Service Delivery and Consumer Cloud (Global Comparison)
A Connected Life Market Watch Perspective

Cisco Internet Business Solutions Group
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Agenda

- Methodology and Respondent Demographics
- Key Findings and Implications
- Topics
  1. Technology Usage
  2. Buying Behavior
  3. Pricing
  4. Service Provider Wi-Fi
  5. Consumer Cloud and Connected Life
  6. How To Expand Customer Potential
Methodology and Respondent Demographics
## Connected Life Market Watch
### Service Delivery and Consumer Cloud

### Approach

**Connected Life Market Watch (CLMW) Program**
- Cisco IBSG’s recurring primary research program
- Monitors changing consumer behavior to identify key market transitions
- Topics include mobile (2009), video (2008, 2010)
- 2011 focus: Service Delivery & Cloud Experiences

**Methodology**
- Broadband consumers
- 20-minute online survey, representative sample (500-1,000 respondents/country); where needed, sample was weighted to match population
- Multiple segmentations (demographic, tech affinity)
- Studies were fielded from April to December 2011

### Scope 2011
- Canada
- France
- Germany
- Italy
- United Kingdom
- United States

Source: Cisco IBSG Connected Life Market Watch, 2011
3,900 Respondents Are Representative of the Overall Broadband Population

<table>
<thead>
<tr>
<th></th>
<th>Global</th>
<th>United States</th>
<th>Canada</th>
<th>United Kingdom</th>
<th>Germany</th>
<th>France</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender: male/female</td>
<td>51% / 49%</td>
<td>50% / 50%</td>
<td>49% / 51%</td>
<td>54% / 46%</td>
<td>57% / 43%</td>
<td>48% / 52%</td>
<td>48% / 52%</td>
</tr>
<tr>
<td>Average household income</td>
<td>€46,000</td>
<td>$61,800</td>
<td>$62,700</td>
<td>€37,000</td>
<td>€39,000</td>
<td>€34,000</td>
<td>€36,000</td>
</tr>
<tr>
<td>Have children in the home</td>
<td>32%</td>
<td>32%</td>
<td>30%</td>
<td>34%</td>
<td>27%</td>
<td>38%</td>
<td>46%</td>
</tr>
<tr>
<td>Employed</td>
<td>57%</td>
<td>54%</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>63%</td>
<td>64%</td>
</tr>
</tbody>
</table>

Broadband consumers tend to have higher income, more children, and a higher level of employment than the average population

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
Key Findings
### Key Findings: Service Delivery & Cloud

<table>
<thead>
<tr>
<th>Topics</th>
<th>Emerging Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technology Use</strong></td>
<td>• The <strong>smartphone</strong> is becoming the <strong>primary consumer device</strong> and drives behavior such as use of mobile video</td>
</tr>
</tbody>
</table>
| **Buyer Behavior**            | • **Broadband** is the **anchor service** for all, while mobile data is less significant  
• **SPs lead as the preferred provider of innovative solutions** such as Internet-to-TV for a significant share of consumers                                      |
| **Wi-Fi**                     | • 80% of **mobile Internet is not mobile, but nomadic** across fixed locations  
• **Users are “Wi-Fi ready”** and limit their use of expensive cellular data in favor of Wi-Fi networks  
• Users wait for Wi-Fi coverage and are ready to accept compromises on quality and immediacy                                                                 |
| **End-User Pricing**          | • **Consumers do not want to move away from flat rates**  
• There is no “one size fits all” mitigation strategy (peak/off-peak, service-based pricing, transparency) to make tiered pricing more acceptable                                                                 |
| **Consumer Cloud & Connected Life** | • **Cloud enhancements** can **accelerate** Connected Life **service adoption** for consumers (varying by country)  
• Cloud enhancements that make services easy to get generate the highest interest  
• Strong potential for online data protection                                                                                                           |
| **Expanding Potential**       | • Many customers are still undecided (29% “in play”), and are a prime target for SPs  
• SPs score with reliability, ease of use & setup, troubleshooting                                                                                   |

Source: Cisco IBSG Connected Life Market Watch, 2011
1 Technology Use
Technology Use: Key Takeaways

- In some countries, mobile is surpassing traditional landline.
- Smartphones are becoming the primary portable device for most consumers.
- Mobile video is still a “snacking” experience.
- A significant minority of smartphone users watch video, but we are facing the tablet era: tablets already surpass e-books.
- Consumers are adopting both physical and online data protection practices, and some of them fully trust the cloud.

Source: Cisco IBSG Connected Life Market Watch, 2011
Respondent Segmentation Based on Technology Profile

Sample of 3,900 Broadband Consumers Well Represents All Technology Segments

Average Across Base

- Age: 42
- Male/Female: 51% / 49%
- Income: €46K
- Employed: 59%

Consumer Segmentation Based on Technology Profile

- **Laggard**
  - 50 years old (avg.)
  - 47% male / 53% female
  - €36K HH income
  - 44% employed

- **Late Majority**
  - 45 years old (avg.)
  - 47% male / 53% female
  - €42K HH income
  - 54% employed

- **Early Majority**
  - 39 years old (avg.)
  - 53% male / 47% female
  - €48K HH income
  - 61% employed

- **Early Adopter**
  - 36 years old (avg.)
  - 58% male / 42% female
  - €55K HH income
  - 75% employed

Source: Cisco IBSG Connected Life Market Watch, 2011

Base: 3,900 broadband consumers
In Some Countries, Mobile Is Surpassing Traditional Landline

Household Monthly Subscriptions
Percentage of Respondents

- **Mobile phone***
  - Total: 75%
  - U.S.: 77%
  - Canada: 62%
  - U.K.: 67%
  - Germany: 55%
  - France: 50%
  - Italy: 40%

- **Landline**
  - Total: 60%
  - U.S.: 58%
  - Canada: 68%
  - U.K.: 68%
  - Germany: 78%
  - France: 78%
  - Italy: 77%

- **DTT/satellite TV**
  - Total: 90%
  - U.S.: 90%
  - Canada: 90%
  - U.K.: 90%
  - Germany: 90%
  - France: 90%
  - Italy: 90%

- **Mobile data service**
  - Total: 45%
  - U.S.: 45%
  - Canada: 45%
  - U.K.: 45%
  - Germany: 45%
  - France: 45%
  - Italy: 45%

- **DVR**
  - Total: 10%
  - U.S.: 10%
  - Canada: 10%
  - U.K.: 10%
  - Germany: 10%
  - France: 10%
  - Italy: 10%

* Large prepaid mobile customer base not included

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
Adoption of Many Services Has Not Yet Hit the Mass Market

Household Monthly Subscriptions
Percentage of Respondents

An aggressively-priced “key card” campaign made mobile data card quite popular in Italy among other services.

The lower French percentage could be related to wide Wi-Fi availability.

Blanks indicate that the technology was not included in a particular country’s survey.

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
# Mobile Video Is Still a “Snacking” Experience

## Time Spent Viewing Mobile Video Weekly

<table>
<thead>
<tr>
<th>Time Range</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less 5 mins</td>
<td>30%</td>
</tr>
<tr>
<td>5 - 15 mins/week</td>
<td>22%</td>
</tr>
<tr>
<td>15 - 30 mins/week</td>
<td>16%</td>
</tr>
<tr>
<td>30 mins - 1 hr/week</td>
<td>13%</td>
</tr>
<tr>
<td>1 - 2 hrs/week</td>
<td>8%</td>
</tr>
<tr>
<td>2 - 3 hrs/week</td>
<td>5%</td>
</tr>
<tr>
<td>More than 3 hrs/week</td>
<td>6%</td>
</tr>
</tbody>
</table>

- **Limited snacking—68%**
- **Extended use—19%**

- Rough average is about 42 minutes / week among mobile video users
- Only 19% of mobile video users watch more than 1 hour / week on their mobile phones and 68% of broadband consumers never use mobile phone to watch videos

Source: Cisco IBSG Connected Life Market Watch, 2011

Base: Global mobile video users; n=1,157
A Significant Minority of Smartphone Users Watch Video

Percentage of Smartphone Users Who Watch Video

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage of Users Watching Video</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>34%</td>
</tr>
<tr>
<td>Canada</td>
<td>25%</td>
</tr>
<tr>
<td>U.K.</td>
<td>30%</td>
</tr>
<tr>
<td>Germany</td>
<td>37%</td>
</tr>
<tr>
<td>France</td>
<td>35%</td>
</tr>
<tr>
<td>Italy</td>
<td>41%</td>
</tr>
</tbody>
</table>

Average Minutes/Week of Mobile Video Usage

- U.S.: 49 minutes
- Canada: 35 minutes
- U.K.: 42 minutes
- Germany: 46 minutes
- France: 36 minutes
- Italy: 41 minutes

Approximate global average is about 5 to 7 minutes per day

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: Global mobile video users; n=1,157
Please note: There was a four-month lag in data collection between North America and Europe, which could have contributed to the higher European percentages.

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
The Tablet Era: Tablets Already Surpass E-Books

Tablets have the potential to transform video consumption and to change the industry at large because great amounts of mobile data traffic push the limits of traditional networks, and consumers are ready for Wi-Fi alternatives.

* Netbook data for Italy is from secondary sources because we suspect a questionnaire misinterpretation.

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
2 Consumer Buying Behavior
Buying Behavior: Key Takeaways

- Broadband has become the anchor service; consumers in all countries protect it
  - Mobile data is the first service consumers in all countries would cut
  - VoIP, mobile replacement, and TV-over-Internet challenge landlines and pay TV—with different impact in different countries

- Consumers everywhere have similar priorities when it comes to important factors for where to buy
  - Cost and reliability are the most important factors across the board
  - Ease of use and troubleshooting have less priority

- There is no clear preferred provider for Internet-to-TV solutions, but SPs have clear lead in most important decision criteria in all countries
  - SPs can benefit by emphasizing their strength in key factors when marketing Internet-to-TV solutions

Source: Cisco IBSG Connected Life Market Watch, 2011
Broadband Is the Anchor Service, While Mobile Data Is Expendable

Consumer Spending Priorities
Which Services Would You Cut First If You Had To Reduce Expenses?

- North American respondents less willing to drop pay TV than Europeans
- VoIP solutions, mobile replacement, and TV-over-Internet challenge landlines and pay TV
- In countries where landline is stronger, use of mobile voice is lower

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
Cost and Reliability Are the Most Important Factors in Where To Buy

Factors that Drive Consumer Purchase Behavior
Percentage of Respondents Who Ranked Factor 1 or 2

- Cost and reliability are rated similarly across countries
- Reliability is more important to U.K. consumers
- Lower ongoing cost is most important in Germany and France

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
Factors Such As Troubleshooting and Ease of Selection Have Lower Priority

Factors that Drive Consumer Purchase Behavior
Percentage of Respondents Who Ranked Factor 1 or 2

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
No Clear Preferred Provider for Internet-to-TV Solutions

For 8 different factors in the purchase process—from up-front cost to ease of use—consumers were asked which channel option best met their needs:

- **Strong SP**: These consumers believe SP provides a better experience in ALL factors
- **Strong Retail/Online**: These consumers believe retail/online provides a better experience in ALL factors
- **In Play**: These consumers’ channel preference shifts from factor to factor; SP prevails in 4 areas, Retail in 2, and the remaining areas are quite balanced
- **Indifferent**: These consumers selected “don’t know” for all 8 factors, likely due to lack of interest in Internet-to-TV solutions

![Consumers’ Preferred Channel Experience](chart)

Source: Cisco IBSG Connected Life Market Watch, 2011

Base: 3,900 broadband consumers
SPs Have Clear Lead in Most Important Decision Criteria

### Consumer Channel Preferred Provider for Internet-to-TV Solution

**Individual Factors in Order of Importance**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Direct from SP</th>
<th>Retailer + Online</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Troubleshooting</td>
<td>54%</td>
<td>21%</td>
<td>25%</td>
</tr>
<tr>
<td>Ease of setup</td>
<td>51%</td>
<td>24%</td>
<td>25%</td>
</tr>
<tr>
<td>Reliability</td>
<td>50%</td>
<td>23%</td>
<td>27%</td>
</tr>
<tr>
<td>Ease of use</td>
<td>46%</td>
<td>27%</td>
<td>27%</td>
</tr>
<tr>
<td>Lower up-front cost</td>
<td>43%</td>
<td>30%</td>
<td>27%</td>
</tr>
<tr>
<td>Lower ongoing cost</td>
<td>42%</td>
<td>31%</td>
<td>27%</td>
</tr>
<tr>
<td>Features and capabilities</td>
<td>42%</td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td>Ease in selecting the right device</td>
<td>41%</td>
<td>32%</td>
<td>27%</td>
</tr>
</tbody>
</table>

SPs can benefit by emphasizing their strength in key factors when marketing Internet-to-TV solutions.

Source: Cisco IBSG Connected Life Market Watch, 2011

Base: 3,900 broadband consumers
There Are Interesting Differences Among Countries for Internet-to-TV Solutions

Countries show high preference toward SPs
- SP leads Retail + Online in all countries
- “In Play” segment has important role overall
- Italy has highest number of “In Play” consumers
- Large portion is Indifferent, especially in U.K.

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
3 Pricing
Pricing: Key Takeaways

- Consumers prefer flat-rate plans; SP strategies to drive tiered pricing are underwhelming.
- EU broadband consumers feel it is unfair to pay for broadband services based on use.
- There is less resistance to usage-based pricing for mobile broadband in all surveyed geographies.

Source: Cisco IBSG Connected Life Market Watch, 2011
Consumers Prefer Flat Rates and Are Not Impressed by SP Conciliation Strategies

**Consumers’ Reaction to Tiered Pricing**

Percentage of Respondents

- Fixed: 71% (Unfair), 17% (Fair)
- Mobile: 62% (Unfair), 16% (Fair)

**Impact of Conciliation Strategies**

Percentage of Respondents

- Service-Based Pricing:
  - No effect: 33%
  - More attractive but unaccepting: 16%
  - Less attractive: 20%
  - More accepting: 11%
- Usage Transparency:
  - No effect: 32%
  - More attractive but unaccepting: 18%
  - Less attractive: 21%
  - More accepting: 11%
- Peak / Off-Peak Differentiation:
  - No effect: 32%
  - More attractive but unaccepting: 14%
  - Less attractive: 17%
  - More accepting: 19%

Consumers with no opinion have been excluded from the sample.

Source: Cisco IBSG Connected Life Market Watch, 2011

Base: 2,105 broadband consumers
Consumers Feel It Is Unfair To Pay for Fixed Broadband Based on Use

Perceived Fairness of Fixed Broadband Usage-Based Billing
Percentage of Respondents

<table>
<thead>
<tr>
<th>Country</th>
<th>Unfair</th>
<th>Fair</th>
<th>No opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>71%</td>
<td>19%</td>
<td>16%</td>
</tr>
<tr>
<td>Canada</td>
<td>72%</td>
<td>19%</td>
<td>16%</td>
</tr>
<tr>
<td>U.K.</td>
<td>25%</td>
<td>52%</td>
<td>23%</td>
</tr>
<tr>
<td>Germany</td>
<td>74%</td>
<td>17%</td>
<td>9%</td>
</tr>
<tr>
<td>France</td>
<td>86%</td>
<td>5%</td>
<td>9%</td>
</tr>
<tr>
<td>Italy</td>
<td>74%</td>
<td>9%</td>
<td>17%</td>
</tr>
</tbody>
</table>

- U.K. consumers are most receptive to tiered billing for fixed broadband
- U.K. has had usage-based fixed broadband billing for many years, hence the greater receptivity

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 2,105 broadband consumers
There Is Less Resistance to Tiered Pricing for Mobile Broadband

Perceived Fairness of Mobile Tiered Pricing
Percentage of Respondents

<table>
<thead>
<tr>
<th></th>
<th>Unfair</th>
<th>Fair</th>
<th>No opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>62%</td>
<td>22%</td>
<td>16%</td>
</tr>
<tr>
<td>U.K.</td>
<td>45%</td>
<td>26%</td>
<td>29%</td>
</tr>
<tr>
<td>Germany</td>
<td>65%</td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td>France</td>
<td>71%</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>Italy</td>
<td>67%</td>
<td>10%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Perceived Fairness of Fixed vs. Mobile Tiered Pricing
Percentage of Respondents

<table>
<thead>
<tr>
<th></th>
<th>Fixed</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.K.</td>
<td>25%</td>
<td>26%</td>
</tr>
<tr>
<td>Germany</td>
<td>17%</td>
<td>20%</td>
</tr>
<tr>
<td>France</td>
<td>9%</td>
<td>17%</td>
</tr>
<tr>
<td>Italy</td>
<td>17%</td>
<td>23%</td>
</tr>
</tbody>
</table>

United Kingdom has had usage-based billing for fixed broadband for many years, hence the greater receptivity

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 2,105 broadband consumers
4 Service Provider Wi-Fi
Service Provider Wi-Fi: Key Takeaways

- Most mobile Internet and mobile video activity takes place in fixed locations
  - About 80% of mobile Internet use (via mobile device) is not mobile
  - Innovative services such as Wi-Fi offload and small cells solutions can fit consumer requirements for increased data speeds, increased coverage, and quality at reasonable prices
- Wi-Fi adoption is spreading through all market segments
- Heavy data users will likely start limiting their use of expensive cellular data packages with tiered pricing models in favor of Wi-Fi networks
- Economics of traditional mobile data delivery models can break down in favor of strong economic case for Wi-Fi / small cells offload, where integrated operators could be in a better position than “mobile only”

Source: Cisco IBSG Connected Life Market Watch, 2011
About 80% of mobile Internet use (via mobile device) is not mobile

Innovative services such as Wi-Fi offload and small cells solutions (femto / pico) can fit consumers’ requirements for increased data speeds, increased coverage, and quality at reasonable prices

Source: Cisco IBSG Connected Life Market Watch, 2011
Wi-Fi Adoption Is Spreading Through All Market Segments

- Majority of respondents said they use Wi-Fi more than their cellular network for browsing on their smartphones.
- This behavior is extending beyond the Early Adopter and Early Majority segments to include the Late Majority broadband consumer segment.

European Union (EU) Average Wireless Web Browsing

- 12% Wi-Fi
- 38% Cellular
- 50% Don't know

Late Majority Wireless Web Browsing

- France:
  - 15% Wi-Fi
  - 35% Cellular
  - 50% Don't know

- Germany:
  - 24% Wi-Fi
  - 41% Cellular
  - 29% Don't know

- Italy:
  - 15% Wi-Fi
  - 29% Cellular
  - 56% Don't know

- U.K.:
  - 14% Wi-Fi
  - 40% Cellular
  - 46% Don't know

Base: Respondents using smartphone; n= 1,043

Late Majority behavior is an indicator of where the technology is in the adoption lifecycle.

Source: Cisco IBSG Connected Life Market Watch, 2011
Smartphone Users Plan Their Access to Data-Heavy Programs via Wi-Fi

- Heavy data users start limiting their use of expensive cellular data packages with tiered pricing models in favor of offloading traffic onto Wi-Fi networks that provide unlimited access.
- Economics of traditional mobile data delivery models can break down in favor of strong economic case for Wi-Fi / small cells offload where integrated operators could be in a better position than “mobile only”.

### Frequency of Waiting for Wi-Fi Access To Use Mobile Data
(% of Mobile Data Users)

<table>
<thead>
<tr>
<th>Country</th>
<th>Always</th>
<th>Usually</th>
<th>About half the time</th>
<th>Seldom</th>
<th>Never</th>
<th>I don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.K.</td>
<td>14%</td>
<td>19%</td>
<td>18%</td>
<td>26%</td>
<td>14%</td>
<td>9%</td>
</tr>
<tr>
<td>Italy</td>
<td>15%</td>
<td>25%</td>
<td>11%</td>
<td>23%</td>
<td>21%</td>
<td>5%</td>
</tr>
<tr>
<td>Germany</td>
<td>11%</td>
<td>21%</td>
<td>18%</td>
<td>24%</td>
<td>19%</td>
<td>7%</td>
</tr>
<tr>
<td>France</td>
<td>21%</td>
<td>26%</td>
<td>19%</td>
<td>18%</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td>Total</td>
<td>15%</td>
<td>23%</td>
<td>16%</td>
<td>23%</td>
<td>16%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: Respondents using smartphone; n= 1,010
5 Consumer Cloud and Connected Life
**Consumer Cloud and Connected Life: Key Takeaways**

- Cloud enhancements have a varying ability to accelerate Connected Life service adoption
- In the United States, Canada, France and Italy, cloud features can accelerate adoption, while in Germany and the United Kingdom, consumers are wary of cloud
- Even one cloud enhancement can make consumers more likely to buy a Connected Life service
  - In the U.S., Canada, France, and Italy, about 70% of people are more likely to buy a Connected Life service if it has even one cloud enhancement
  - In Germany and the U.K., fewer consumers are looking for a broad cloud experience
- The attitude toward each category of cloud services is similar; only “social behavior” services are significantly less appealing
- Listening to music emerges as the primary Connected Life activity

Source: Cisco IBSG Connected Life Market Watch, 2011
Cloud Impact on Consumers’ Buying Behavior Using Kano Methodology

How Each Cloud Enhancement Influences Consumers’ Assessment of a Connected Life Service

<table>
<thead>
<tr>
<th>Consumer Attitude Toward a Particular Cloud Enhancement</th>
<th>Critical</th>
<th>Differentiating</th>
<th>Mandatory</th>
<th>Neutral</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancement included with your service?</td>
<td>Positive</td>
<td>Positive</td>
<td>Neutral</td>
<td>Neutral</td>
<td>Negative</td>
</tr>
<tr>
<td>Enhancement NOT included with your service?</td>
<td>Negative</td>
<td>Neutral</td>
<td>Negative</td>
<td>Neutral</td>
<td>Neutral</td>
</tr>
</tbody>
</table>

Consumers are happy when it's present and dissatisfied when it's not.
Consumers don't expect it to be included, but thrilled when it is.
Consumers expect it to be there. Not thrilled when it is, but very displeased when it is not.
Consumers are indifferent to its presence.
Consumers are displeased when this enhancement is present.

Sources: ASQ, 2005; Cisco IBSG, 2012
Overall, 29% of Consumers Are Looking for a Broad Cloud Experience

More Are Looking for Single / Few Enhancements

**Positive Impact on Likelihood of Customer Purchase**
Percentage of Consumers

- **No Cloud:** 33%
- **Some Cloud:** 38%
- **Significant Cloud:** 16%
- **Complete Cloud:** 13%
- **10 or more cloud enhancements**
- **6 to 9 cloud enhancements**

Source: Cisco IBSG, based on Kano methodology, 2012  
Base: 3,900 broadband consumers
Cloud Impact on Connected Life Service Adoption Varies Widely by Country

- In U.S., Canada, France, and Italy, cloud tends to accelerate adoption, while in Germany and U.K., consumers are more wary of cloud.
- Even one cloud enhancement can make consumers more likely to buy a Connected Life service.
  - In U.S., Canada, France, and Italy, about 70% of people are more likely to buy Connected Life services if they have even one cloud enhancement.
  - In Germany and U.K., fewer consumers are looking for a broad cloud experience; more are looking for single / few enhancements.

Source: Cisco IBSG, based on Kano methodology, 2011

Positive Impact of Various Levels of Cloud on Likelihood of Customers’ Purchase

Percentage of Positive Responses to Cloud Enhancements

<table>
<thead>
<tr>
<th></th>
<th>Complete Cloud</th>
<th>Significant Cloud</th>
<th>Some Cloud</th>
<th>No Cloud</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>33%</td>
<td>38%</td>
<td>16%</td>
<td>13%</td>
</tr>
<tr>
<td>U.S.</td>
<td>25%</td>
<td>36%</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td>Canada</td>
<td>22%</td>
<td>36%</td>
<td>22%</td>
<td>20%</td>
</tr>
<tr>
<td>U.K.</td>
<td>43%</td>
<td>39%</td>
<td>13%</td>
<td>5%</td>
</tr>
<tr>
<td>Germany</td>
<td>54%</td>
<td>40%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>France</td>
<td>26%</td>
<td>38%</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>Italy</td>
<td>32%</td>
<td>42%</td>
<td>15%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Base: 3,900 broadband consumers
## Cloud Offers Consumers an Enhanced Connected Life Experience

Cloud-Enabled Enhancements Can Be Applied Horizontally Across Connected Life Services

<table>
<thead>
<tr>
<th>Connected Life</th>
<th>Cloud Enhancements</th>
<th>Answer Consumer Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unified Data Management</td>
<td>Make my data management easy</td>
</tr>
<tr>
<td></td>
<td>Automatic Backup</td>
<td>Let me access and move my stuff easily across my devices, from anywhere</td>
</tr>
<tr>
<td></td>
<td>Automatic Data Sync</td>
<td>Let me choose what I want across all services, but pay only once</td>
</tr>
<tr>
<td></td>
<td>Any Device / Location</td>
<td>Make it easy for me to get Connected Life services</td>
</tr>
<tr>
<td></td>
<td>Immediate Access</td>
<td>Help me match my online social behavior to my real-life social behavior</td>
</tr>
<tr>
<td></td>
<td>Seamless Switching</td>
<td></td>
</tr>
<tr>
<td></td>
<td>One-Time Payment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Single-Menu Access</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intelligent Personalization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add New Capabilities Automatically</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remote Monitor / Automatic Fix</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Advanced Sharing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>See Peer Recommendations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Companion Device</td>
<td></td>
</tr>
</tbody>
</table>

Source: Cisco IBSG Connected Life Market Watch, 2011
Enhancements that Make Services Easy To Get Are Most Attractive

Impact of Cloud Enhancement, Grouped by Analogous Consumer Needs

Percentage of Respondents

- Easy Data Management: 26%
  - Differentiating: 16%
  - Mandatory: 7%
  - Critical: 3%
- Any Device - Anywhere: 28%
  - Differentiating: 16%
  - Mandatory: 8%
  - Critical: 4%
- Choose and Pay Once: 30%
  - Differentiating: 16%
  - Mandatory: 9%
  - Critical: 5%
- Easy-to-Get Services: 34%
  - Differentiating: 21%
  - Mandatory: 8%
  - Critical: 5%
- Social Behavior: 16%
  - Differentiating: 9%
  - Mandatory: 3%
  - Critical: 4%

Only concepts presented globally are included in the analysis.

- Single Payment and Any Device-Anywhere are 2\textsuperscript{nd} and 3\textsuperscript{rd} most attractive enhancements.
- Only Social Behavior services were significantly less appealing than others.
- Receptivity was highest in Canada and France across all service categories.

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
Receptivity to Cloud Enhancements Has Similar Trends for All Services

Example: Impact of Any Device-Anywhere Cloud Enhancements
Percentage of Respondents

- This graph is related to Immediate Access, Any Device, and Seamless Switching cloud enhancements grouped under Any Device-Anywhere consumer needs: highest in Canada and the U.S., and lowest in Germany.
- We noticed similar trends for all cloud enhancements grouped in five consumer needs.

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
“Backup Data Online” Is Among the High-Priority Cloud Services

Consumers’ Data Backup Frequency
Percentage of Respondents

- A significant number of consumers practice both physical and online data protection, and some fully trust the cloud.
- SP opportunities:
  1. Educate users about the importance of regular backup practices
  2. Boost online adoption

Source: Cisco IBSG Connected Life Market Watch, 2011
Listening to Music Has Emerged as the Primary Connected Life Activity

Connected Life Activities by Frequency
Percentage of Respondents

We noticed a comparable distribution for each activity among all countries

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
6
How To Expand Customer Potential
How To Expand Customer Potential: Key Takeaways

- Consumers were asked which channel option best met their needs based on the importance of 8 different factors in deciding where to buy an Internet-to-TV device / service.

- 29% of broadband consumers are “In Play”: their channel preference shifts from factor to factor.

- “In Play” respondents in Europe favor SPs for Reliability, Ease of Use & Setup, and Troubleshooting, but they favor retail on Ease of Selection and Features.

- U.S. and Canadian consumers strongly prefer SP channel.

- Age, employment status, income level, and technical attitude affect consumers’ preference.

- More criteria (marketing initiatives, brand leverage, communication strategies, offer bundling) are required to capture “In Play” consumers.

Source: Cisco IBSG Connected Life Market Watch, 2011
No Clear Preferred Provider for Internet-to-TV Solutions

For 8 different factors in the purchase process—from up-front cost to ease of use—consumers were asked which channel option best met their needs:

- **Strong SP**: These consumers believe SP provides a better experience in ALL factors
- **Strong Retail/Online**: These consumers believe retail/online provides a better experience in ALL factors
- **In Play**: These consumers’ channel preference shifts from factor to factor; SP prevails in 4 areas, Retail in 2, and the remaining areas are quite balanced
- **Indifferent**: These consumers selected “don’t know” for all 8 factors, likely due to lack of interest in Internet-to-TV solutions

Source: Cisco IBSG Connected Life Market Watch, 2011

Base: 3,900 broadband consumers
How To Capture the 29% of Consumers Who Are Up for Grabs

“In Play” Channel Preference Segment: Device / Service Decision Factors, by Importance
Percentage of Respondents Who Ranked Factor as 1st or 2nd Most Important

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: “In-Play” broadband consumers; n=1,125
Less Important Factors for “In Play” Consumers

“In Play” Channel Preference Segment: Device / Service Decision Factors, by Importance
Percentage of Respondents Who Ranked Factor as 1st or 2nd Most Important

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: “In-Play” broadband consumers; n=1,125
“In Play” Respondents Strongly Favor SPs for Four Preference Factors

Channel Preference of “In Play” Consumers
Based on Individual Factors in Consumers’ End-to-End Experience

#3: Reliability

<table>
<thead>
<tr>
<th>Country</th>
<th>Service Provider</th>
<th>Retail / Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>58%</td>
<td>26%</td>
</tr>
<tr>
<td>Canada</td>
<td>61%</td>
<td>31%</td>
</tr>
<tr>
<td>U.K.</td>
<td>53%</td>
<td>33%</td>
</tr>
<tr>
<td>Germany</td>
<td>62%</td>
<td>26%</td>
</tr>
<tr>
<td>France</td>
<td>58%</td>
<td>33%</td>
</tr>
<tr>
<td>Italy</td>
<td>58%</td>
<td>34%</td>
</tr>
</tbody>
</table>

#5: Ease of Setup

<table>
<thead>
<tr>
<th>Country</th>
<th>Service Provider</th>
<th>Retail / Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>65%</td>
<td>29%</td>
</tr>
<tr>
<td>Canada</td>
<td>60%</td>
<td>33%</td>
</tr>
<tr>
<td>U.K.</td>
<td>63%</td>
<td>29%</td>
</tr>
<tr>
<td>Germany</td>
<td>59%</td>
<td>34%</td>
</tr>
<tr>
<td>France</td>
<td>59%</td>
<td>32%</td>
</tr>
<tr>
<td>Italy</td>
<td>60%</td>
<td>32%</td>
</tr>
</tbody>
</table>

#6: Ease of Use

<table>
<thead>
<tr>
<th>Country</th>
<th>Service Provider</th>
<th>Retail / Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>51%</td>
<td>34%</td>
</tr>
<tr>
<td>Canada</td>
<td>53%</td>
<td>37%</td>
</tr>
<tr>
<td>U.K.</td>
<td>51%</td>
<td>31%</td>
</tr>
<tr>
<td>Germany</td>
<td>43%</td>
<td>42%</td>
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<tr>
<td>France</td>
<td>50%</td>
<td>41%</td>
</tr>
<tr>
<td>Italy</td>
<td>47%</td>
<td>39%</td>
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</table>

#8: Troubleshooting

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<tr>
<th>Country</th>
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<tr>
<td>U.S.</td>
<td>74%</td>
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<td>Canada</td>
<td>72%</td>
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<tr>
<td>U.K.</td>
<td>64%</td>
<td>25%</td>
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<tr>
<td>Germany</td>
<td>59%</td>
<td>30%</td>
</tr>
<tr>
<td>France</td>
<td>65%</td>
<td>29%</td>
</tr>
<tr>
<td>Italy</td>
<td>62%</td>
<td>33%</td>
</tr>
</tbody>
</table>

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: “In Play” broadband consumers; n=1,125
“In Play” Respondents Prefer Retail for Ease of Selection and Features

Channel Preference of “In Play” Consumers
Based on Individual Factors in Consumers’ End-to-End Experience

#7: Ease of Selection

<table>
<thead>
<tr>
<th>Country</th>
<th>Service Provider</th>
<th>Retail / Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>50%</td>
<td>41%</td>
</tr>
<tr>
<td>Canada</td>
<td>52%</td>
<td>39%</td>
</tr>
<tr>
<td>U.K.</td>
<td>35%</td>
<td>59%</td>
</tr>
<tr>
<td>Germany</td>
<td>54%</td>
<td>36%</td>
</tr>
<tr>
<td>France</td>
<td>48%</td>
<td>39%</td>
</tr>
<tr>
<td>Italy</td>
<td>57%</td>
<td>38%</td>
</tr>
</tbody>
</table>

#4: Features

<table>
<thead>
<tr>
<th>Country</th>
<th>Service Provider</th>
<th>Retail / Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>49%</td>
<td>37%</td>
</tr>
<tr>
<td>Canada</td>
<td>50%</td>
<td>39%</td>
</tr>
<tr>
<td>U.K.</td>
<td>35%</td>
<td>59%</td>
</tr>
<tr>
<td>Germany</td>
<td>43%</td>
<td>36%</td>
</tr>
<tr>
<td>France</td>
<td>48%</td>
<td>39%</td>
</tr>
<tr>
<td>Italy</td>
<td>54%</td>
<td>33%</td>
</tr>
</tbody>
</table>

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: “In Play” broadband consumers; n=1,125
“In Play” Respondents Are Fairly Split Regarding Cost Factors

More criteria (marketing initiatives, brand leverage, communication strategies, offer bundling) are required to capture “In Play” consumers

North American consumers are more likely to perceive a cost advantage through the retail / online channel

Channel Preference of “In Play” Consumers Based on Individual Factors in Consumers’ End-to-End Experience

- **#1: Lower Ongoing Cost**
  - U.S.: 59%, Canada: 56%, U.K.: 52%, Germany: 50%, France: 46%, Italy: 45%-48%

- **#2: Lower Up-front Cost**
  - U.S.: 51%, Canada: 58%, U.K.: 52%, Germany: 46%, France: 43%, Italy: 44%-49%

Source: Cisco IBSG Connected Life Market Watch, 2011

Base: “In-Play” broadband consumers; n=1,125
Preference Shifts from Retail to Service Provider in Older Segments

Channel Preference of Consumers by Age
Percentage in Each Age Group

- Consumers under 30 years old have more tendency to be In Play
- Consumers over 40 are more likely to prefer SPs or be indifferent

Opportunity area for SPs: marketing and branding activity in the youth segment

Source: Cisco IBSG Connected Life Market Watch, 2011

Base: 3,900 broadband consumers
Retail Strongest with Students; SP Strongest with Retirees

However, Students Are Most Likely To Be “In Play”

Channel Preference of Consumers by Employment Status
Percentage of Respondents

Opportunity area for SPs: plans and options targeting students

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
Both Indifference and Preference for Retail Rise with Income Level

Channel Preference of Consumers by Income
Percentage of Respondents

Opportunity area for SPs: indifferent consumers; with higher income come more choices and greater demand for unique and differentiated services

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
Tech-Savvy Most Likely To Be “In Play” or To Prefer Service Provider

Channel Preference of Consumers by Technology Adoption Segment

Takeaway for SPs: Tech-savvy consumers are informed and choosy shoppers; capturing market and winning loyalty require high-value, innovative services

Source: Cisco IBSG Connected Life Market Watch, 2011
Base: 3,900 broadband consumers
# Key Service Provider Implications

<table>
<thead>
<tr>
<th>Topics</th>
<th>Implications</th>
</tr>
</thead>
</table>
| **Technology Use**              | • Tailor all services to **multiscreen** delivery  
• Translate importance of smartphones into paid-for mobile data plans  
• Leverage importance of broadband as anchor for multi-play services  
• Leverage importance of broadband importance to drive willingness to pay |
| **Buyer Behavior**              | • Build and leverage SP strong points (reliability, ease of use & setup, troubleshooting) when positioning for innovative services         |
| **Wi-Fi**                       | • Leverage **Wi-Fi** and **small cell** solutions for network build-out, home gateways, and mobile offload strategies                        |
| **End-User Pricing**            | • Remove the flat-rate paradigm  
• Move beyond usage-based and capped plans  
• Develop differentiated value-based pricing plans that require **advanced network-based capabilities** such as deep packet inspection |
| **Consumer Cloud & Connected Life** | • Build and leverage **differentiating cloud service attributes** (“easy-to-get” features, for example) to educate users and attract them to cloud services  
• Develop cloud-based “lighthouse” services such as online backup |
| **Expanding Potential**         | • Aggressively move to claim the spot for large share of customers who are still undecided about where to buy                                  |

Source: Cisco IBSG Connected Life Market Watch, 2011