Opportunity Calling:
The Future of Mobile Communications – Take Two

October 31, 2011
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Introduction

The mobile services industry continues to evolve at a lightening-fast pace. Smartphone proliferation and the birth of the iPad and other tablets have spawned a growing legion of data-hungry consumers. In the last three years, users downloaded more than 300,000 mobile applications 10.9 billion times.* And as new players continue to enter this increasingly competitive marketplace, mobile users have high expectations – they want the coolest device, superior service, and flexible service plan and payment options.

Against this backdrop, Oracle launched the second annual Opportunity Calling: The Future of Mobile Communications report, surveying more than 3,000 mobile phone users around the world** to examine:

- Changes in global mobile phone use and perceptions of mobile devices
- Interest in new mobile technologies, such as purchasing capabilities and location-based services
- Expectations for service providers in the new mobile frontier

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**Mobile phone users 18 and older from North America, Europe, Asia Pacific, Latin America, and the Middle East
Executive Summary

• Data use continues to rise:
  ✓ 47% of mobile customers say their data use has increased in the past 12 months
  ✓ Nearly 70% of consumers use smartphones – which are replacing cameras, MP3 players, and GPS tools more quickly than anticipated
  ✓ 55% report having downloaded a free mobile application (app), up significantly from 42% in 2010
  ✓ 16% of mobile customers have purchased a tablet computer and another 41% plan to purchase one in the next 12 months

• While they are becoming more comfortable with apps and other mobile features, customers continue to express concerns about mobile information security:
  ✓ Customers are more willing to share their location with mobile apps than they were one year ago, and a greater number are using their phones to access online banking or make online purchases
  ✓ But, fewer are comfortable making an in-store purchase using their mobile phone instead of cash or a credit card
  ✓ And just 32% believe information stored or transmitted by their mobile phone is secure

• Providers have an opportunity to educate customers across various channels:
  ✓ 84% of customers report purchasing their mobile phone from a retail store
  ✓ 73% of customers access their wireless provider’s online services at least once a month
Upward Mobility

• Customers report increased usage of primary mobile functions, with data usage growing faster than texts or calls

69% of global mobile phone users report using a smartphone*

With the majority of respondents using smartphones, *data is in demand*…

*Percentage of respondents who say their usage of the following has increased over the last 12 months:*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Data</td>
<td>47%</td>
</tr>
<tr>
<td>Texts</td>
<td>41%</td>
</tr>
<tr>
<td>Call minutes</td>
<td>39%</td>
</tr>
<tr>
<td>Apps</td>
<td>38%</td>
</tr>
</tbody>
</table>

57% of respondents report they use *one* mobile phone

43% report they use *two or more* mobile phones

**Take Away: Data in Demand**

*Smartphone users are those who reported using at least one of the following smartphones: Android, Blackberry, iPhone, Nokia/Symbian, Windows 7 phone/Microsoft, or other smartphone.*
Secondary Features Are Also On the Rise

- As customers shift to smartphones, their mobile phone is replacing other devices, such as digital cameras, more quickly than they anticipated.

In 2010, 52% thought their mobile phone would replace their digital camera by 2015. In 2011, 43% say it already has*

In 2010, 54% thought their mobile phone would replace their iPod/MP3 player by 2015. In 2011, 34% say it already has*

In 2010, 54% thought their mobile phone would replace their GPS by 2015. In 2011, 24% say it already has*

Take Away: Technology Outpaces Expectations

*Percentage of respondents who say their phone has replaced or almost replaced their digital camera, iPod/MP3 player, or GPS.
Tablet Takeover

• Nearly half of mobile customers who do not have a tablet computer plan to purchase one in the next 12 months

Take Away: Mobile Customers Add to their Arsenal

16% of mobile customers have a tablet today

41% plan to purchase one in the next 12 months
# Adding Apps

- More customers are downloading mobile apps, with free downloads outpacing pay-to-play apps two to one

## Have you ever downloaded an app for your mobile phone?*

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid</td>
<td>25%</td>
<td>20%</td>
</tr>
<tr>
<td>Free</td>
<td>55%</td>
<td>42%</td>
</tr>
<tr>
<td>None</td>
<td>37%</td>
<td>45%</td>
</tr>
<tr>
<td>Unsure</td>
<td>4%</td>
<td>5%</td>
</tr>
</tbody>
</table>

**Gen Y users (75%) are more likely to have downloaded an app than Baby Boomer users (41%)**

- **Take Away: Growing App-etite**

*Respondents asked to select all that apply **Gen Y represents respondents born 1977-1992 and Baby Boomers represents respondents born 1946-1964*
Where Will Apps Live?

- The majority of customers want to access apps on both their mobile phone and tablet computer.

*Consider the apps that you use or would like to use on your mobile phone and tablet computer. On which device would you like to use the following apps?*

<table>
<thead>
<tr>
<th></th>
<th>Tablet Computer</th>
<th>Mobile Phone</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Games</td>
<td>19%</td>
<td>13%</td>
<td>68%</td>
</tr>
<tr>
<td>Social Networks</td>
<td>20%</td>
<td>13%</td>
<td>67%</td>
</tr>
<tr>
<td>Music</td>
<td>12%</td>
<td>25%</td>
<td>63%</td>
</tr>
<tr>
<td>Banking/Finance</td>
<td>34%</td>
<td>11%</td>
<td>55%</td>
</tr>
<tr>
<td>Video/Movies</td>
<td>42%</td>
<td>7%</td>
<td>51%</td>
</tr>
<tr>
<td>Reading</td>
<td>50%</td>
<td>6%</td>
<td>44%</td>
</tr>
</tbody>
</table>

Take Away: Anywhere App Access is Key

*Of those interested in the app who have a tablet or plan to get one in the next 12 months*
**Warming Up to Location-Based Services**

- Customers are more willing to share their location than they were one year ago

<table>
<thead>
<tr>
<th>2010</th>
<th>vs.</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>33%</td>
<td>45%</td>
<td></td>
</tr>
</tbody>
</table>

- 33% of respondents who say they would be interested in receiving relevant content based on their location
- 45% of respondents who say they have already elected to share their location with a mobile app*

*Of those who have downloaded a mobile app

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**Take Away: Growing Comfort with Sharing Mobile Location**
Mobile Payments, Security Cause Concern

While consumers are increasingly using mobile phones to access online banking (28% in 2011 vs. 18% in 2010) and make purchases online (18% in 2011 vs. 9% in 2010), they have security concerns.

Do you think information stored or transmitted by your mobile phone is secure?

68% say no or unsure

Only:

6% of respondents have made a physical purchase while in a store using their mobile phone (instead of cash or a credit card)

21% say they would be “very comfortable” making a purchase with their mobile phone instead of using cash or credit card

Take Away: Providers Must Build Customer Confidence
Service Provider Pulse Check:

What should you know about your customers?
Purchasing Habits

• Cross channel is key. Consumers use mobile and other channels to support shopping experiences, but prefer to purchase in store

  30% of customers have comparison shopped using their mobile phone

  24% have read customer reviews on their mobile phone

  14% have scanned a QR code in an ad or article

When shopping specifically for a mobile phone:

✓ 41% rely on recommendations from friends
✓ 84% purchased their phone from a retail store; 16% purchased their phone online
Service Preferences

Overall, 84% of customers say their mobile service provider is doing a good job.

But just 54% say their provider supplies them with the necessary tools to manage their monthly usage.

73% of customers access their wireless provider’s online services at least once a month*.

While just 8% have a family data plan, 31% would be interested in getting one.

Price prevails: 74% would be motivated to switch service providers for a better price.

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*Does not include those who say the question (How often do you access your wireless provider’s online services, i.e., bill payment, account status, etc.?) did not apply to them.
Recommendations

• **Hit the Ground Running:** Time is money; invest in information technology that will enable you to bring new services, across multiple devices, to the market – and activate and bill for them – quickly

• **Think Incremental:** Identify opportunities for new short term revenue streams that drive competitive differentiation

• **Understand your Customers’ Needs:** As service packages become more complex, it is increasingly important to have a 360-degree view of customer touch points across all channels to improve the user experience and minimize churn

• **Focus on Communication:** Customers want more information on their usage; alert them when they are about to hit limits to build trust and loyalty

• **Embrace the Personal Touch:** While consumers use various channels and information sources in their shopping experience, the vast majority still purchase their phones in-store. That interaction is critical, so make it count

• **Provide Security Education:** Customers are increasingly using tablets/mobile phones in every facet of life; learn more about their privacy concerns and provide recommendations to ensure security

• **Scale for the Future:** As more and more devices and services hook into the network, providers must prepare for growing complexity and competition. Continue to work to ensure your network and back-end systems are scalable, securely open to developers, and integrated across services
Methodology

- Oracle conducted the online survey of more than 3,000 mobile phone users around the world* in July 2011. Respondents were asked to answer each question based on their primary phone.

**Respondent Profile**

**Location:**
- 20% North America (Canada and the U.S.)
- 20% Europe (Czech Republic, Finland, France, Germany, Poland, Russia, Sweden, and the U.K.)
- 20% Asia Pacific (Australia, China, Japan, New Zealand, and South Korea)
- 20% Latin America (Brazil and Mexico)
- 20% Middle East (United Arab Emirates)

**Gender:**
- 57% Male
- 43% Female

**Year Born:**
- 5% Before 1946
- 28% 1946-1964
- 32% 1965-1976
- 35% 1977-1992

**Margin of Error:**
- ±1.76% at a 95% confidence level for the full sample (n = 3,110)
- ±3.96% at a 95% confidence level for each region (n = 613+)

*Mobile phone users 18 and older from North America, Europe, Asia Pacific, Latin America, and the Middle East*
Thank You

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443-759-8151
Regional Snapshots

- North America
- Europe
- Asia Pacific
- Latin America
- Middle East
## Regional Highlights

### Purchased their mobile phone in a retail store vs. online

<table>
<thead>
<tr>
<th>Region</th>
<th>Retail Store</th>
<th>Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>86%</td>
<td>70%</td>
</tr>
<tr>
<td>Europe</td>
<td>80%</td>
<td>7%</td>
</tr>
<tr>
<td>Asia-Pacific</td>
<td>87%</td>
<td>95%</td>
</tr>
<tr>
<td>Latin America</td>
<td>74%</td>
<td>87%</td>
</tr>
<tr>
<td>Middle East</td>
<td>95%</td>
<td>80%</td>
</tr>
</tbody>
</table>

### Devices and Apps

- **Use a smartphone**: 56% (North America), 57% (Europe), 62% (Asia-Pacific), 74% (Latin America), 95% (Middle East)
- **Have a tablet**: 10% (North America), 7% (Europe), 16% (Asia-Pacific), 19% (Latin America), 27% (Middle East)
- **Plan to purchase tablet**: 26% (North America), 38% (Europe), 34% (Asia-Pacific), 59% (Latin America), 46% (Middle East)
- **Have downloaded a free mobile app**: 43% (North America), 48% (Europe), 53% (Asia-Pacific), 58% (Latin America), 73% (Middle East)

*in the next 12 months
North American Mobile Phone Use

### Device Snapshot:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>56%</td>
<td>Use a smartphone</td>
</tr>
<tr>
<td>20%</td>
<td>Use more than one mobile phone</td>
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<tr>
<td>10%</td>
<td>Currently have a tablet</td>
</tr>
<tr>
<td>26%</td>
<td>Plan to purchase a tablet in the next 12 months</td>
</tr>
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</table>

### Mobile Use:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>35%</td>
<td>Say their data use has increased in the past 12 months</td>
</tr>
<tr>
<td>43%</td>
<td>Have downloaded a free mobile app</td>
</tr>
<tr>
<td>23%</td>
<td>Have paid for an app</td>
</tr>
<tr>
<td>52%</td>
<td>Have shared their location with an app*</td>
</tr>
</tbody>
</table>

Which of the following have you done using your mobile phone?**

- 23% Comparison shopped
- 25% Read customer reviews
- 15% Scanned a QR code in an ad or article

Do you think information stored or transmitted by your phone is secure?

- Unsure, 33%
- Yes, 32%
- No, 35%

*Of those who have downloaded a mobile app **Respondents asked to select all that apply
Where did you purchase your mobile phone?

- At a retail store (86%)
- Online (14%)

Which of the following were very important sources of information to you in selecting your mobile phone?*

- 39% Recommendations from friends
- 34% Mobile operator’s retail store
- 27% Mobile operator’s Web site
- 20% Ratings sites
- 15% Device manufacturer’s Web site

62% access their wireless provider’s online services at least once a month**

72% say their provider gives them the necessary tools to manage their monthly usage

14% have a family data plan, and 20% would be interested in getting one

*Respondents asked to select up to three sources that were most important to their decision-making process **Does not include those who say the question (How often do you access your wireless provider’s online services, i.e., bill payment, account status, etc.? ) did not apply to them
European Mobile Phone Use

Device Snapshot:

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<tr>
<td>57%</td>
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<td>45%</td>
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<td>38%</td>
<td>Plan to purchase a tablet in the next 12 months</td>
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Mobile Use:

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<tr>
<td>41%</td>
<td>Say their data use has increased in the past 12 months</td>
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<tr>
<td>48%</td>
<td>Have downloaded a free mobile app</td>
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<td>21%</td>
<td>Have paid for an app</td>
</tr>
<tr>
<td>38%</td>
<td>Have shared their location with an app*</td>
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</tbody>
</table>

Which of the following have you done using your mobile phone?**

- ✓ 24% Comparison shopped
- ✓ 19% Read customer reviews
- ✓ 7% Scanned a QR code in an ad or article

Do you think information stored or transmitted by your phone is secure?

- Unsure, 40%
- Yes, 33%
- No, 27%

*Of those who have downloaded a mobile app  **Respondents asked to select all that apply
European Provider Feedback

**Where did you purchase your mobile phone?**

- At a retail store (70%)
- Online (30%)  

**Which of the following were very important sources of information to you in selecting your mobile phone?**

- 38% Recommendations from friends
- 32% Mobile operator's Web site
- 27% Device manufacturer’s Web site
- 26% Ratings sites
- 24% Mobile operator’s retail store

- 72% access their wireless provider’s online services at least once a month**
- 57% say their provider gives them the necessary tools to manage their monthly usage
- Just 3% have a family data plan, but 23% would be interested in getting one

*Respondents asked to select up to three sources that were most important to their decision-making process **Does not include those who say the question (How often do you access your wireless provider's online services, i.e., bill payment, account status, etc.? ) did not apply to them
# Asia Pacific Mobile Phone Use

## Device Snapshot:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>62%</td>
<td>Use a smartphone</td>
</tr>
<tr>
<td>26%</td>
<td>Use more than one mobile phone</td>
</tr>
<tr>
<td>16%</td>
<td>Currently have a tablet</td>
</tr>
<tr>
<td>34%</td>
<td>Plan to purchase a tablet in the next 12 months</td>
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</table>

## Mobile Use:

<table>
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<tr>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>41%</td>
<td>Say their data use has increased in the past 12 months</td>
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<tr>
<td>53%</td>
<td>Have downloaded a free mobile app</td>
</tr>
<tr>
<td>22%</td>
<td>Have paid for an app</td>
</tr>
<tr>
<td>44%</td>
<td>Have shared their location with an app*</td>
</tr>
</tbody>
</table>

## Which of the following have you done using your mobile phone?**

- ✔️ 35% Comparison shopped
- ✔️ 23% Read customer reviews
- ✔️ 26% Scanned a QR code in an ad or article

## Do you think information stored or transmitted by your phone is secure?

- Unsure, 32%
- Yes, 33%
- No, 35%

*Of those who have downloaded a mobile app  **Respondents asked to select all that apply
Asia Pacific Provider Feedback

Where did you purchase your mobile phone?

- At a retail store (80%)
- Online (20%)

Which of the following were very important sources of information to you in selecting your mobile phone?*

- 34% Ratings sites
- 32% Recommendations from friends
- 32% Mobile operator’s retail store
- 30% Mobile operator’s Web site
- 19% Device manufacturer’s Web site

74% access their wireless provider’s online services at least once a month**

59% say their provider gives them the necessary tools to manage their monthly usage

11% have a family data plan, and 31% would be interested in getting one

*Respondents asked to select up to three sources that were most important to their decision-making process. **Does not include those who say the question (How often do you access your wireless provider’s online services, i.e., bill payment, account status, etc.?) did not apply to them.
Latin American Mobile Phone Use

Device Snapshot:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>74%</td>
<td>Use a smartphone</td>
</tr>
<tr>
<td>52%</td>
<td>Use more than one mobile phone</td>
</tr>
<tr>
<td>19%</td>
<td>Currently have a tablet</td>
</tr>
<tr>
<td>59%</td>
<td>Plan to purchase a tablet in the next 12 months</td>
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</tbody>
</table>

Mobile Use:

<table>
<thead>
<tr>
<th>Percentage</th>
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<tr>
<td>56%</td>
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<tr>
<td>58%</td>
<td>Have downloaded a free mobile app</td>
</tr>
<tr>
<td>30%</td>
<td>Have paid for an app</td>
</tr>
<tr>
<td>48%</td>
<td>Have shared their location with an app*</td>
</tr>
</tbody>
</table>

Which of the following have you done using your mobile phone?**

- 35% Comparison shopped
- 18% Read customer reviews
- 13% Scanned a QR code in an ad or article

Do you think information stored or transmitted by your phone is secure?

- Unsure, 29%
- Yes, 35%
- No, 36%

*Of those who have downloaded a mobile app **Respondents asked to select all that apply
Latin American Provider Feedback

**Where did you purchase your mobile phone?**

- At a retail store (87%)
- Online (13%)

**Which of the following were very important sources of information to you in selecting your mobile phone?***

- 45% Recommendations from friends
- 33% Mobile operator's Web site
- 33% Device manufacturer’s Web site
- 32% Mobile operator’s retail store
- 17% Ratings sites

- 75% access their wireless provider’s online services at least once a month**
- 40% say their provider gives them the necessary tools to manage their monthly usage
- Just 7% have a family data plan, but 41% would be interested in getting one

*Respondents asked to select up to three sources that were most important to their decision-making process **Does not include those who say the question (How often do you access your wireless provider's online services, i.e., bill payment, account status, etc.?) did not apply to them
Middle Eastern Mobile Phone Use

Device Snapshot:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>95%</td>
<td>Use a smartphone</td>
</tr>
<tr>
<td>71%</td>
<td>Use more than one mobile phone</td>
</tr>
<tr>
<td>27%</td>
<td>Currently have a tablet</td>
</tr>
<tr>
<td>46%</td>
<td>Plan to purchase a tablet in the next 12 months</td>
</tr>
</tbody>
</table>

Mobile Use:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>64%</td>
<td>Say their data use has increased in the past 12 months</td>
</tr>
<tr>
<td>73%</td>
<td>Have downloaded a free mobile app</td>
</tr>
<tr>
<td>31%</td>
<td>Have paid for an app</td>
</tr>
<tr>
<td>45%</td>
<td>Have shared their location with an app*</td>
</tr>
</tbody>
</table>

Which of the following have you done using your mobile phone?**

- ✓ 33% Comparison shopped
- ✓ 34% Read customer reviews
- ✓ 10% Scanned a QR code in an ad or article

Do you think information stored or transmitted by your phone is secure?

- Unsure, 34%
- Yes, 25%
- No, 41%

*Of those who have downloaded a mobile app  **Respondents asked to select all that apply
Middle Eastern Provider Feedback

Where did you purchase your mobile phone?

- At a retail store (95%)
- Online (5%)

82% access their wireless provider’s online services at least once a month**

Which of the following were very important sources of information to you in selecting your mobile phone?*

- 53% Recommendations from friends
- 36% Device manufacturer’s Web site
- 27% Ratings sites
- 20% Mobile operator’s Web site
- 16% Mobile operator’s retail store

45% say their provider gives them the necessary tools to manage their monthly usage

Just 4% have a family data plan, but 40% would be interested in getting one

*Respondents asked to select up to three sources that were most important to their decision-making process **Does not include those who say the question (How often do you access your wireless provider’s online services, i.e., bill payment, account status, etc.?) did not apply to them