

# Mobile Internet Services in Europe and USA: Initiatives to Drive Adoption and Usage

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# 1 Abstract

Less than 15% of European and US mobile consumers use mobile Internet services regularly, significantly lower than leaders such as Japan which has a corresponding penetration rate of almost 90%. Moreover, growth in mobile Internet penetration in the two geographies has been slow recently. We believe that operators in Europe and USA can enhance their mobile Internet offerings and stimulate adoption by pursuing certain key initiatives. Allowing access to the open Internet and making popular Internet content available on mobile devices would encourage consumers to complement their fixed Internet browsing with regular mobile access. Operators should also encourage the adoption of smart phones and other feature-rich devices that allow user-friendly access to mobile Internet, as such consumers are more likely to use these services extensively compared to regular handset users. Additionally, tariff packages in Europe and USA need to evolve from pay per usage plans to flat- rates. Evidence from Japan also suggests that certainty of billing is one of the key drivers for enhanced uptake of mobile Internet. Lastly, active collaboration with content producers, device manufacturers and online majors can help mobile operators in Europe and USA deliver enhanced consumer value on each of the three key parameters and stimulate the adoption as well as usage of mobile Internet.

## 2 Introduction

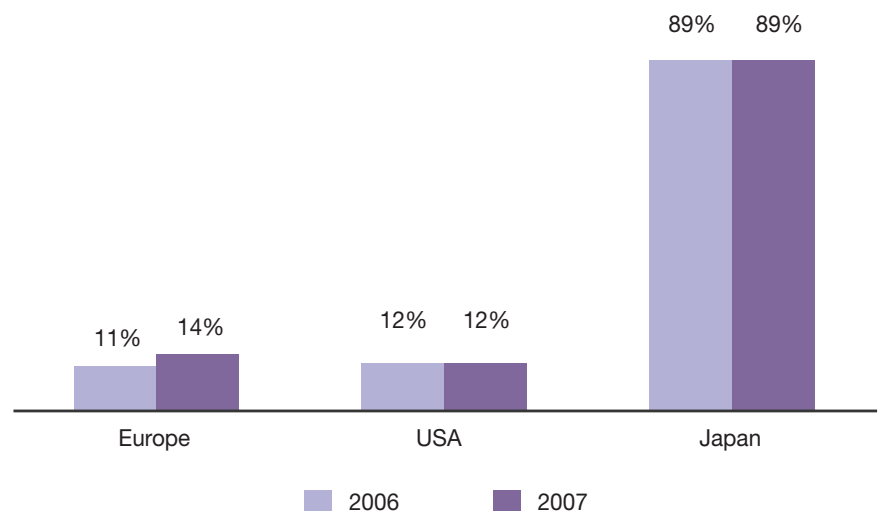
“Mobile Internet penetration rates in Europe and USA were only around 14% and 12% respectively in 2007, compared with a staggering 90% penetration rate in Japan”

Although operators in Europe and USA have tried to stimulate the uptake of mobile Internet in their respective geographies, they have been unable to drive adoption in the mass market so far. Mobile Internet penetration rates<sup>1</sup> in Europe and USA were only around 14% and 12% respectively in 2007, compared with a staggering 90% penetration rate in Japan, the world leader in mobile Internet services (see Figure 1). Further, adoption rates have been almost stagnant or have witnessed only a marginal increase over the recent past in the two geographies.

With highly saturated markets and competitive pressures adversely impacting revenue and margin growth in the voice business, mobile operators need to encourage the usage of mobile Internet services aggressively to drive data revenues and protect margins.

In this report, Capgemini's TME Strategy Lab suggests operator strategies that would help in stimulating the uptake of mobile Internet services in the respective markets. The study also identifies areas where operators need to collaborate with various stakeholders such as device vendors and major online players to enhance their offerings in order to boost adoption as well as usage of mobile Internet.

**Figure 1: Mobile Internet Penetration (% of Mobile Subscribers) in Europe, USA and Japan, 2007**



Source: Capgemini TME Strategy Lab analysis. Forrester, "European Mobile Forecast: 2008 To 2013", March 2008. eMarketer, "Mobile Search - Clash of the Titans", 2007. Ministry of Internal Affairs and Communications (MIC) - Japan, "Subscribers and Contracts to Information and Communications Services," March 19, 2008

<sup>1</sup> Refers to consumers using mobile Internet services regularly (at least once a month).

# 3 Key Initiatives to Drive the Uptake of Mobile Internet

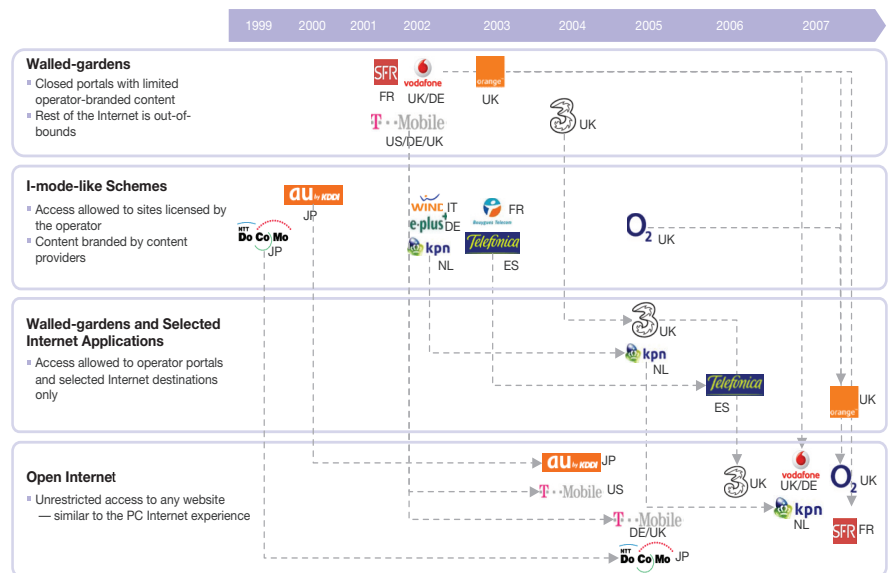
In 2007, around 40% of European mobile consumers did not see value in using mobile Internet services due to unattractive pricing and the perceived lack of compelling applications<sup>2</sup>. The key initiatives that operators need to pursue to enhance consumer value of mobile Internet and drive its penetration include offering a wide variety of content accessible from the mobile device, enhancing user experience by offering feature-rich handsets, and providing services at cost-effective flat rates to stimulate adoption as well as usage.

## Offering a wide variety of content over mobile Internet

Operators typically offer one of the following four types of mobile Internet access—walled-gardens, i-mode like schemes, walled-gardens coupled with access to popular Internet applications, and open, unbridled Internet. Mobile content offerings have gradually evolved from walled-gardens towards partnerships with Internet players and subsequently full access to open Internet (see Figure 2).

“Around 40% of European mobile consumers did not see value in using mobile Internet services due to unattractive pricing and the perceived lack of compelling applications”

Figure 2: Evolution of Operator Mobile Internet Offerings, 1999-2007



Source: Capgemini TME Strategy Lab analysis. Company websites

2 Forrester, “Mobile Internet Pricing Strategies Mature”, July 2007.

“Partnerships with key Internet players can be a win-win scenario for both mobile operators as well as the online majors”

Almost 50% of the data plans offered by Japanese operators allow open Internet access. The rest of their plans are usually i-mode type schemes, which have extensive content availability<sup>3</sup>. In stark contrast, in 2007, almost half of US operator offerings allowed access only to the operators’ walled-gardens, while only around a quarter of offerings allowed access to the open Internet<sup>4</sup>. In fact, players such as Telefonica in Spain did not allow access to the open Internet and Verizon in the USA restricted consumers from accessing content such as streaming audio and video services from non-portal sites in 2007<sup>5</sup>.

Capgemini believes that European and US operators should endeavor to provide extensive mobile content to consumers by offering open Internet services and/or by partnering with online majors to ensure easy accessibility of popular content through mobile Internet.

In fact, many European operators increasingly allow access to the open Internet and have also re-launched their portals with additional content. The new content is primarily sourced through partnerships with online majors such as Google and Yahoo! (see Figure 3), and users are typically offered easy access to popular web applications through operator portals. This shift away from closed content strategies, such as walled-gardens and i-mode schemes, was driven by the limited success of i-mode schemes launched by operators such as KPN and Telefonica.

**Figure 3: Operator Partnerships with Internet Players, 2007**

	Mobile Operators	Internet Players	Partnership Description
Search			<ul style="list-style-type: none"> <li>Operators typically provide a search-field, branded with the Internet player’s logo, on their portals</li> <li>Internet players earn revenues from sponsored links they place in search results and share them with operators</li> <li>Revenues earned from sponsored links served by the Internet player are shared with the mobile operator</li> </ul>
Email			<ul style="list-style-type: none"> <li>Links to e-mail providers are included on operator portals, with some operators partnering with multiple players</li> <li>Operators that charge monthly fees for access to e-mail share revenues with the Internet players</li> </ul>
Content			<ul style="list-style-type: none"> <li>Operators gain access to premium content for their portals</li> <li>Operators use either pay-for-use or flat-fee model to allow consumers access to such content</li> <li>Revenues are typically shared between partners, but content could also be acquired outright by the operator</li> </ul>
Instant Messaging & Social Networking			<ul style="list-style-type: none"> <li>Operators typically provide a link to the social networking site(s) from their portals</li> <li>Many operators charge a periodic subscription fee for usage of these services, and share revenues with the Internet partners</li> </ul>

Source: Capgemini TME Strategy Lab analysis. Company websites

Partnerships with key Internet players can be a win-win scenario for both mobile operators as well as the online majors. For instance, in June 2007, around 4.8 million consumers accessed social networking sites such as Myspace, Facebook and Bebo on their mobiles in Western Europe, with Italy and UK being the leading countries<sup>6</sup>.

Operators should also aim to integrate consumers’ fixed and mobile web experiences, thereby encouraging them to use popular Internet applications over the mobile device. For instance, around 75% of mobile Internet users in Europe used search services in 2007<sup>7</sup>. This can be attributed to the extensive tie-ups

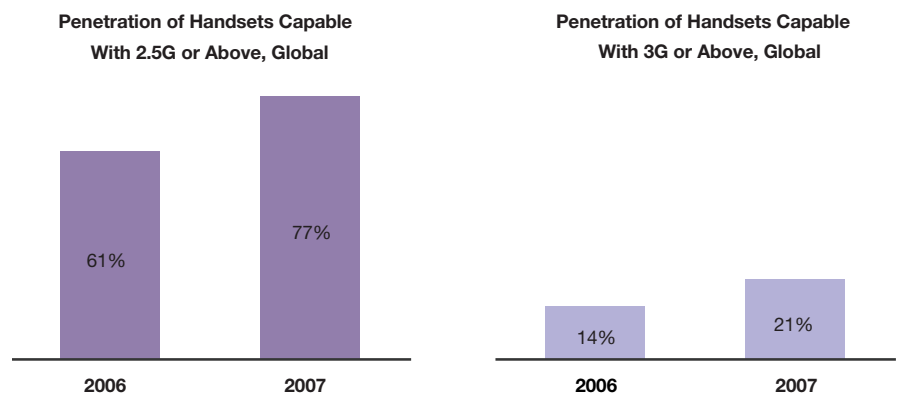
3 Capgemini TME Strategy Lab analysis based on the study of mobile Internet offerings of NTTDoCoMo, au/KDDI and Softbank.  
4 Capgemini TME Strategy Lab analysis.  
5 Capgemini TME Strategy Lab analysis. Company websites and press releases.  
6 M:Metrics, “Mobile Social Networking has 12.3 Million Friends in the USA and Western Europe”, August 2007.  
7 Capgemini TME Strategy Lab analysis. eMarketer, “Mobile Search: Clash of the Titans”, July 2007.

made by operators to allow easy access to mobile search services from players such as Google and Yahoo!. Similarly, Research-In-Motion (RIM) recently announced that almost 1 million users of its Blackberry service had downloaded the Facebook application in only five months since launch<sup>8</sup>.

### Enhancing user experience through feature-rich handsets

A fast and hassle-free user experience while surfing the Internet on mobile phones is one of the key drivers of adoption and usage growth. The minimum standard required for open mobile Internet access is 2.5G; else users can be turned off by the slow speed of the Internet connection. Access technology such as 3G, which offers significantly higher speeds and rapid browsing, can provide a boost to mobile Internet by enhancing customer experience. Operators should therefore strive to increase penetration of 3G handsets, which currently lags the penetration of 2.5G handsets by a significant amount (see Figure 4).

**Figure 4: Global Penetration of 2.5G and 3G Handsets, % of Mobile Subscribers**



Source: Capgemini TME Strategy Lab analysis. Company websites. eMarketer, "3G Mobile Shipments Worldwide", October 2007

“Almost 85% of iPhone users accessed news through mobile browsers in 2008, compared with the market average of only around 13%”

Operators should also encourage the adoption of smart phones<sup>9</sup> and other feature-rich devices that enhance the mobile Internet user experience and therefore drive its adoption. The recent launches of devices such as Apple's iPhone have demonstrated that smart phones indeed drive adoption of mobile Internet. For instance, almost 85% of iPhone users and around 58% of smart phone users accessed news or information through mobile browsers in January 2008, compared with the market average of only around 13%<sup>10</sup>.

Moreover, operators and device manufacturers should also pre-load more mid-range handsets with Internet browsers, which are necessary to access various services over mobile Internet. The worldwide penetration of handsets with pre-installed browsers was only around 20% in 2007<sup>11</sup>. Operators should take a cue from players such as T-Mobile, which recently partnered with Opera, an Internet player specializing in web access applications, to pre-install browsers in an extensive range of mid-range handsets. This partnership, initiated in 2006, now enables T-mobile to provide open Internet access on almost 80% of the devices it offers with its plans<sup>12</sup>.

<sup>8</sup> Market Wire, "Downloads of Facebook for Blackberry Smartphones Top 1,000,000", 1st April 2008.

<sup>9</sup> Smart phones include mobile handsets loaded with operating systems from vendors such as Windows, Symbian, RIM and Apple.

<sup>10</sup> eMarketer, "Mobile Content Consumption: iPhone, Smartphone and Total Market: January 2008", March 2008.

<sup>11</sup> Capgemini TME Strategy Lab analysis. m:Metrics. The Mobile World. eMarketer. Online Publishers Association, "Going Mobile", March 2007. Screen Digest.

<sup>12</sup> Opera Software, "T-Mobile and Opera Mini-powered Web'n'Walk hits one million", February 2008.

“Empirical evidence from Japan and South Korea suggests that the introduction of flat-rate data packages reduces billing uncertainty and encourages service adoption”

Additionally, operators should partner with device manufacturers and Internet players to customize handsets and incorporate features in the mobile device to make web content more easily accessible from the handset. For instance, NTT DoCoMo (Japan), Vodafone (Portugal) and TMN (Portugal) offer one-click-functionality that allows easy access to content, without the need to know or remember the URL<sup>13</sup>. Clickable news “tickers” with scrolling news headlines on the mobile screen that can take the user directly to the relevant news item is another example of simplifying content access for users. Japanese operators and Swisscom also allow camera phones to capture “quick-response” codes printed on newspapers or banners/posters at public places, and take users directly to associated websites.

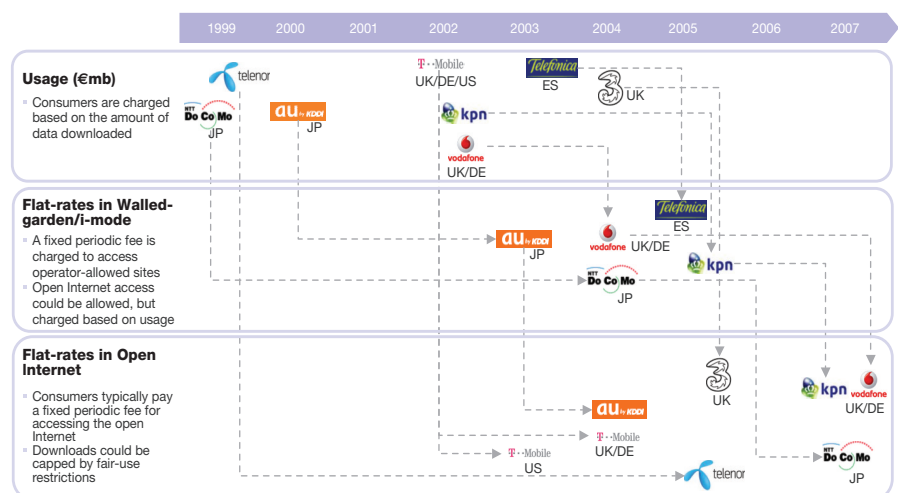
### Simplifying tariffs and offering flat-rate plans to encourage usage

We also believe that offering mobile Internet browsing at flat rates, instead of charging consumers based on usage is critical to increasing widespread adoption and usage.

Evidence from Japan and South Korea suggests that the introduction of flat-rate data packages in place of usage driven tariffs reduces billing uncertainty and encourages service adoption<sup>14</sup>. The trend of offering such plans was started by Japanese operator au/KDDI in 2003, when it launched an unlimited flat-rate tariff targeted at high usage 3G consumers for accessing its proprietary EZweb content platform. A variant of the plan, aimed at low usage consumers, was launched subsequently. These packages stimulated adoption and by 2005, 81% of KDDI’s 3G users had subscribed to flat-rate data plans<sup>15</sup>.

Accordingly, tariff plans for mobile Internet across the developed world have been evolving from “pay per use” to flat-rate plans allowing almost unlimited usage, albeit capped by fair-use restrictions (see Figure 5).

Figure 5: Evolution of Mobile Internet Pricing Plans of Selected Operators



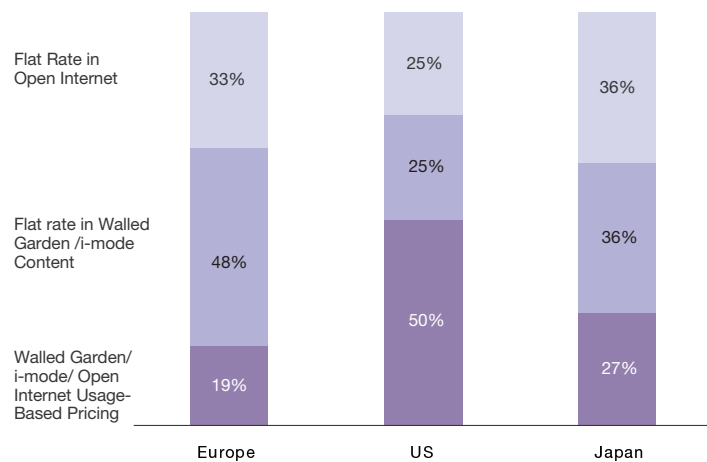
Source: Capgemini TME Strategy Lab analysis. Company websites and press releases

13 Uniform Resource Locator that specifies the address of the website on Internet.

14 Capgemini Telecom and Media Insights, “Mobile and Broadband Services in Japan and South Korea: What can Western Operators Learn from their Eastern Peers”, December 2007.

15 Analysys, “Japanese and South Korean Mobile Markets”, 2006. Company websites.



**Figure 6: Distribution of Mobile Internet Pricing Structures, Selected Regions, 2007**

Source: Capgemini TME Strategy Lab analysis. Company web-sites and press releases  
 Note: Percentages represent the proportion of operator pricing plans in each category, not proportion of customers using each

Although operators in Europe have started following the example of Japanese operators and started shifting towards flat-rate pricing for open Internet access, such plans comprised only around one-third of the overall pricing plans offered in 2007 and targeted primarily high-usage subscribers<sup>16</sup>. Almost two-thirds of operator pricing plans across Europe offered either flat-rate in walled-garden or i-mode schemes or usage-based pricing for open Internet access. Similarly, only around a quarter of operator pricing plans in the US allowed open Internet access at flat rates in 2007 (see Figure 6).

We believe that operator pricing must evolve towards flat-rate access to the open Internet in order to have a significant impact on user uptake. For instance, T-Mobile was the first European operator to introduce open Internet flat-rate plans including both data and time-based pricing structures. Its Web 'n' Walk offerings enjoy high uptake rates with around 3.2 million mobile Internet subscribers across Europe in 2007<sup>17</sup>.

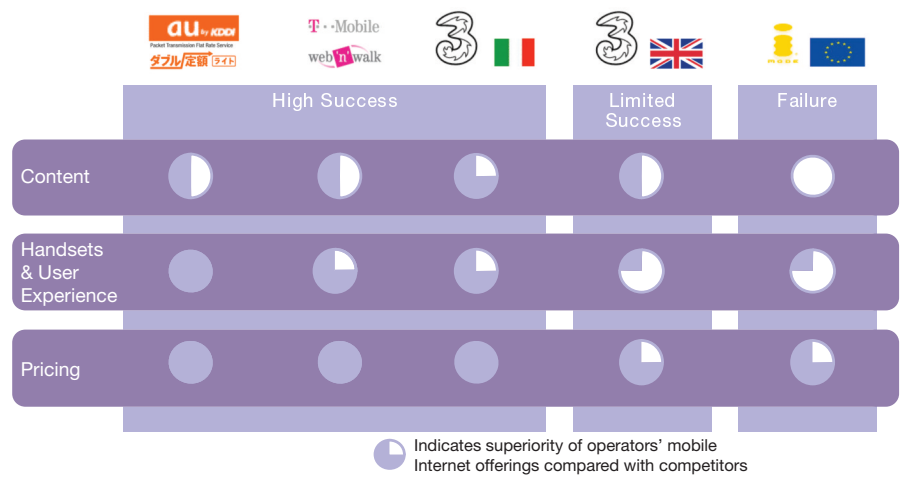
Operators need to ensure that they address each of the three critical success factors—content, handsets as well as user experience and pricing—adequately and do not offer what consumers could consider to be sub-par value on any of the factors. Figure 7 demonstrates that consumers are unlikely to subscribe to a service that does not serve their needs on all three parameters. For instance, i-mode offerings in Europe did not work as well as in Japan due to non-availability of user-friendly handsets, operator restrictions regarding content availability over the open Internet and unfavorable revenue sharing schemes that discouraged third-party content development. For example, while there were around 12,000 official i-mode sites in Japan in 2006, there were just 100 in the USA. Similarly, 3 UK had initial traction issues, regarding non-availability of best-selling or mid-range handsets, which resulted in a sub-optimal consumer response. 3 Italy, however, built on the UK launch experience and was able to deliver high consumer value on all the three critical success factors leading to high subscriber uptakes.

<sup>16</sup> Capgemini TME Strategy Lab analysis based on study of mobile Internet tariff plans of Vodafone, Orange, Telefonica/O2, T-Mobile, Boygues Telecom, E-plus Germany and 3 Hutchinson UK.

<sup>17</sup> Thomson StreetEvents, "DT - Q4 2007 Deutsche Telekom Earnings Conference Call", February 2008.

“Operators need to ensure that they address each of the three critical success factors— content, handsets as well as user experience and pricing—adequately”

Figure 7: Comparison of Mobile Internet Offerings of Selected Operators



Source: Capgemini TME Strategy Lab analysis. Company websites and press releases

In conclusion, mobile operators need to drive the uptake of mobile Internet services by actively collaborating with content producers, device manufacturers as well as online majors to deliver high consumer value on the three key parameters of content, handsets as well as user experience and pricing. Continued operator initiatives to make the offerings more compelling will be crucial in stimulating further adoption and usage of mobile Internet services. However, as mobile Internet users and mobile content revenues grow over the next few years, content and device players are likely to make increasingly disruptive moves across the value chain in order to capture a greater share of the market. Operators will need to continue offering the right mix of content, user experience and pricing to subscribers in order to avoid becoming reduced to undifferentiated data pipes.

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