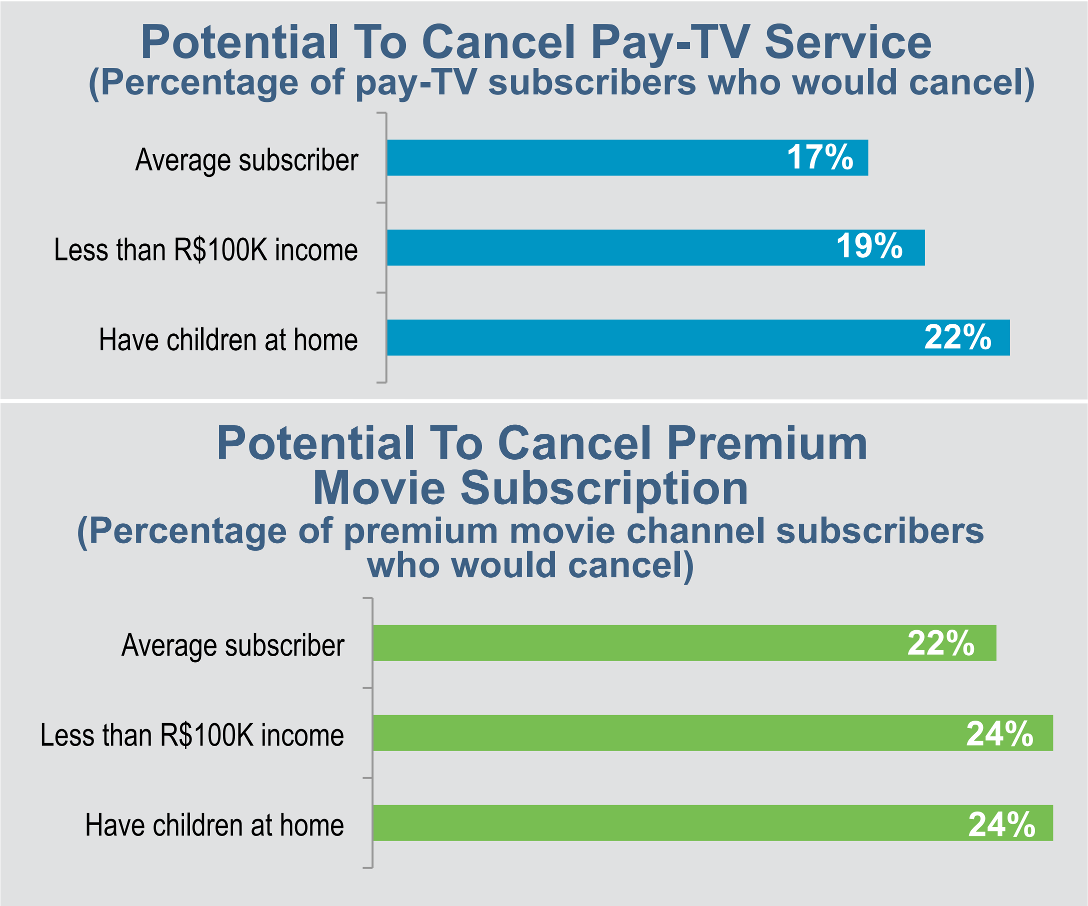
Internet Video Could Threaten Core SP Businesses

Greatest Threat Is in Secondary Video, but New Alternative Services Could Touch Core SP Markets

If you had…

- Free access to *web video to TV*
- Easy ability to watch all Internet video content on your TV
- On-demand access to prime-time TV shows, but not your regular TV service or your TV lineup as it airs . . .

…Would you make any changes to your current TV service package?



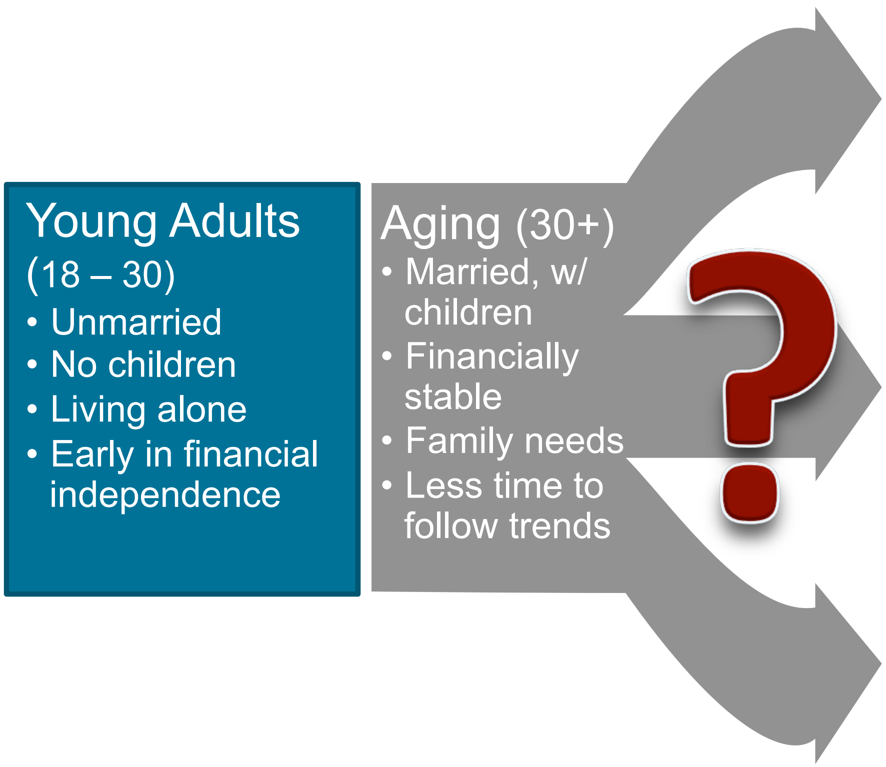
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil broadband subscribers

Evaluating the Long-Term Threat

Will 20-Somethings' Attachment to Pay TV Change as They Age?

Forecasting Future TV Behavior



Source: Cisco IBSG Connected Life Market Watch, 2010

What's Likely To Change

- More disposable income
- Investment in home technology
- Time spent at home
- Degree of "busy-ness"
- Household decisions are compromises based on interest and needs of multiple people

What's Likely To Stay the Same

- General level of technology comfort
- Awareness of options
- Desire for control, choice, and convenience

Market Evolution

- In the future, will these customers have the same options as in today's market?
- Will new options make it easier to source video from alternative sources and watch it at home on TV?

Going Forward:
Key Trends To Watch

1 Trends To Watch: Moving Internet Video to the TV

Migration to TV

The latest TVs & consumer electronics products make it easier to watch Internet video on TV

- 36% of Brazil broadband consumers have already connected their computers to the TV
- 29% of Brazil broadband consumers have a game console with capability to connect to the Internet, and more than 14% have already used it to rent movies online

As Internet video moves to the TV, usage patterns will shift significantly

- Today, 93% of video entertainment is viewed on TV. It is the preferred viewing device
- #1 reason consumers don't watch more Internet video is because they'd rather not watch their entertainment on a computer; #2 reason is low quality of Internet video
- As consumer electronics offers make it easier to access Internet-sourced video on TV, usage patterns could shift rapidly.

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil broadband subscribers

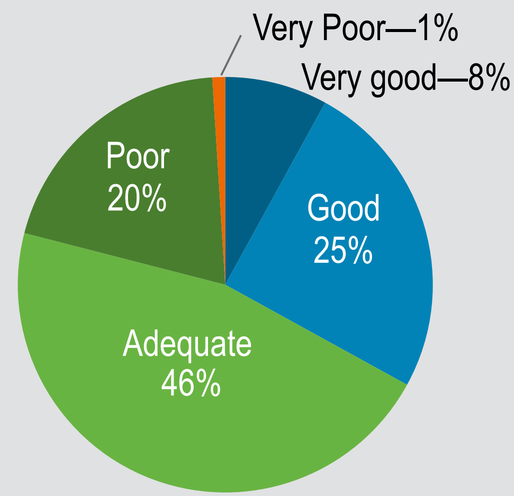
2

Quality Can Impact Internet Video Use

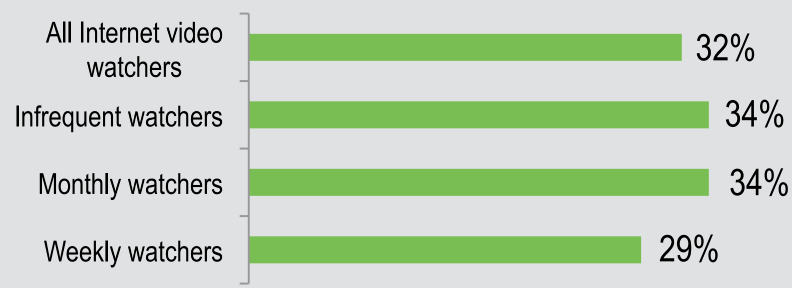
Impact of Quality

- 21% of Internet video viewers regard quality as poor or very poor
- With improved quality, 32% of Internet video viewers, and 29% of weekly viewers, would spend more time watching TV on the Internet
- As competitors match each other in content and control capabilities, quality will rise as competitive differentiator

Perception of Internet Video Quality



Percentage of Consumers Who Limit Internet Video Viewing Due to Quality

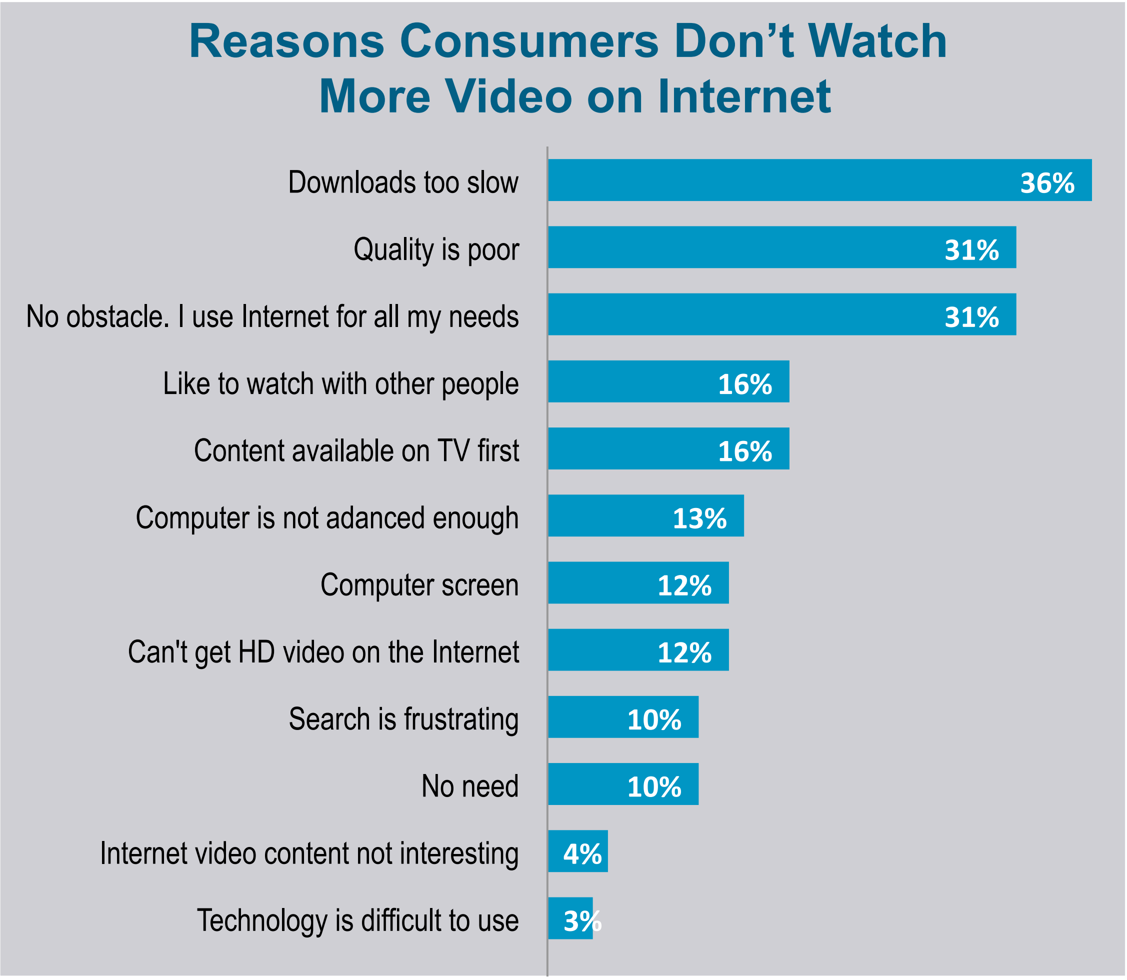


Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil Internet video watchers

Impact: Quality Improvements and TV Accessibility Could Boost Internet Video

- Major protections for traditional pay TV include screen preference, video quality, and time windows for premium content on other media
- Challenge is that these protections are not fully in control of service providers
- Content distribution policy changes and technology developments can drastically impact consumer behavior



Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil broadband subscribers

3 Trends To Watch: TV Screen Becomes New Internet Screen

TV Internet Access

As widgets proliferate, consumers may come to recognize TV as access point to Internet	▪ In January 2009, Yahoo! announced distribution partners for its TV widgets. Today, more than two dozen widgets are available from Vizio, Samsung, LG, and Sony ▪ Three weeks after Verizon FiOS launched updated widgets, it reported that “millions” of Tweets and Facebook gallery photos had been viewed by FiOS TV subscribers on TV
2011 is learning year for consumers	▪ In Brazil, 74% of broadband consumers express interest in accessing Internet content from the TV—enormous potential for consumer electronics and service providers
Market impact may not be in competitive differentiation, but in consumer perception	▪ Cisco IBSG expects competitive differentiation in GUI and general ease of use versus exclusive widgets or applications ▪ The significance of TV widgets may not be in the competitive edge they deliver, but in their role in fundamentally changing the way consumers view their TV screen—opening the door for consumer telepresence and other services

Source: Cisco IBSG Connected Life Market Watch, 2010; company reports; Cisco canvas focus groups, 2010

4 Trends To Watch: Introduce Social Behavior into TV

TV Social Behavior

"TV is fundamentally a social experience, and the only reason people haven't engaged socially with their TV screens to date is that they haven't had a convenient way to do so."
—**Forrester, August 2009**

4 Potential Social TV Developments

Applications that….

1. Enhance a live group experience
2. Create a "virtual" group experience, watching TV with people in other locations
3. Foster interaction with the TV programming itself (decide plot lines, vote on reality winners)
4. Create a peer recommendation engine and commentary on viewing

TV Viewing Behavior Is Complex

- People watch TV alone about half the time
- People multi-task while watching TV about 40% of the time

Social TV Offers Potential Value to Brazilian Consumers

- 15% say the desire to watch with others prevents them from watching more Internet TV
- 52% of broadband consumers express interest in friend-to-friend social TV service

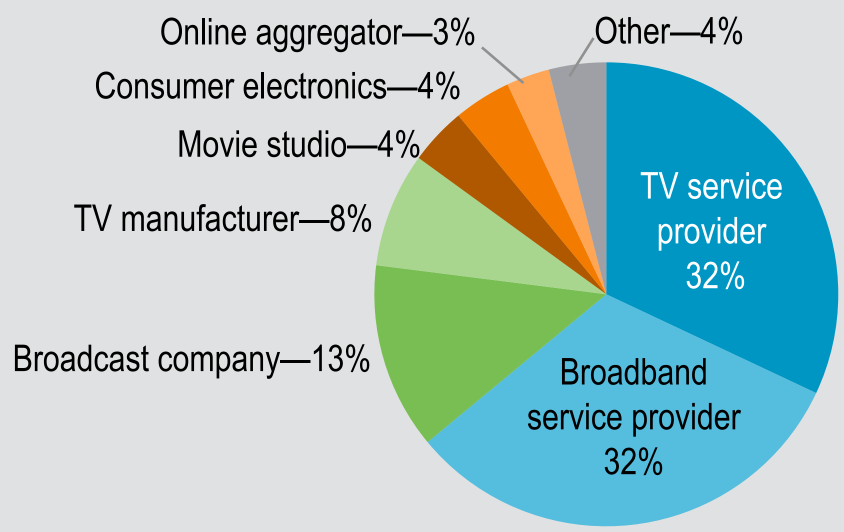
Source: Cisco IBSG Connected Life Market Watch, 2007, 2010; Forrester, 2009

Going Forward:
Service Provider Opportunities

SPs Are Strongly Positioned To Deliver Internet Video to Consumers

- 64% of consumers prefer SP to deliver *web video to TV* service
- SPs can address consumers' concerns, including up-front cost and quality
- SPs should work with retailers to optimize offers that require consumers to buy separate device
  - —66% would buy enabling device at consumer electronics or Internet retailer
- This preferred position could change quickly if any manufacturer, retailer, or aggregator launches aggressively

Preferred Provider for *Web Video to TV* in Brazil

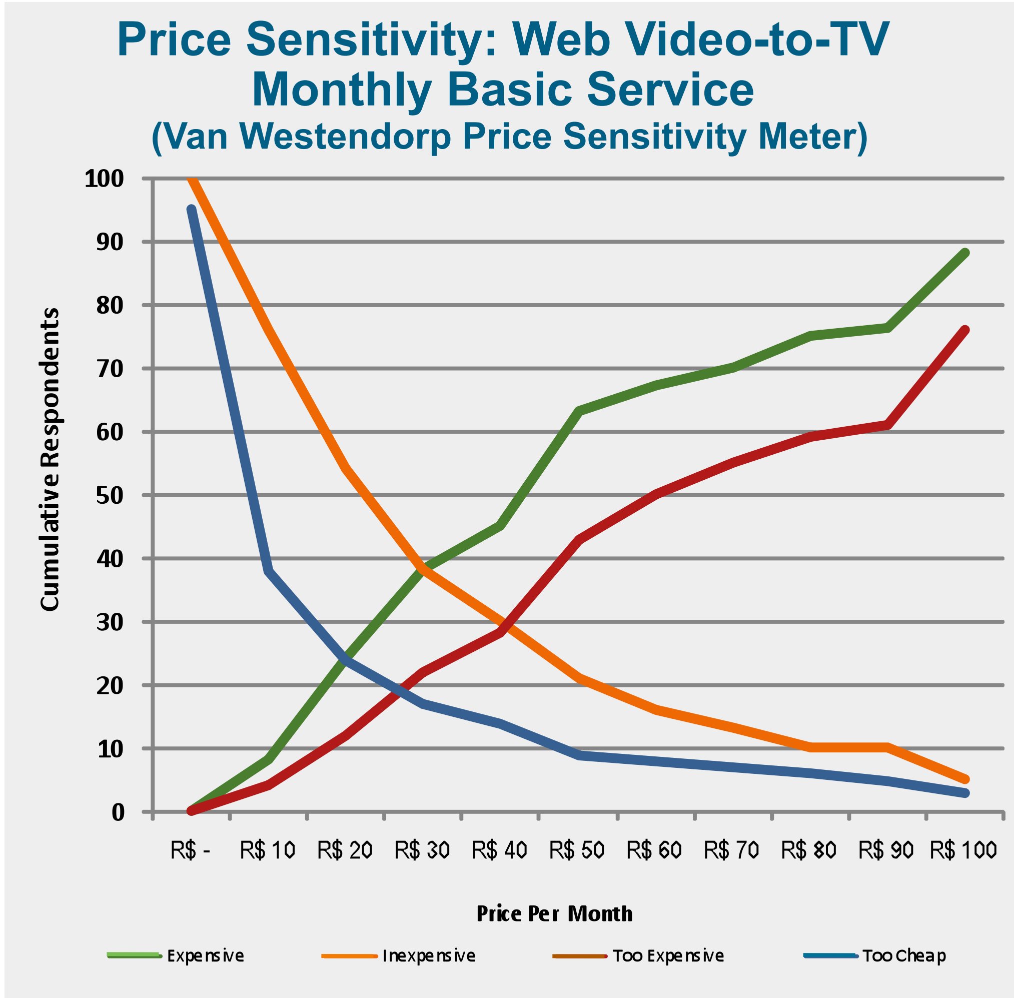


Base: Interest in *Web Video to TV*

Source: Cisco IBSG Connected Life Market Watch, 2010

Service Providers Have Multiple Ways To Monetize Web-Video-to-TV Services

- Consumers are willing to pay directly for *web video to TV*
  - —Range of acceptable pricing for interested consumers is between R$20 and R$43 per month
- Consumers would upgrade their broadband to gain access to *web video to TV*
  - —73% of broadband consumers would upgrade their broadband service for an additional R$20 per month if *web video to TV* were available for free with premium broadband

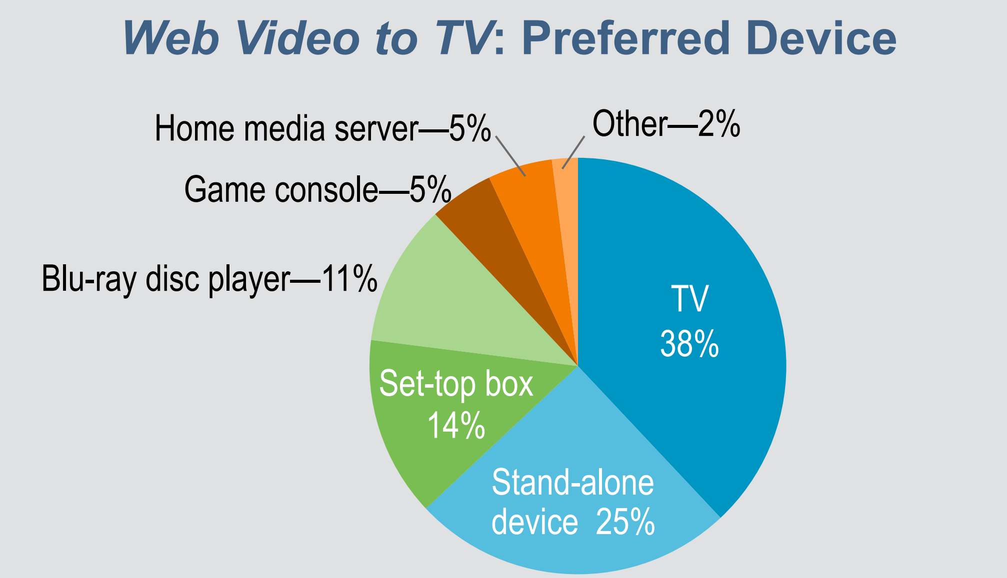


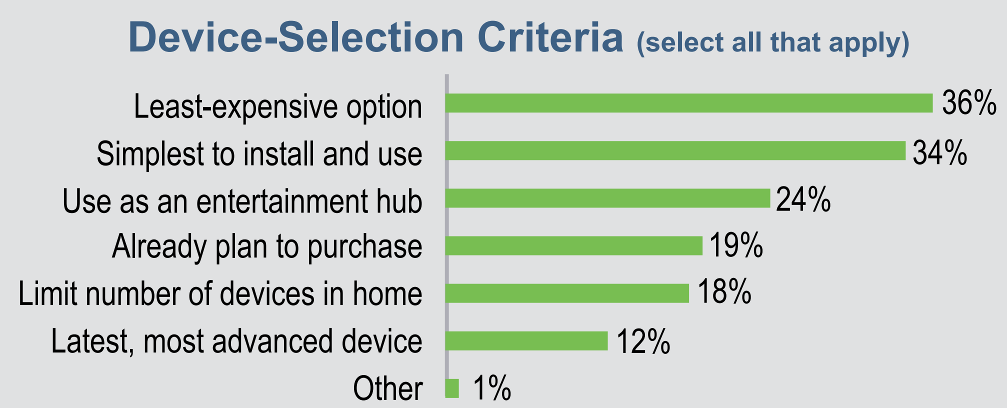
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Brazil interested consumers (6+ on 10-point scale)

CE Manufacturers Do Not Currently Have Edge in Device Choice

- Consumers prefer to enable their *web-video-to-TV* service through the TV set or stand-alone service-specific devices, ahead of existing set-top boxes
- Price and ease of use are key criteria
- Ability to use device as entertainment hub at home is also important





Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Interest in *Web Video to TV*

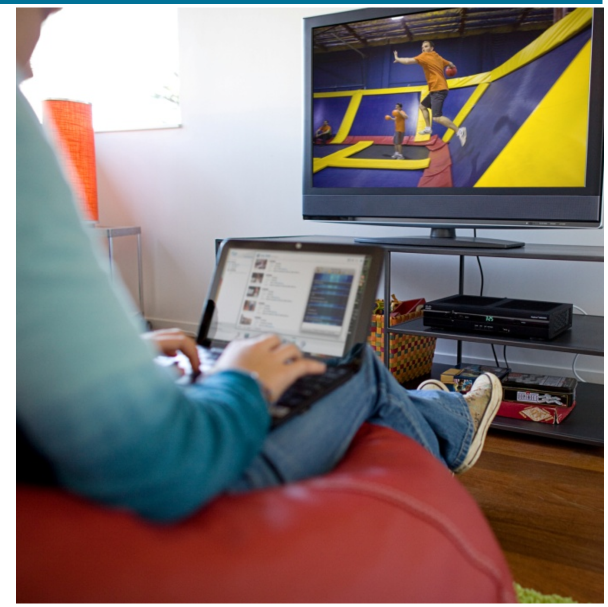
1 Advanced Video Strategy: SPs Have Many Options To Consider

Strategy Options

Service Concept: Connected Home

Move Digital Content Around the Home

- Makes it easy to move digital content (photos and videos) to and from any TV or computer in your home.
  - —Use living-room TV to view photos stored on computer in your office
  - —Watch TV program as it airs, using computer in kitchen
- **75%** of BB consumers are interested (6+ on a 10-point scale)
- **91%** would be willing to pay R$10 for such a service
- **57%** would be less likely to change video SP if it offered such a service



Source: Cisco IBSG Connected Life Market Watch, 2010

2 Advanced Video Strategy: SPs Have Many Options To Consider

Strategy Options

Service Concept: Immersive TV

Immersive TV

Feature	Description	Interest*
Internet Widgets	Service that provides quick access to selection of Internet sites directly from your TV	74%
Select Camera Angles	Feature that enables you to choose from different camera angles to view your show	69%
Interactive TV Retrieve More Info	Feature that enables you to use your TV to retrieve information and videos about the program you are watching, while you are watching it	67%
Social TV Friend-to-Friend Chat	"Friend-to-Friend TV" feature that enables you to invite friends to participate in interactive chat sessions while you watch TV and to share the same viewing experience	52%

- **92%** of respondents would be willing to pay R$10 for immersive TV
- **72%** would be interested in upgrading pay-TV package to get immersive TV

Source: Cisco IBSG Connected Life Market Watch, 2010

*Consumers rating interest 6+ on a 10-point scale

Service Provider Next Steps: Market Landscape

- Consumer video entertainment is poised for significant change driven by web video, time shifting, convenience
- Rapid expansion of broadband will increase demand for Internet video
- Expected fall of regulatory barriers will allow telecom SPs to compete with pay TV through IPTV
- Factors outside SPs' control could cause rapid change in landscape
  - Content developer/distributor strategies could bypass SPs, going directly to consumers
  - Consumer electronics product developments

Source: Cisco IBSG Connected Life Market Watch, 2010

Service Provider Next Steps: Strategies To Prepare for Video Disruption

- Content is king: SPs must offer premium channels, HD (and soon, 3D) content
- Broadband SPs must enhance position as preferred providers of web video through quality guarantee and triple- and quad-plays
- Address new consumer needs:
  - Provide more control over pay-TV content (VoD, "catch-up TV")
  - Provide high-quality web video on TV
  - Stay ahead of changes in video experience
  - Fully exploit monetization options to capture value across complete portfolio and full customer lifecycle

Source: Cisco IBSG Connected Life Market Watch, 2010

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