

# Attachment A

Ministry of Internal Affairs and Communications  
Mobile Business Workshop

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Nomura Research Institute

Resource 10-4

# The Estimate of Economic Effect of MVNO Revitalization

10th meeting

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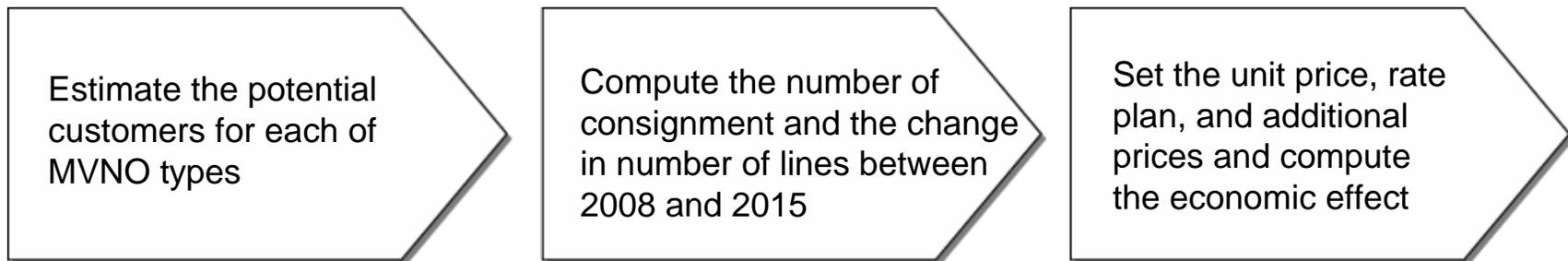
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[Method of Estimate of Economic Effect]

## Estimate of MVNO market on assumption of realization of mobile revitalization plan by the year 2011

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- This estimate is based on the assumption that all of the measures described in the report are effective on bringing in the new MVNO into the market.
- We estimated the **high-value-added-MVNO** rather than the **low-cost-MVNO**, because of the disadvantage of the low cost MVNO in Japan due to the small market of prepaid phone and MNO's low cost rate plan and fixed data usage plan.
- The calculation is made first by estimating the **number of potential customers** of each of the MVNO type. Then the growth curve is generated to compute the number of consignment and lines for 2008~2015.



- The number of potential customers of MVNO can be shared with potential customers of MNO, therefore in reality, the estimated market in this report can be **shared between MVNO and MNO**.
  - Example: SBM (MNO) introduces the “Hawks Cell Phone” against the Hawks becomes MVNO of SBM and introduces the “Hawks Cell Phone.”

## Potential market of high-value-added MVNO is extremely great (mass population)

▪The preparation of customer facing layer (sales channel, customer support channel) is the important factor to launch MVNO in Japan, where MNO provides good customer facing layer.

|                 | Service Contents, Examples   | Expected Effects/Tasks  |
|-----------------|--|---|
| Premium MVNO    | <ul style="list-style-type: none"> <li>To increase the loyalty of the customers<br/>example: wealthy upper class<br/>users of luxury cars (with built in electronic key)<br/>FFP users of airline company, etc</li> </ul>  | <ul style="list-style-type: none"> <li>The cost of CRM transforms to profit of telecommunication industry</li> <li>Although increasing the demand for replacement, it will mainly used as primary device; the overall sales may not increase</li> </ul> |
| Ubiquitous MVNO | <ul style="list-style-type: none"> <li>Addition of telecommunication feature to already highly functional Japanese mobile devices</li> <li>Possibility of spreading among existing users<br/>example: portable game system, digital camera, digital video, PMP (music, video)</li> </ul> | <ul style="list-style-type: none"> <li>Increased benefits by adding telecommunication feature to variety of devices</li> <li>Possibly use as secondary device; the total sale may increase</li> <li>Expands markets abroad</li> </ul>                   |
| Contents MVNO   | <ul style="list-style-type: none"> <li>MVNO by mass media of high reputation<br/>example: newspaper, broadcasting, publishers (manga), etc</li> </ul>  | <ul style="list-style-type: none"> <li>Expansion of the market of mobile contents and mobile commerce</li> <li>Use the current cell phone (primary), or use the new device (secondary)</li> </ul>   |
| Local MVNO      | <ul style="list-style-type: none"> <li>Localized MVNO for/by local community<br/>example: local cable TV, etc</li> </ul>   | <ul style="list-style-type: none"> <li>Efficient use of local broadcasting</li> <li>Increase the replacement as use for primary device, the overall sales may not increase</li> </ul>   |

## Potential market of high-value-added MVNO is extremely great (corporation)

- Japanese population is highly exposed to cell phone data usage (browsing the web, application), the possibility of emergence of diverse MVNO exists in Japan.

|                      | Service Contents, Examples   | Expected Effects/Tasks   |
|----------------------|--|--|
| MVNO for Corporation | <ul style="list-style-type: none"> <li>•Sler, Nler, and SP become corporate MVNO, and provide their advantages (groupware, security), cell phone, and rate plan altogether as One-stop solution provider</li> </ul>  | <ul style="list-style-type: none"> <li>•The infiltration of mobile solution will lower cost of corporate, increase productivity, and strengthen competitive power.</li> <li>•The devices may used as a secondary rather than primary private use, the total sale my increase.</li> </ul> |
| M to M MVNO          | <ul style="list-style-type: none"> <li>•MVNO for industrial machineries, such as vending machines, and vehicle-mounted equipments to attach telecommunication module</li> </ul> <p>example: vending machines, credit card terminal, car navigation, security camera, construction machines (some are already realized)</p> | <ul style="list-style-type: none"> <li>•Obtaining information on the operating status of machines, clear images, and location of machines, will lead to improve cost, productivity , and safety</li> <li>•Expansion of the market of telecommunication devices for machines</li> </ul>   |

[Estimation of potential MVNO customers]

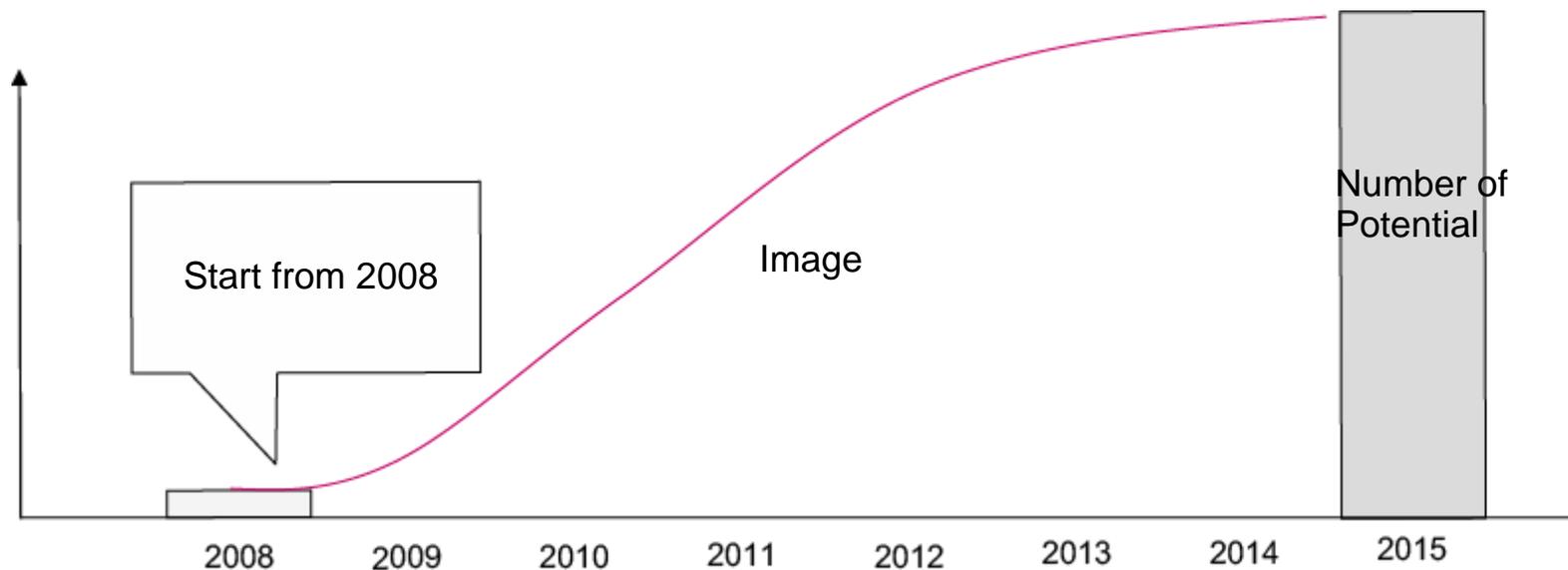
## Estimate of the semi-macro/micro index in addition to the individual MVNO types

| Type of MVNO                    | Potential Users or Consignment  | Basis of Estimation                                      | Examples (reference the scale)   | Notes   |
|---------------------------------|---|--|--|---|
| CRM MVNO                        | 3 million users<br>■ Retail store, highly loyal customers using point system  | ■ Survey done by NRI                                     | ■ Superior members of JAL, ANA: 400 thousands each (NRI estimate)  | ■ Financial medium and luxury car for wealthy people  |
| Ubiquitous MVNO                 | 7.40 million per year<br>■ Targeting portable game system, digital audio player, digital camera, camcorder, laptop computer   | ■ JEITA data, survey done by NRI, cell phone white paper | ■ Portable game systems connect to internet: 23.5% (survey done by NRI)  | ■ Electronic paper, health machines, watch, IC recorder, and other devices are not included |
| Contents MVNO                   | 3.4 million users<br>■ Sign up for at least 5 mobile services<br>■ Membership of baseball and soccer fan clubs  | ■ Cell phone white paper                                 | ■ Readers of newspaper on cell phone: 2.4 mill.<br>■ Users of mobile online trade: 800 thousand<br>■ Comic & anime otaku: 460 thousand | ■ Heavy users of multi-channel broadcasting are not included                                |
| Local (specific community) MVNO | 2.4 million users<br>■ Local Cable TV subscribers<br>■ Holders of resident registration card  | ■ Number of Cable TV subscribers                         | ■ Number of resident registration card: 1.09 million cards (as of August 2006)   | ■ SNS members are not included  |
| MVNO for Corporate              | 1.77 million users<br>■ Field workers   | ■ Basic structure of Employment                          | ■ Number of outside employees/salesman of insurance company and financial sectors: 680 thousands                                       |   |
| FMC MVNO (additional)           | 3.4 million users<br>■ Users of broadband service other than KDDI, SBB  | ■ From various statistics                                | ■ Member of USEN: approx. 800 thousands  | ■ Portal and ISP members are not included   |
| M to M MVNO                     | 3.9 million units per year<br>■ Consignment of vending machines, credit card terminal, handy terminal, vehicle-mounted device, security camera, and construction machines | ■ JEITA  | ■ Consignment of cigarette vending machines: 80 thousand   |   |

[Method of estimating the Consignment and Number of Lines]

Estimate on the growth curve through 2008 to 2015 based on potential consignment or number of users

- Assumes each of MVNO types will approach its potential toward 2015.



[Prerequisite for estimating the economic effects]

Set ARPU (+additional profits), unit price, and cell phone model change cycle for each type of MVNO

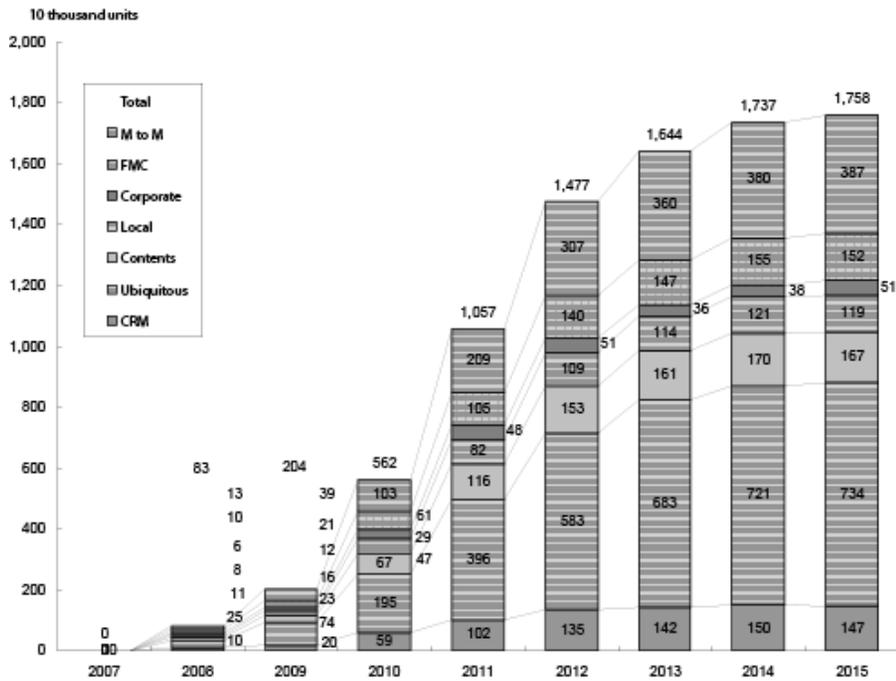
Include BWA (WiMAX, next generation PHS) in wireless

|                                 | Service charges, Additional profit   | Unit Price (Device cost)   | Model Change Cycle   |
|---------------------------------|--|--|--|
|                                 | Estimated ARPU (cell phone, BWA)   | Estimated Unit Price   |  |
| CRM MVNO                        | <u>About ¥6,000</u><br>■ Average ARPU  | <u>About ¥50,000</u><br>■ Average device   | <u>2 years</u><br>■ Average cycle  |
| Ubiquitous MVNO                 | <u>About ¥2,500</u><br>■ Only data communication<br>(Reference: Initial cost of E-Mobile (discount))   | <u>About ¥10,000</u><br>■ Only module part   | <u>2 years</u><br>■ Portable game system and digital camera model change cycle = 2 years |
| Contents MVNO                   | <u>About ¥7,500</u><br>■ Contents price of ¥200 X 8 on top of average ARPU                             | <u>About ¥70,000</u><br>■ Little expensive to be specialized for viewing web contents<br>(Reference: iPhone, 8GB, \$599) | <u>2 years</u><br>■ Average cycle  |
| Local (specific community) MVNO | <u>About ¥6,000</u><br>■ Average ARPU  | <u>About ¥50,000</u><br>■ Average device   | <u>2 years</u><br>■ Average cycle  |
| MVNO for Corporate              | <u>About ¥8,000</u><br>■ Additional-value of mobile solution (NRI estimate on researching the company) | <u>About ¥60,000</u><br>■ A device like smart-phone<br>(Reference: Price of Blackberry ¥59,900 (DoCoMo))                 | <u>4 years</u><br>■ Set at 4 years because it is a market for corporate                  |
| FMC MVNO                        | <u>About ¥6,000</u><br>■ Average ARPU  | <u>About ¥70,000</u><br>■ With wireless LAN, ¥70,000   | <u>2 years</u><br>■ Average cycle  |
| M to M MVNO                     | <u>About ¥500</u><br>■ Only special data communication<br>(Reference: Interviewing with the carrier)   | <u>About ¥10,000</u><br>■ Only module part, ¥10,000  | <u>4 years</u><br>■ Set at 4 years because it is a market for corporate                  |

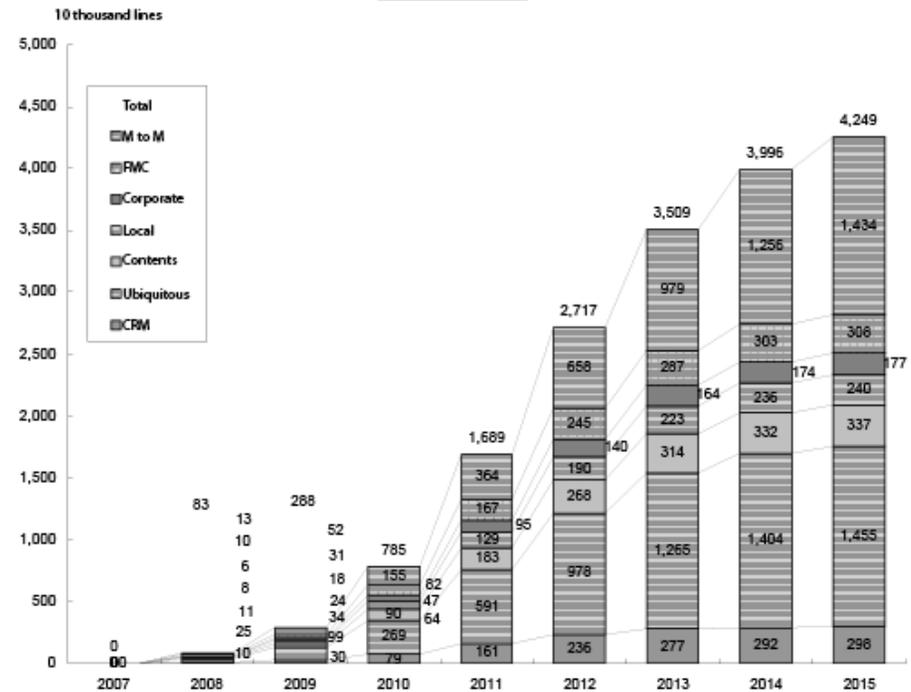
[Estimation Result]

At 2015, the consignment of device in MVNO related market will be approx. 17 million units and the number of lines will be approx. 43 million lines

Shift in shipment



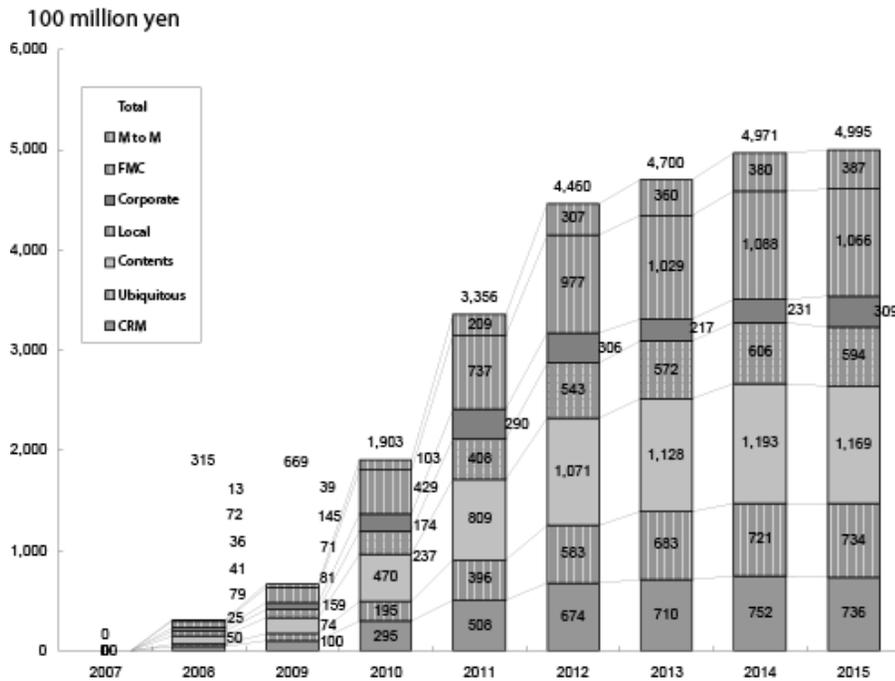
Shift in lines



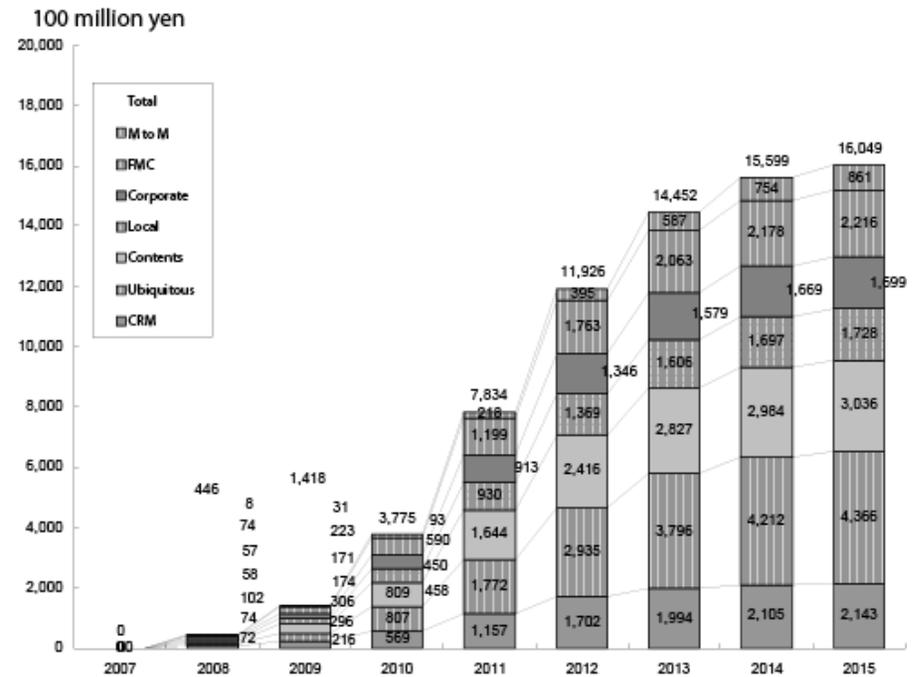
[Estimation Result]

At 2015, the size of MVNO market is approx. ¥500 billion, and service charges and additional charges accompanying it is approx. ¥1.6 trillion

Device Market Size



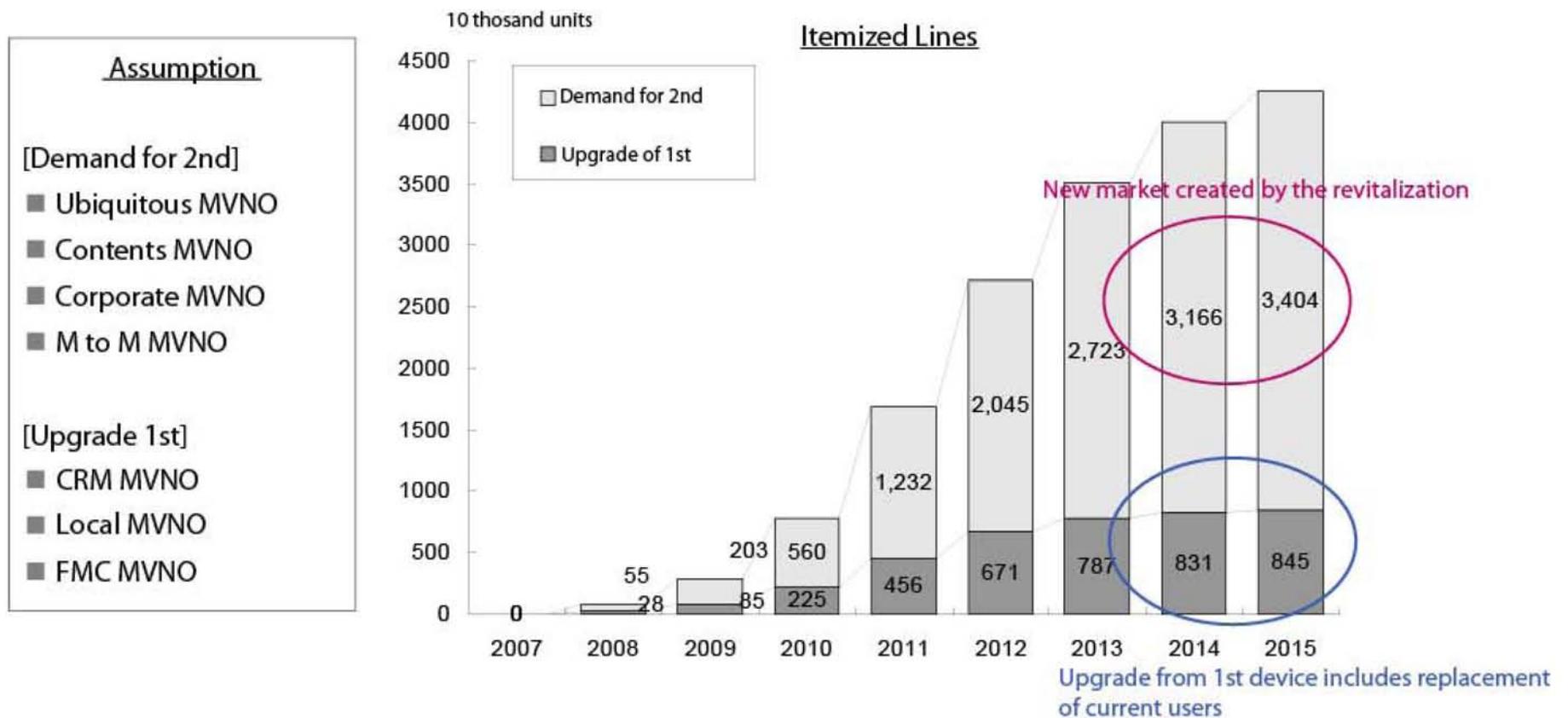
Service Charges + Additional Charges



[Estimation Result]

80% is added by the new market which not only upgrade the current device, but also arouse demand for second device

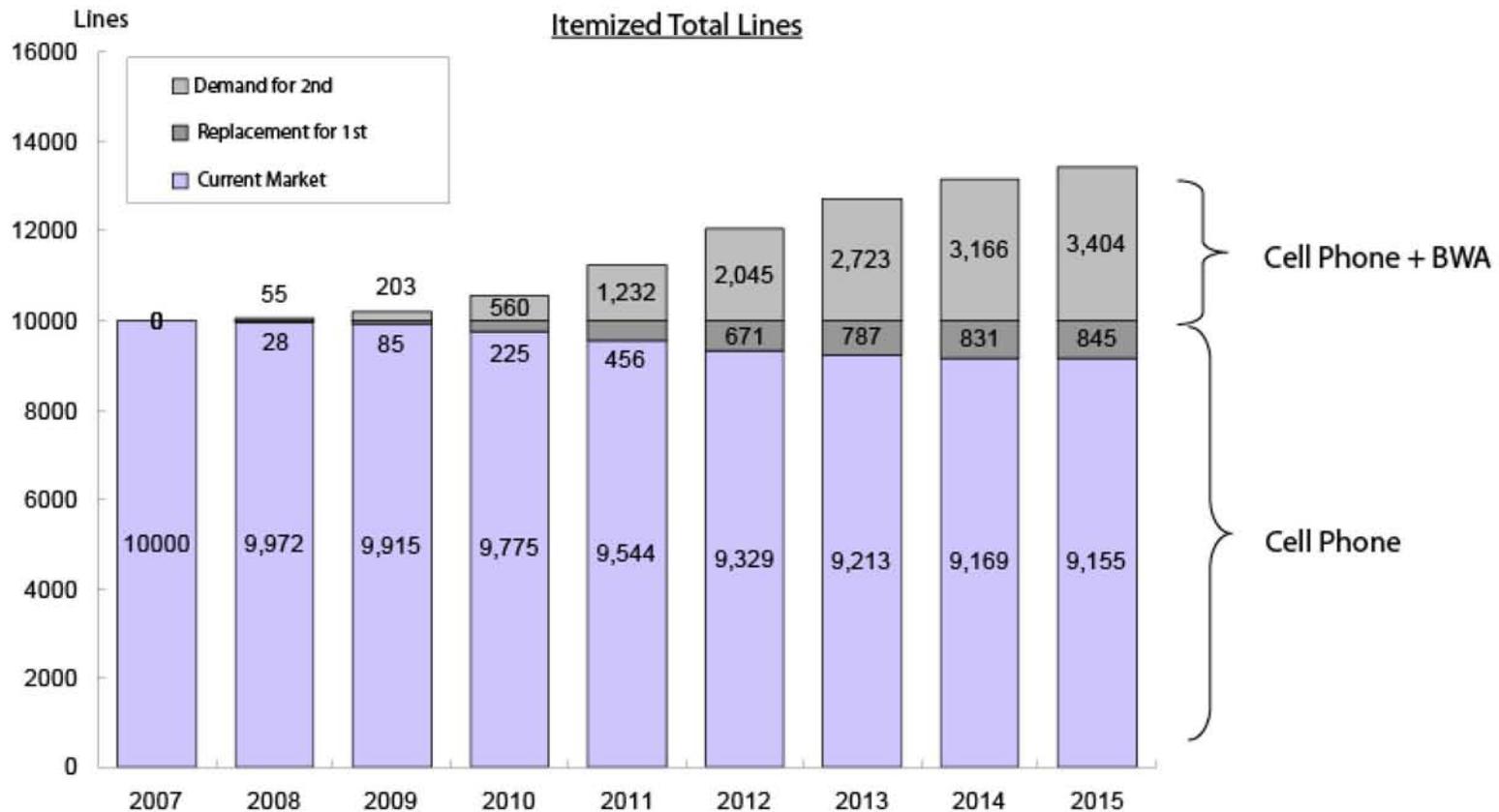
- Each MVNO types are categorized in upgrade (1st demand) or demand for 2nd.



[Estimation Result]

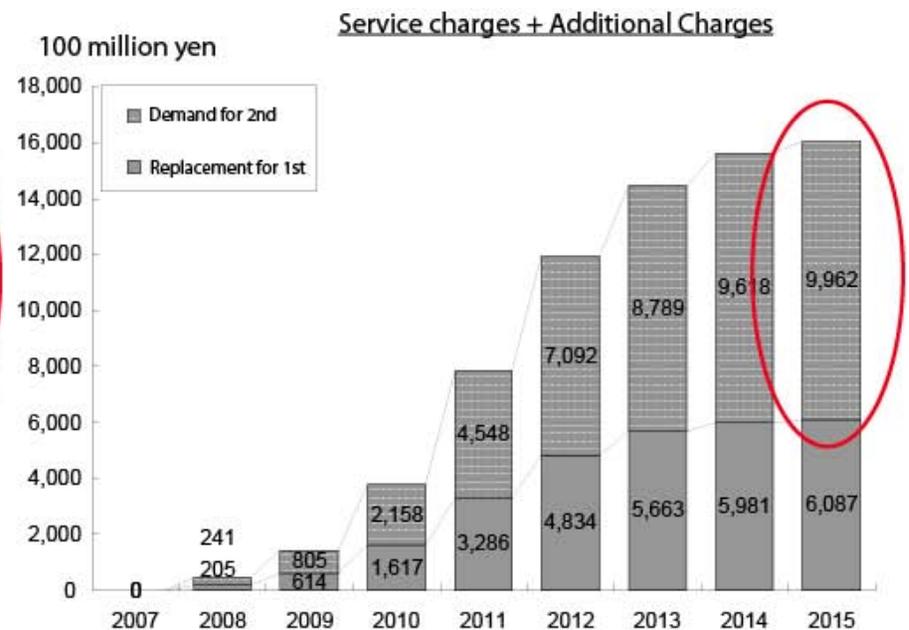
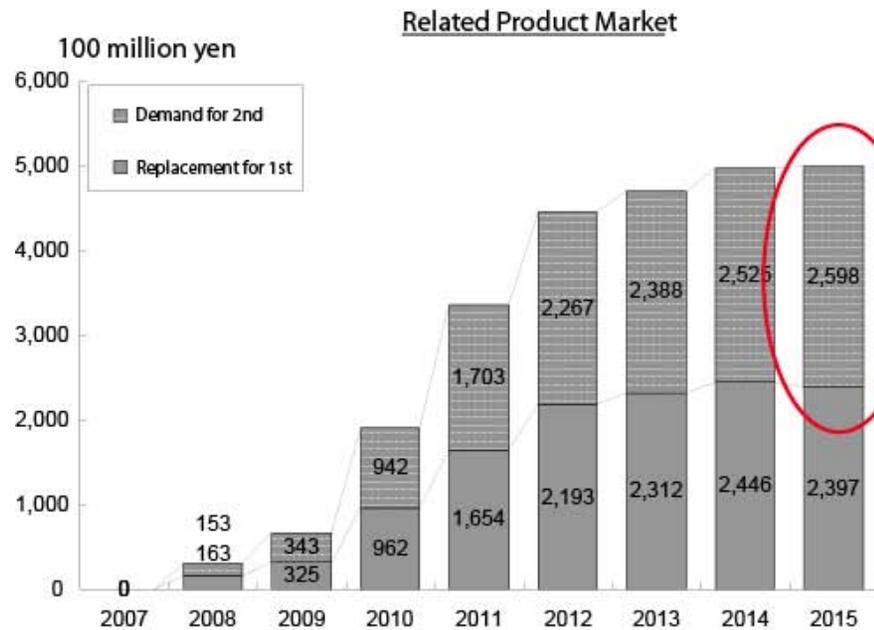
For the entire wireless market, the total number of lines will reach 130 million lines by year 2015

- The baseline of 100 million lines at 2007, and assuming that market is fixed, then the market created by the MVNO revitalization will boost the number up to 130 million at 2015.



[Estimation Result]

The new cell phone related products market will reach approx. ¥260 billion, and the service charges accompanying it will be approx. ¥1 trillion



## The MVNO business revitalization would increase direct profits estimated in this report and variety of additional value

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- The additional profits shown below may be generated from upgrade of the first device (not included in this estimate).
  - **CRM MVNO**
    - Corporations can strengthen its competitive power and profit by the efficient use of mobile technology to increase CRM.
  - **FMC MVNO**
    - In future, the advance in all IP-enabled network (including cell phones) will bring high quality network services, such as switching networks according to location and securing product quality at end to end, which will bring greater profits.
- In Japan, the MVNO must introduce some kind of an additional value to the replacement of first device, rather than low-cost MVNO, and **increase the user benefits and enlarge the ICT market.**